CHAPTER 4

FINDINGS AND DISCUSSIONS

The aims of this study were to explore the factors influencing the success in implementing Health Promoting Schools (HPSs). This chapter focuses on three parts of findings from the HPSs and comparative schools (CSs). The first part describes the general information of the study schools and general characteristics of the participants in the study. The second part entails the description of the implementation of the Health Promoting Schools; a comparison of the similarities and differences of the ten components of HPS between the gold-level HPSs and the CSs; and the factors influencing the similarities, differences, and success of implementing HPS. The ten components of HPSs includes school policy, management in school, school and community participation, environmental health, school health services, nutrition and safety foods, exercise and recreation, counseling and social support, and health promotion for staff. Lastly, the third part concludes factors influencing the similarities, differences, and success in implementing HPSs.

PART I: GENERAL INFORMATION OF SCHOOLS AND GENERAL CHARACTERISTICS OF PARTICIPANTS

General Information of Schools

The school setting in this study comprised two groups of schools. The first group was the gold-level HPSs and the second group was CSs. General information

about the schools and general characteristics were presented. In this part, the researcher also presents descriptive information regarding the implementation of the ten components of health promoting school including school policy, management in school, collaborative project between school and community, gold-level health promoting schools group and comparative schools group.

The general information of HPSs and CSs including number of students, number of teachers, school area were compared and presented as in Table 4-1.

Table 4-1

General information of schools

	Health promoting schools	Comparative schools
Mean of number of students	354	285
Mean of number of teachers	16	13
Ratio of teachers: students	1:22	1:22
Mean of school area(rai)	11.4	7.8

Each group of HPSs and CSs consisted of three extended primary schools and two primary schools. Average number of both school children and teachers in the group of HPSs was 354 and 16 higher than the group of CSs which was 285 and 13 whereas the ratio showed the equality. The group of HPSs had an average of school area of 11.4 Rai higher than the group of CSs which had an average area space of 7.8 Rai.

General Characteristics of Participants

Participants in this study comprised the directors or principals, teachers, school children, parents or guardians, cooks or food sellers, janitors, community leaders, and health personnel. General characteristics of participants including sex,

age, marital status, religion, and educational level were presented separately by following the gold-level HPS group (Table 4-2) and the CS group (Table 4-3).

Table 4-2

Sex Age Marital status Religion Educational level of participants in health promoting school group

Characteristics	Directors/ principals (5)	Teachers (15)	School children (148) n (%)	Parents (10)	School personnel (10)		Community leaders (5)	Health personnel (5)
					Janitors (5)	Cooks/Food sellers (5)		
Sex								
Male	5	3	64(43.2)	-	5	-	5	-
Female	-	12	84(56.8)	10	-	5	-	5
Age								
0-9	-	-	46(31.1)	-	-	-	-	-
10-19	-	-	102(68.9)	-	-	-	-	-
20-29	-	-	-	-	-	-	-	1
30-39	-	1	-	2	1	-	1	3
40-49	3	10	-	5	2	4	2	1
50-59	2	4	-	2	2	1	2	-
≥ 60	-	-	-	1	-	-	-	-
Average age	51	46	10.2	47.5	43.8	45.2	48.6	33.8
Marital status								
Single	-	-	-	-	-	-	-	1
Married	5	13	-	8	5	5	5	4
Widow/Divorce	-	2	-	2	-	-	-	-
Religion								
Buddhism	5	15	148(100.0)	9	5	5	5	5
Christianity	-	-	-	1	-	-	-	-
Islam	-	-	-	-	-	-	-	-
Educational level								
Primary education	-	-	130(87.8)	5	2	4	-	-
Secondary education	-	-	18(12.2)	2	3	1	1	-
Vocational education	-	-	-	3	-	-	4	2
Bachelor degree	3	12	-	-	-	-	-	3
Master degree and higher	2	3	-	-	-	-	-	-

Table 4-3

Sex Age Marital status Religion Educational level of participants in comparative school group

Characteristics	Directors/ principals (5)	Teachers (15)	School children (147) n (%)	Parents (10)	School personnel (10)		Community leaders (5)	Health personnel (5)
					Janitors (5)	Cooks/Food sellers (5)		
Sex								
Male	5	4	60(40.8)	-	5	-	4	-
Female	-	11	87(59.2)	10	-	5	1	5
Age								
0-9	-	-	47(32.0)	-	-	-	-	-
10-19	-	-	100(68.0)	-	-	-	-	-
20-29	-	-	-	-	-	-	-	-
30-39	-	4	-	6	-	1	1	2
40-49	3	8	-	1	3	1	2	3
50-59	2	3	-	3	2	3	2	-
≥ 60	-	-	-	-	-	-	-	-
Average age	48.4	44.9	10.1	41.7	48.4	47.4	48.6	40.2
Marital status								
Single	-	1	-	-	1	-	-	-
Married	5	12	-	10	4	5	5	4
Widow/Divorce	-	2	-	-	-	-	-	1
Religion								
Buddhism	5	15	128(88.1)	10	5	5	5	5
Christianity	-	-	19(11.9)	-	-	-	-	-
Islam	-	-	-	-	-	-	-	-
Educational level								
Primary education	-	-	140(87.2)	9	1	5	2	-
Secondary education	-	-	7(4.8)	1	3	-	2	-
Vocational education	-	-	-	-	1	-	1	1
Bachelor degree	3	15	-	-	-	-	-	4
Master degree and higher	2	-	-	-	-	-	-	-

Administrators. The general characteristics of the directors or principals of the groups of HPSs and CSs were similar in sex, age marital status, religion, and educational level. All were male, which average of age 51 years and 48.4 years respectively. All were married, and Buddhists. Most of them graduated with a bachelor education and or masters in education.

Teachers. Teachers of the groups of HPSs and CSs had similar characteristics in sex, marital status, and religion. Most of them were female, married, and Buddhists. The average ages of the teachers were 46 and 44.9 years respectively. Most of the teachers in HPSs graduated with a bachelors or masters degree whereas all of the teachers in CSs graduated with a bachelor's degree.

School children. School children in both groups had similar characteristics in sex, and age. The difference was that all of the school children in the HPS group were Buddhists whereas the CS group were Buddhists and Christians.

Parents. Parents in the HPSs and CSs group were all female, the average age being 47.5 and 41.7 years of age, respectively. Most of parents in both groups were married. Half of the parents in HPSs group graduated with primary education and the other with secondary and vocational education whereas almost of the parents in CSs group graduated with primary education.

School personnel. The school personnel was composed of cooks or food sellers, and janitors. All of cooks/food sellers in both groups were female, with the average age of 45.2 years. All were married, Buddhists, and most of them graduated from primary schools. All of janitors were male, with the average age of 43.8 years. All were married, Buddhists, and graduated from secondary schools.

