APPROACHES TO MOBILIZE COMMUNITY PARTICIPATION IN NUTRITION PROMOTION OF CHILDREN UNDER FIVE AMONG VILLAGE HEALTH VOLUNTEERS, WANG NAM YEN DISTRICT, SAKEO PROVINCE, THAILAND

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ABSTRACT

The study objective was to identify the approaches to mobilize community participation in nutrition promotion of children under five years of age among village health volunteers (VHVs). The research was conducted in Wang Nam Yen district, Sakeo province, Thailand. The study design was a cross-sectional study, and self-administered questionnaires were distributed to 260 village health volunteers in the district.

This study revealed the following: Four fifths of VHVs had performed nutrition promotion activities including problem identification, planning and implementation, and half of them had performed evaluation of the activities on their own initiative when they thought necessary. However, the VHV showed low performance on the planning of activities for community participation. Except for implementation of activities that showed 83%, the process of planning was less than 40%. VHV's main activities in nutrition promotion were child growth monitoring, health education, and meeting and discussing with community people. They mostly worked at a Community Primary Health Care Center and had little contact with the community, as confirmed by only 6% who used participation approaches and one fourth who used proactive and inner-initiated approaches. However, VHVs of the younger age group (20-39 years) were more likely to use proactive, inner-initiated, formal, informal and group approaches. Variables that also determined the practice of the VHVs were female, primary or secondary school education level, more than 5 years of VHV work experience and more than 5 successful refresher training course in the last year. VHVs motivated by social support such as free medical care, social recognition, and self-satisfaction tended to practice a high level of positive approaches. However, being family members, health personnel, school teachers, mothers or caretakers showed no influence on VHV's approaches.

The study suggests that guidance from health personnel as well as strong social support to enhance VHV's approaches to mobilize community participations should be encouraged.

KEY WORDS : VHVs, APPROACHES, COMMUNITY PARTICIPATION, MOBILIZATION, NUTRITION PROMOTION, CHILDREN UNDER FIVE YEARS

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LIST OF ABBREVIATIONS

VHV : Village Health Volunteer

VHC : Village Health Communicator

CPHCC : Community Primary Health Care Center

NGO : Non-governmental Organization

LO : Local organization

TAO : Tambon Administration Organization

DHF : Dengue Hemorrhagic Fever

AIDS : Acquired Immune Deficiency Syndorome

MoPH : Ministry of Public Health

VF : Village Fund

AURI : Acute Upper Respiratory Infection

HC : Health Center

PHO : Provincial Health Office

DH : District Hospital

WHO : World Health Organization

UNICEF : United Nations Children's Fund

CHAPTER I
INTRODUCTION

1.1 Rationale and Justification

In 1978 the Declaration of Alma-Ata sought the commitment of the Member States of the World Health Organization to the target of health for all by the year 2000 (WHO, 1979). This target was to be achieved by strategy of primary health care (PHC), which was intended to revolutionize the practice of health care and health development. An important element of this strategy was the promotion of greater and more effective community participation in services and structures designed to bring better health care to the millions of people who lacked even basic access to such facilities. (1)

Since 1978 when the Alma Ata Conference reactivated concern for Primary Health Care (PHC), many countries have renewed their interest in the use of selected villagers to provide PHC services to their own communities. Example, in Tanzania, is committed to making essential health care universally accessible to every individual and family in the community. The most realistic solution for attaining total population coverage with essential health care is to employ community health workers who can trained in a relatively short time to perform the most important tasks required to respond to people's most pressing health need. (2)

The term 'community health worker (CHW)' only comes into use in the 1980s, and in many parts of the world they still known by other names. (2) Example, in India named 'village health guides (VHGs)', in Indonesia named 'health cadres', in Korea named 'Sanitation Monitor. In Thailand that CHW was named 'village health communicator' (VHC) and 'village health volunteer' (VHV). (3)

The definition of CHWs was that they should be 'members of the communities

where they work; should be selected by the communities; should be answerable to the communities for their activities; should be supported by the health system but not necessarily a part of its organization; and have a shorter training than professional workers. (4)

The momentum in the mobilization of CHWs is increasing worldwide as it became more generally accepted that the wide deployment of generalist health workers is the main avenue towards achievement PHC in most countries. (4)

In Thailand, PHC was initiated in 1983. At first two types of primary health care worker as CHWs were introduced in the village level. One is village health communicator (VHCs) and another is village health volunteers (VHVs). Both of them are key actors in community based on important element of PHC strategy for Health for All (HFA).

VHCs and VHVs in Thailand were selected by villagers and were trained by health personnel of the government for to improve peoples' health with self-reliance and community participation on primary health care activity in the village. VHVs and VHCs who work in their own villages at the ratio of 1 VHV to 10 VHCs, and they have indicated willingness, capacity and capability to facilitate health service delivery on a voluntary basis. (5) VHC's responsibilities were to inform the villagers about health-related information, to collect information from the public regarding health and health-related matters such as birth, death, migration, pregnancy, other problems and needs, to disseminate health knowledge and advice the public in the element of PHC and to carry out and coordinate health development activities and join in other intersectoral development activities. VHV's responsibilities were added more training and other tasks in VHC's, which are to weight pre-school children and distribute supplementary food to the ones who need it, to provide first aid treatment and simple symptomatic medical care by using the medicines on the National Drug List for PHC and to distribute birth control pills and condoms to the clients who have already been examined by the government health staff. After VHC had experience over 6 months, VHC could become to VHV with addition training and activities. Consequently, VHC

has been abolished for several years and all responsibilities of VHC were taken by VHV since 1993. (3)

VHV in Thailand, essentially, are community people who serve as 'mobilizers'. At present, VHV has use their activities to mobilize people and community to participate i.e. Child growth monitoring, encourage mother to bring their children for immunization, identify pregnancy for mother and child health and antenatal care, involve in environment, sanitation which had bring about the good nutrition status of children. (6) Then, They are shown success way on health of people in the village, for example, the immunization coverage was over 94% for all, except measles, which remained at 86.4%, and the coverage of clean drinking water was 95.5% and sanitary latrine of 98.2% in 1999. (7) As for nutrition among preschool children in Thailand that malnutrition (underweight) rate among then were remarkably reduced during the nine years from 1982 to 1991, from over 50% to under 20 percent virtually eradicating severe and moderate malnutrition in the process. (8)

To mobilize people and to promote community participation for health are key strategies of PHC for HFA, and VHV usually takes these part of responsibility in their activities in the community. Then, malnourished children especially protein-energy malnutrition (PEM) in Thailand has dramatically reduced, including the virtual eradication of severe PEM. (9) It is an evidence of achievement in community-based program on VHV and people's participation. Adequate nutrition is an integral part of human development. Good nutrition leads to fitter and better-educated people. However, malnutrition in childhood, even if later corrected, affects educability and eventual school achievements. Nutrition thus improves human capital. (8)

The strategy of community-based nutrition program in Thailand, at first was growth monitoring for Children under five years of age by VHV in the village, which was introduced by Ministry of Public Health in 1981. It is a component of the larger rural primary health care program and it is implemented in Thailand's entire village. And, all children suffering second and third grade malnutrition are then weighed monthly and given food supplementation for three months. They are followed by or

referred to the health service if they do not recuperated. (9)

However, an analysis of the community participation characteristics of the Thailand program (1988) had shown, that there were no needs assessments, and the activities were developed vertically through the health sector, with little or no link to any community organization. Leadership rests with the health staff. The community does not mobilize resources, and even the VHV can receive free health care. The community's "volunteers" are managed directly by the health staff. There is very little growth monitoring because the weighing in each three month is a screening exercise to identify malnourished children for targeting curative supplementary feeding. Preventive growth monitoring for growth promotion does not occur. The results of the weighings are used little locally for education or public dissemination. They are not discussed in any public forum or considered at meetings of the village development council. (9)

Growth monitoring in Thailand has been institutionalized from the national level down to the village level. However, there are still some concerns that deserve attention and corrective measures. Community-based growth monitoring has not yet covered most children and may have distorted the actual prevalence of malnutrition. Moreover, there seems to be a clear need for proper causal analysis by mothers and the community and improved communication with the target household and the communities in order to corrective and preventive measures to be fully implemented. (9)

Furthermore, an assessment of PHC in Thailand and several previous studies showed that there were low level of people participation that most of participation depended on health personnel supervision more than decision and solving of community problems by themselves. The previous studies, Honda (1992) pointed out the attrition problems of VHV were (1) lack of payment, (2) opportunity cost such as transportation for long distance to meeting place, no spare time due to busy homework for youth migration in their family and lack of cooperation to their activity, and (3) lack of villager's cooperation, pure economic reason (e.g. lack of payment).

(10)

Therefore, to assess the approach of VHVs to mobilize community participation through Community nutrition program point of view; it might be account for crucial factors of VHV's mobilization and community participation.

Wang Nam Yen district in Sakeo province, Thailand was the study area. The district exist the major community based health program in nutrition promotion for children under five years of age. Wang Nam Yen district hospital reported that, in December 2003, the prevalence of malnourished children under five years of age in the district was 9 % for first degree of malnourished, the second degree was 1% and there was no third degree. This prevalence was low than national surveillance data in 1995. However, Wang Nam Yen district was continued to strengthen nutrition promotion of children under five years of age by community base. For this nutrition promotion in the community was leading mainly by Village Health Volunteers. They had continued child growth monitoring regularly and when they found malnourished child, they took action promptly such as prepared and provided supplementary food to the children, follow up by home visiting very often. And VHVs have mobilized people to promote nutritional stage of the children with community participation. Moreover, Wang Nam Yen district has some features in the nutrition promotion for children under five years of age, example some VHVs make soymilk easily and there were some milk companies in Wang Nam Yen and they have donated milk for malnourished children and formula milk for children under 2 years of age through the hospital and health center.

Therefore, this study was to identify the approaches used by VHV to mobilize Community participation in Nutrition promotion for Children under five years of age in Wang Nam Yen district. And, the results of this study would provide some insights for an improvement and sustainability of the VHV work system for strengthening of Community participation on health.

1.2 Research questions

What type of the approaches do Village health volunteers (VHV) apply for mobilization of Community participation in Nutrition promotion of children under five years of age in Wang Nam Yen district, Sakeo province?

1.3 Research objectives

1.3.1 General objectives

To identify the approaches used by VHV to mobilize community participation for nutrition promotion of children under five years of age in Wang Nam Yen district, Sakeo province.

1.3.2 Specific objectives

1.3.2.1 To identify the socio-demographic factors (i.e., age, gender, marital status, education, occupation, household monthly income etc.) and the psychosocial factors (i.e., type of recruitment, period of health volunteer work, incentive, refreshment training, etc), and the characteristics of community in VHV's responsible cluster (i.e., major occupation of families and of mothers, economic status of families, condition of newborn babies and children under five years of age).

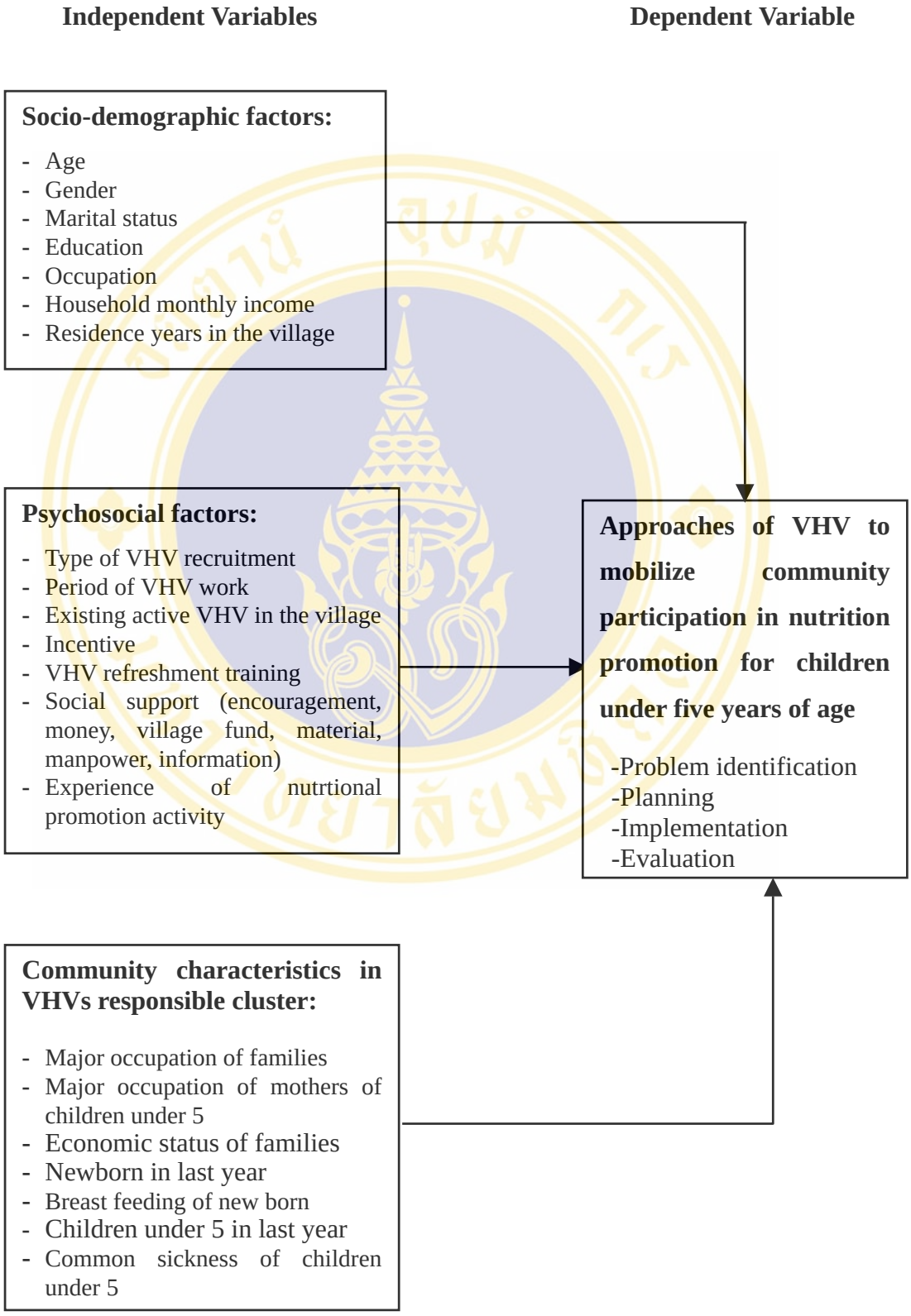
1.3.2.2 To identify the performance of VHV to mobilize community participation in nutrition promotion activities for children under five years of age, Wang Nam Yen district, Sakeo province.

1.3.2.3 To describe the type of approaches that VHV used usually to mobilize community participation in nutrition promotion for children under five years of age in Wang Nam Yen district, Sakeo province.

1.3.2.4 To describe pattern of VHV's approaches in nutrition promotion

activities for children under five years of age by socio-demographic factors, psychosocial factors of and community characteristics of VHV's responsible cluster in Wang Nam Yen district, Sakeo province.

1.4 Conceptual framework



1.5 Operational definitions

1.5.1 Approaches used by VHV to mobilize community participation in nutrition promotion for children under five years of age:

Community mobilization is a process through action which is stimulated by a community itself or by other that is planned, carried out, and evaluated by a community's individuals, groups, and organizations on a participatory and sustained basis to achieve specific, mutually agreed upon goals and objectives. (13)

In this study, the process and the action referred to performance and approaches of VHV to mobilize community participation in nutrition promotion for children under five years of age. The process referred to four criteria, which were (1) **nutritional problem identification,** (2) **planning of activities,** (3) **implementation** and (4) **evaluation** of nutrition promotion activities for children under five years of age. For these process, the approaches referred to participants (i.e., VHV, mother or caretaker or family of under five years of age, stakeholders in the village, health personnel and VHV colleague), location of activities (i.e., home of children under five years of age, CPHCC, village regular meeting and public place) and type of VHV's approaches (i.e., **proactive**, **reactive**, **inner-initiated**, **outer-initiated**, **formal**, **informal**, **individual**, **group**, **participative** and **non-participative**).

1.5.2 Scio-demographic factors

In this study, socio-demographic factors of Village Health Volunteer referred to **Age**: age as of last birthday, scoring by year; **Gender**: male and female; **Marital status**: categorized into single; married; widow/divorce; **Education** was the latest level of education attainment of VHV: primary school; secondary school; graduate and above; **Occupation** referred to main occupation of VHV which took most time for earning income for livelihood: farming/plantation, daily wages labor/vender, business firm private sector employee, private shop owner, government official, housewife; **Household monthly income** referred to the amount of average

monthly total income in the family; **Residence year** referred to the number of years of VHV's residence in the village.

1.5.3 Psychosocial factors

The psychosocial factors referred to factors that had influence on Village Health Volunteer's work including: type of VHV recruitment, period of VHV work, existing active VHV in the village, VHV refresher training, social support and experience of nutritional promotion activities.

Type of VHV recruitment referred to VHV who was self-volunteered, nominated by the villagers, selected by village headman or transferred by parent or relative.

Period of VHV work referred to month and years after he or she has been working as VHV.

Existing active VHV in the village referred to current number of active VHV colleagues in the village that they were VHV, living same village and working and cooperating with other VHV

Incentives of VHV referred to VHV who received incentive in VHV work, such as free medical care, bi-monthly perdiem at meeting, certificate, social recognition and self-satisfaction for being useful resource.

VHV refresher training referred to frequency of VHV attainment and topic include position of trainer to improve VHV's knowledge and skill for VHV work in last year.

Social support referred to kind and source of support for VHV work, such as encouragement, money include village fund, materials/equipment, manpower and information. The source of the support refers to from family members of VHV, from

staff of Health Center, from Pre-school or School teachers, from mothers or caretakers of children under five years of age, from local organization or village headman or Non Government Organization (NGO) and from religious priest or neighbors.

Experience of nutritional promotion activity referred to started time of nutrition promotion activity in VHV work, such as currently, last year and more than two years ago.

1.5.4 Community Characteristics of VHV's responsible cluster

The community characteristics of VHV's responsible cluster were reported by VHV's opinion, which referred to major occupation of families and mothers of children under five years of age, economic status among families, number, health status and common sickness of newborn baby and children under five years of age who were existed in last year, and nutritional information source among families.

Major occupation of families and mothers of children under five years of age referred to their main income sources, such as farming/plantation, daily wage labor, factory worker, housewife and others.

Economic status of families referred to the families in VHV's responsible cluster that most of families were poor, or well-off or average.

Newborn babies and children under five years of age referred to existed number of newborn baby and children under five years of age in last year, case of low birth weight and exclusive 6 months breast-feeding of newborn babies, case of malnutrition and over weight of children under five years of age in last year.

Common sickness of children under five years of age referred to common sickness among children under five years of age in last year, such as diarrhea, anemia, worm/parasites, upper respiratory infection, skin infection or other.

1.6 Scope and Limitations:

This study had tried to identify the current performance and approaches used by VHV to mobilize community participation in nutrition promotion for children under five years of age. It had also tried to describe the socio-demographic factors, psychosocial factors of VHV and characteristics of community in VHV responsible cluster.

This study focused on VHV's mobilizing in community participation to nutrition promotion of children under age five in villages of Wang Nam Yang district, Sakeo province. This province is border of Cambodia and it was just upgraded to province few years ago. Moreover, as VHV performance status and type and level of approaches were identify only for in last year (i.e., 1year ago) at the time of survey. Therefore, this sample was absolutely not representative of the whole VHVs in Thailand and recall method of VHV on the nutrition promotion activities were the limitation of this study.

CHAPTER II
LITERATURE REVIEW

2.1 Primary Health Care

In 1978 the Declaration of Alma-Ata sought the commitment of the Member of the World Health Organization to the target of health for all (HFA) by the year 2000(WHO, 1979). (1) The declaration identified Primary Health Care (PHC) as the key to attaining HFA as part of the global quest for social and economic development, in a spirit of social justice. The heavy burden of sickness, the high cost of health technology and the inadequacy of health services coverage called for a bold new approach; PHC offered a Rationale and practical means for both developing and industrialized nations to work towards the Health for All goal. (11)

The major concepts of PHC approaches consist of community participation, appropriate technology, intersectoral collaboration and the mobilization of local resources. (5) For areas of intervention, PHC concentrates on 8 elements: education concerning prevailing health problems and the methods of preventing and controlling them; promotion of food supply and proper nutrition; and adequate supply of safe water and basic sanitation; maternal and child health care, including family planning; immunization against the major infectious diseases; prevention and control of locally endemic diseases; appropriate treatment of common diseases and injuries; provision of essential drugs.(7)

PHC is people-oriented that it success must therefore rest with the people and it has a four-fold objective on PHC approach, both in developing and industrialized countries:(7)

(1) to enable people to seek better health at home, in schools, in fields and in factors;

(2) to enable people to prevent disease and injury, instead of relying on doctors to repair damage that could have been avoided;

(3) to enable people to exercise their right and responsibility in shaping the environment and bringing about conditions that make it possible, and easier, to live a healthy life;

(4) to enable people to participate and exercise control in managing health and related systems, and to ensure that the basic prerequisites for health and access to health care are available to all people.