Community leaders. Community leaders of both groups had similar characteristics of sex, were male, where the average age was 48.6 years. All were married and Buddhists. Most of community leaders in the group of HPSs graduated with a vocational education whereas most of the community leaders in the CS group graduated with a primary and secondary education.

PART II: DESCRIPTION AND COMPARISON THE SIMILARITIES AND DIFFERENCES OF THE IMPLEMENTATION OF HEALTH PROMOTING SCHOOLS

In this part, the researcher presents the results by following the ten components of Health Promoting Schools (HPSs) including school policy, management in school, school and community participation, environmental health, school health services, nutrition and safety foods, exercise and recreation, counseling and social support, and health promotion for staff. The result in each component of HPS are presented as follows: the first part includes descriptive information regarding the implementation of HPS. The second part includes the comparison of the descriptive information, and similarities and differences of each component of HPS. The third part includes the factors influencing the similarities, differences, and success in implementing HPS.

School Policy

Description of the Implementation of School Policy

The Group of Gold-Level Health Promoting Schools

The group of gold-level HPSs implemented school policy of health promoting school as follows:

Being involved in the HPS project, all schools sent the school health teachers to attend the orientation meeting at the health offices. The teachers started with meeting with the teachers in school not only to inform about the concept of HPS. To create understanding of personnel, some HPSs invited conducted special training and invited health personnel from the health offices to inform other teachers and school children about the HPS. Later, the teachers discussed and agreed to carry on the HPS project in schools. All schools made the consensus by setting the formal HPS committees that was composed of teachers, parents, school children, health personnel, and community leaders. The composition of HPS committee included the representatives of teachers, school children, parents, health personnel, and community leaders and one school invited the elderly to solve the problem of other community members who *"lack of time"*. The reasoning being that, the elderly in the community were accepted by the community members and so they intended to participate in health promoting activities too. Most of schools organized informal and formal meetings for the HPS committee to identify students' health problems and a plan for implementation. Most of the schools had set the specific policy for the HPS as the good directed of schools and integrated other health-related projects such as HIV/AIDS prevention, exercise, prevention of habit-forming drugs, safe foods (consumer protection project), and environmental health projects etc. The HPS project

was set to be one program in the school plan and most of the schools assigned twining project's manager for HPS project and health-related projects. All of the schools disseminated the policy of the HPS to the teachers, school children, school personnel, and community members through the regular systems of communication, such as monthly meetings and announcements during morning assembly. Some participants said, *"there was announcement in the morning before studying that our school implemented health promoting school and we promoted activities about aerobic exercise, selection of safety foods for consumer protection project"*. Furthermore, the directors announced the policy during the parent's meeting, at the school fair on special occasions, through sending letters or leaflets to parents, and using the village broadcast. The participants said, "*we informed the parents during the school fair on special occasion because parents did not available to come to school"*. Furthermore, the teachers encouraged school children and invited the elderly to disseminate policy through the village. The participants said, *"we asked the children to distribute leaflets about school policy of HPS and announced through the community broadcast about HPS policy and activities, and the elderly could help to explain school activities to the villagers"*. There was a participant from one school who had mentioned that her school selected a house in the community, which modeled healthy environment, and the teachers visited this house. Visiting a model house was a helpful method to disseminate the policy of the HPS and create mutual understanding among people in the community.

The Group of Comparative Schools

The group of CSs implemented policy of HPS as follows:

Most of the directors were informed about the policy of HPSs by the Office of Educational Service Area. All schools sent school health teachers to attend the orientation meeting conducted by the health offices. The school health teachers disseminated the policy and concept of the HPS to the directors and other teachers at the monthly meeting. All schools confronted the problem of early retirement of school health teachers. They decided to implement routine activities of health-related projects such as school lunch, exercise, prevention of habit-forming drug projects because school health teachers had planned for an early retirement. The reason that the implementation of HPS started late were because of the retirement of school health teachers and another reason was mentioned by the participants from two schools: *"our teachers have met and decided to implement as we can, we did not emphasize on the contest for the gold or silver, or bronze level of health promoting schools"*. In 2003, all of the schools were assigned new school health teachers and they attended the annual meeting conducted by the district health offices. The new school health teachers disseminated the concept of HPSs to the directors and teachers and they started to solve some urgent problems relating to health. For example, having food sellers do bidding to control the price and quality of the school lunch and creating a solution to the garbage problem. Most of the CSs did not establish the formal health promoting school committees and the directors presented school plans to the school committee called "Basic Educational Institute Committee". All schools did not set the specific policy for the HPS. They had health-related projects such as school health services, school lunch, exercise, prevention of habit-forming drugs, and

environmental health in the school plan. All schools announced the policy of health-related projects to the teachers, school children, school personnel, and community members through the regular systems of communication such as monthly meetings, announcements during the morning assembly and parent meetings. Results from focus group discussion in the comparative school showed that 100% (147) of the school children did not hear about *"health promoting school"*.

When all of the documents in each school were collected a comparative analysis was made showing the factors influencing the success of each the components. The results of the assessment scores based on the ten components of the HPS and the standard assessment criteria of HPS created in 2003 have been explored and compared as following:

Comparison the Similarities and Differences of the Implementation of School Policy

Comparison of Descriptive Information of School Policy

Both the groups of the HPSs and comparative schools had similarities and differences in the implementation of the HPS policy including, acknowledgement of policy, the establishment of a health promoting school committee, setting a specific HPS policy, and dissemination of policy through practice. These results are presented in Table 4-4.

Table 4-4

Similarities and differences of school policy

	Similarities	Differences		Best practice health promoting schools
	health promoting school and Comparative school	health promoting school	Comparative school	
1. Acknowledgement of policy	*Formal system:* administrators and teachers knew from the formal meeting	*Special training:* teachers in HPS attended special training related to health promotion	-	*Formal system:* 3. Meeting; -Special training:
2. Establishment of health promoting school committee	-	*Establish specific group of health promoting school committee in addition to educational institute committee*	*Establish only the educational institute committee*	*Establish specific group of committee and educational institute committee*
3. Setting specific health promoting school policy	-	*Setting specific health promoting school policy*	-	*Setting specific health promoting school policy*
4. Dissemination of policy through practice.	*Dissemination of HPS policy through regular system of communication:* - meeting - regular announcement - place on board - village broad cast - leaflet	- teachers selected and visit model house in community	-	*Dissemination through all systems of communication:* - meeting - regular announcement - place on board - village broad cast - leaflet - visit model house

Acknowledgement of policy. The administrators and teachers in the HPS group knew about the policy of the HPS from three channels of formal meetings. Firstly, the directors were informed about the policy of HPS by the Office of Educational Service Area and they disseminated this policy to the teachers in the schools. Secondly, all HPSs sent the school health teachers to attend a meeting conducted by district health offices and district hospitals and they disseminated the information to other teachers during school meetings. Thirdly, most of the HPSs organized special training activities about health promotion and invited speakers from the health sector to explain the policy, concept, and principles of health promotion to all teachers and staff. In contrast, the group of CSs was informed about the policy of HPSs from two channels of formal meetings. Firstly, the directors were told about the policy from the Office of Educational Service Area and they then disseminated it to the teachers. Secondly, all CSs sent the school health teachers to attend the meeting conducted by district health offices and district hospitals and these teachers disseminated this information to the directors and teachers in their schools.

Establishment of health promoting school committee. Most of the HPSs established the formal HPS committees. The committees were composed of teachers, parents, school children, and community leaders and one school invited the elderly people to form the committee. The HPS committee was involved in the process of analyzing and planning concerns about students' health problems. Whereas most of CSs did not establish formal health promoting school committees. Most of CSs had presented the schools annual plans to the school committees, which was composed of the teachers and community leaders. The school committees listened to the schools and provided suggestions.

Set of a specific health promoting school policy. Most of the HPSs had set the specific policy for the HPS and integrated other health-related projects such as HIV/AIDS prevention, exercise, prevention of habit-forming drugs, consumer protection, etc. The HPS project was established as one of the projects in the schools annual plan. Most of the gold-level HPSs assigned a twining project's coordinator for each project to solve the problem of teacher's retirement. In contrast, the comparative schools did not create a specific policy for the health promoting schools. They had the health-related projects such as school health services, school lunch and milk, exercise, and environment incorporated in the school plan.

Dissemination of policy through practice. All of the schools disseminated the policy to teachers, school children, school personnel, and community members through the regular system of communication such as monthly meetings, and also the announcement during the morning activities. Other systems of communication employed were the meetings with parents every semester, the school fair on special occasions, sending the letters to the parents, and visiting the model house. There was one school which emphasized the policy by providing the leaflets announcing the policy and visiting the model house in community. The model house was selected to be an example of cleanliness and proper garbage disposal in order to campaign for environmental cleanliness. In contrast, all of the CSs disseminated the policy to teachers, school children, school personnel, and community members through the regular system of communication such as monthly meetings, and the announcement during the morning activities. Other systems of communication employed were the meetings with the parents every semester, the school fair on special occasions, sending the letters to parents, and meeting with the school committee. All of the

comparative schools announced the policy of health-related projects but did not mention anything about the health promoting school policy. The result of focus group discussion in the CS showed that 100% (147) of school children did not hear the term *"health promoting school"*.

Comparison of Similarities and Differences of School Policy

Acknowledgement of policy.

1) Similarities

A*cknowledge the policy from similar channels.* Both groups of schools knew the policy through the similar channels of director meetings and school health teacher meetings.

2) Differences

Conduct special training related to health promotion. Most of the HPSs organized special training sessions for teachers and staff to create understanding the concept and significance of health promotion and HPS. In contrast, the teachers of CSs were informed of the policy by the directors and school health teachers and through these meetings understood that the HPS project was the implementation of health-related projects. They thought that schools had already implemented the activities such as school health services, school lunch, exercise, and prevention of Dengue hemorrhagic fever. Some participants from the CSs thought that the assessment of the health promoting school was a contest of implementation, *"we did not want to contest, so we just implement our school projects as usual"*.

Establishment of health promoting school committee.

1) Similarities

With regard to the similarities of establishment of HPS policy, neither schools showed remarkable similarities.

2) Differences

Establishment of health promoting school committee. In addition to an educational institute committee, most of the HPSs established a specific committee to analyze and plan ways to solve the school children's health problems. The HPS committee consisted of the representatives from teachers, parents, school children, and the community. Whereas the CSs had only an educational institute committee which presented the health problems as they discovered them to the school committee for suggestions.

Set a specific health promoting school policy.

1) Similarities

Regarding the similarities in terms of setting a specific HPS policy, neither schools showed remarkable similarities.

2) Differences

Set of specific health promoting school policy. Most of the HPSs had set a specific policy and integrated the community members involved in setting the policy while the CSs did not. Examples of health-related projects in the HPSs were consumer protection, prevention of drugs, exercise etc. Most of the CSs had set the policy of health-related projects as being school lunch, school health services, exercise by the teachers and suggestions presented to the school committee for approval.

Dissemination of policy through practice.

1) Similarities

Utilization of the regular school system to disseminate the policy. Both groups of schools used the regular system of communication to disseminate the policy.

2) Differences

(a) *Dissemination of clearly policy.* Directors or principals of the gold-level HPSs announced clearly to parents and community members that their schools had implemented a HPS project and called upon participation from the parents. From the focus group discussion, all school children from the HPS group had heard about the HPS whereas all of the school children from the CS group had not.

(b) *Involvement of school children and community members in dissemination of policy.* A few HPSs created a larger system of communication by assigning school children to provide leaflets concerning the health promoting school policy and visiting the model house of environmental health in the community. The model house was selected by teachers and the community members as being an example about cleanliness and garbage disposal.

Factors Influencing the Similarities,Differences, and Success of School Policy

Factors Influencing the Similarities of School Policy

Orientation of health promoting school project. Health sectors and educational sectors organized an orientation meeting to inform the directors or principals and school health teachers about the health promoting school.

HPS became a national policy. The HPS was a national policy that schools were to practice.

Utilization of school channels to disseminate health information. All of the schools in both groups used school communication channels to inform parents, and the community members about the health promoting activities.

Factors Influencing the Differences of School Policy

Creation the awareness of personnel by conducting a special training session about health promotion. Health promoting schools had conducted a special meeting to inform teachers and the school personnel about the concept and significance of health promotion and HPS whereas the school teachers in CSs had just informed the principals and other teachers during the meeting.

Creation the awareness of personnel by establishing of a specific health promoting school committee. All HPSs created the awareness of personnel by establishing a specific health promoting school committee that involved parents and elderly people. The participants said, *"this specific group of committee was establish in addition to the basic educational institute committee because we want to encourage the concern of children's health"*. The specific committee focused on solving health problems of the school children and the basic educational institute committee concentrated on education. Whereas in the CSs there was only a basic educational institute committee that emphasized health in the regular educational programs.

Establishment of commitment among stakeholders by set up a specific health promoting school policy. The HPS committee had set a specific HPS policy

and integrated to school mission that integrated all of the health related projects in the schools.

Dissemination of clearly policy. The directors or principals of the HPSs clearly announced the HPS policy to people in community. Beside the dissemination of policy through school's regular system, the teachers selected the model house of healthy environment in the village and announced the policy clearly to create mutual understanding.

Factors Influencing the Success of School Policy

Creation the awareness of personnel through interactive training about health promotion and HPS. The group of HPSs conduct special training for teachers, school personnel, and school children about the concept and significance of health promotion and HPS. The teachers said could understand the concept of HPS and agreed to implement HPS. Some HPSs sent the teachers to attend special training about health promotion.