2.2 PHC in Thailand

Since the 4th National health plan (1977-1981) in Thailand, it has continuously implemented primary health care (PHC) activities ranging from policy and implementation plan formulation, budgets allocation, and responsible organization and supporting factor identification. Thailand had implemented Primary Health Care with three major components: PHC elements, PHC approach and PHC activities, and according to the country's needs such as population migration, change of family size, change of population pattern, increasing ratios of teenagers, labor forces, aging and change of disease pattern from communicable to non-communicable diseases, PHC had had extended areas of intervention to 14 elements of Thailand. (5)

(1) Education concerning prevailing health problems and the methods of preventing and controlling diseases

(2) Promotion of food supply and proper notorious food

(3) Maternal and child health care, including family planning

(4) Adequacy of safe water supply and basic sanitation

(5) Immunization against major infectious diseases

(6) Prevention and control of locally endemic diseases

(7) Appropriate treatment of common diseases and injuries

(8) Provision of essential basic household drugs for the community

(9) Promotion of oral hygiene and correct dental care

(10) Provision of mental health care and promotion of appropriate community

care for people with disabilities, drug addicts and alcoholics

(11) Consumer protection by encouraging people to consume good with the logo of the Food and Drug Health administration

(12) Non-communicable disease control and accidental injury prevention

(13) Environmental pollution control

(14) HIV/AIDS prevention and control.

The concept of PHC in Thailand has been developed from the country's experience in solving the health problems of underserved people in the rural areas. The concept of community participation - consisting of the contribution of ideas, manpower, money, and materials by the community - is fundamental and provides the key to the success of the PHC programme. Then, the Ministry of Public Health (MOPH) is aware that the strengthening of a health-services delivery system and development of a referral system is essential to support the PHC activities. (11) And the Program's objectives were formulated on the basis of various concepts: (12)

(1) To expand the coverage of the health services, particularly among the underserved rural population, and to help the people help themselves.

(2) To utilize community resources and encourage community participation in order to solve individual health problems, and eventually to establish self-help programmes at the village level.

(3) To promote the dissemination of health information to local people, as well as to integrate all data that would reflect the needs and improve the health of the communities.

(4) To make basic health services available, accessible, and acceptable to the people.

(5) To promote better health for rural people as well as to enhance their awareness of health problems and problem-solving.

2.3 Community mobilization

Community mobilization is a process through action which is stimulated by a

community itself or by other that is planned, carried out, and evaluated by a community's individuals, groups, and organizations on a participatory and sustained basis to achieve specific, mutually agreed upon goals and objectives. (13)

For mobilizing communities for health activities, the social preparation and education of the community is a pre-requisite. Simple instruments for villages to assess their own situation and to prioritize their need are required. This could be supported through information, education and communication (IEC) materials, efforts of health volunteers through village-exchange visits, and development of joint plan of action/intersectoral activities at village level. (14)

2.4 People's Participation in development

The concept of peoples' participation in development has come to have a major influence upon development thinking and practice. The people's participation in development concerns two things: structural relationships and the importance of developing people's capacity and skills to negotiate for and to seek the resources and changes they require to improve their live; and the methods and techniques used to ease local people's involvement in development programmes. (1)

Ideas concerning people's participation in the development of health services have crystallized around Community Involvement in health. This concept is not, of course, entirely new; indigenous health practices, traditional methods of community support in times of poor health and positive community action to tackle existing health problems and needs (e.g. mobilizing community efforts for a vaccination campaign or community labour to build a health post) are all manifestations of community participation. (1)

People participation in health development in Thailand has been going on for several decades. Before the modernization era, health was the responsibility of individual, families and community based on local wisdom. Development in modern medical sciences has taken away the capacity for self-reliance and also delayed the

development of local health wisdom. In the two decades of health for all movement, new forms of people participation were developed.

2.5 Community participation and PHC

Community participation is a process of a type and degree that often varies over time, even in the same project. Community participation is not political participation but the active involvement of a community in the development process of change. Community participation concerns the participation of the community at large, not just that of elected leaders or political representatives. The term "community" can include both the people living in a geographically defined area and a group of people with some common trait, interest, or problem. (9)

WHO identifies an action for HFA, must be based on community participation, the active involvement of people, and the mobilization of societal forces for health development. Therefore, PHC is people-oriented. Its success must therefore rest with the people. It has a four-fold objective:(15)

(1) to enable people to seek better health at home, in schools, in fields and in factories,

(2) to enable people to prevent disease and injury, instead of relying on doctors to repair damage that could have been avoided;

(3) to enable people to exercise their right and responsibility in shaping the environment and bringing about conditions that make it possible, and easier, to live a healthy life;

(4) to enable people to participate and exercise control in managing health and related systems, and to ensure that the basic prerequisites for health and access to health care are available to all people.

The primary health care approach, with its accent on equity, effectiveness, affordability, community participation, intersectoral collaboration and appropriate technology will long continue to be valid. (15)

2.6 Mobilizing the community for action through the use of volunteers

Mobilizing the community for action through the use of VHVs is a continuous and evolving process. It is not a one-time static event. It needs close monitoring, evaluation, adaptation and guidance to improve the magnitude, direction and strength of involvement and to address evolving problems. The reasons of focus VHVs in Thailand are as follows. (3)

(1) Building a network of communication for creating awareness in the community is an essential prerequisite for sensitizing the community for action. Individuals, families and communities have the need and the right for information to take their own initiatives in maintaining, promoting and protecting their own health.

(2) Providing the human resources required for participation, and establishing organizational framework and local leadership for a process of sustainable action, towards improving health and well being of the community.

(3) Promoting self-confidence in individuals, families and communities, enabling them to discover and uphold their potential for action essential for both health development, and broader social development.

(4) Motivating people to undertake responsibility to apply important promotive, preventive, first aid rehabilitative technologies at their own homes, work places and environment, thus contributing to self-reliance and decreasing dependence on health services.

(5) Building sense of ownership, partnership and dignity, particularly among disadvantaged and marginalized communities, thus improving access and equity.

(6) To contribute to effectiveness and efficiency of health care programmes, through greater coordination of resources, activities and efforts and social accountability and transparency through people's involvement.

(7) Promoting sustainability of health programmes through the contribution of the community of their ideas, labourer, and cost and through the sense of ownership of local health care resources.

(8) To facilitate broader action between social development sectors, and NGOs for overall development, poverty alleviation, and the improvement of the quality of life;

(9) Volunteers link the health services personnel with the community contributing to the development of mutual orientation and learning essential for both partners to play their role more effectively towards community health development.

2.7 Village Health Volunteer (VHV)

VHV is Community-based health manpower. In order to achieve better health of the population through health promotion and prevention, VHV were selected and trained as a key actor in Community-Based Health Development. The word 'Volunteer' has two important concepts in common; they all involve action or work of some kind, and crucially, the work is carried out willingly. The concept of free will is central of volunteering. A further feature of this concept of volunteering is that it is carried out for common good or interest, or the benefit of others. (16)

The Government's PHC program in Thailand has been centered on system of VHV and Village Health Communicators (VHCs). Both of volunteers were villagers, were selected by villagers and the village committee based a set of criteria. VHCs were given five days training in PHC and then pass this knowledge on to their neighbors (nutrition, hygiene, immunization, prevention of communicable disease, etc) under the supervision of the Tambon health personal. Then the VHC selects one of their members in each village for further fifteen days training. The VHVs organize immunization, administer first aid, dispense basic drug, etc. The government has also introduced drug co-operatives at the village level, which is called Community Primary

Health Care Center (CPHCC) and they are supervised by the VHVs. (17)

By 1994, such local health volunteers in Thailand have been evolved, only VHVs left and changed their roles for greater effectiveness by enhancing capacity with continuing learning techniques. Up to now (30 April 2001) there are approximately 710,000 VHVs (18), and they are assigned 10 to 15 households per VHV. VHV has no salary or compensation but only allowances while on training course for 50 baths per day per head plus the incentive of free medical services. Existing incentive for the VHV are free medical care benefit at government health facilities, which had extended to cover the family members also and perdiem has been paid to VHV attending a bi-monthly one day meeting.

Responsibilities of VHVs: (6)

(1) to inform the villagers in his/her respective area about information related to health.

(2) to collect information from the public regarding health and health related matters such as births, death, migration, pregnancies, problems and needs.

(3) to disseminate knowledge, advise and stimulate the public in the 8 elements of PHC.

(4) to carry out and coordinate health development activities and join other intersectoral development activities.

(5) to weigh pre-school children and distribute supplementary foods for malnourished children

(6) to provide simple symptomatic medical care by using home remedies or other medicines, which the Ministry of Public Health has given permission to use.

(7) to give first aid treatment for fresh wounds, fractures, burns, etc.

(8) to distribute birth control pill and condoms to the clients who have already examined by the government health staff.

As for nutrition activities, VHV coordinated all food and nutrition activities within their village. Supervised by health personnel, they carried out growth

monitoring activities in the village. Simple beam balance and growth chart, which helped mothers and caretakers to understand the nutritional status of their children were introduced. After each weighing session, the weight-for-age of all children weighed was plotted on a village growth chart. This tool allowed the community to visualize the magnitude of its nutrition problem. (9)

2.8 Type of nutritional problem of Children under five

There are three types of nutritional problems - one is under-nutrition, another is over-nutrition and last one is micronutrient deficiency.

Under-nutrition means too little food, too little care and too little health. More emphasis should be given not only to food but also to care and health, the reason being that even if children in the age group of 0-2 years are able to get food, they may have mothers who do not have enough time to pay attention to their children. Similarly, if there is no health-guaranteeing environment, and children suffer from diarrhea diseases, no amount of food will help prevent malnutrition. (19)

Over-nutrition, on the other hand, means either too many calories or the wrong types of calories such as saturated fats or highly processed sugar that lead to obesity, vascular diseases, etc. Many developing countries have under-nutrition and those in Europe and North America have over- nutrition problems. There is this in-between category with countries like India that still have an enormous amount of under-nutrition and significant over-nutrition problems. In India, for instance, around 50 per cent of its children under the age of five are undernourished or malnourished. But in urban areas, the over-nutrition problem is shooting up, thanks to the change in lifestyle and food habits. The point is that many countries in Asia face the problem of having to deal with the over-nutrition and under-nutrition simultaneously. As a result, their health systems are under huge stress. (19)

Micronutrient deficiency is measured by specific signs. It has concern three that vitamin A deficiency (VAD), iron deficiency, usually assessed as anemia, and iodine

deficiency disorders (IDDs). (8)

2.9 Nutrition Situation and Trend in Thailand

During the decade, Thailand has reduced the magnitude and severity of the problems, especially protein energy malnutrition (PEM). Current nutrition problems and trends could be summarize as follows: (9)

Low Birth Weigh (LBW) (under 2,500 gm.) prevalence in 1989 and 1991 were 9.5% and 9.0% respectively for the whole country. In 1991, the regional prevalence were 9.5%, 9.2%, 9.4% and 10.2% in the Southern, the Central, the North-eastern, and the Northern regions respectively. North has the highest LBW prevalence is the high percentage of minority hill-tribes, the fact that it is an Iodine Deficiency Disorder (IDD) endemic area and the high smoker prevalence among women.

Protein Energy Malnutrition (PEM) by weight-for-age in children under five, Thailand has achieved a dramatic reduction. Using the Thai growth standard the combined mild, moderate and severe malnutrition by weight-for-age declined consistently from 50.8% in 1982 to 18.6% in 1990 (for moderate and severe combined from 15.1% to 0.8% in the same period).

Iron Deficiency Anaemia was first described as a public health problem in a 1962 nutrition survey. The Prevalence of anaemia in school age children and pregnant women from the hospital-based data has been reduced from 27.3% and 27.3% in 1988 to 18.6% and 18.8% in 1990 respectively. People in the South seem to have the highest prevalence of anaemia. It may be the climatic, occupational and life style conditions.

Iodine Deficiency Disorder (IDD) is categorized as goitre endemic. The prevalence of IDD at present has been determined on the basis of physical examination of children in rural primary schools where teachers have been trained to screen for goitre. The Nutrition Division Report in 1991 indicated that prevalence of

goitre in school children might be as high as 37.9 % in 10 upper northeast province and 26.5% in 11 central provinces. Current control measure include the distribution of iodized salt, iodide concentrated stock solution drops in community wells, drinking water tank at school and at home in villages where goitre rates exceed 5%. Iodized oil capsules (200mg) are also provided for women of child-bearing age and pregnant women in those villages where goitre rates are greater than 20% or those villages that have cretins of less than 5 years of age.

Vitamin A Deficiency as a public health problem is not clear. Information on vitamin A deficiency's magnitude and geographical distribution is obtainable through accumulated small scale surveys and research studies. In the 1990 survey in the North and the North-east, marginal serum retinol between 10-20 mcg/dl were found in 14% and 7% of the pre-school children in the dry and the rainy seasons, respectively, due largely to an increase in vitamin A-rich food during the latter period. It may be concluded that, although xerophthalmia and deficient serum levels existed during the 1960's, to mid 1970's, the problem declined to marginal levels, rather than severe ones, during the mid-1980's. Nevertheless sporadic cases of clinical manifestations and deficient serum retinol levels in pre-school children can still be found in some specific areas in rural north and north-eastern Thailand.

Micronutrient Deficiencies are also quite common and prevail in certain vulnerable groups, i.e. riboflavin deficiency among rural dwellers. A study was conducted in northeastern province (Khon Kaen and Nakorn Rajchasima) that the highest prevalence was in the first year age group (21%).

Urinary Bladder Stone Disease has been listed in the past as one of the major nutritional problems in Thailand. Its striking characteristics were the high prevalence in young children and the stone composition. Phosphorus deficiency was identified as the causal factor, and was related to infant feeding practices in the north and northeast where the prevalence was high. However, there have been no epidemiological studies to support the trend.

2.10 Community Participation in Nutrition Program

Popular participation as an essential element of sustainable development is gaining widespread acceptance, especially in the area of food and nutrition. At the Alma Ata conference on primary health care (PHC), community participation (CP) was accepted as the basis of the strategy to achieve health for all by the year 2000, and one of the eight priority areas for action identified was food and nutrition (WHO, 1978). (9)

In terms of community participation in nutrition for children, there are some success cases. Thailand can say one of success countries; it has evidence that in the 1980s and early 1990s, malnutrition was reduced from around 40 percent to less than 10 percent. This success is that the ratio of VHV to families is high enough for individual contact to begin to solve the problems. (8)

The idea now used the terminology of “facilitators”, as the local level government or NGO employees, and “mobilizers” as the village level workers, often village volunteers. In Thai program, the mobilizers were called Village Health Volunteers (VHV) and the concept is that their functions as part of community organizations, supported by facilitators who act as the interface with the community leaders. (8)

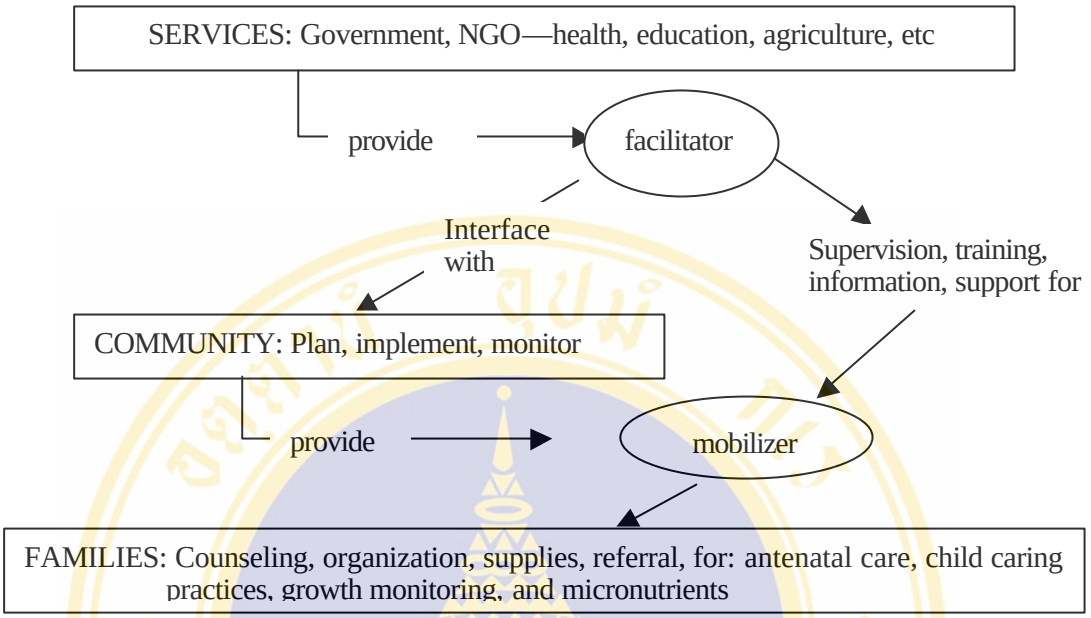


Figure 1 : Support Structure for Community-based Programs, based on Thailand's

Sources : Adapted from Tontisirin (1996) (8)

Community participation in Nutrition program, at first step of VHV, has to know and understand how the people in the area live as community health worker, and at the same time, gain their confidence and respect by community. Therefore, VHV should become familiar with the community leaders, the pattern of authority and land ownership, the social customs, religious and cultural beliefs, the levels or education and literacy, the type of work done and the responsibilities and role of men and women particularly in the area of food production and purchasing. M. Cameron and Y. Hofvander pointed out about community health worker that who should try to find out what people think are their most urgent problems, priorities, and needs as follows. (20)

(1) Every community has its own patterns of eating, and beliefs about foods; some foods are popular and prestigious, while others are disliked or taboo.

(2) Discussions with people also help to discover this information and at the same time build up a sympathetic contact between the worker and community.

(3) Only by informal discussions and indirect, tactful questioning is it possible

to get an indication of how the family budgets are used.

(4) Finding out about the family economy, it is important to find out whether special infant food are bought, which these are, and why they have been chosen.

Community-based nutrition intervention programmes with an emphasis on community organization for planning and management, community manpower development based on appropriate technology information, and community financing schemes have a better chance of being sustainable. Special efforts should be made to empower people for self-reliance and self-determination. namely, the Nutrition intervention programmes should not be centrally planned and ready made, it would be better if nutrition interventions and indicators were a part of the community development process. Full efforts should be made to advocate the use of nutrition indicators in planning, monitoring and evaluating development programme. (9)

2.11 Growth monitoring for children under age fives in Thailand

In 1981, the Ministry of Public Health introduced the growth-monitoring program, it is a component of the large rural primary health care program and is implemented in all of Thailand's village. The activities were carried out by the VHV/VHC and served as a tool for educating mothers about nutrition and for helping them determine the nutritional status of their own children. (9)

The most recent evaluation of the growth monitoring and promotion activities (GMP) in 1991 in indicated that although mothers appreciated the chance to monitor their children's. About half (46%) of the mothers understood how to interpret nutritional status according to the colour on the chart and 62% knew about the directional changes on the chart. (9)

2.12 Nutritional Status in Thailand

(1) Under its nutritional surveillance for children aged 0-5 programme, using weight for age standards adjusted from the Gomez Standard, the 4/1995 (June –

August 1995) report reveals the following:(21)

Nutritional Status		No. of children	Percent(%)
Children weighed		3,752,622	
Status – normal		2,633,950	88.67
Malnourished :	1st degree	320,228	10.66
	2nd degree	20,055	0.67
	3rd degree	83	0.00

(2) Number and percentage of children with iodine deficiency disorders (IDD). According to the IDD surveillance report, December 1996, there are 215,711 children with IDD or 4.24 percent. (21)

(3) Number and percentage of women with anaemia—no data available. For anaemia in pregnant women, a surveillance programme launched in 1995 reveals that there are 380,716 cases or 13.4 percent. (21)

(4) Number and percentage of children under 5 with anaemia. According to a sampling survey in 1991, there were 1,195 cases or 15.0 percent. (21)

(5) Number and percentage of vitamin A deficient people. No new cases of infants and children with vitamin A deficiency with ophthalmic manifestation from 1993 – 1996 were found. (21)

2.13 Communication, Diffusion and Innovation

Communication is essential for VHV's community mobilization. Communication is a process in which participants create and share information with one another in order to reach a mutual understanding. (13)

Simple conceptions of human communication describe certain communication acts or events involved in diffusion. The diffusion is the process by which an

innovation is communicated through certain channels over time among the members of a social system. There are four Main Elements in the Diffusion of Innovations (Rogers, 1983) which are **Innovation, Communication channels**, **Time and** the Members of a **Social system**. (14)

Innovation is an idea, practice, or object that is perceive as new by an individual or other unit of adoption. The Innovation has five characteristics, which are Relative advantage, Compatibility, Complexity, Trialability and Observability. These characteristics of innovations are perceived by receivers and to explain their different of adoption. (13)

Communication channel is the means by which messages get from one individual to another, then, the interpersonal channels are more effective in persuading an individual to adopt a new idea.