Creation the awareness of personnel by setting a specific health promoting school committee. The group of HPS set a specific HPS committee in addition to the educational institute committee. The specific HPS committee could focus on health promotion activities for school children, school personnel, and community members.

Establishment of commitment among stakeholders by setting up a specific health promoting school policy. The HPS committee had set a specific HPS policy and integrated to school mission that integrated all of the health related projects in the schools.

Establishment of commitment among stakeholders by dissemination of clearly policy through entire population. The directors or principals of the HPSs regularily mentioned about the policy and activities of HPS project to establish commitment among teachers, school children, parents, school personnel, and community members to promote health in the school meeting. The participants from HPS said that "*parents knew what we have done for the children and they increased participation*". The participants from HPS mentioned that, "*good public relation made us success*".

Leadership of administrators. Most of participants from HPSs mentioned that leadership of administrators was the factor of success in their schools. The participants mentioned,

> *"I think leadership is important, if the administrator can convince other teachers and they agree to participate, they will do it."*
>
> *"Our director is good, justice, open mind, and that make everybody participate in promoting health."*
>
> *"Our administrator understand and concern about the significant of the project, then assign the task equally."*

Management in School

Description of Management in School

The Group of Gold-Level Health Promoting Schools

The group of gold-level HPSs planned, implemented, and evaluated the HPS project as follows:

The planning and implementation processes, all schools conducted informal and formal meetings with the HPS committee to identify the problems of school children. The committee planned for health-related activities and put this in the school's annual plan. Then the directors presented the school plan to the basic educational institute committee for suggestions. The directors, school committee, and HPS committee helped to seek budget from the community and outside the community for supporting scholarships, health promoting activities, and improving the school environment. All schools requested the budget from the sub-district administrative organization, temples, and the municipality for supporting scholarships, sport activities, school lunch, and supplementary milk for the school children. All of the schools received donations from the religious ceremony *"tod pha pa"* (a forest robe ceremony in which a robe, together with other offerings, is left for the monks to take as a discarded cloth) to improve the library, cafeteria, school park, and fitness park. Additionally, some schools utilized the donation budget for buying musical instruments for the school children. One participant mentioned,

> *"Last year, the villagers conducted the religious ceremony (tod pha pa) and donated money over a hundred thousand baht for our school. We used the*

money to improve the park besides the kindergarten building, and improve the cafeteria."

"Our school built the fitness park from the donation of religion ceremony (tod pha pa) and some was distributed from the commission when our school had to buy the books or materials."

The schools were not only seek the budget but also managed the budget to support various activities. One school managed to use the money from the budget for the Promotion of Science and Technology project to build the Mathematics Park for children to learn a more natural surrounding. One school requested monies from the budget of the non-government organization (NGO) to improve the cafeteria, the toilets, a building used by the kindergarten, and to build drinking water pipe.

Besides the management of budget and materials for promoting health, most of HPSs managed human resource by assigning twining project's coordinator for HPS and health related projects. The participants mentioned, *"we assigned two persons for each health project to replace for early retirement teachers and everybody had equal chance to responsible for health projects".*

The evaluating process, most of the schools summarized the health-related projects at the end of school year and presented this information in the teachers and parents' meetings, and the committee meetings. The parents and committee had suggestions for the evaluation of the project.

The Group of Comparative Schools

The group of CSs planned, implemented, and evaluated the HPS project as follows:

The planning and implementing processes, the teachers planned for health-related activities and put this agenda in school's annual plan. The directors presented the plan to basic educational institute committees for suggestions. The directors and school committee helped to seek a budget from the community and outside the community for supporting the scholarship and health promoting activities, and improving the school environment. All schools requested the budget from the sub-district administrative organization, temples, and the municipality for supporting scholarships, the sport activities, school lunch, and milk supplement for school children. They also received donations from millionaires to support scholarships and improve the buildings and drinking water.

> *"Our school was lucky...the millionaires from Bangkok donated money for scholarship, building. When we had problems like the lack of water, we proposed a project to her and the parents helped us to repair it."*
>
> *"Our school received donations from the millionaires in Chiang Mai province to support the scholarship, and school lunch."*

Besides those resources, most of the CSs received donations from community members and from the religious ceremony *"tod pha pa"* to improve the cafeteria, school fencing, and the road in the school.

> *"Last year, we proposed that the school committee repair the school fencing, the villagers tried to help by conducting a religious ceremony (tod pha pa) and we received some budget to build a few meters of school fencing...we have to do it step by step."*

The evaluating process, most of the schools summarized the health-related projects at the end of school year and presented this information in the teachers meeting and committee meetings.

Comparison the Similarities and Differences of the Implementation of Management in School

Comparison of Descriptive Information of Management in School

Both of the groups, the HPSs and the CSs, had similarities and differences in the management of the HPS project including planning, implementation, and evaluation of HPS activities as presented in Table 4-5.

Table 4-5

Similarities and differences of management in school

	Similarities	Differences		Best practice health promoting schools
	Health promoting school and Comparative school	Health promoting school	Comparative school	
1. Planning of health promotion activities	*Resource exploration:* Seeking resources from sub-district administration organizations, villagers public agencies private agencies municipalities, temples	*Active involvement of stakeholders in planning*	-	*-Resource exploration:* Seeking resources from inside and outside community
2. Implementation of health promoting activities	*Implementation of health promotion projects:* nutrition, dental health, exercise, environment, accident prevention	*Continuity of health promotion projects* *Assignment of twining project's coordinator*	-	*Implementation of health promotion projects:* nutrition, dental health, exercise, environment, accident prevention
3. Evaluation of health promoting school activities	-	-	-	-

Health promotion planning. All of the gold-level HPSs worked together with the basic educational institute committee and the HPS committee to identify and plan on health promotion, whereas all schools in the comparative group jointly planned with the basic educational institute committee by identifying health related problems and seeking suggestions for the solutions as follows:

1) *Resource exploration.* The administrators, educational institute committee and the gold-level health promoting school committees sought resources inside and outside the community for funding the education of students, health promoting activities and for improving the school environment which were sources of education and health promotion. The same practice was conducted by the school administrators in the comparative group.

a) All of the schools of the two groups requested funding from local administrational organizations and municipalities to support such activities as sports day, school lunch and supplementary milk.

b) The schools from both groups were usually given a donation from a Pha-Pa ceremony and arranged to use this fund, with the cooperation of the community, to improve the school facilities including the library, restrooms, canteen, playground and health park. These monies were also used to purchase musical instruments for the students.

Likewise, schools in the comparative group collected donations from the wealthy for scholarships, school building improvement and drinking water supplies for the students.

c) The gold-level HPSs sought resources from agencies in both the public and private sectors to improve the physical environment of the schools. One of these schools called for budget assistance from the Institute for the Promotion of Teaching Science and Technology in order to create a mathematics park where children could learn amidst the natural environment. Another school approached international private organizations for funding to improve the school food court, restrooms, kindergarten building and drinking water supplies for students. However,

the implementation of seeking financial resources outside of the school was found less among the schools in the comparative group.