Time is an important element in the diffusion process and aspect of any communication process, it is an aspect of every activity. Time does not exist independently of events, but it is an aspect of every activity. The time dimension is involved in diffusion (1) in the innovation-decision process, (2) in the innovativeness of an individual or other unit of adoption, and (3) in innovation's rate of adoption in a system. Those dimension are measured as the number of members of the system that adopt the innovation in a given time period.

Social system is that the members or units such as individuals, informal groups, organizations, and/or subsystems are engaged in joint problem solving to accomplish a common goal. (14) Therefore, the social system is very important. The structure of the system affects the innovation's diffusion in several ways, the structure gives regularity and stability to human behavior in a social system, and the structure represents one type of information in that it decreases uncertainty (Rogers, 1983). The structure has some type such as formal structure, informal structure and communication structure among the units in a social system, and they can facilitate or impede the diffusion of innovations in the social system. (14)

CHAPTER III
RESEARCH METHODOLOGY

3.1 Research design

This study is a cross-sectional study. The dependent variable was the approaches of VHV to mobilize community participation in nutrition promotion for children under five years of age. The approaches of VHV was asked on four process of community participation activities include nutritional problem identification, planning to solve problem, implementation and evaluation. The approaches were also intend to find the pattern of activities that VHV had done such as proactive, reactive, inner initiated, outer initiated, formal, informal, individual, group, participative and non-participative in nutritional promotion for children under five years of age. The tendency of relationship between these pattern of VHV's approaches and socio-demographic factors, psychosocial factors of VHV and characteristics of community in VHV's responsible cluster were also described.

The independent variables were socio-demographic factors, psychosocial factors of VHV and community characteristics of VHV's responsible cluster in nutrition promotion for children under five years of age.

3.2 Study population

The target population in this study was the VHV who had registered as village health volunteer, carried out primary health care responsibility, include work in nutrition promotion activity for children under five years of age and residence in Wang Nam Yen district, Sakeo province.

3.3 Place of study

Wang Nam Yen district in Sakeo Province was the place of study. Sakeo province is located in the upper part of eastern in Thailand, on the borders of Cambodia, and where is constituted by seven district (Amphur). The Wang Nam Yen district is one of district in Sakeo, is constituted by four tambons with the population approximately 50,939 people and 783 VHVs. This district had been purposively chosen because the district had a background for community participation activities in nutrition promotion for children under five years of age by VHV. And as there was never study regarding with the VHV's approaches to mobilize community participation in nutrition promotion for children under five years of age.

Table 1 Tambon and number of village, population, household, children under five and VHV in Wang Nam Yen district, Sakeo province

Tambon in Wang Nam Yen district	Klong Hin Poon	Thung Maha Charoen	Ta Lang Nai	Wang Nam Yen	Total
No. of village	15	22	15	18	70
No. of population	9,399	16,334	11,050	14,156	50,939
No. of household	2,158	3,522	2,290	3,770	11,740
No. of children under 5	403	853	453	465	2,184
(proportion)	(18%)	(39%)	(21%)	(22%)	(100%)
No. of VHV	120	200	250	213	783

3.4 Sample size

$$n = \frac{Z^2_{a/2} P(1-P)}{d^2}$$

$n =$ n = the desirable calculated sample size

$Z^2_{a/2} =$ Z = level at 0.05 significance = 1.96

P = Proportion of people participation= 0.214

d = degree of accuracy desired setting at 0.05

$$n = \frac{(1.96)^2 (0.214)(1 - 0.214)}{0.05^2}$$

= 258.5 260

3.5 Sampling frame

Wang Nam Yen district has four tambons. From these four tambons, 260 VHVs were selected randomly. However, it had difference proportion of children under five years of age in among tambons. Therefore, the number of sample from each Tambon was calculated by multiplication the proportion of number children under five of years in the district and total number of VHV in own Tambon. Thus, the sample in this study was selected 47 VHVs from Klong Hin Poon, 54 VHVs from Ta Lang Nai, 101 VHVs from Thun Maha Charoen, and 58 VHVs from Wang Nam Yen, randomly. Sampling technique has been shown diagrammatically as follows.

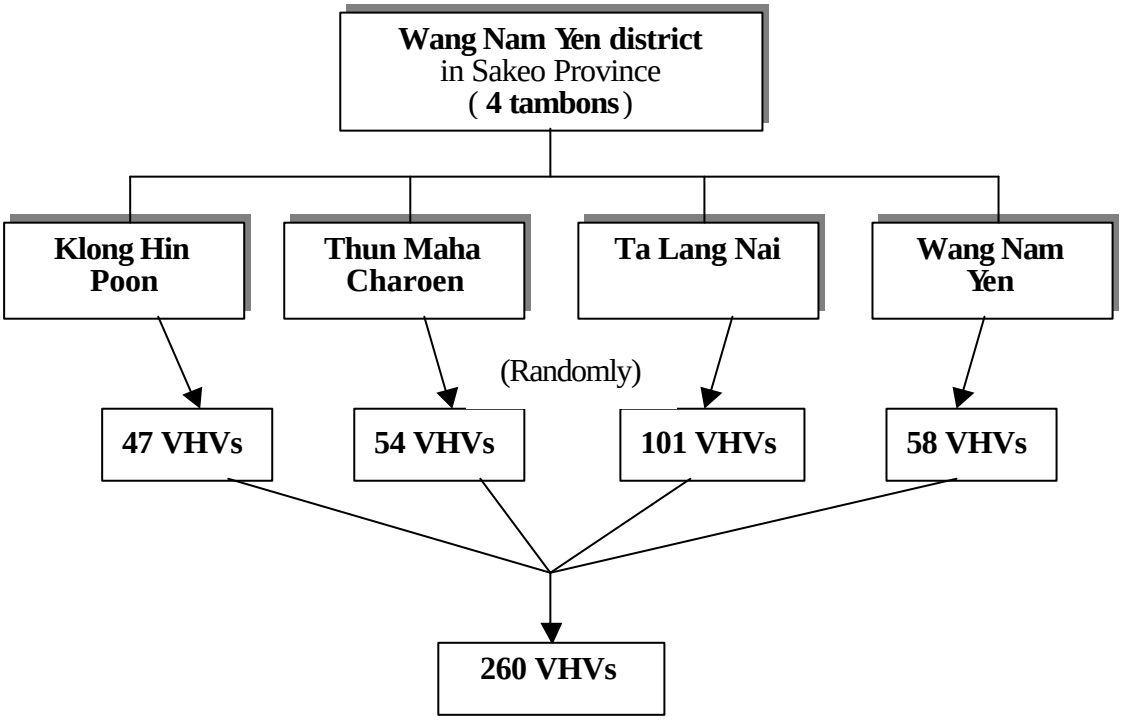


Figure 2 : Diagrammatic view of Sampling

3.6 Research instruments

Data were collected by self-administered questionnaire designated by researcher. The contents of questionnaires were based on previous similar research conducted by other researchers. Almost all of the questions in the questions in the questionnaire were closed ended and some were open-ended. Initially questionnaires were prepared in English and were later translated into Thai language.

3.7 Reliability and Validity

Reliability and validity of questionnaire was content-validated by the advisory committee in order to correct the content and variables related.

The questionnaire composed of two parts as follows.

Part I : included the questions concerning with Village Health Volunteer Personal characteristics, including:

(a) Socio-demographic factors, such as age, gender, marital status, education, occupation, household monthly income and residence years in the village.

(b) Psychosocial factors, such as type of Village Health Volunteer recruitment, period of volunteer, existing active VHV in the village, incentive, Village Health Volunteer refresher training, social support to Village Health Volunteer work and experience of nutritional promotion activity.

The questions of Part I included also concerning with Community characteristics of VHV's responsible cluster, such as major occupation of families and mothers of children under five years of age and their economic status, the number, trend of nutritional condition and common sickness of new born baby and children under five years of age in last year, and nutritional information source of the families.

Part II : included the questions concerning with the performance and pattern of VHV approaches to mobilize community participation in nutrition promotion for children under five years of age in last year.

(a) Approaches of VHV to mobilize community participation in nutrition promotion for children five of age: The respondents were interviewed 26 activities statements as questions for four process of community participation activities such as **nutritional problem identification**, **planning** of activities, **implementation** of plan and **evaluation** of activities. And, the questions were designed to describe type of VHV's approach such as **Proactive, Reactive**, **Inner-initiated**, **Outer-initiated**, **Formal**, **Informal**, **Individual**, **Group**, **Participative** and **Non-participative**. Therefore, the respondents answered that they applied to their activities in nutrition promotion, the applicable activity was given " " as "1" score and not applicable activity was kept blank as "0" score. Then, total score of each process was dealt as VHV work results in nutrition promotion, last year, and was dealt to investigate the type of approach.

For the four process of participatory activity, the questions were used activities statements in questioners as follows:

(1) Activities on **Nutritional problem identification** were used17 statements such as: 1), 2), 3), 7), 8), 9), 10), 11), 12), 17), 20), 21), 22), 23), 24), 25) and 26).

(2) Activities on **Planning** of nutrition promotion activity were used 15 statements such as: 1), 3), 7), 8), 9), 10), 12), 17), 18), 21), 22), 23), 24), 25) and 26).

(3) Activities on **Implementation** of Nutrition promotion activity plan were used 26 statements between 1) - 26)

(4) Activities on **Evaluation** of Nutrition promotion were used statements such as: 1), 2), 3), 7), 8), 9), 10), 11), 12), 18), 20), 21), 22), 23), 24), 25) and 26).

For the type of approaches, the questions were used as follows:

Proactive was used 15 statements such as: 1), 2), 4), 7), 11), 12), 15), 16), 18), 20), 22), 23), 24), 25) and 26). This approach indicated the activities on preventive future problem cases or before any happen.

Reactive was used 11 statements such as: 3), 5), 6), 8), 9), 10), 13), 14), 17), 19) and 21). This approach indicated the activities that focused on limiting or reducing problem after a problem or something had happened.

Inner-initiated was used 17 statements such as: 2), 4), 5), 6), 7), 11), 12), 14), 15), 16), 18), 20), 22), 23), 24), 25) and 26). This approach indicated that the activities focused on promoting local efforts to solve a health problem.

Outer-initiated was used 6 statements such as: 8), 9), 10), 17), 19) and 21). This approach indicated that the activities focused on channeling outside resources to do.

Formal was used 19 statements such as: 2), 3), 5), 7), 8), 10), 11), 12), 13), 15), 16), 17), 18), 19), 21), 22), 23), 24) and 25). This approach indicated that the activities are organized people by VHV.

Informal was used 7 statements such as: 1), 4), 6), 9), 14), 20) and 26). This approach indicated that non-organized activities.

Individual was used 10 statements such as: 2), 3), 4), 6), 11), 13), 14), 20), 25) and 26). This approach indicated that VHV applied the activities to people individually.

Group was used 9 statements such as: 5), 7), 12), 15), 16), 18), 22), 23) and 24). This approach indicated that VHV applied the activities to people group in community.

Participative was used 15 statements as: 5), 7), 8), 9), 11), 12), 15), 16), 17), 20), 21), 23), 24), 25) and 26). This approach indicated that VHV has involved people in community to the activities.

Non-participative was used 3 statements as: 10), 17) and 19). This approach indicated that VHV has not involved people in community to the activities.

For description of pattern of their approaches, it was categorized into two groups, on the basis of total activities score of the four processes on participatory activities that was greater than 60% or below 60% was recorded as "high" and "low" as follows.

1. Proactive activities numbering 45 statements range 0-45 scores

Score between	27-45 scores	High
Score between	0-26 scores	Low

2. Reactive activities numbering 27 statements range 0-27 scores.

Score between	16-27scores	High
Score between	0-15 scores	Low

3. Inner-initiated activities numbering 47 statements range 0-47 scores.

Score between	28-47 scores	High
Score between	0-27scores	Low

4. Outer-initiated activities numbering 19 statements range 0-19 scores.

Score between	12-19 scores	High
Score between	0-11 scores	Low

5. Formal activities numbering 53 statements range 0-53 scores.

Score between	32-53 scores	High
Score between	0-31 scores	Low

6. Informal activities numbering 18 statements range 0-18 scores.

Score between	11-18 scores	High
Score between	0-10 scores	Low

7. Individual activities numbering 28 statements range 0-28 scores.

Score between	17-28 scores	High
Score between	0-16 scores	Low

8. Group activities numbering 19 statements range 0-19 scores.

Score between	12-19 scores	High
Score between	0-11 scores	Low

9. Participative activities numbering 49 statements range 0-49 scores.

Score between	30-49 scores	High
Score between	0-29 scores	Low

10. Non-participative activities numbering 7 statements range 0-7 scores.

Score between	5-7 scores	High
Score between	0-4 scores	Low

3.8 Data collection

After completion of the operational questionnaire, and have approved by thesis advisory committee, the researcher requested to have cooperation and assistance from M.P.H.M office. They sent an official letter indicating the objective of this study to Provincial Chief Medical Officer and Wang Nam Yen district director of Sakeo province to grant permission. The coordinator was recruited one nurse from Wang Nam Yen district hospital and trained to use the questionnaires. After that researcher and the coordinator organized respondents who were selected by randomly. Then, the questionnaire were distributed them, and the data were collected through self-administrated during 22 to 31, January in 2004.

3.9 Data analysis

3.9.1 Data Entry

This was done after checking the completeness, missing value, and coding of the questionnaires, and was analyzed by using Microsoft ACCESS 2000 and Statistical software Minitab for Windows program.

3.9.2 Data Processing

In order to obtain the research objectives, the data was sorted and grouped, according to the following headings:

1. The number and percent distribution of VHV by personal characteristics i.e., socio-demographic factors and psychosocial factors of VHV and by community characteristics in VHV's responsible cluster were tabulated

2. The number and percent distribution of limiting factors on VHV such as number of existing active VHV in the village, incentives, refreshment training, social support and experience of nutritional promotion activity were described.

3. The data were used cross tabulation to describe the pattern of VHV's approaches to mobilize community participation in nutrition promotion by socio-demographic factors, psychosocial factors and characteristics of community.

CHAPTER IV
RESERCH RESULTS

This research was to study the approaches of Village Health Volunteer (VHV) for mobilization of community participation in nutrition promotion of children under five years of age in Wang Nam Yeng District, Sakeo Province. A total of 260 VHV were given a self-administered questionnaire.

The results were divided into four parts as follows:

Part 1: Identification of socio-demographic factors of VHV

Part 2: Identification of psycho-social factors of VHV

Part 3: Identification of community characteristics in VHV's responsible cluster by VHV's opinion

Part 4: Identification of performance and approaches of VHV to mobilize community participation in nutrition promotion for children under five years of age

Part 5: Description of the approaches pattern of VHV to mobilize community participation in nutrition promotion for children under five years of age by the socio-demographic factors of VHV, by psycho-social factors and by characteristics of community in VHV's responsible cluster.

Part 1 Identification of socio-demographic factors of Village Health Volunteer

Socio-demographic factors of VHV were identified by age, gender, marital status, background of education, occupation, member of family and children and monthly income of VHV. The distribution of these characteristics presented in table 2. Majority of VHV were concentrated in 30 to 39 years old and older age groups. There was only small fraction in under 30 years old group. Female VHV were approximately two times more than male. Most of them were married (95%). Two-third attained only primary school education and one-forth at secondary education.

There was only one VHV that attained graduate level. Main occupations of VHV were farmer and daily wage labourer, which comprised of 75.4% and 6.5% respectively, 8.5% had own private shop and cow farm. Most (82.3%) of the VHV had at least 1 to 3 children in their family and 13.5% had 4 to 6 children. The household monthly income average ranges from 500 Baht to 30,000 Baht. Most (68.5%) of them were less than 5,000 Baht. The range from 5,000 Baht to 9,999 Baht was 21.5%, only 10 % for more than 10,000 Baht, and the average was 4,264 Baht among VHVs. The period of residence in VHV's responsible village, almost of the VHV had been lived more than 10 years, half (45.8%) of the VHV had been lived since last two to three decade ago.

Table 2 Number and percentage distribution of VHV by Socio-demographic factors in last year

Socio-demographic Profiles	Number (N = 260)	Percent (%)
Age		
20 - 29	28	10.8
30 - 39	98	37.7
40 - 49	73	28.1
50	61	23.5
(Mean =41.5, Median = 40, S.D.=10.9, Max =74, Min =20)		
Gender		
Male	74	28.5
Female	186	71.5
Marital Status		
Single	6	2.3
Married	247	95.0
Widow/Divorce	7	2.7
Highest education attainment		
Primary school	172	66.2
Secondary school	66	25.4
High school/Vocational training	21	8.1
Graduate and above graduate	1	0.4
Main Occupation		
Farmer/plantation	196	75.4
Private shop owner/ cow farm owner	22	8.5
Daily wage labourer/vender	17	6.5
Business firm/ private sector employee	12	4.7
Housewife	11	4.2
Government official	2	0.8

Table 2 Number and percentage distribution of VHV by Socio-demographic factors in last year. (cont.)

Socio-demographic Profiles	Number (N = 260)	Percent (%)
Number of Family member		
≦4	128	49.2
More than 4	132	50.8
(Mean =4.8, Median = 4.7, S.D.=1.3, Max =9, Min =2)		
Number of Children in VHV's family		
No have	9	3.5
1 to 3	214	82.3
4 to 6	35	13.5
More than 7	2	0.8
(Mean =2.3, Median = 2, S.D.= 1.2, Max =7, Min =0)		
Household monthly income average (baht)		
<5,000	178	68.5
5,000-9,999	56	21.5
10,000	26	10.0
(Mean = 4,264, Median =3,000, SD = 3,764, Max = 30,000, Min = 500) **Baht**		
Period of residence in VHV's responsible village (years)		
10	27	10.4
11-20	93	35.8
21-30	119	45.8
31	21	8.1
(Mean = 21.4, Median = 23, SD = 7.8, Max =2, Min =40)		

Part 2 Identification of psychosocial factors of Village Health Volunteer

The psycho-social factors of VHV were identified by type of recruitment, period of VHV work, existing active VHV in the village, type of incentive, refreshment training attainment, social support to VHV work and experience on nutrition promotion of children under five years of age.

2.1 Type of recruitment, period of work, existing active VHV in the village and type of incentive of Village Health Volunteer

Type of recruitment, period of VHV work, existing active VHV in the village, type of incentive and work experience on nutrition promotion presented in

table 3. Most (77.6%) of VHV were self-volunteered, and only 10.4% of them were nominated by the villagers. Half (53.5%) of VHV had the period for VHV work less than 5 years and the average was 7 years. Half (46.3%) of the VHV reported that there were less than 10 colleagues. Highest (91.9%) of benefit for VHV work was free medical care, second (71.5%) was the self-satisfaction for being useful resource for their people and third (35.8%) was social recognition. Bi-monthly perdiem at meeting was only 6.5% of VHV as their benefit of VHV work.

Table 3 Number and percentage distribution of VHV by psychosocial factors

Characteristics	Number (n = 260)	Percent (%)
Type of recruitment		
Self-volunteered	202	77.7
Nominated by the villagers	27	10.4
Selected by health personnel	12	4.6
Selected by village headman	16	6.2
Transferred by parent/relative	3	1.2
Period of VHV work (years)		
5	139	53.5
6-10	70	26.9
11-15	27	10.4
16-20	20	7.7
21	4	1.5
(Mean = 7.0, Median = 5, SD = 5.5, Max = 27, Min = 1)		
Number of active VHV colleague in the village		
10	120	46.2
11-15	97	37.3
16-20	33	12.7
More than 21	9	3.4
Don't know	1	0.4
(Mean = 11.5, Median = 11, SD = 4.1, Max = 21, Min = 3)		
Type of incentives*		
Free medical care	239	91.9
Self-satisfaction for being useful resource	186	71.5
Social recognition	92	35.8
Certificate of appreciation	49	18.9
Bi-monthly perdiem received at meeting	17	6.5

* Multiple responses

2.2 Refresher training attainment of Village Health Volunteer

The refresher training attainment of VHV showed in table 4. In this study, it was found that among 260 VHVs, almost all of VHV (95.4%) had reported that they had refresher training attainment for their activities during last year. Most (75.4%) of VHV reported that they had received refresher training from 1 to 5 times and the rest were to receive 6 to more than 10 times. Trainers were mainly District Hospital Staffs (53.2%) followed by Health Center Staffs (36.0%). Topic was mainly related disease prevention, Drug addiction (60%), DHF (53.1%) and AIDS (43.1%) were the most frequent topics while interesting enough nutrition were the least frequent topics (5%).

Table 4 Number and percentage distribution of VHV by refresher training

Characteristics	Number (n = 260)	Percent (%)
Refresher training attainment		
Yes	248	95.4
No	12	4.6
Times of refresher training attainment**		
1 to 5 times	187	75.4
6 to 10 times	58	23.4
11 and above	3	1.2
(Mean = 3.6, Median = 3, SD = 2.3, Max =20, Min =1)		
Trainers*		
Chief of Health Center	134	16.0
Staffs from Health Center	167	20.0
Staffs from District Hospital	445	53.2
Staffs from Provincial Health Office	68	8.1
Non Governmental Organization	22	2.6

*Multiple responses ** Exclude no training

Table 4 Number and percentage distribution of VHV by refresher training.(cont.)

Characteristics	Number (n = 260)	Percent (%)
Topic of training attainment*		
Drug addiction prevention	156	60.0
Dengue Hemorrhage Fever (DHF)	138	53.1
AIDS	112	43.1
Exercise	90	34.6
Herbal	45	17.3
Control mosquito controlling	33	12.7
Heart disease and Diabetes	21	8.1
30 Baht program	18	6.9
Malnutrition	13	5.0
Others (Safety food, First aid, Blood pressure, Communicable disease etc)	135	51.9

2.3 Social supports to VHV work on nutrition promotion activities of children under five years of age

The social supports to VHV work on nutrition promotion activities of children under five years of age were identified by encouragement, money, material or equipment, manpower and information. The distributions of these supports presented in table 5. Surprisingly, VHV received encouragement for their work from lay people more than the official part. Encouragement support were mostly (80%) came from their family members followed by religious priests or neighbors (71.5%). Mothers and caretakers of children appreciated their work at the third place (67.3%). Health personnel, School teachers, and Local organization, Village headman, NGO were approximately equal proportions (42.3-45.8%). However, in terms of financial support the latter group (Local organization, Village headman and NGO) were the major contributors (48.5%), the others had only minor sharing, which might due to the availability of village fund for health program was very high (96.9%). The source of

village fund was also mainly from Local organization and governmental office i.e., Health Center and Ministry of Public Health of equal distribution (24.6%). Almost all of VHV (94.6%) utilized the Village Fund for nutrition promotion activities including buying and preparing supplementary food and milk. VHV received materials and equipment supports from official organization and local organization more than from lay people, and the contribution of this part was not very high. On the contrary, manpower supports were received from unofficial sources including mothers and caretakers, priests and neighbors and family of VHV (34.6%, 33.5%, and 24.6% respectively) more than the official sources. Information supports were concentrated to receive from the official organization.

In this study, researcher identified the effect of VHV by the social support to VHV work. Half (53.9%) of the VHV reported the effect on feeling of VHV's work worthy, one third (33.1%) were on giving VHV more strength. The effect on improving VHV work was 17.8% and on making VHV work easily was 16.6% only among VHVs.

Table 5 Social support (encouragement, money, material/equipment, manpower, information) to VHV work for nutrition promotion of children under 5

Characteristics	Number (n = 260)	Percent (%)
Encouragement*		
Family members of VHV	208	80.0
Religious priest / Neighbors	186	71.5
Mothers/caretakers of children under 5	175	67.3
Health centre staff	119	45.8
Local organization/ Village headman/ NGO	118	45.4
Pre-school/ School teachers	110	42.3
- Influence by encouragement support*		
Cooperation	188	72.3
Recognition	86	33.1
Admiration	39	15.0

* Multiple responses

Table 5 Social support (encouragement, money, material/equipment, manpower, information) to VHV work for nutrition promotion of children under 5. (cont.)

Characteristics	Number (n = 260)	Percent (%)
Money*		
Local organization/ Village headman/ NGO	126	48.5
Health centre staff	46	17.7
Mothers/caretakers of children under 5	40	15.4
Family members of VHV	31	11.9
Religious priest / Neighbors	25	9.6
Pre-school/ School teachers	9	3.5
- Village fund (VF) for health program		
Available	252	96.9
Not available	8	3.1
- Source of VF*		
TAO (Tambon administration organization)	66	25.4
Health center	64	24.6
Contribution from household	49	18.8
Community group saving	46	17.7
Others (MoPH = 49, Fund of medicine = 4, CPHCC = 2, Housewife group = 1, Villagers = 1)	64	24.6
- Utilization of VF for nutrition promotion activities		
Utilized	246	94.6
Never used	14	5.4
Utilized to children under 5*		
- make and supply porridge or food	125	50.8
- buy and supply cow's milk or soy milk	118	48.0
- buy and supply porridge or food	27	11.0
- make and supply soy milk	10	4.7

* Multiple responses

Table 5 Social support (encouragement, money, material/equipment, manpower, information) to VHV work for nutrition promotion of children under 5. (cont.)

Characteristics	Number (n = 260)	Percent (%)
Material/Equipment *		
Health centre staff	109	41.9
Local organization/ Village headman/ NGO	103	39.6
Pre-school/ School teachers	82	31.5
Religious priest / Neighbors	56	21.5
Mothers/caretakers of children under 5	29	11.2
Family members of VHV	25	9.6
Manpower *		
Mothers/caretakers of children under 5	90	34.6
Religious priest / Neighbors	87	33.5
Family members of VHV	64	24.6
Local organization/ Village headman/ NGO	54	20.8
Pre-school/ School teachers	36	13.9
Health centre staff	28	10.8
Information *		
Local organization/ Village headman/ NGO	204	78.5
Health centre staff	141	54.2
Pre-school/ School teachers	100	38.5
Religious priest / Neighbors	87	33.5
Family members of VHV	52	20.0
Mothers/caretakers of children under 5	34	13.1
Effect on VHV's work*		
Feeling of VHV work worthiness	140	53.9
Give VHV more strength	86	33.1
Improve VHV work	46	17.7
Make VHV work easily	43	16.5
Make VHV work harder	15	5.8
Others	3	1.2

* Multiple responses

2.4 Working experience of Village Health Volunteer on nutrition promotion of children under five years of age

The working experience of VHV on nutrition promotion of children under five years was presented in table 6. Two third (66.2%) of the VHV had been started more than two years ago, one quarter (26.5%) were since last year, and minority (6.9%) were just started currently.

Table 6 Number and percentage distribution of VHV by started time of nutrition promotion activity for children under 5

Started time	Number (n =260)	Percent (%)
Currently (2004)	18	6.9
Last year (2003)	69	26.5
More than 2 years (before 2002)	172	66.2
No/Never	1	0.4
(Mean = 5.0, Median = 4, SD = 4.3, Max =25)		

Part 3 Identification of characteristics of community in Village Health Volunteer's responsible cluster

Characteristics of community in VHV's responsible cluster was identified by major occupation of families and mothers of children under five years of age, economic status of the families, newborn babies and children under five years of age and common sickness of them in last year and nutritional information source among the families based on VHV's report.

3.1 Major occupation of families and mothers of children under five years of age and economic characteristics of VHV's responsible cluster

Major occupation of families and mothers of children under five years of age and economic status of the families in VHV's responsible cluster presented in table 7. Most of VHV reported that the major occupation of families and mothers were farmer or plantation (88.1%, 72.7%). Economic status that most of families were considered well-off (72.7%) and one quarter (26.2%) for poor by VHV report.

Table 7 Major occupation of families and mothers and economic status of families in VHV's responsible cluster by VHV recognition

Characteristics	Number (n = 260)	Percent (%)
Families' major occupation		
Farmer/plantation	229	88.1
Daily wage labourer	29	11.2
Factory worker	1	0.4
Others (cow farm)	1	0.4
Mothers' major occupation		
Farmer/plantation	189	72.7
Housewife	32	12.3
Daily wage labourer	31	11.9
Factory worker	6	2.3
Others (cow farm)	2	0.8
Families' average economic status		
Most of families are considered poor	68	26.2
Most of families are considered average	3	1.2
Most of families are considered well-off	189	72.7

3.2 Characteristics of newborn babies in Village Health Volunteer's responsible cluster in last year

Characteristics of newborn babies in VHV's responsible cluster in last year were to present into table 8. Two third (67.3%) of VHV reported that there were existed several newborn cases and one third (32.7%) of VHV reported no newborn in last year. About those newborn babies, most (78.9%) of the VHV reported no low birth weight baby, but, 21.1% of VHV reported several newborn of low birth weight. In term of breast-fed to newborn baby, most (84.8%) of mothers had used breast-fed, and three quarter (76.6%) of mothers had used breast –fed exclusively 6 months.

Table 8 Newborn babies in last year by VHV's report

Characteristics	Number (n = 260)	Percent (%)
Newborn case (Total n. = 402*)		
Existed (several cases)	175	67.3
None/No response	85	32.3
Low birth weight of newborn **		
None	138	78.9
Existed (several cases)	37	21.1
Breast-feed to newborn babies, **		
Brest-fed	341	84.8
no breast-fed	61	15.2
Exclusive breast-fed (6months) newborn *, **		
Exclusive	308	76.6
not exclusive	94	23.4

* Based on total number of newborn case by VHV report

** Exclude 85 respondents with no newborn baby

3.3 Characteristics of children under five years of age in Village Health Volunteer's cluster

The characteristics of children under five years of age of VHV's responsible cluster were presented into table 9. Half (52.3%) of the VHV reported that at least one to four children under five years of age in their responsible cluster, more than five were approximately 40%, nineteen VHV were reported no and five VHV were not known. As for those children, most (75%) of the VHV reported no malnourished, however, 15.4% of the VHV reported that they had at least one to three malnourished in their cluster. While, most (85.4%) of the VHV reported no over-weight for age, only 5.4% of the VHV reported that noticed over weight for age among children under five years of age in their cluster. About common sickness, more than half (58.5%) of the VHV reported upper acute respiratory infection, and one quarter (26.9%) of the VHV reported diarrhea. While, nutrition related sickness such as malnutrition, anaemia, worm/parasites were reported less.

Table 9 Characteristics of newborn and of children under 5 belong VHV's cluster in last year by based on VHV report

Characteristics in last year	Number (n = 260)	Percent (%)
Number of Children under 5 (total n. = 1,101)**		
no children under 5	19	7.3
one to four	136	52.3
five to eight	74	28.5
more than nine	26	10.0
don't know	5	1.9
Case of malnourished children under 5**		
had	41	15.4
didn't have	195	75.0
didn't know	5	1.9
no children under 5 in VHV's cluster	19	7.3
Number of malnourished children under 5		
one to three	40	15.4
more than four	1	0.4
no malnourished	195	75.0
didn't know	5	1.9

* Multiple responses ** Exclude 19 persons with no children under 5

Table 9 Characteristics of newborn and of children under 5 belong VHV's cluster in last year by based on VHV report. (cont.)

Characteristics in last year	Number (n = 260)	Percent (%)
Case of over-weight for age of children under 5**		
had	14	5.4
didn't have	222	85.4
didn't know	5	1.9
no children under 5 in VHV's cluster	19	7.3
Number of over-weight for age of children under 5**		
One	10	3.9
Two	3	1.2
Five	1	0.4
not over weight	222	85.4
Common sickness*		
Acute Upper Respiratory Infection	152	58.5
Diarrhea	70	26.9
Malnutrition	20	7.7
Worm/ Parasites	10	3.9
Anemia	4	1.5
Others	24	9.2
No sickness	30	11.5

* Multiple responses

** Exclude 19 persons with no children under 5

Part 4 Identification of Village Health Volunteer's approaches for nutrition promotion for the children under five years in the community

4.1 Performance of VHV on nutrition promotion activities includes problem identification, planning, implementation and evaluation in last year.

The questionnaire was designed to measure the VHV's performance in nutrition promotion activities for children under five years of age in their community during last year. The activities included identification of nutritional problem, planning, implementation and evaluation. The results were presented in table 10.

Most (70-80%) of VHV reported that they performed to initiate activities for nutritional problem identification, planning and implementation for nutrition promotion when they think it is necessary except for evaluation. The evaluation was initiated by only half (57.3%) of VHV.

The activities that VHV applied to identify the nutritional problems among children under five years included the followings, observing health status of children, checking growth curve of the children at home, reviewing heath record, growth and development chart of all children at CPHCC, discussing with the people at village meeting, receiving the advise from stakeholders and holding the mothers class about nutrition of children at CPHCC. In entirety, VHV's performance for problem identification was applied only 7-10 % of VHV.

With regard to planning, around half of the VHV performed by propose VHV's idea to health personnel and wait for their decision, review textbook on nutrition of young children, dialogue with people at village and organized nutritional promotion activities in the village together with their colleague. Other activities done for nutrition planning among VHV at less proportion (38-42%) were holding mothers class at CPHCC, followed the advise of health personal, review record of health of all children under five years at CPHCC and by home visiting and discussion with people at village meeting. The VHV performed with community people in planning, such as receive advice form stakeholders or from mother and/or family of children and hold meeting with them and chat with them in public place as market, that were applied by only one quarter (25-28%) of VHV.

Concerning implementation of nutrition promotion activities, majority (93.5%, 90.8%) of VHV had done by advise from hospital or health center staff and organize the nutritional activities with their colleague in the village. Most (80-90%) of VHV reported, they had done many activities for nutrition promotion under the their responsibility. But, in their report, receiving advise from stakeholders and discussion with stakeholders for their implementation activities were applied by only 45% and 66.7% of VHV. Therefore, it could be said the result that VHV performed at institutional place as CPHCC, under the their duty, and to follow in health personal or

colleague, they were not to perform community-oriented.

Regarding evaluation activities of nutrition promotion were more than half of VHV had done to observe health status of children under five years of age and checked growth curve of them by home visiting, and to review records of health, growth and development of infant and all children under five years of age at CPHCC, it was their basic duty for VHV work. And, half of VHV had done to assign the mother or family to take note and record of child growth by her or him self. These results showed that VHV had done just their responsibility and individual action in nutrition evaluation activities for children under five years of age.

Table 10 Performance of VHV on Nutrition Promotion for Children under five years of age

A: Nutritional problem identification, B: Nutrition promotion planning

C: Nutrition promotion implementation, D: Nutrition promotion evaluation

Activities of VHV	A	B	C	D
	n (%)	n (%)	n (%)	n (%)
1) **VHV initiated** when he or she think its necessary	187 (71.9%)	182 (70%)	202 (77.7%)	149 (57.3%)
2) **VHV observed** health status and checked growth curve of children under 5 at home visiting	48 (18.5%)		226 (89.9%)	150 (57.7%)
3) **reviewed** records of health, growth and development include birth weight of all children at CPHCC	44 (16.9%)	102 (39.2%)	224 (86.2%)	144 (55.4%)
4) **promoted** infant feeding to mothers and caretakers			219 (84.2%)	
5) **VHV and community people cooperated** to produce supplementary food for undernourished children under 5			229 (88.1%)	
6) **VHV provided** supplementary food to severely malnourished children under 5			217 (83.5%)	
7) **VHV dialogued with people** at village meeting	72 (27.7%)	128 (49.2%)	215 (82.7%)	93 (35.8%)
8) **VHV received** advise from stakeholders such as elderly people, headman of temple, monk in the village or preschool teachers	44 (16.9%)	71 (27.3%)	177 (45%)	74 (28.5%)

Table 10 Performance of VHV on Nutrition Promotion for Children under five years of age. (cont.)

A: Nutritional problem identification, B: Nutrition promotion planning

C: Nutrition promotion implementation, D: Nutrition promotion evaluation

Activities	A	B	C	D
	n (%)	n (%)	n (%)	n (%)
9) **VHV received** advise from mother and/ or family of children under 5	22 (8.5%)	72 (27.7%)	212 (81.5%)	81 (31.2%)
10) **VHV received** advise from hospital or health center staff	23 (8.8%)	106 (40.8%)	243 (93.5%)	106 (40.8%)
11) **VHV made regular home visiting** to observe and record the children health and nutritional status	42 (16.2%)		218 (83.8%)	125 (48.1%)
12) **VHV reviewed text book** related health care and nutrition of young children and carry out to the families and/or community	34 (13.1%)	134 (51.5%)	231 (88.8%)	76 (29.2%)
13) **VHV diagnosed** sick child under 5, and refer to health center or provided simple treatment or home care on time			218 (83.8%)	
14) **VHV educated** and motivated mother or family of nutritional problem children under 5 individually at home visiting			231 (88.8%)	
15) **VHV called** mothers or caretakers of children under 5 for growth check at CPHCC			233 (89.6%)	
16) **VHV called** community people, and organized meeting or demonstrated preparation of nutritional fortified and supplementary food			213 (81.9%)	
17) **VHV proposed** your idea to health personnel and wait for their decision-making		137 (52.7%)	199 (76.5%)	
18) **VHV and colleagues organized** nutritional promotion activity in the village	23 (8.8%)	127 (48.8%)	236 (90.8%)	79 (30.4%)
19) **VHV waited** for health personnel at Health centre to inform and assign activities			219 (84.2%)	
20) **VHV assigned** the mother or family to take note and record of child growth by her or him self	8 (3.1%)		209 (80.4%)	147 (56.3%)

Table 10 Performance of VHV on Nutrition Promotion for Children under five years of age. (cont.)

A: Nutritional problem identification, B: Nutrition promotion planning

C: Nutrition promotion implementation, D: Nutrition promotion evaluation

Activities	A n (%)	B n (%)	C n (%)	D n (%)
21) **VHV used** standard form or checklists from health centre	20 (7.7%)	63 (24.2%)	191 (73.5%)	128 (49.2%)
22) **VHV held mothers class** to discuss about nutrition of children under 5 at CPHCC	44 (16.9%)	108 (41.5%)	212 (81.5%)	84 (32.3%)
23) **VHV held meeting** with stakeholder such as elderly people, headman of temple, monk, school teacher	23 (8.8%)	69 (26.5%)	174 (66.7%)	47 (18.1%)
24) **VHV discussed with people** at village regular meeting	31 (11.9%)	92 (35.4%)	221 (85%)	66 (25.4%)
25) **VHV conducted personal discussion** with mothers or caretaker of children under 5 at CPHCC	28 (10.8%)	68 (26.2%)	225 (86.5%)	103 (39.6%)
26) **VHV chatted with mother or caretaker** of child under 5 and/ or community people at public place as market	20 (7.7%)	65 (25%)	218 (83.8%)	111 (42.7%)
Mean of performance (n= 260)	(14%)	(38.0%)	(83%)	(37%)

4.2 VHV's approaches to mobilize community participation in nutrition promotion for children under five years of age

The constituted activities statements in questionnaires were also designed to describe type and pattern of approaches that was used by VHV in nutrition promotion activities for children under five years of age.

4.2.1 Type and pattern of VHV's approaches on nutrition promotion activities in the community

It was investigated ten types and level of approaches i.e., proactive, reactive, inner-initiated outer-initiated, formal, informal, individual, group,

participative and non-participative approach. The number of approaches was sum up the practiced activities by VHV in each process included problem identification, planning, implementation and evaluation, then it was devised into two groups high and low which meant the pattern of their approaches. The result showed in table 11. The mean of each type of approach was less than half of total score among VHVs. Regarding the pattern of approaches, most (44.6%) of VHV performed high level of group approach, one third of VHV performed informally, individually and reactively. While proactive, inner-initiated, formal approaches for nutrition promotion were performed only 20-27% of VHV, and participative approach was much fewer (6.2%).

Table 11 Type and level of VHV's approach on nutrition promotion activities for children under five years of age in the community

Type of approach	Mean score	High n (%)	Low n (%)
Proactive	23.1	69(26.5)	191(73.5)
Reactive	13.8	87(33.5)	173(66.5)
Inner-initiated	23.0	52(20.0)	208(80.0)
Outer-initiated	8.4	28(10.8)	232(89.2)
Formal	26.3	54(20.8)	206(79.2)
Informal	9.0	84(32.3)	176(67.7)
Individual	14.9	83(31.9)	177(68.1)
Group	10.9	116(44.6)	144(55.4)
Participative	21.7	16 (6.2)	244(93.8)
Non-participative	4.0	97(37.3)	163(62.7)

4.2.2 Pattern of VHV's approaches in nutrition promotion activities for children under five years of age by their age

High and low of approach pattern that VHV practiced in their nutrition promotion activities for children under five years of age were tabulated by socio-demographic factors such as age, gender, educational background and

psychosocial factors such as type of recruitment, period of VHV work, frequency of refresher training attainment of VHV, and looked trend of VHV who practiced high level in each approaches.