2) *Implementation for the health promotion project.* Both groups of schools managed the resources for health promotion including nutrition, dental health, exercise, environmental health, prevention of habit-forming drugs, and accident prevention projects.

3) *Evaluation of the health promotion projects.* As part of the assessment of the HPS project, most of the schools in both groups presented the annual summary report of health related projects at the teacher and educational institute committee meetings.

Comparison of Similarities and Differences of Management in school

Resources exploration.

1) Similarities

Ability of resources exploration. Both groups of the schools, depending on each school's capability, had to seek financial resources inside and outside of the community for the funding of scholarships for poor students and for improving the physical environment.

2) Differences

Regarding the differences in terms of resource exploration, neither schools showed remarkable differences.

Health promotion implementation.

1) Similarities

Coverage of health promotion projects in school. Both groups of schools implemented several health promotion projects according to the policy,

including the projects on nutrition, dental health, exercise, the environment, drug prevention, dengue fever prevention, accident prevention, etc.

2) Differences

(a) *Continuation of health promotion projects.* Most of the gold-level HPSs continuously implemented health promotion projects as routine activities, such as the nutritional, dental health and exercise projects; whereas schools in the comparative group failed to routinely conduct some health promotion activities due to the lack of staff.

(b) *Assignment of twining project's coordinator.* The HPSs assigned two teachers to responsible for the HPS and health related projects. The teachers showed strong ability to collaborate with other teachers, school children, parents, school staff, community leaders, and health personnel.

Factors Influencing the Similarities, Differences, and Success of Management in School

Factors Influencing the Similarities of Management in School

Ability of resource exploration from inside and outside of community. The administrators in both groups of schools could seek budget from inside and outside the community to support children's scholarship, provide of school lunch, support teaching materials, and improve environment.

Coverage of health promotion activities in school. Both groups of school received support from various ministries to provide health-related projects.

Factors Influencing the Differences of Management in School

1) *Active participation of community members in planning, implementing, and evaluating processes.* The HPSs encouraged participation of teachers, school children, parents, health personnel, and community members in planning, implementing, and evaluating processes.

2) *Assignment of twining project's coordinator.* Most of HPSs had assigned two responsible teachers to implement health related projects, the responsible teacher of each project had someone to help and replace when she left. In contrast, all of the CSs were confronted with problems when the project's coordinator retired and the new teacher should start the health project.

Factors Influencing the Success of Management in School

Effective management of administrators and teachers. The participants from HPSs mentioned that their school could allocate the budget to buy computer, books, and teaching materials because the director loaned money from the community's bank.

Participants from another school said, "one NGO follow our director from previous school to this school and provide fund to improve the environment of this school because the NGO trust on this director that he was fair, openness, and responsible to allocate the money to improve children's health".

One participant said, *"our teachers made decision and we used profit from selling stationary to build fitness park".*

Leadership of administrators. Most of participants from HPSs mentioned that leadership of administrators was the factor of success in their schools. The participants mentioned,

> *"Our administrator understand and concern about the significant of the project, then assign the task equally."*
>
> *"We should consult the director to set the HPS committee, our director had good relationship with many people in the community and he could ask them to be the committee."*

Creation of networking through full participation of stakeholders. The participants from HPSs mentioned that the participation of school children, parents, and community members in planning, implementing, and evaluating processes was helpful. They could understand and disseminate to other community members that helpful for gaining participation.

Effective management through assignment of twining project's coordinator. Most of HPSs had assigned two responsible teachers to implement health related projects, the responsible teacher of each project had someone to help and replace when she left. In contrast, all of the CSs were confronted with problems when the project's coordinator retired and the new teacher should start the health project.

Participation of Stakeholders in Implementing Health Promoting Schools

Description of Participation of Stakeholders in Implementing HPS

The Group of Gold-Level Health Promoting Schools

Stakeholders participated in school health promoting activities in two patterns. The first pattern was the teacher brought children to participate in community activities such as improvement of environmental health, campaign to prevent drugs addiction, and prevention of hemorrhagic fever projects. The second pattern was the teacher invited parents and community members to participate in school health activities during special occasions such as Children's day, Mother's day, Father's day, Farewell day, sport day, religion ceremony, etc. Parents and community members helped teachers to prepare foods and gifts, and attended the activities.

The kinds of participation stakeholders from the gold-level HPSs had involved in, planning, implementing, evaluating, and receiving benefits are described below.

Participation in planning. Parents, community leaders, and school children were involved with the HPS committee. In most of the schools where there were problems in planning the teachers approached the health promoting school committee and the committee provided suggestions. There were two HPSs that encouraged the HPS committee to work together in planning ways to deal with health problems, and set the school vision.

Participation in implementation. The stakeholders participated in sharing the work load, providing resources, and being lecturers.

1) *Sharing workforce.* Parents participated by attending school activities and meetings and being the cooks or food sellers for school children, *"when the school invited us to the meeting, we attended and helped the teachers to prepare foods for children, clean the buildings, and cut the trees around the school".* School children participated in school health activities and assisted in disseminating health information. They helped to look after the young students to brush teeth, putting the abate sand in the sources and provided the sand to households in the community, turning upside down the coconut shell for destroying the source of larvae of mosquitoes, announcing health information through local broad cast, placing on the public relations board, cleaning the floor, disposing the garbage, washing the toilets, watering the plants, separating the garbage to recycle for producing sa paper. As some example statements from school children:

> *"We helped by putting the abate sand in the sources and provided the sand to households in the community, turn upside down the coconut shell for destroying the source of larvae of mosquitoes."*
>
> *"We helped by announcing through local broad cast, placing on the public relations board."*
>
> *"We helped to separate the garbage, and brought paper garbage to recycle for producing sa paper."*

The janitors and cooks/food sellers in all HPSs participated in cooking foods, cleaning the classroom and school surroundings, producing materials to support health campaigns. The participants mentioned that,

"I helped to produce the campaign board when school had the campaign, ...for example...board for HIV/AIDS prevention campaign, board for prevention of hemorrhagic fever campaign."

"We helped to clean and decorate the school surroundings... maintaining the buildings, it's our responsibility and we wanted the children to learn in the good environment."

"In the evening...we helped teachers to coach the students while they were playing football because I used to be a football player when I was in school."

"We partook in cooking essential foods for children ...we had to cook clean foods, meat, and vegetables because we wanted our children to grow up and healthy."

"We helped the teachers to look after the children to prevent accident because there were many big trees behind our school and some children climbed up the tree."

2) *Providing resources.* Community members participated by providing foods when schools conducted the activities and during special occasions. Community members also supported money for scholarship, school lunch and supplementary milk, clothes, stationery, and gifts etc. The participants said,

"The sub-district administration organization supported us for school lunch, milk...and helped schools to find scholarships."