The pattern of approaches by age group of VHV was presented in figure 3. The younger age group of VHV as 20-39 seemed to practice high level of proactive, inner-initiated, individual and group approach. Individual approach of 30-39 years group was one point five times higher than other age group (40.8%, 28.6%, 27.4%, 24.6%). Older age group as over 50 years of VHV seemed higher to practice any type of approaches except individual approach. 40-49 years group seemed lowest proactive, inner-initiated, formal and group approach among the age group of VHV.

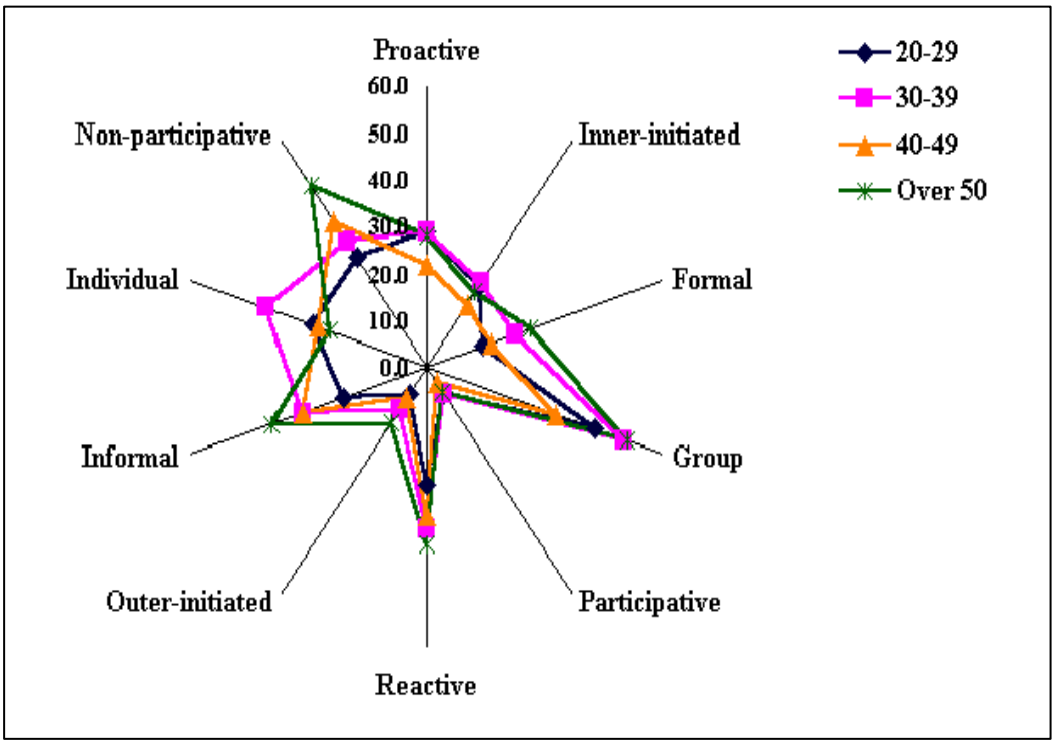


Figure 3 : Pattern of VHV's approaches by age

4.2.3 Pattern of VHV's approaches in nutrition promotion activities for children under five years of age by gender

The pattern of approaches by gender of VHV was presented in figure 4. Female VHV tended obviously to practice any approaches higher than male VHV except informal and non-participative approach. Especially, proactive, inner-initiated, formal, outer-initiated and individual approaches of female were twice higher than male.

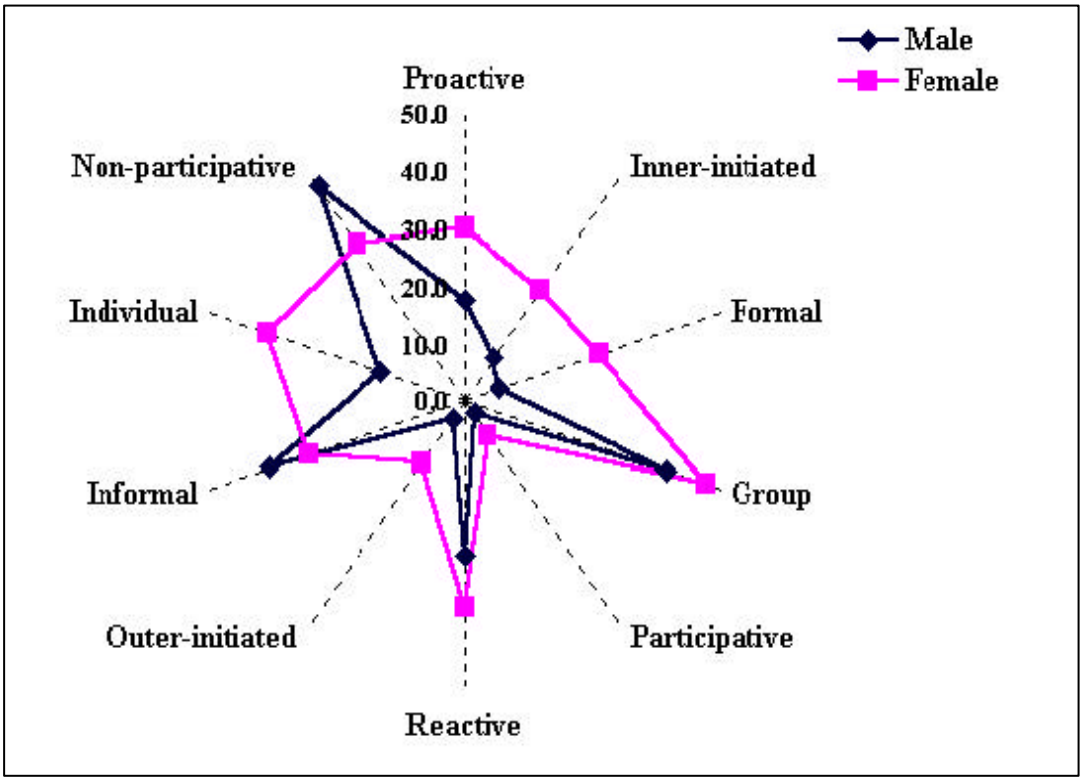


Figure 4 : Pattern of VHV's approaches by gender

4.2.4 Pattern of VHV's approaches in nutrition promotion activities for children under five years of age by educational background

The pattern of VHV's approaches by educational background was presented in figure 5. Primary school and secondary school level of VHV seemed to practice no much regardless any approaches except informal and individual approach and it was higher than more high education level. Whereas, high education VHV group as high school or vocational training attainment seemed to practice participative approach more than low education group.

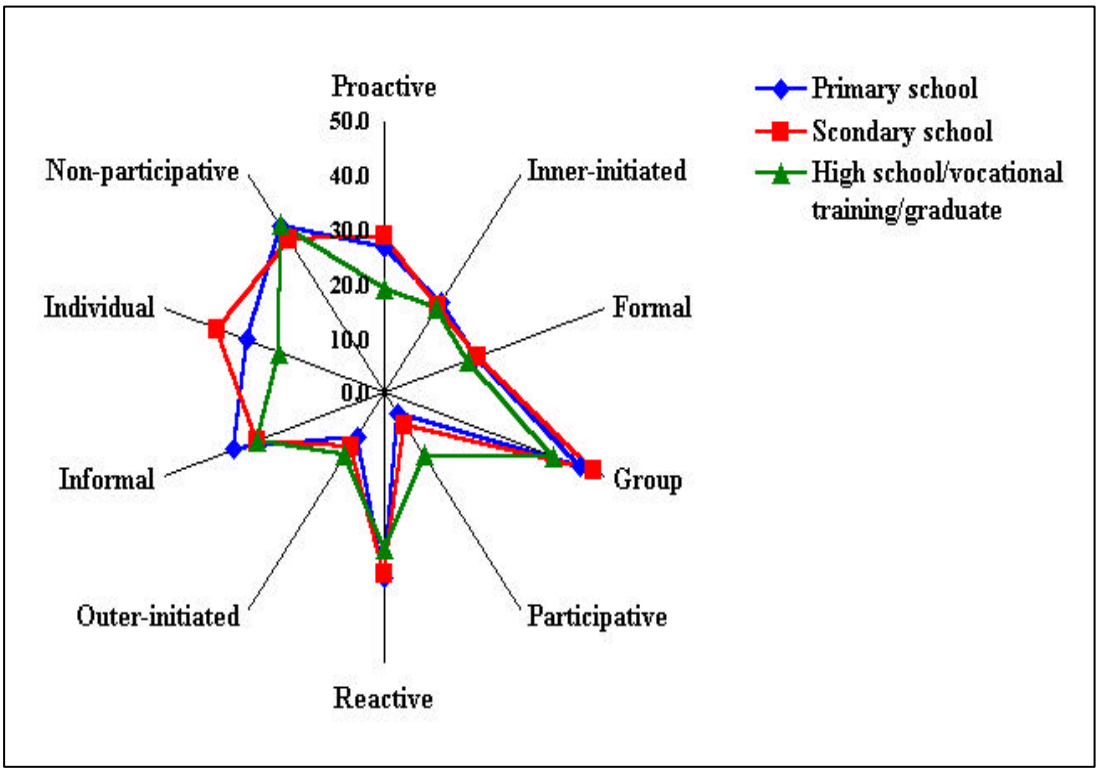


Figure 5 : Pattern of VHV's approaches by educational background

4.2.5 Pattern of VHV's approaches in nutrition promotion activities for children under five years of age by type of recruitment

The pattern of VHV's approaches by different type of recruitment for VHV work was presented in figure 6. VHV who took over their parent or relative seemed highest to practice any approaches, particularly, two third of them seemed to practice high level of proactive, group and individual approaches. As for pattern of reactive and informal approach, there were not much differed to practice among the VHV. The VHV who were nominated by villagers seemed that only 10-30% of them practiced high level of ten approaches, however, it was quite low than other recruitment VHV.

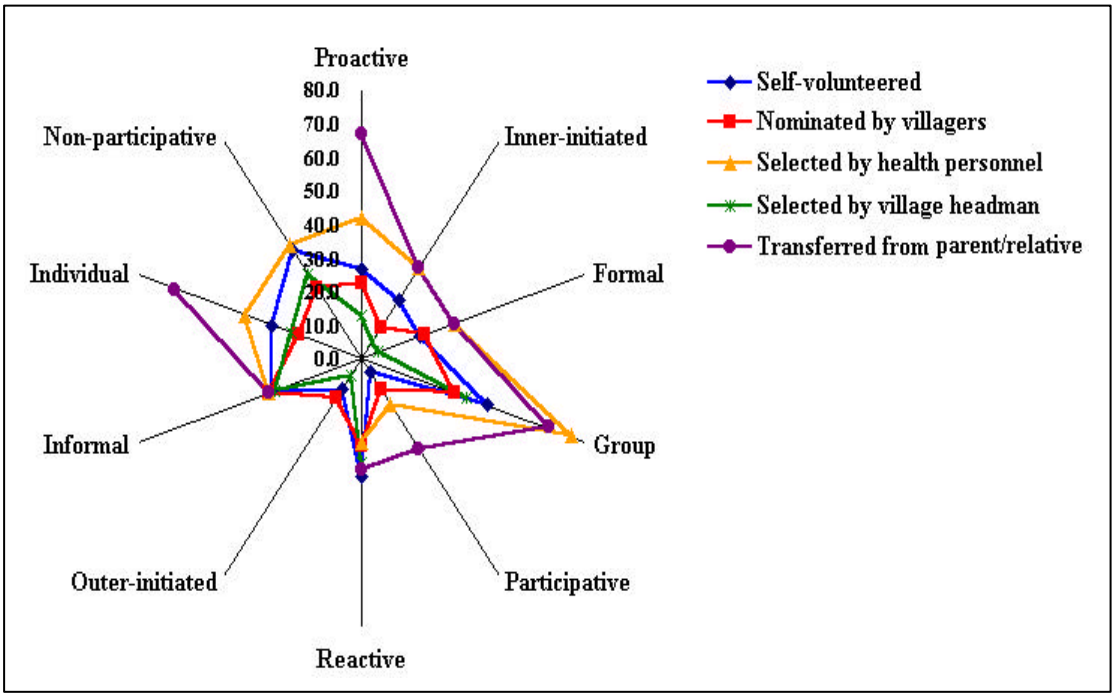


Figure 6 : Pattern of VHV's approaches by recruitment

4.2.6 Pattern of VHV's approaches in nutrition promotion activities for children under five years of age by period of VHV work

The pattern of VHV's approaches by period of VHV work was presented in figure 7. More than 5 years experience VHV seemed to practice any approaches higher than less experience. However, both of the VHV seemed that their group approach was high (40%) and participative and outer-initiated approach were low (3-10%).

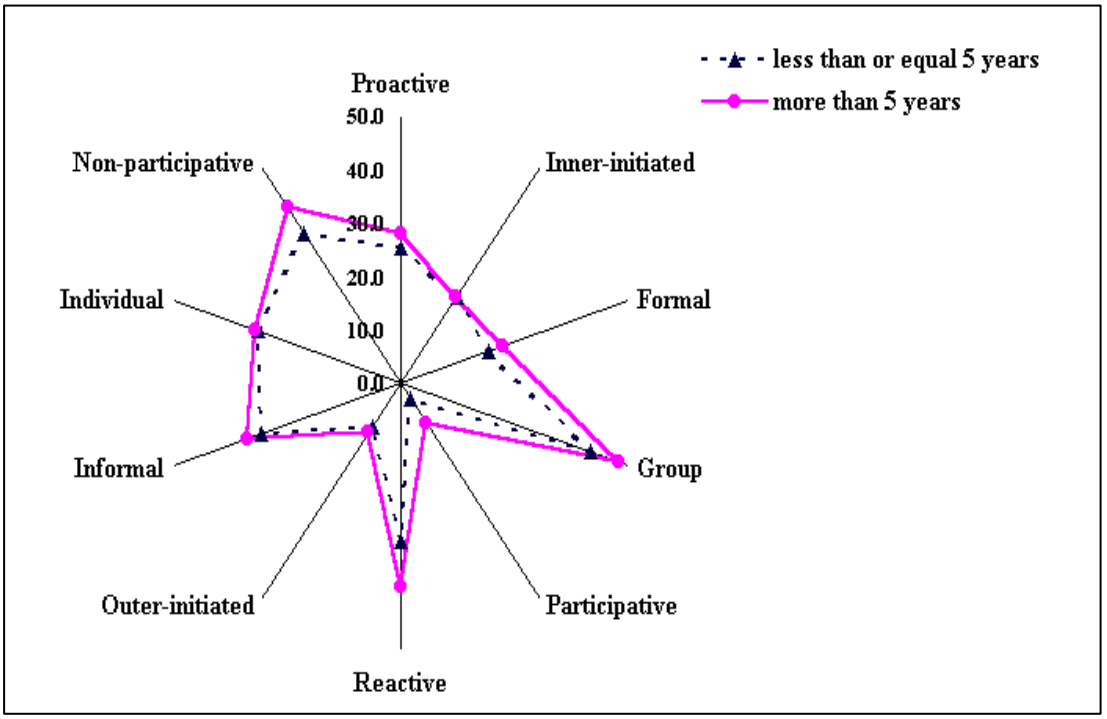


Figure 7 : Pattern of VHV's approaches by period of VHV work

4.2.7 Pattern of VHV's approaches in nutrition promotion activities for children under five years of age by frequency of refresher training attainment

The pattern of VHV's approaches by frequency of refresher training attainment was presented in figure 8. VHV who attained the training more than 5times seemed to practice any approaches (30-50%) higher than less attained VHV except group and informal approach, particularly their individual approach was twice higher than less attained VHV (49.2%, 26.7%). The pattern of participative and

outer-initiated approach was not regardless among VHVs and it was lower approach (5-13%) than other approaches.

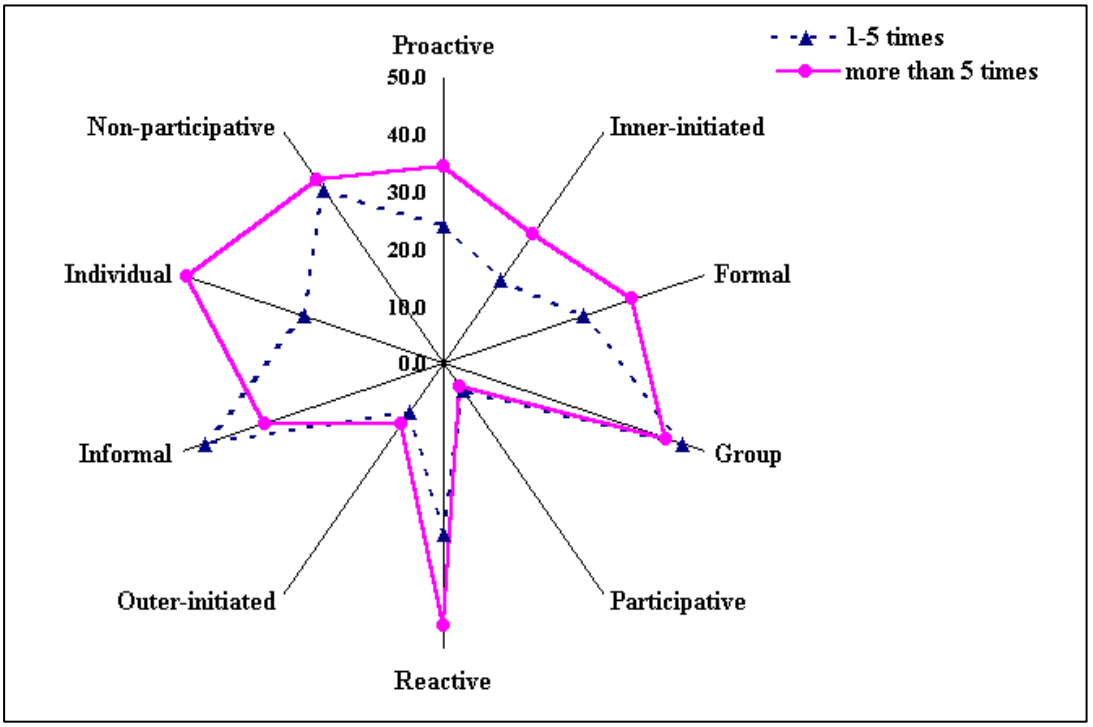


Figure 8 : Pattern of VHV's approaches by refresher training attainment

4.2.8 Pattern of VHV's approaches by other factors of psychosocial and community characteristics of VHV's responsible cluster

The pattern of VHV's approaches by other psychosocial factors of VHV includes the multiple responses of incentive, trainer of refresher training, social support and period of nutrition promotion activities showed table in Appendix-B.

Concerning incentive by high level of approaches were tended to practice in VHV who motivated by free medical care, social recognition and self-satisfaction. By social support to VHV such as encouragement, money, material or equipment, manpower and information from several sectors that they were not much differed proportion of high level of approach. However, highest social support was money and VHV's approach by support of money seemed to practice quite high

approach among VHVs as formal approach. The pattern of approaches by supporters to VHV work such as family member, health personnel, school teachers, mothers or care takers and village headman so on that was also almost equal proportion. If forced to compare, VHV's approaches by support of school teachers seemed quite low than support from others.

By trainers of refresher training that VHV who received the training from PHO and HC seemed to practice high level of any approach.

The pattern of VHV's approaches by started time of nutrition promotion activities in the VHV work, approximately one-quarter (27.5%, 27.3%) of VHV who started more than 1 year ago group practiced high-level any approaches as proactive, inner-initiated and formal approaches. VHV who started the activities currently that they seemed to practice reactive more than long experience VHV.

The pattern of VHV's approaches by major occupation and economic status average of families in VHV's responsible cluster that VHV in cluster of farmer and ordinary or well-off economic seemed to more practice any approach. However, the informal approach that there was not differed proportion of high level between ordinary /well-off economic and poor economic cluster. Concerning individual approach that it was seemed greater on VHV who reported daily wage labourer for major occupation and ordinary/well-off economic of cluster than reported farmer and poor for cluster.

CHAPTER V
DISCUSSION

This study was a cross-sectional descriptive study. Its main objective was to describe the approaches to mobilize community participation in nutrition promotion for children under five years of age among VHV include problem identification, planning of activities, implementation and evaluation of activities. And, it aimed to describe the pattern of their approaches by socio-demographic factors and psychosocial factors in Wang Nam Yen district, Sakeo Province, Thailand. This section was presented in four parts. At first part was identification of socio-demographic factors, and second part was identification of psychosocial factors of VHV. The third part was trend of VHV's approaches, and last part was pattern of their approaches by some factors of socio-demographic, psychosocial and community characteristics.

5.1 Socio-demographic factors of Village Health Volunteer

Mostly (89.3%) of VHV were in the age group of 30 years and above. There were only 10% younger than 30 years. The mean age was 41.5 years (SD = 10.9 years) and the age range of VHV was 20 to 74 years. In general comparing with previous studies in Thailand: Tin Tun Aung (22) and Khin Myitzu Han (23), the results of this study provided a little bit different from socio-demographic factor about the age group of subjects. Those previous studies found that there were only 5.8 % and 5.4 % of VHV of 20-29 years group. However, in this study, 10.8% of the VHV were 20-29 years.

Regarding the gender, proportion of the female (71.5%) was 3 times higher than male (28.5%). The previous studies also showed that female was higher than male such as 37.9 % for male and 62.1% for female (22) or 47.9% for male and 52.1% for female (23). From these results, female can be recruited as VHV respectably.

Especially, in nutrition promotion activities for children under five years of age, VHV had to contact and educate family member of children who are main child caretakers and female such as mothers or grandmother. Usually, mother is representative of health management in family members. Therefore, female VHV can be communicate female child-caretaker easily than male VHV and they can be approach with their own experience of child-care if she had been had childcare for her children.

Regarding educational background of VHV, majority (66.2%) of their latest school education was a primary school level, followed secondary school level (25.4%) and few (8.5%) of them were high school or vocational training or above it. In previous studies showed that majority 77.2% (22), 84% (24) were attained primary school education. Whereas in 2001 Pham Thi Nhuyen showed that 32.3% of VHV have high school education level, and primary level education was very few (29.4%).

In this study, main occupation of the majority of VHV and villagers that their main occupation were farmers, so that they are engaging in agriculture farming in the community base. Communication is essential VHV's community mobilization, which is a process in which participants create and shear information with one another in order to reach a mutual understanding. (13) Therefore, through their common occupation, they have own their network and living with interaction among the community such as agricultural meeting. This is considered high potential of expansion the health promotion or effective means.

With regard to household monthly income average of VHV, ranges were from 500 to 30,000 Baht, and the average is 4,264 Baht. Almost all of respondents (90%) had household monthly income less than 10,000 Baht, which was lower than average monthly total income per household (i.e., 13,418 Baht) (29). However, this amount seemed insufficient for enable to keep their livelihood through a year, because they were farmer, did not have regular income as monthly salary.

5.2 Psychosocial factors of Village Health Volunteer

Psychosocial factors of VHV were included type of recruitment, period of VHV work, incentive, refresher training attainment include topic, social support to VHV and work experience in nutrition promotion for children under five years of age.

5.2.1 Type of recruitment, period of VHV work and incentive of Village Health Volunteer

In this study, most (77.7%) of VHV were self-volunteered. Cohen's descried the government's PHC program in Thailand that the VHV were villagers, were selected by villagers and the village committee based a set of criteria. (17) However, this study found that only 10% of villagers recognized the VHV in their community. By comparing with previous studies. Tin Tun's study (2001) showed similar trend 47.1% for self-volunteered and 16.5% for nominated by the villagers (22), whereas Khin Myitzu Han showed in his study (2000) that the majority of recruitment of VHV was 54.3% for selected by health personal, self-volunteered (10.7%) and nominated by villagers (12.1%) were quite low. Therefore, it can say that actually the VHV recruitment were not followed the definition of VHV in national PHC program and it may say that the VHV in this study had high voluntary motivation for community health improvement or they have expected and gain some benefit from VHV work to their own life such as some kind of incentive of VHV work.

Regarding the period of VHV work experience in this study, the majority of VHV were 1 to 5years (53.5%) and 26.9% were 6 to 10 years. The mean of period of VHV work experience was 6.97 years (SD = 4.08 years) and their range of experience period was 1 to 27 years. By comparing with previous studies 48.5% for 1 to 5 years experienced and 28.6% for 6 to 10 years experienced (22). However, in Khin Myitzu Han showed that the majority (55.3%) of VHV work experience of VHV was more than 10 years, 1 to 5 years was 31. 4% and 6 to 10 years was 12.9 % (23). Viewed in this light, VHV in this study could be regarded as little of experience in

VHV work. However, by researcher's observation and informal interview with the VHV, they believed that the reliance or confidence from the villagers could obtain only after three years passing of their work. In this study, all of their work experience is within 5 years. Therefore, I can say that they obtained confidence of community.

Regarding the incentive of VHV, the result found that majority was free medical care (91.9%), 71.5% was self-satisfaction and one-quarter (35.8%) was social recognition. In general comparing with previous studies, 85.5% for free medical care and 65.5% for self-satisfaction for being useful resource (22) or 98.6% for free medical care 89.9% for self-satisfaction and 92.9% for social recognition. Up to now (30 April 2001) in Thailand, the incentive of free medical care benefit had extended to cover the family member of VHV as well as him or her. (18) From these remarks, the free medical care for VHV with their family member could be regarded as a marvelous incentive among VHVs.

5.2.2 Refresher training attainment of VHV include topic

Two third (75.4%) of VHV in this study reported that they had attained some refresher training course at least one to five times, and the leftover one third (24.6%) had more than 6 times. Through researcher's personal interview informally, some VHV had attained extra training for their particular function as leader of VHV. And the result in this study, some VHV reported frequency include meeting or conference as refresher training. Therefore, including those situation of VHV in this study, I said that the training opportunities were difference to obtain among VHVs and it seemed reasonable to suppose that suitable frequency of the refresher training in year, maximum 5. However, regarding the topic of refresher-training course in this study, it was mainly focused on "disease prevention", i.e. drug addiction, diarrhea, AIDS, and DHF in this study. The refresher training course of malnutrition was only 5%. Indeed, Protein energy malnutrition (PEM) by weight-for-age in children under five in Thailand was reduced dramatically from 50.8% in 1982 to 18.6%. However, there are several type of malnutrition such as Low birth weight, Iron deficiency anemia, Vitamin-A deficiency, Micronutrient deficiencies, etc. (9) Pinstrup reported

that Vitamin A deficiency in pre-school children can still be found in some areas in rural north and north-eastern, Thailand (9) And, the prevalence of anemia of children under five years of age by national health survey was showed 15%. (21) In this study, VHV reported that they recognized some low birth weight, malnourished, over-weight and anemia case of children under five years of age in their responsible cluster, last year. Therefore, I can say that VHV should be emphasized more the refresher training course about child nutrition more. Moreover, PHC elements for health for all in Thailand (15) and health promotion declaration by Ottawa Charter (30) specified the importance of health promotion approaches. Nonetheless, the public health sector seemed tendency that they have not changed stance to focus on preventing and controlling disease than health promotion. Therefore, I can say that the VHV have necessary to obtain more the refresher training on " health promotion".

5.2.3 Social support and supporter and work experience in nutrition promotion for children under five years of age by Village Health Volunteer

Social support and supporters for VHV in their work in this study, majority of the VHV received encouragement from community members including their family (80.0%), mothers or caretakers of children under five years of age in their village (67.3%) and religious priest or neighbors. They seemed strong supporters to VHVs for their spiritual and work.

Concerning support of money as finance for VHV work in the community that half of the VHV reported to received mainly from local organization or village headman or NGO. However, in other hand, almost all of VHV mentioned VF for health finance. Majority (96.9%) of VHV reported that they have their own fund, so called "Village Fund for health"(VF) and majority (94.6%) of them have used this fund for nutrition promotion activities; purchasing and preparation of supplemental food for malnutrition children and handing to them directory. In previous study pointed out about VF that 96.9 % of VHV was known VF for village drug co-operative and only 6.2% of VHV was known that the fund was for nutrition fund (23). As I have mentioned before, over 90% of VHV in this study had used VF for

nutrition promotion activities. From this result, I could regarded that their VF was reasonable for health activities, utilizable to community needs satisfactory and acceptable important means of community health development. However, the source of VF was mostly from national health budget or municipality, and community contribution was quite low. Dhillon H.S pointed that Community participation and Community based development are contributed financial part as well as materials and manpower. (11) The other side, Remigio D.pointed said that community participation of villagers is almost only their labour and manpower (25). From their point out, I have to carefully consider that community based development by their initiatives with their self-management were very important, simultaneously, it is very difficult issues in the community.

Material support for VHV work were mostly supported from official personnel such as Health center staff, Preschool or School teachers, local organization or village headman so on. Thus, I could be said that VHV received material or equipment by officially.

Manpower support to VHV work that there were not particular people and sector, to sum up, the VHV were supported manpower from several sectors. Somsong Rugpoa explained that community support to their community activities may be in term of labour, money or cooperation on voluntary basis (25) Therefore, I said to emphasized responsibility of VHV on promoting sustainability of health programmes through the contribution of the community of their ideas, labourer, and cost and through the sense of ownership of local health care resources (3)

Regarding information to VHV in this study, they reported to receive mainly from Health center, schoolteachers and local organization/NGO. WHO said that the role of VHV is to facilitate of broader action between social development sectors, and NGOs for overall development, poverty alleviation, and the improvement of the quality of life. (3) Also, WHO said that volunteers have link the health services personnel with the community contributing to the development of mutual orientation and learning essential for both partners to play their role more effectively towards

community health development. (3) Moreover, the communication or exchange information is essential for VHV's community mobilization, and communication is a process in which participants create and share information with one another in order to reach a mutual understanding (13). Therefore, the result of this study was quite reasonable for functioning of intersectoral networking or communication channel between VHV and intuitional sector. However, On the other hand, the VHV was likely to follow or to depend on much official information.

5.3 Nutritional characteristics of newborn babies, of children under five years and information availability of people in VHV's responsible cluster

The result of the feeding infants includes newborn babies in last year, VHV in this study answered that most (76.6%) of the newborn babies in last year were fed by breast feeding until 6 months. By comparing with national data reported UNICEF in 2003 that it was only 4% of infants to be fed exclusive breast milk until 4months. (32) According this national data, the result of this study was much doubted reliability of exclusive breast-fed until 6 months old among newborn babies. VHV might have wrong answer. However, according VHV's report that their mothers were mainly farmer or housewife and through researcher's observation during data collection, mothers in the study area seemed to stay at home and to work at home for income generation as milk cow rising. Therefore, high proportion of exclusive breastfed for babies until 6 months may correct. However, the result in this study that I cannot say for certain whether correct or not. As any countries that the powder milk formula to use for babies are increased by increasing of mothers' income generation activities and advertisement of milk companies. This tendency regarded related with advance of female to society and improvement accessibility to information by media development. A study on child nutrition was made in India and it revealed that under-nutrition child 0-2 years that they might have mothers who do not have enough time to pay attention to their children. (19) Therefore, I could say that this study was not enough to understand real situation of young baby's nutrition.

Malnourished children in Thailand have dramatically reduced and it is an

evidence of achievement in community base program on VHV and people's participation. (8) However, the result in this study, malnourished children were found some VHV's cluster. In addition this, VHV in this study reported diarrhea, AURI (acute upper of respiration infection) disease and worm/parasites as common sickness of children under five years of age in last year. These diseases are sometimes suspected effect of malnutrition so that I could say it is nutrition related disease. Thus, VHV should be discussed interrelation between malnutrition and these sicknesses. UNICEF suggest that the cause of malnutrition is combination of inadequate dietary intake and disease, and malnourished child will get sick easily than non-malnourished child. (31)

5.4 Approaches of Village Health Volunteers to mobilize community participation in nutrition promotion of children under five years of age

VHV's approaches for mobilization of community in their nutrition promotion activities in this study were investigated from two points of view. First point was VHV's approaches on four processes of participatory nutrition promotion activities for children under five years of age, such as problem identification, planning, implementation and evaluation. Second point of the investigation in this study was the level of VHV approach in ten types of approaches for their nutrition promotion activity, which was compared the average and total of score of their practiced in each type of approach.

5.4.1 Trend of activities of Village Health Volunteer in process of nutrition promotion of children under five

In VHV's activities in the four processes in this study, the result showed percentage of their practice in each process. The data of results showed that 14% for identification of nutritional problem, 38% for planning of activities, 83% for implementation of activities, and 37% for evaluation of activities. From these results, VHV's activities in each process that they tended to invest much time and energy to carries out the implementation activities only, and they seemed mostly no their

intention to act for nutritional problem identification, planning of activity and evaluation of activity. However, this situation could be regarded as nature trend in VHV work, Thailand.

5.4.2 Type and pattern of Village Health Volunteer's approaches to mobilize community participation in their nutrition promotion of children under five years of age

VHV's approaches to mobilize community participation in nutrition promotion were investigated by ten types approaches, and each of the type of approach was classified into two patterns, which was high level and low level. The ten approaches were proactive, reactive, inner-initiated, outer-initiated, formal, informal, individual, group, participative and non-participative for nutrition promotion activity for children under five. The result showed that the ten approaches of VHV seemed to practice wholly very low. The proportion of high level VHV's approach in, proactive was 26.5%, reactive was 33.5%, inner-initiated was 20.0%, outer-initiated was 10.8%, formal was 20.8 %, informal was 32.3%, individual was 31.9%, group was 44.6% and participative was 6.2% and non-participative was 37.3%. In Khin Myitzu Han study, he had found that 32.6% of VHV were rated by the VHV as high performance in PHC activities (23). By comparing between the pattern of VHV approaches in this study and level of VHV performance in previous study, it may say the similar tendency. However, from what has been said above the percentage of high level of ten types of approaches for VHV's nutrition promotion activities, that they tended to practice approach an informally, an individually and in a group by self management. Nevertheless, it could be considered, that VHV were not proactively and participatory to work.

5.5 Pattern of Village Health Volunteer's approaches of by socio-demographic and psychosocial factors for nutrition promotion of children under five years of age

VHV's approaches by socio-demographic factors such as age, gender, education,

and psychosocial factors such as type of recruitment, number of refreshment training attainment, type of incentive, kind of social support and supporters for VHV were showed that there were similar pattern of proactive, inner-initiated, formal, individual and group approach. For example, high level of approach of VHV were, in 30-39 years age group, in female group, in educational background of primary or secondary school group, in self-volunteered group, in free medical care availability, many times of refresher training attained group, in several social support and supporter available group. As researcher in this study had mentioned before, the trend of VHV approaches by socio-geographic factors and psychosocial factors were not much differed the previous studies (22)(23). Regarding the educational background, David. W (1982) pointed out that person only a few years of schooling often make more reliable more community strengthening health workers than those who had more formal education (26). Concerning social support, Fazil Maula studied in Pakistan, that the Lady Health Workers who had high level of social support from the community (27), it might be the reason that they would have benefited from the community as well as the official group as health center, district hospital, and village headman etc.

Regarding participative approach of VHV in nutrition promotion activities was very low in the study. Remigio D said, the problem was largely due to weakness in the capacity for planning, management, financing and evaluation, and in training and providing effective support to the community level of PHC activities (25). In other hand, previous study of Tin Tun Aung indicated that socio-demographic factors of VHV that there were no association between the level of participation with age, gender, marital status, educational level, occupation, family monthly income and duration of village health volunteer stayed in their responsible areas. (22) However, there were typical difference pattern of VHV's approaches by some factors of socio-demographic such as age group, gender and educational background, I could be considered that VHV's participative approaches by socio-demographic factors in this study that seemed have any concern.

CHAPTER VI
CONCLUSION AND RECOMMENDATION

6.1 Conclusion

The results of this study showed that VHV practiced many activities in nutrition promotion for children under five years of age. However, they were less practiced participatory approaches in the community nutrition promotion activities for children under five years of age, include problem identification, planning, implementation and evaluation. On the other hand, the study showed that there was relationship between some socio-demographic and psychosocial factors of VHV and the pattern of their approaches in nutrition promotion activities. Based on the findings conclusion are as follows.

6.1.1 Performance of VHV to children under five years of age and their mothers or caretakers in nutrition promotion, i.e., child growth monitoring and heath education were mainly done in CPHCC rather than at home of children or in the community. And regarding nutritional problem identification and planning of activities that VHV had tendency to wait for advise from health center or for complaints from mothers or care takers of children rather than initiated by themselves.

6.1.2 VHV carried out child growth monitoring, health education and supplement food strongly by their responsibilities in nutrition promotion activity, but they had practice no more.

6.1.3 Communication and exchange information about nutrition promotion between VHV and community people were mainly utilized village regular meeting rather than extra meeting by VHV's initiated.

6.1.4 Most of VHV were more than 30 years old, and even older continued to

work as VHV. With regard to type of approaches in nutrition promotion activities, 20-39 years tended to use proactive and participative approaches. And, 30-39 years group showed tendency to use inner-initiated and individual approach. While older VHVs tended to use formal, informal and group approaches more than young VHV.

6.1.5 The result indicated that female tend to be recruited for VHV than male. And, female VHV were more active in nutrition promotion activities than male.

6.1.6 Almost all VHV's educational level were primary or secondary school. Through observation by researcher, they were quite weak in skill of reading and writing. With regard to their approaches in nutrition promotion activities, VHV with primary or secondary school education level seemed to perform more active approaches. However, their participatory approaches were more practiced VHV high school education level.

6.1.7 Most of VHV have less than 10,000 Baht of monthly income, which reflected that they have low income and low living expenses than national standard.

6.1.8 Two third of VHV were self-volunteered, and only 10% were nominated by the villagers. VHV who was selected by health personal and transferred from parent or relative seemed to use any type of approaches positively.

6.1.9 VHV had been work on average of 7-8 years in their village. VHV with more than 5 years experience tended to use any approaches positively. Whereas, less than 5 years experienced VHV seemed to use the inner-initiated approach more than long experienced.

6.1.10 The benefit VHVs received from their works were free medical care for themselves and their families. Social recognition and self-satisfaction also mentioned.

6.1.11 Almost all VHV had received some refresher training, and the average was 3-4 times. VHVs who received 1 to 5 times training seemed to use informal,

group and participative approach. Whereas these with over 6 times tended to use individual approach.

6.1.12 The topic of refresher training were mainly focused on disease prevention rather than health promotion, particularly the topic on malnutrition were considerably low. .

6.1.13 The trainers of refresher training were mainly District Hospital staff. VHV who received training from Provincial Health Office staff seemed to use proactive, inner-initiated, formally, group and participative approach. Whereas, VHV who received training from Health Center staff seemed to perform informal and individual approach.

6.1.14 Social supports VHV received were spiritual and manpower from their families and community members, monetary and materials or equipments were officially received from Health Centre, School or Local organization.

6.1.15 Almost all VHV had been started nutrition promotion activities for children under five years of age more than one year ago. They seemed to use any approaches than VHV who started currently.

6.1.16 Major occupation of VHV's responsible households were mainly farmer, their economic status were mostly ordinary or well-off economic based on VHV reported. VHVs of better cluster economic seemed to use any approach in their nutrition promotion activities more than VHV of low economic cluster.

6.1.17 VHV reported that there were malnutrition children cases in last year, thus reflected that the malnutrition problem issues still exist.

6.2 Recommendation

6.2.1 Since this study findings revealed that the VHV carried out many activities to community for nutrition promotion of children under five years of age. These activities were their primary responsibilities in PHC. However, their performance and approaches to mobilize community participation and self-management of community development were considered unsatisfactory. Therefore, strengthening VHV to improve their knowledge and skill about participatory approach and self-management of community based nutrition program by partaking training course, receiving information and sharing experience from or with others should be encouraged.

6.2.2 From the findings that revealed the topic for VHV refresher training were mainly disease prevention and malnutrition was very few. Although prevalence of malnutrition of children under five years of age was dramatically reduced in Thailand, however, there is not enough evidence of reducing in micronutrient deficiency. Anemia still be a problem among young children. And as food habit and life style is changing, there are increasing over-weight children. Therefore, training contents should cover all these issues in addition to health promotion education as well as disease prevention education.

6.2.3 High social support to VHV, especially spiritual and work support from their family and community people should be encouraged to continue and sustain.

6.2.4 Village Fund (VF) for health enabled the VHV to utilize for their health work in the community, but the source of VF was mainly contribution from the Government and it was quite small amount. Therefore, contribution from Community should be motivated.

6.2.5 Majority of VHV have self-confidence to perform nutrition promotion activities, therefore they have potentiality to mobilize the community participation to involve in nutrition promotion program and thus it should be encouraged.

6.2.6 Majority of VHV performed their role and responsibility in nutrition promotion activities such as child growth monitoring, supplementary food for malnourished children, dissemination of health information to people through village meeting, health education to mothers at CPHCC, etc and they also have good net-working with health personnel and community stakeholders. So that they had achieved in reducing malnutrition children remarkably. However, under the 30 Baht scheme role and function of VHV seemed to be weakened. This issues is very sensitive and worth to be considered.

6.2.7 This study was cross-sectional descriptive, and the result was analyzed by number and percentage distribution only, so that its result was not to show statistical significance association between VHV's performance or approaches and socio-demographic factors, between VHV's performance or approaches and psychosocial factors, and between VHV's performance or approaches and community characteristics. Therefore, it is suggested that further research should be done to identify association between VHV and factors in same objective with this study.