"When the school lacked chairs for children, we conducted the religious ceremony (tod pa pha) and villagers donated to buy chairs for them."

"We partook as we have...someone gave money...someone prepared the gifts."

"The villagers held the northern traditional food fair (khan tok), the parents participated by selling foods, so we could buy the musical instruments for school children."

"Some parents donated their used computer to school when their child graduated from the school."

"When schools conducted the activities, we participated by collecting money to help them."

3) *Being lecturer in school.* The community members participated as the lecturer in school. The HPSs developed a subject to serve the community's occupation and invited the community members to teach the school children. One HPS invited the village health volunteer to teach school children about planting herbs, practicing traditional massage, and performing Northern Thai dance. One HPS invited the community members to teach about cultivating the trees. One HPS invited the elderly to teach about making flowers and another two HPSs invited the community members to teach about planting peanut and trees.

"Our school invited the village health volunteer to be a special lecturer about herbs, Thai traditional massage, northern Thai music instruments, and northern Thai dance (Fon leb)."

"People in our village planting one kind of pea, we added the subject about pea in the curriculum and invited the community members to teach the students."

"We were in the community of cultivating trees, so we invited the villagers to teach our students and the children could learn and help their family."

Participation in evaluation. The community members participated in providing suggestions when teachers presented the results of implementing the health-related projects.

Participation benefits. The school children were the major beneficiaries from the health promoting school program. Many of the school children in the HPSs mentioned they had benefited from the school health programs. Here are some of their statements,

"Our school provided us the opportunity to exercise, play sports, aerobic exercise."

"We had practiced tob-ma-phab...it is an exercise...good for health."

"We had eaten clean foods that made us healthy."

"We had brushed our teeth after lunch to prevent dental caries and washing hands to prevent disease."

"We had drank milk, fruit juice that useful to promote health."

"We received the physical examination...from our school health leaders...from the health personnel."

"We practiced traditional dance...when we dance, we practiced the body movement...it was also an exercise."

"We played northern musical instruments (sa-lor-sor-sueng)...that made us happy."

"The teacher taught us to meditate before starting the class...that helped us to concentrate in studying."

The community members also benefited from the school children activities. Here are some examples of activities where community members benefited; when the school children made an effort to eliminate the larvae of mosquitoes in the community, their campaigns for the prevention of HIV/AIDs and the prevention of habit-forming drugs.

The Group of Comparative Schools

Likewise, stakeholders of CSs participated in school health promoting activities in two patterns. The first pattern was the teacher brought children to participate in community activities such as improvement of environmental health, campaign to prevent drugs addiction, and prevention of hemorrhagic fever projects. The second pattern was the teacher invited parents and community members to participate in school health activities during special occasions such as Children's day, Mother's day, Father's day, Farewell day, sport day, religion ceremony, etc.

Below is a description of the kinds of participation stakeholders of CSs were involved in, planning, implementing, evaluating, and receiving benefits.

Participation in planning. Teachers were the people who planned the health-related projects and then presented these plans to the basic educational institute committee.

Participation in implementation. The stakeholders participated in sharing the work load and providing resources.

1) *Sharing in the work force.* Parents and community members participated in the work force by attending the school activities, preparing schools for the activities, and being the cooks or food sellers in the school.

The participants stated that,

"When school conducted the Sports day, the school committee helped to prepare the tent."

"The committee helped our school to build the water pipe...drinking water tank."

Most of school children in the CSs said that they had participated in the protection of the environment and health-related activities. They had been involved in activities like cleaning the floor, disposing the garbage, washing the toilets, watering the plants, turning upside down the coconut shell for destroying the source of larvae of mosquitoes, and participating in the parade on prevention of habit-forming drugs campaign.

The janitors, cooks and food sellers in all the CSs participated in school activities as their jobs responsibility, for example, the janitors took care of cleaning the buildings and environment, the cook/sellers took care of cooking clean and essential foods. The participants mentioned that,

"We were responsible to clean the school surroundings...cleaning the toilets ...taking care of water, trees, and school playground."

"We partook in cooking essential foods for children...we did not put sodium glutamate into foods... we helped the children to eat enough foods."

2) *Providing Resources.* Community members provided the foods when schools conducted special activities and occasions. They donated money for scholarship, clothes, stationery, and gifts etc. The participants said,

"We partook when the school held the Sports day...we brought the foods to join with them...some parents gave money."

"We partook in conducting religious ceremony (tod-pa-pha) to find money for repairing the cafeteria in the school."

"The sub-district administration organization supported for school lunch, milk, sport, and musical instruments."

Participation in evaluation. Teachers summarized the results of each health-related project and presented this information routinely to the basic educational institute school committees.

Participation in receiving benefits. Many of the comparative school children recognized the health benefits they received from schools and stated the following,

"Our school provided us the opportunity to exercise, playing sports, aerobic exercise."

"We had eaten lunch that made us strong."

"We had drank milk."

"We received the physical examination from the health personnel."

"We practiced traditional dance (Rumvong Martathan...Fon Leb) ...the boys practiced the Thai boxing for exercise (Mae Mai Muay Thai)."

"We played Thai musical instruments ...that made us happy."

The community members also received benefits from school children activities. An example was the activity of the school children to eliminate the larvae of mosquitoes in the community.

Comparison the Similarities and Differences of Participation of Stakeholders in School

Comparison of Descriptive Information of Participation in School

Both of the groups, the HPSs and the CSs, encouraged participation from stakeholders as presented in Table 4-6.

Table 4-6

Similarities and differences of stakeholders participation in school

	Similarities	Differences		Best practice
	Health promoting school and comparative school	Health promoting school	Comparative school	health promoting schools
1. Pattern of participation	*Pattern of participation:* The collaborative projects between school and community, The school activities on special occasion	-	-	-
2. Kinds of participation	*2.1 Participation in implementing school activities:* - work force for school activities - as community resources - knowledge-based people related to health promotion *2.2 Participation in evaluation of health promoting school project*	*Active participation of stakeholders in identifying and planning health problems*	-	*Active participation of stakeholders in planning, implementing, and evaluating processes.*

Pattern of participation. In both groups of schools, the community members participated in school health promotion activities in the following two patterns:

1) *The collaborative projects between school and community.* The school and community worked together in the collaborative projects such as, improvement for environmental health, campaign for the prevention drug addiction, and prevention of Dengue hemorrhagic fever projects.

2) The school activities on special occasion. The parents and community members participated in the school activities related to health on Children's day, Mother's day, Father's day, Farewell day, sports day, and religious ceremonies. They attended the activities and prepared foods and gifts for children.

Kinds of participation.