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APPENDIX

APPENDIX A
QUESTIONNARIES

Approaches of village health volunteer for mobilization of community participation in nutrition promotion of children under 5 in Wang Nam Yen district, Sakeo province, Thailand

This study intends to achieve better understanding about the approaches of Village Health Volunteers for mobilization of community participation in nutrition promotion of children under 5. Please put the mark ( ) in the box (☐) or in column applicable item. Make sure that every question is marked and answered. Your answer will be confidential and anonymous. I would like to thank-you very much for your participation in this survey.

Residence; Village ..... Sub-district ..... Wang Nam Yean district
Date:

Part 1: Characteristics of VHV, Psychosocial factors and Characteristics of Community:

1. Age: .....years old
2. Gender: ☐Male ☐Female
3. Marital status: ☐ Single ☐ Married ☐ Widow/Divorce
4. What is your highest education attainment?
   - ☐ Primary school
   - ☐ Secondary school
   - ☐ High school/ Vocational training (specify): .....
   - ☐ Graduate and above (specify): .....

5. What is your main occupation?

   ☐ Farmer/plantation

   ☐ Business firm private sector employee

   ☐ Private shop owner

   ☐ Daily wages labor/vender

   ☐ Government official

   ☐ Housewife

   ☐ Other (please specify) .....

6. How many member of your family?: (specify) .....
7. How many children do you have?:(specify) .....
8. What is your household average monthly income? .....Baht.
9. How long have you been this village? ..... Years
10. How did you recruit to be a Village Health Volunteer?

    ☐ Self-volunteered

    ☐ Nominated by the villagers

    ☐ Selected by health personnel

    ☐ Selected by village headman

    ☐ Transferred by parent/relative

    ☐ Others (please specify) .....

11. How long have you been working as a Village Health Volunteer?

    ..... years

12. At present, how many village health volunteer still work as VHV in your village?

    ☐ There are .....active VHVs

    ☐ I don't know.

13. As a volunteer, are you receiving any kind of incentive?

☐ Yes. — What are they? (You can specify more than one)

☐ Free medical care

☐ Bi-monthly per-diem received at the meeting in Health Center

☐ Certificate of appreciation

☐ Social recognition

☐ Self-satisfaction for being useful resource for the village

☐ Others (specify): .....

☐ No,

14. In your responsible cluster, what is the families' major occupation for livelihood?

☐ Farming/plantation

☐ Daily wage labourer

☐ Factory worker

☐ Other. (specify): .....

15. What is the major occupation of mothers of children under 5 in your responsible cluster?

☐ Housewife

☐ Farming/ plantation

☐ Daily wage labourer

☐ Factory worker

☐ Other. (specify): .....

16. Among families in your responsible cluster, how would you rate their average economic status?

☐ Most of families are considered poor

☐ Most of families are considered average

☐ Most of families are considered well-off

☐ Don't know

17. In last year (January-December 2003), how many newborn in your responsible cluster?

    ☐ Specify: ..... cases

    ☐ None (pleases go to question 21)

18. In last year (January-December 2003), were there any low birth weight newborns?

    ☐ Yes, there were .....

    ☐ No, there were none.

    ☐ Don't know

19. Among newborn in last year (January-December 2003), how many mothers breast-fed their baby?

    ☐ Specify: ..... mothers

    ☐ None (pleases go to question 21)

    ☐ Don't know (pleases go to question 21)

20. In last year (January-December 2003), how many mothers breast-fed their babies exclusively 6 months?

    ☐ Specify: .....mothers

    ☐ none

    ☐ Don't know

21. In your responsible cluster, how many children under 5 in last year (January-December 2003)?

    ☐ Specify: .....children

    ☐ None (please go to question 25)

    ☐ Don't know (please go to question 25)

22. In your responsible cluster, were there any malnourished children under 5 in last year (January-December 2003)?

    ☐ Yes. (specify number): .....

    ☐ No, there were none.

23. In last year (January-December 2003), were there any over-weight for age among children under 5 in your responsible cluster?

    ☐ Yes, there were ..... cases over-weight

    ☐ No, there were none.

24. In last year, what kind of sickness did you often see among children under 5 in your responsible cluster?

    ☐ Diarrhea

    ☐ Anaemia

    ☐ Worm/Parasites

    ☐ Acute Upper Respiratory infection

    ☐ Malnutrition

    ☐ Others, specify: .....

    ☐ No sickness

25. Have you had any refreshment-training course for VHV work in 2003? (January to December 2003)? And how many times it?

    ☐ Yes. (specify number of time):.....time

    ☐ No (Please go to question 28)

26. From question 25, please specify each subject of refreshment-training courses, and put the mark ( ) in column the applicable trainer of each subject.

Subject of refreshment training	Trainer					
	Chief of Health center	Staff of Health center	Staff of District hospital	Staff of Provincial health office	NGO	Others (specify)
a.						
b.						
c.						
d.						
e.						
f.						

27. Had you been working on nutrition promotion of children under 5?

☐ Yes. — Please specify "When did you start"

☐ long time ago. (specify year if you remember): .....year

☐ last year

☐ Currently with in this year

☐ No/never

28. Have you ever received support from the following people for your work on nutrition promotion of children under 5? Please check each category of people and put the mark ( ) in column as much applicable one.

Support from	Encourage-ment	Money	Material/ equipment	Manpo-wer	Inform-ation	Others (specify)	never recei-ve
Relative member							
Village headman							
Health center staff							
Pre-school teachers							
School teachers							
Mothers/caretakers of children under 5							
Neighbors							
Local organization							
Religious priest/ monk							
Non government organization							
Others, specify:							

29. About the encouragement to you (answered question 28), what kind of support did you receive?

☐ Recognition

☐ Admiration

☐ Cooperation

☐ Other, specify .....

30. From answered question 29, what type of information are you useful for your VHV work on nutrition promotion of children under 5? (multiple answer)

- ☐ illness/ health of children
- ☐ diet of children
- ☐ weight of children i.e. under-weight, over-weight
- ☐ danger or accident of children
- ☐ source of help for nutrition promotion for children under 5
- ☐ source of knowledge about nutrition
- ☐ others, specify .....

31. From answered question 30, what are the effected of those support in your work?

- ☐ make you work harder
- ☐ give you more strength knowledge
- ☐ feel that your work is worthy
- ☐ improve your work
- ☐ make you work easily
- ☐ others (specefy):.....

32. Is there village fund in your village for any health program?

☐ Yes ☐No, (go to question **part 2**.)

33. If "Yes" in question 32, what is source of the village fund?

- ☐ Community saving
- ☐ Contribution from household
- ☐ TAO (Tambon administration organization)
- ☐ Support from Health center
- ☐ Donation from temple
- ☐ Others. Specify: .....

34. Have you ever used the village fund (answered from question 32) for your work on nutrition promotion of children under 5?

    ☐ Yes, (specify the work): .....

    ☐ No

Part 2: Approaches used by VHV to mobilize community participation in nutrition promotion for children under 5:

1. In identification, planning, proceeding and evaluating of the nutrition promotion activities for children under 5, what did you do follow the items below:

Activities of VHV	Nutritional problem identification	Nutrition promotion planning	Nutrition promotion implementation	Nutrition promotion evaluation	not apply
1) **VHV initiated** when he think its necessary					
2) **VHV observed** health status and checked growth curve of children under 5 at home visiting					
3) **reviewed** records of health, growth and development include birth weight of all children at CPHCC					
4) **promoted** infant feeding to mothers and caretakers					
5) **VHV and community people cooperated** to produce supplementary food for undernourished children under 5					

6) **VHV provided** supplementary food to severely malnourished children under 5					
7) **VHV dialogued with people** at village meeting					
8) **VHV received** advise from stakeholders such as elderly people, headman of temple, monk in the village or preschool teachers					
9) **VHV received** advise from mother and/ or family of children under 5					
10) **VHV received** advise from hospital or health center staff					
11) **VHV made regular home visiting** to observe and record the children health and nutritional status					
12) **VHV reviewed text book** related health care and nutrition of young children and carry out to the families and/or community					
13) **VHV diagnosed** sick child under 5, and refer to health center or provided simple treatment or home care on time					

14) **VHV educated** and motivated mother or family of nutritional problem children under 5 individually at home visiting					
15) **VHV called** mothers or caretakers of children under 5 for growth check at CPHCC					
16) **VHV called** community people, and organized meeting or demonstrated preparation of nutritional fortified and supplementary food					
17) **VHV proposed** your idea to health personnel and wait for their decision-making					
18) **VHV and colleagues organized** nutritional promotion activity in the village					
19) **VHV waited** for health personnel at Health centre to inform and assign activities					
20) **VHV assigned** the mother or family to take note and record of child growth by her or him self					
21) **VHV used** standard form or checklists from health centre					

22) **VHV held mothers class** to discuss about nutrition of children under 5 at CPHCC					
23) **VHV held meeting** with stakeholder such as elderly people, headman of temple, monk, school teacher					
24) **VHV discussed with people** at village regular meeting					
25) **VHV conducted personal discussion** with mothers or caretaker of children under 5 at CPHCC					
26) **VHV chatted with mother or caretaker** of child under 5 and/ or community people at public place as market					
27) Others specify:					

2. How would you rate the community participation of your responsible cluster for nutrition promotion of children under 5 in last year?

   ☐ High

   ☐ Moderate

   ☐ Low

APPENDIX B

Table 12 Pattern of VHV proactive approaches by socio-demographic and psychosocial factors on nutrition promotion activities in the community

Socio-demographic & psychosocial factors	Pro-active	
	High n (%)	Low n (%)
Age (n=260)		
20-29	8(28.6)	20(71.4)
30-39	28(28.6)	70(71.4)
40-49	16(21.9)	57(78.1)
≧50	17(27.9)	44(72.1)
Gender (n=260)		
Male	13(17.6)	61(82.4)
Female	56(30.1)	130(69.9)
Education (n=260)		
Primary School	46(26.7)	126(73.3)
Secondary School	19(28.8)	47(71.2)
High school/vocational training& graduate	4(19.0)	17(81.0)
Type of recruitment (n=260)		
Transferred by parent/relative	2(66.7)	1(33.3)
Selected by health personnel	5(41.7)	7(58.3)
Self-volunteered	54(26.7)	148(73.3)
Nominated by the villagers	6(22.2)	21(77.8)
Selected by village headman	2(12.5)	14(87.5)
Period of VHV work (n=260)		
≦5 years	35(25.2)	104(74.8)
more than 5 years	24(28.1)	87(71.9)
Number of refreshment training attainment (n=248)		
1-5 times	45(24.1)	142(75.9)
≧6 times	21(34.4)	40(65.6)
Trainer of refreshment training*		
Staff from PHO	13(26.5)	36(73.5)
Chief & Staff of HC	26(20.6)	100(79.4)
Staff from DH	15(16.3)	77(83.7)
NGO	0(0)	17(100.0)

* Multiple responses

Table 12 Pattern of VHV proactive approaches by socio-demographic and psychosocial factors on nutrition promotion activities in the community. (cont.)

Socio-demographic & psychosocial factors	Pro-active	
	High n (%)	**Low n (%)**
Type of Incentive*		
Social recognition	26(28.3)	66(71.7)
Free medical care	66(27.6)	173(72.4)
Self-satisfaction	47(25.3)	139(74.7)
Certificate of appreciation	10(20.4)	39(79.6)
Perdiem of bi-monthly meeting	3(17.7)	14(82.3)
Social Support (from several)*		
Encouragement	67(26.4)	187(73.6)
Money	48(26.4)	134(73.6)
Manpower	46(25.6)	134(74.4)
Information	61(25.2)	181(74.8)
Material/Equipment	53(24.8)	161(75.6)
Supporter of VHV*		
Family member	67(26.7)	184(73.3)
LO/VH/NGO	68(26.7)	187(72.3)
HC staff	69(26.5)	191(73.5)
Pre/ School teachers	29(26.4)	81(73.6)
Mothers/care takers	65(26.3)	182(73.7)
Religious priest / Neighbors	65(26.1)	184(73.9)
Time of started nutrition promotion activity for children under 5 (n=260)		
Currently (2004)	3(16.7)	15(83.3)
Last year (2003)	19(27.5)	50(72.5)
More than 2 years ago	47(27.3)	125(72.7)
Major occupation of families in VHV's responsible cluster (n=258)		
Farmer	63(27.5)	166(72.5)
Daily wage labourer	6(20.7)	23(79.3)
Economic aspect of families in VHV's responsible cluster (n=260)		
Ordinary/ well-off	54(28.1)	138(71.9)
Poor	15(22.1)	53(77.9)

* Multiple responses

Table 13 Pattern of VHV reactive approaches by socio-demographic and psychosocial factors on nutrition promotion activities in the community

Socio-demographic & psychosocial factors	Re-active	
	High n (%)	Low n (%)
Age		
20-29	7(25.0)	21(75.0)
30-39	34(34.7)	64(65.3)
40-49	23(31.5)	50(68.5)
≧50	23(37.7)	38(62.3)
Sex		
Male	20(27.0)	54(73.0)
Female	67(36.0)	119(64.0)
Education		
Primary School	59(34.3)	113(65.7)
Secondary School	22(33.3)	44(66.7)
High school/vocational training& graduate	6(28.6)	15(71.4)
Type of recruitment		
Self-volunteered	71(35.1)	131(64.9)
Transferred by parent/relative	1(33.3)	2(66.7)
Selected by village headman	5(31.2)	11(68.8)
Nominated by the villagers	7(25.9)	20(74.1)
Selected by health personnel	3(25.0)	9(75.0)
Period of VHV work		
≦5 years	41(29.5)	98(70.5)
more than 5 years	46(38.0)	75(62.0)
Type of Incentive*		
Social recognition	36(39.1)	56(60.9)
Free medical care	81(33.9)	158(66.1)
Self-satisfaction	61(32.8)	125(67.2)
Certificate of appreciation	16(32.6)	33(67.4)
Perdiem of bi-monthly meeting	5(29.4)	12(70.6)
Number of refreshment training attainment		
1-5 times	56(29.9)	131(70.1)
≧6 times	28(45.9)	33(54.1)
Trainer of refreshment training*		
Chief & staff of HC	43(34.1)	83(65.9)
Staff from PHO	16(32.6)	33(67.4)
Staff from HC	28(31.8)	60(68.2)
Staff from DH	29(31.5)	63(68.5)
NGO	1(5.9)	16(94.1)

* Multiple responses

Table 13 Pattern of VHV reactive approaches by socio-demographic and psychosocial factors on nutrition promotion activities in the community. (cont.)

Socio-demographic & psychosocial factors	Re-active	
	High n (%)	**Low** n (%)
Social Support (from several)*		
Manpower	61(33.9)	119(66.1)
Money	61(33.5)	121(66.5)
Material/Equipment	71(33.2)	143(66.8)
Encouragement	84(33.1)	170(66.9)
Information	79(32.6)	163(67.4)
Person of support to VHV*		
Mothers/care takers	85(34.4)	162(65.6)
Family member	85(33.8)	166(66.1)
LO/VH/NGO	86(33.7)	169(66.3)
HC staff	87(33.5)	173(88.5)
Religious priest / Neighbors	83(33.3)	166(66.7)
Pre/school teachers	35(31.8)	75(68.2)
Time VHV started activity on nutrition promotion for children under 5		
Currently (2004)	7(38.9)	11(61.1)
Last year (2003)	21(30.4)	48(69.6)
More than 2 years ago	59(34.3)	113(65.7)
Major occupation among families in VHV's responsible cluster		
Farmer	76(33.2)	153(66.8)
Daily wage labourer	10(34.5)	19(65.5)
Economic aspect of families in VHV's responsible cluster		
Ordinary/ well-off	66(34.4)	126(65.6)
Poor	21(30.9)	47(69.1)

* Multiple responses

Table 14 VHV's inner-initiated approach level by socio-demographic and psychosocial factors for nutrition promotion activity children under five years of age

Socio-demographic & psychosocial factors	Inner-initiated	
	High n (%)	**Low n (%)**
Age (n=260)		
20-29	6(21.4)	22(78.6)
30-39	22(22.5)	76(77.6)
40-49	12(16.4)	61(83.6)
≧50	12(19.7)	49(80.3)
Gender (n=260)		
Male	7(9.5)	67(90.5)
Female	45(24.2)	141(75.8)
Education (n=260)		
Primary School	35(20.4)	137(79.6)
Secondary School	13(19.7)	53(80.3)
High school/vocational training& graduate	4(19.0)	17(81.0)
Type of recruitment (n=260)		
Selected by health personnel	4(33.3)	8(66.7)
Transferred by parent/relative	1(33.3)	2(66.7)
Self-volunteered	43(21.3)	159(78.7)
Nominated by the villagers	3(11.1)	24(88.9)
Selected by village headman	1(6.3)	15(93.7)
Period of VHV work (n=260)		
≦5 years	28(20.1)	111(79.9)
more than 5 years	24(19.8)	97(80.2)
Number of refreshment training attainment (n=248)		
1-5 times	33(17.7)	154(82.3)
≧6 times	17(27.9)	44(72.1)
Trainer of refreshment training*		
Staff from PHO	6(12.2)	43(87.8)
Chief & Staff of HC	15(11.9)	111(88.1)
Staff from DH	8(8.7)	84(91.3)
NGO	0(0)	17(100.0)
Type of Incentive*		
Free medical care	52(21.8)	187(78.2)
Social recognition	17(18.5)	75(81.5)
Self-satisfaction	32(17.2)	154(82.8)
Certificate of appreciation	7(14.3)	42(85.7)
Perdiem of bi-monthly meeting	2(11.8)	15(88.2)

* Multiple responses

Table 14 VHV's inner-initiated approach level by socio-demographic and psychosocial factors for nutrition promotion activity children under five years of age. (cont.)

Socio-demographic & psychosocial factors	Inner-initiated	
	High n (%)	**Low n (%)**
Social Support (from several)*		
Information	48(19.8)	194(80.2)
Encouragement	50(19.7)	204(80.3)
Manpower	35(19.4)	145(80.6)
Money	35(19.2)	147(80.8)
Material/Equipment	29(18.2)	178(81.8)
Supporter of VHV*		
Pre/school teachers	25(22.7)	85(77.3)
Family member	51(20.3)	200(79.7)
Mothers/care takers	50(20.2)	197(79.8)
HC staff	52(20.0)	208(80.0)
LO/VH/NGO	51(20.0)	204(80.0)
Religious priest / Neighbors	49(19.7)	200(80.3)
Time of started nutrition promotion activity for children under 5 (n=260)		
Currently (2004)	3(16.7)	15(83.3)
Last year (2003)	15(21.7)	54(78.3)
More than 2 years ago	34(19.8)	138(80.2)
Major occupation of families in VHV's responsible cluster (n=258)		
Farmer	46(20.1)	183(79.9)
Daily wage labourer	6(20.7)	23(79.3)
Economic aspect of families in VHV's responsible cluster (n=260)		
Ordinary/ well-off	43(22.4)	149(77.6)
Poor	9(13.2)	59(86.8)

* Multiple responses

Table 15 Pattern of VHV's outer-initiated approach by socio-demographic and psychosocial factors for nutrition promotion activity children under five years of age

Socio-demographic & psychosocial factors	Outer-initiated	
	High n (%)	**Low n (%)**
Age		
20-29	2(7.1)	26(92.9)
30-39	11(11.2)	87(88.8)
40-49	6(8.2)	67(91.8)
≧50	9(14.8)	52(85.3)
Sex		
Male	3(4.1)	71(95.9)
Female	25(13.4)	161(86.6)
Education		
Primary School	17(9.9)	155(90.1)
Secondary School	8(12.1)	58(87.9)
High school/vocational training& graduate	3(14.3)	18(85.7)
Type of recruitment		
Nominated by the villagers	4(14.8)	23(85.2)
Self-volunteered	23(11.4)	179(88.6)
Selected by village headman	1(6.2)	15(93.8)
Selected by health personnel	0(0)	12(100)
Transferred by parent/relative	0(0)	3(100)
Period of VHV work		
≦5 years	14(10.1)	125(89.9)
more than 5 years	14(11.6)	107(88.4)
Type of Incentive*		
Perdiem of bi-monthly meeting	3(14.6)	14(82.4)
Social recognition	13(14.1)	79(85.9)
Self-satisfaction	23(12.4)	163(87.6)
Free medical care	26(10.9)	213(89.1)
Certificate of appreciation	5(10.2)	44(89.8)
Number of refreshment training attainment		
1-5 times	20(10.7)	167(89.3)
≧6 times	8(13.1)	53(86.9)
Trainer of refreshment training*		
NGO	3(17.7)	14(82.3)
Staff from PHO	8(16.3)	41(83.7)
Chief & staff of HC	10(7.9)	116(92.1)
Staff from DH	6(6.5)	86(93.5)

* Multiple responses

Table 15 Pattern of VHV's outer-initiated approach by socio-demographic and psychosocial factors for nutrition promotion activity children under five years of age. (cont.)

Socio-demographic & psychosocial factors	Outer-initiated	
	High n (%)	**Low n (%)**
Social Support (from several)*		
Money	21(11.5)	161(88.5)
Material/Equipment	24(11.2)	190(88.8)
Information	26(10.7)	242(89.3)
Encouragement	27(10.6)	227(89.4)
Manpower	16(8.9)	164(91.1)
Person of support to VHV*		
HC staff	28(10.8)	232(89.2)
Religious priest / Neighbors	27(10.8)	222(89.2)
LO/VH/NGO	27(10.6)	228(89.4)
Mothers/care takers	26(10.5)	221(89.5)
Family member	26(10.4)	225(89.6)
Pre/school teachers	10(9.1)	100(90.9)
Time VHV started activity on nutrition promotion for children under 5		
Currently (2004)	1(5.6)	17(94.4)
Last year (2003)	2(2.9)	67(97.1)
More than 2 years ago	25(14.5)	147(85.5)
Major occupation among families in VHV's responsible cluster		
Farmer	26(11.4)	203(88.6)
Daily wage labourer	2(6.9)	27(93.1)
Economic aspect of families in VHV's responsible cluster		
Ordinary/ well-off	24(12.5)	168(87.5)
Poor	4(5.9)	64(94.1)

* Multiple responses

Table 16 Pattern of VHV formal approaches by socio-demographic and psychosocial factors for nutrition promotion activities

Socio-demographic & psychosocial factors	Formal	
	High n (%)	**Low** n (%)
Age (n=260)		
20-29	4(14.3)	24(85.7)
30-39	22(22.5)	76(77.6)
40-49	12(16.4)	61(83.6)
≧50	16(26.2)	45(73.8)
Gender (n=260)		
Male	5(6.8)	69(93.2)
Female	49(26.3)	137(73.7)
Education (n=260)		
Primary School	36(20.9)	136(79.1)
Secondary School	14(21.2)	52(78.8)
High school/vocational training& graduate	4(19.0)	17(81.0)
Type of recruitment (n=260)		
Selected by health personnel	4(33.3)	8(66.7)
Transferred by parent/relative	1(33.3)	2(66.7)
Nominated by the villagers	6(22.2)	21(77.8)
Self-volunteered	42(20.8)	160(79.2)
Selected by village headman	1(6.3)	15(93.7)
Period of VHV work (n=260)		
≦5 years	27(19.4)	112(80.6)
more than 5 years	27(22.3)	94(77.7)
Number of refreshment training attainment (n=248)		
1-5 times	30(26.7)	137(73.3)
≧6 times	22(36.1)	39(63.9)
Trainer of refreshment training*		
Staff from PHO	9(18.4)	40(81.6)
Staff from DH	12(13.0)	80(87.0)
Chief & Staff of HC	15(11.9)	111(88.1)
NGO	0(0)	17(100.0)
Type of Incentive*		
Social recognition	24(26.1)	68(73.9)
Free medical care	52(21.8)	187(78.2)
Self-satisfaction	38(20.4)	148(79.6)
Certificate of appreciation	10(20.4)	39(79.6)
Perdiem of bi-monthly meeting	3(17.7)	14(82.3)

* Multiple responses

Table 16 Pattern of VHV formal approaches by socio-demographic and psychosocial factors for nutrition promotion activities. (cont.)

Socio-demographic & psychosocial factors	Formal	
	High n (%)	**Low n (%)**
Social Support (from several)*		
Money	54(29.7)	128(70.3)
Encouragement	52(20.5)	202(79.5)
Information	48(19.8)	194(80.2)
Material/Equipment	42(19.6)	172(80.4)
Manpower	35(19.4)	145(80.6)
Supporter of VHV*		
Pre/school teachers	25(22.7)	85(77.3)
HC staff	54(20.8)	206(79.2)
LO/VH/NGO	53(20.8)	202(79/2)
Mothers/care takers	51(20.7)	196(79.3)
Religious priest / Neighbors	51(20.5)	198(79.5)
Family member	51(20.3)	200(79.7)
Time of started nutrition promotion activity for children under 5 (n=260)		
Currently (2004)	1(5.6)	17(94.4)
Last year (2003)	15(21.7)	54(78.3)
More than 2 years ago	38(22.1)	134(77.9)
Major occupation among families in VHV's responsible cluster (n=258)		
Farmer	47(20.5)	182(79.5)
Daily wage labourer	7(24.1)	22(75.9)
Economic aspect of families in VHV's responsible cluster (n=260)		
Ordinary/ well-off	44(22.9)	148(77.1)
Poor	10(14.7)	58(85.3)

* Multiple responses

Table 17 Pattern of VHV informal approaches by socio-demographic and psychosocial factors for nutrition promotion activities

Socio-demographic & psychosocial factors	Informal	
	High n (%)	**Low** n (%)
Age (n=260)		
20-29	6(21.4)	22(78.9)
30-39	31(31.6)	67(68.4)
40-49	23(31.5)	50(68.5)
≧50	24(39.3)	37(60.7)
Gender (n=260)		
Male	28(37.8)	46(62.2)
Female	56(30.1)	130(69.9)
Education (n=260)		
Primary School	59(34.3)	113(65.7)
Secondary School	19(28.8)	47(71.2)
High school/vocational training& graduate	6(28.6)	15(71.4)
Type of recruitment (n=260)		
Nominated by the villagers	9(33.3)	18(66.7)
Selected by health personnel	4(33.3)	8(66.7)
Transferred by parent/relative	1(33.3)	2(66.7)
Self-volunteered	65(32.2)	137(67.8)
Selected by village headman	5(31.3)	11(68.7)
Period of VHV work (n=260)		
≦5 years	43(30.9)	96(69.1)
more than 5 years	41(33.9)	80(66.1)
Number of refreshment training attainment (n=248)		
1-5 times	86(46.0)	101(54.0)
≧6 times	21(34.4)	40(65.6)
Trainer of refreshment training*		
Chief & Staff of HC	43(34.1)	83(65.9)
Staff from DH	30(32.6)	62(67.4)
Staff from PHO	14(28.6)	35(71.4)
NGO	3(17.7)	14(82.3)
Type of Incentive*		
Social recognition	34(37.0)	58(63.0)
Free medical care	80(33.5)	159(66.5)
Self-satisfaction	62(33.3)	124(66.7)
Perdiem of bi-monthly meeting	4(23.5)	13(76.5)
Certificate of appreciation	10(20.4)	39(79.6)

* Multiple responses

Table 17 Pattern of VHV informal approaches by socio-demographic and psychosocial factors for nutrition promotion activities.(cont.)

Socio-demographic & psychosocial factors	Informal	
	High n (%)	**Low** n (%)
Social Support (from several)*		
Money	79(43.4)	103(56.6)
Material/Equipment	74(34.6)	140(65.4)
Encouragement	82(32.3)	172(67.7)
Manpower	57(31.7)	123(68.3)
Information	74(30.6)	168(69.4)
Supporter of VHV*		
LO/VH/NGO	84(32.9)	171(67.1)
Family member	82(32.7)	169(67.3)
Mothers/care takers	80(32.4)	167(67.6)
HC staff	84(32.3)	176(67.7)
Religious priest / Neighbors	80(32.1)	169(67.9)
Pre/school teachers	30(27.3)	80(72.7)
Time of started nutrition promotion activity for children under 5 (n=260)		
Currently (2004)	5(27.8)	13(72.2)
Last year (2003)	21(30.4)	48(69.6)
More than 2 years ago	58(33.7)	114(66.3)
Major occupation among families in VHV's responsible cluster (n=258)		
Farmer	76(33.2)	153(66.8)
Daily wage labourer	8(27.6)	21(72.4)
Economic aspect of families in VHV's responsible cluster (n=260)		
Ordinary/ well-off	61(31.8)	131(68.2)
Poor	23(33.8)	45(66.2)

* Multiple responses

Table 18 Pattern of VHV individual approaches by socio-demographic and psychosocial factors for nutrition promotion activity children under five years of age

Socio-demographic & psychosocial factors	Individual	
	High n (%)	Low n (%)
Age (n=260)		
20-29	8(28.6)	71.4)
30-39	40(40.8)	58(59.2)
40-49	20(27.4)	53(72.6)
≧50	15(24.6)	46(75.4)
Gender (n=260)		
Male	12(16.2)	62(83.8)
Female	71(38.2)	115(61.8)
Education (n=260)		
Primary school	53(30.8)	119(69.2)
Secondary school	25(37.9)	41(62.1)
High school/vocational training& graduate	5(23.8)	16(76.2)
Type of recruitment (n=260)		
Transferred by parent/relative	2(66.7)	1(33.3)
Selected by health personnel	5(41.7)	7(58.3)
Self-volunteered	65(32.2)	137(67.8)
Nominated by the villagers	7(22.2)	21(77.8)
Selected by village headman	4(25.0)	12(75.0)
Period of VHV work (n=260)		
≦5 years	44(31.7)	95(68.3)
more than 5 years	39(32.2)	82(67.8)
Number of refreshment training attainment (n=248)		
1-5 times	50(26.7)	137(73.3)
≧6 times	30(49.2)	31(50.8)
Trainer of refreshment training*		
Chief & Staff of HC	36(28.6)	90(71.4)
Staff from PHO	13(26.5)	36(73.5)
Staff from DH	21(22.8)	71(77.2)
NGO	0(0)	17(100.0)
Type of Incentive*		
Free medical care	77(32.2)	162(67.8)
Social recognition	29(31.5)	63(68.5)
Self-satisfaction	57(30.7)	129(69.3)
Certificate of appreciation	15(30.6)	34(69.4)
Perdiem of bi-monthly meeting	5(29.4)	12(70.6)

* Multiple responses

Table 18 Pattern of VHV individual approaches by socio-demographic and psychosocial factors for nutrition promotion activity children under five years of age. (cont.)

Socio-demographic & psychosocial factors	Individual	
	High n (%)	**Low** n (%)
Social Support (from several)*		
Encouragement	81(31.9)	173(68.1)
Information	76(31.4)	166(68.6)
Manpower	55(30.6)	125(69.4)
Material/Equipment	64(29.9)	150(70.1)
Money	54(29.7)	128(70.3)
Supporter of VHV*		
Family member	82(32.7)	169(67.3)
Mothers/care takers	80(32.4)	167(67.6)
LO/VH/NGO	82(32.2)	173(67.8)
Religious priest / Neighbors	80(32.1)	169(67.9)
HC staff	83(31.9)	177(68.1)
Pre/school teachers	25(22.7)	85(77.27)
Time of started nutrition promotion activity for children under 5 (n=260)		
Currently (2004)	4(22.2)	14(77.8)
Last year (2003)	22(31.9)	47(68.1)
More than 2 years ago	57(33.1)	115(66.9)
Major occupation among families in VHV's responsible cluster (n=258)		
Farmer	72(31.4)	157(68.6)
Daily wage labourer	11(37.9)	18(62.1)
Economic aspect of families in VHV's responsible cluster (n=260)		
Ordinary/ well-off	64(33.3)	128(66.7)
Poor	19(27.9)	49(72.1)

* Multiple responses

Table 19 Pattern of VHV group approaches by socio-demographic and psychosocial factors for nutrition promotion activity children under five years of age

Socio-demographic & psychosocial factors	Group	
	High n (%)	**Low** n (%)
Age (n=260)		
20-29	12(42.9)	16(57.1)
30-39	49(50.0)	49(50.0)
40-49	24(32.9)	49(67.1)
≧50	31(50.8)	30(49.2)
Gender (n=260)		
Male	29(39.2)	45(60.8)
Female	87(46.8)	99(53.2)
Education (n=260)		
Primary School	76(44.2)	96(55.8)
Secondary School	31(47.0)	35(53.0)
High school/vocational training& graduate	8(38.1)	13(61.9)
Type of recruitment (n=260)		
Selected by health personnel	9(75.0)	3(25.0)
Transferred by parent/relative	2(66.7)	1(33.3)
Self-volunteered	90(44.6)	112(55.4)
Selected by village headman	6(37.5)	10(62.5)
Nominated by the villagers	9(33.3)	18(66.7)
Period of VHV work (n=260)		
≦5 years	58(41.7)	81(58.3)
more than 5 years	58(47.9)	63(52.1)
Number of refreshment training attainment (n=248)		
1-5 times	86(46.0)	101(54.0)
≧6 times	26(42.6)	35(57.4)
Trainer of refreshment training*		
Staff from PHO	20(40.8)	29(59.2)
Chief & Staff of HC	49(38.9)	77(61.1)
Staff from DH	33(35.9)	59(64.1)
NGO	3(17.7)	14(82.3)
Type of Incentive*		
Social recognition	44(47.8)	48(52.2)
Free medical care	109(45.6)	130(54.4)
Certificate of appreciation	22(44.9)	27(55.1)
Self-satisfaction	81(43.6)	105(56.4)
Perdiem of bi-monthly meeting	6(35.3)	11(64.7)

* Multiple responses

Table 19 Pattern of VHV group approaches by socio-demographic and psychosocial factors for nutrition promotion activity children under five years of age. (cont.)

Socio-demographic & psychosocial factors	Group	
	High n (%)	**Low** n (%)
Social Support (from several)*		
Encouragement	113(44.5)	141(55.5)
Information	106(43.8)	136(56.2)
Money	79(43.4)	103(56.6)
Material/Equipment	91(42.5)	123(57.5)
Manpower	76(42.2)	104(57.8)
Supporter of VHV*		
Mothers/care takers	112(45.3)	135(54.7)
Family member	113(45.0)	138(55.0)
LO/VH/NGO	114(44.7)	141(55.3)
HC staff	116(44.6)	144(55.4)
Religious priest / Neighbors	110(44.2)	139(55.8)
Pre/school teachers	30(27.3)	80(72.7)
Time of started nutrition promotion activity for children under 5(n=260)		
Currently (2004)	9(50.0)	9(50.0)
Last year (2003)	36(52.2)	33(47.8)
More than 2 years ago	71(41.3)	101(58.7)
Major occupation among families in VHV's responsible cluster (n=258)		
Farmer	105(45.9)	124(54.1)
Daily wage labourer	10(34.5)	19(65.5))
Economic aspect of families in VHV's responsible cluster (n=260)		
Ordinary/ well-off	89(46.4)	103(53.7)
Poor	27(39.7)	41(60.3)

* Multiple responses

Table 20 Pattern of VHV participative approaches by socio-demographic & psychosocial factors for nutrition promotion activity children under five years of age

Socio-demographic & psychosocial factors	Participative	
	High n (%)	Low n (%)
Age (n=260)		
20-29	2(7.1)	26(92.9)
30-39	7(7.1)	91(92.9)
40-49	3(4.1)	70(95.9)
≧50	4(6.6)	57(93.4)
Gender (n=260)		
Male	2(2.7)	72(97.3)
Female	14(7.5)	172(92.5)
Education (n=260)		
Primary School	8(4.7)	164(95.3)
Secondary School	5(7.6)	61(92.4)
High school/vocational training& graduate	3(14.3)	18(85.7)
Type of recruitment (n=260)		
Transferred by parent/relative	1(33.3)	2(66.7)
Selected by health personnel	2(16.7)	10(83.3)
Nominated by the villagers	3(11.1)	24(88.9)
Self-volunteered	10(5.0)	192(95.0)
Selected by village headman	0(0)	16(100)
Period of VHV work (n=260)		
≦5 years	5(3.6)	134(96.4)
more than 5 years	11(9.1)	110(90.9)
Number of refreshment training attainment (n=248)		
1-5 times	11(5.9)	176(94.1)
≧6 times	3(4.9)	58(95.1)
Trainer of refreshment training*		
Staff from PHO	2(4.1)	47(95.9)
Staff from DH	3(3.3)	89(96.7)
Chief & Staff of HC	4(3.2)	122(96.8)
Type of Incentive*		
Social recognition	9(9.8)	83(90.2)
Free medical care	16(6.7)	223(93.3)
Self-satisfaction	12(6.5)	174(93.5)
Certificate of appreciation	3(6.1)	46(93.9)
Perdiem of bi-monthly meeting	0(0)	17(100)

* Multiple responses

Table 20 Pattern of VHV participative approaches by socio-demographic & psychosocial factors for nutrition promotion activity children under five years of age. (cont.)

Socio-demographic & psychosocial factors	Participative	
	High n (%)	**Low** n (%)
Social Support (from several)*		
Material/Equipment	15(7.0)	199(93.0)
Encouragement	15(5.9)	239(94.1)
Information	14(5.8)	228(94.2)
Manpower	10(5.6)	170(94.4)
Money	10(5.5)	172(94.5)
Supporter of VHV*		
Family member	16(6.4)	235(93.6)
HC staff	16(6.2)	244(93.8)
Mothers/care takers	15(6.1)	232(93.9)
Religious priest / Neighbors	15(6.0)	234(94.0)
LO/VH/NGO	15(5.9)	240(94.1)
Pre/school teachers	5(4.6)	105(95.4)
Time of started nutrition promotion activity for children under 5 (n=260)		
Currently (2004)	1(5.6)	17(94.4)
Last year (2003)	2(2.9)	67(97.1)
More than 2 years ago	13(7.6)	159(92.4)
Major occupation among families in VHV's responsible cluster (n=258)		
Farmer	13(5.7)	216(94.3)
Daily wage labourer	3(10.3)	26(89.7)
Economic aspect of families in VHV's responsible cluster (n=260)		
Ordinary/ well-off	13(6.8)	179(93.2)
Poor	3(4.4)	65(95.6)

* Multiple responses

Table 21 Pattern of VHV non-participative approaches by socio-demographic & psychosocial factors for nutrition promotion activity children under five years of age

Socio-demographic & psychosocial factors	Non-participative	
	High n (%)	**Low n (%)**
Age		
20-29	8(28.6)	20(71.4)
30-39	32(32.7)	66(67.3)
40-49	28(38.4)	45(61.6)
≧50	29(47.5)	32(52.5)
Sex		
Male	34(46.0)	40(54.0)
Female	63(33.9)	123(66.1)
Education		
Primary School	65(37.8)	107(62.2)
Secondary School	23(34.8)	43(65.2)
High school/vocational training& graduate	8(38.1)	13(61.9)
Type of recruitment		
Self-volunteered	80(39.6)	122(60.4)
Selected by health personnel	5(41.7)	7(58.3)
Selected by village headman	5(31.3)	11(68.7)
Nominated by the villagers	7(25.9)	20(74.1)
Transferred by parent/relative	0(0)	3(100)
Period of VHV work		
≦5 years	48(34.5)	91(65.5)
more than 5 years	49(40.5)	72(59.5)
Type of Incentive*		
Social recognition	41(44.6)	51(55.4)
Certificate of appreciation	21(42.9)	28(57.1)
Free medical care	91(38.1)	148(61.9)
Self-satisfaction	70(37.6)	116(62.4)
Perdiem of bi-monthly meeting	6(35.3)	11(64.7)
Number of refreshment training attainment		
1-5 times	70(37.4)	117(62.6)
≧6 times	24(39.3)	37(60.7)
Trainer of refreshment training*		
Staff from PHO	19(38.8)	30(61.2)
Staff from DH	34(37.0)	58(63.0)
Chief & staff of HC	43(34.1)	83(65.9)
NGO		

* Multiple responses

Table 21 Pattern of VHV non-participative approaches by socio-demographic & psychosocial factors for nutrition promotion activity children under five years of age. (cont.)

Socio-demographic & psychosocial factors	Non-participative	
	High n (%)	**Low** n (%)
Social Support (from several)*		
Manpower	72(40.0)	108(60.0)
Material/Equipment	84(39.2)	130(60.8)
Information	89(36.9)	152(63.1)
Money	67(36.8)	115(63.2)
Encouragement	93(36.6)	161(63.4)
Person of support to VHV*		
Mothers/care takers	95(38.5)	152(61.5)
Religious priest / Neighbors	94(37.7)	155(62.3)
LO/VH/NGO	96(37.6)	159(62.4)
Family member	94(37.5)	157(62.5)
HC staff	97(37.3)	163(62.7)
Pre/ School teachers	41(37.3)	69(62.7)
Time VHV started activity on nutrition promotion for children under 5		
Currently (2004)	5(27.8)	13(72.2)
Last year (2003)	25(36.2)	44(63.8)
More than 2 years ago	67(38.9)	105(61.1)
Major occupation among families in VHV's responsible cluster		
Farmer	88(38.4)	141(61.6)
Daily wage labourer	8(27.6)	21(72.4)
Economic aspect of families in VHV's responsible cluster		
Ordinary/ well-off	70(36.5)	122(63.5)
Poor	27(39.7)	41(60.3)

* Multiple responses

BIOGRAPHY

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