1) *Participation in planning.* Most of the HPSs conducted meetings between the HPS committees and teachers to solve health problems and set the yearly plans. The HPS committee had to identify health problems and propose a school mission. Whereas in the CSs, the teachers were the persons who planned the health-related projects and presented them to the school committee which was composed of teachers, health personnel and community leaders. The parents were not involved in planning process and they were informed about the school projects during the parent's meeting each semester.

2) *Participation in implementing school activities.* The teachers, parents, school children, school personnel, health personnel, and community members participated in health promoting school activities as follows:

(a) *Participation in work force for school activities.* Most of the parents and community members participated in the work force such as attending the school activities, attending the meetings, and being the cooks or food sellers for the school children. The janitors took care of cleaning the buildings and the school environment, the cooks/sellers took care of cooking and cleaning and the essential foods. In two health promoting schools, the janitors had also helped the teachers to practice sports with the school children.

(b) *Participation as the community resources.* The community members from both groups of schools participated in implementing health promoting activities by providing foods when the schools conducted the activities during a special occasion. They donated money for scholarships, clothes, stationery, gifts etc. The participants from both groups said similarly that,

> *"The sub-district administration organization supported us for school lunch and, milk."*
>
> *"We partook as we have...someone gave money...if someone did not have money, they prepared the gifts."*
>
> *"On Mother's day, we came to offer food to the Buddhist priests."*
>
> *"We partook when the school held the Sports day...we brought the foods to join in with them...some parents gave money."*
>
> *"Some parents donated their used computer to school when their child graduated from the school."*

(c) *Participation as the knowledge-based people related to health promotion.* Most of the participants from both groups of schools mentioned similarly

that the health personnel and community leaders brought their knowledge and experience to assist in activities.

"The health personnel coordinated with the district organization, they accompanied our teachers and students to attend the aerobic exercise...the trained students could be the leaders to promote aerobic exercise in our school."

"Our school invited the village health volunteer to be a special lecturer about herbs; she has also participated in teaching Thai traditional massage, northern Thai music instruments, and northern Thai dance (Fon leb)."

3) *Participation in the evaluation of health promoting school project.* The responsible teachers in each health-related project in the HPSs summarized the results and presented them to the school committees and HPS committees. One HPS evaluated the environmental health project of having a contest for the model house in the community. In contrast, in the CSs the responsible teachers in each of the health-related project summarized the results and then presented them to the teachers and educational institute committees.

4) *Participation in receiving benefits from health promoting school project.* The school children benefited most from the HPS project. Most of the school children in the HPSs and comparative schools spoke about the benefits they had received from schools. These are some of their statements:

"Our school provided us the opportunity to exercise, play sports, aerobic exercise...helped us to be strong."

"We had eaten clean foods...good for health."

"We had brushed our teeth after lunch and washed our hands...preventing dental caries and disease."

"We had drank milk...good for health."

"We played Thai musical instruments ...that made us happy."

Comparison of Similarities and Differences of Participation in School

1) Similarities

(a) *Pattern of participation.* The stakeholders in both groups of the schools had a similar pattern of participation. The patterns of participation were the teachers brought children out to the community and invited community members to get in school activities. The stakeholders participated in some of the collaborative projects between school and community and in some of the school activities created for a special occasions.

(b) *Kinds of participation.* The stakeholders of both groups of schools participated in similar ways in the work force, resources, and distribution of knowledge.

2) Differences

Active participation through planning, implementation, and evaluation processes. Most of the HPSs had involved the community members since the beginning in problem identification and planning, implementing, and evaluating the health promotion activities. Although with the CSs, the community members had less active participation in the planning process, the teachers did present health problems and asked for suggestions.

Factors Influencing the Similarities, Differences, and Success in Participation in Implementing HPS

Factors Influencing the Similarities in Participation in Implementing HPS

Relationships among the directors or principals, teachers, and community members. All of the directors or principals and teachers in both groups of schools had good relationships with community members. They had participated in the community activities.

Factors Influencing differences in participation in Implementing HPS

Active participation of stakeholders in identify and planning health problems. Most of HPSs encouraged school children and community members to participate in identifying, planning, implementing, and evaluating health problems. Whereas the school children and community members in CSs did not participated in the whole processes.

Factors Influencing Success in Participation of Stakeholders in Implementing HPS

Creation of networking through full participation of stakeholders. Most of HPSs encouraged school children and community members to participate in identifying, planning, implementing, and evaluating health problems.

Improvement of Environment in School

Description of the Implementation of Improvement of Environment in School

The Group of Gold-Level Health Promoting Schools

The group of gold-level HPSs improved the physical and social environment in order to promote health as follows:

Physical environment. Most of HPSs improved the physical environment as follows:

1) *School surroundings.* All of the schools improved the surroundings in ways such as these; planting trees, flowers, building the rest area, and constructing the garbage disposal.

2) *Learning resources.* All of the schools used their environment to create learning resources, such as the Mathematics Park for learning, the Herbal Park, library, and health information board.

Figure 4-1. Mathematics park.

Figure 4-2. Herbal Park.

3) *Health promoting environment.* All of the schools have created the physical environment for promoting health, such as building a stone walkway, a children's park fitness park, and lotus well with fish to help eliminate the larvae of mosquitoes.

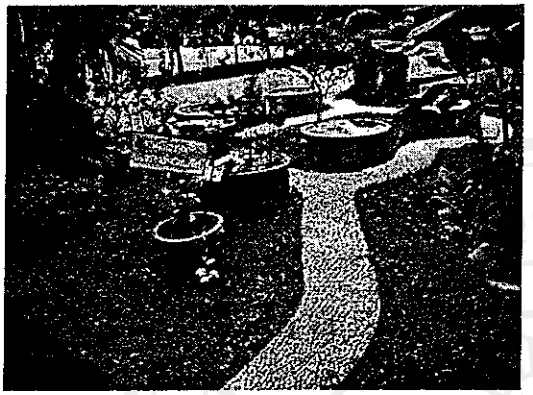

Figure 4-3. Stone walkway.

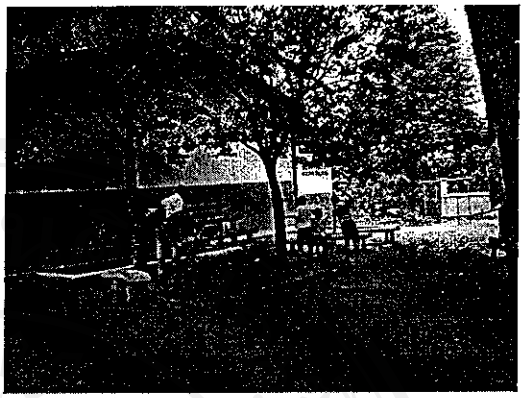

Figure 4-4. Fitness park.

Social environment.

1) *Ethical and moral training.* All of the schools brought the school children to the temple or invited the monk to teach about ethics and moral issues. The teachers also integrated ethical and moral issues in the subjects. Furthermore, one health promoting school provided the opportunity for religious practice every month by making an offering to the monk.

Figure 4-5. School children offered foods to the monk.

2) *Socialization with the community.* All of the schools have brought the school children to participate in health promoting and health prevention activities in the community such as working with the village health volunteers to eliminate the

larvae of mosquitoes, and developing a program with the community to campaign for the prevention drug addiction.

3) *Create social activities to enhance health promoting behaviors.* All schools have created social activities such as; a peer support group which assisted the young students in eating and tooth brushing habits and enabling the students to create a democratic committee, the school cooperation shop committee, and the consumer protection committee. These activities were aimed at regulating the school children's discipline and hygienic behaviors. The participants from one HPS mentioned that they rearranged the classroom so that the older and younger students would be in the same building. This socialized environment was to train the students to help others and prevent the congregating of drug users.

The Group of Comparative Schools

The group of CSs improved their physical and social environment to promote health as follows:

Physical environment.

1) *School surroundings.* Most of the CSs improved the surroundings by planting trees and flowers, building a rest area, and constructing a garbage disposal area.

2) *Learning resources.* All CSs improved the library and information board so they would be learning resources for school children. Most of CSs had a limited budget, but they were still able to develop Herbal Park as an environment setting and learning resource.

Figure 4-6. Herbal Park in a comparative school.

Social environment.

1) *Ethical and moral training.* All of the schools brought the school children to the temple or invited the monk to teach about ethic and moral issues. The teachers were also integrated ethical and moral issues in their subjects.

2) *Socialization with the community.* All of the schools had the school children participate in health promoting and health prevention activities in the community such as working with the village health volunteers to eliminate the larvae of mosquitoes, and participating with the community to campaign for the prevention of habit-forming drugs.

3) *Create social activities to enhance health promoting behaviors.* Most of schools have created social activities such as peer group support in helping young students to eat correctly and brush their teeth properly and enabling the students to form the democratic committee, the school cooperation shop committee, and the consumer protection committee. These activities were aimed at regulating the school children's discipline and hygienic behaviors.

Comparison the Similarities and Differences of the Improvement of Environment in School

Comparison of Descriptive Information of Improvement of Environment in School

Both of the school groups, the HPSs and the CSs, improved the environment to promote health as presented in Table 4-7.

Table 4-7

Similarities and differences of improvement of environment in school

	Similarities	Differences		Best practice health promoting schools
	Health promoting school and Comparative school	Health promoting school	Comparative school	
1. Physical environment	*1.1 School surroundings* *1.2 Learning resources* *1.3 Health promoting environment*	*Create health promotion environment*: fitness park or health park.	-	*Create physical and social environment*
2. Mental and social environment	*2.1 Ethical and moral training* *2.2 Participated in community activities* *2.3 Create social activities to enhance health promoting behaviors*	-	-	-

Improvement of physical environment. Both groups of schools improved the physical environment as follows:

1) *School surroundings.* All of the HPSs improved the surroundings in these ways; planting trees, flowers, building the rest area, and constructing a place for garbage disposal. Whereas most of the CSs improved the surroundings by planting

trees and flowers, building the rest area, and constructing the garbage disposal some schools did not have enough land area to build the rest area.

2) *Learning resources.* All of the HPSs had used the school environment as a source for learning by creating such projects as the Mathematics Park for learning, Herbal Park, and the health information board. In contrast the CSs only improved the library and constructed an information board to be learning resources for the school children. Most of the CSs had a limited budget; consequently they were less likely to use the environment as a learning resource and were not able to make an Herbal Park.

3) *Health promoting environment.* Most of the HPSs had also set the physical environment for an area for promoting health by creating the children's playground, Fitness Park or health park, Foot Massage Road, and the Lotus Well which contained fish to eliminate the larvae of mosquitoes. Most of the CSs had planned on promoting health in the school physical environment but were limited due to finances and in some cases only able to complete a children's playground.

4) *Mental and social environment.*

(a) *Provide ethical and moral training.* All of the schools in both groups brought the school children to the temple or invited the monk to teach about ethical and moral issues. The teachers also integrated the issues ethics and morality in the school subjects. Furthermore, one HPS provided the opportunity for religious practice every month by making an offering to the monk.

(b) *Encourage participation in community activities.* All of the schools in both groups had the school children participate in health promoting and health prevention activities in the community such as participating with the village

health volunteers to eliminate the larvae of mosquitoes, and participating with the community to campaign for drug addiction prevention.

(c) *Create social activities to enhance health promoting behaviors.* All of the schools had created social activities to enhance health promoting behaviors such as; student peers helped the younger students to eat well and brush their teeth, enabling the students to create the democratic, school cooperation shop, and consumer protection committees. These activities were aimed regulating the school children's discipline and hygienic behaviors. The participants from one HPS mentioned that their school arranged the classroom so the older and younger students would be in the same building in order to train them to help each other by preventing the congregation of drug users.

Comparison of Similarities and Differences of Improvement of Environment in School

1) Similarities

Improvement of physical, mental, and social environment. All of the schools in both groups improved the physical, mental, and social environment to promote health.

2) Differences

Create health promotion environment. Most of the HPSs built a physical fitness or Health Park for children, staff, and community members. The participants mentioned that *" our school built fitness park, we could use the place for exercise, teach the children, and relax when we stress".* Whereas most of the CSs were limited by area, space, and buildings which became obstacles for the improving environment.

Factors Influencing the Similarities, Differences, and Success in Improvement of Environment

Factors Influencing the Similarities of Improvement of Environment in School

Concern of environmental health. All administrators and teachers in both school groups were concerned about improving the environment for good health reasons.

Factors Influencing the Differences of Improvement of Environment in School

Creation of health promotion environment. The administrators and teachers in the HPSs had created and built a school surrounding to promote health such as the fitness park and the Mathematics Park.

Factors Influencing the Success of Improvement of Environment in School

Creation of health promotion environment. The participants from HPSs mentioned that their schools built fitness park , mathematics park, or health park. The school children could learn in a good environment and teachers could exercise, work, and relax in the park.

Effective management of administrators. The administrators of HPSs discussed with all teachers to improve the school surrounding and allocate the budget for building fitness park, stone walkway, mathematics park to promote health. One participant said, "*the administrator and teachers discussed to solve the problem of wild and dirty area in school, we agreed to improve the surrounding by building the fitness park, we could build it because we allocate school budget and coordinated with the students from vocational college to build that save our money".* One participant said, "*our teachers created the idea to improve the space in front of this*

building to build stone walkway, we saw the sample of foot massage from the hospital and knew the benefit of foot massage, so we modified and built this stone walkway".

One participant said, "*when we started HPS project, one side of school that was dirty and children throw the garbage especially the milk bag, the administrator discussed how to improve the environment and we agreed with his idea to build fitness park for teachers and school children, the parents and community members could see the change in our school and increased donation".*

School Health Services

Description of the Implementation of School Health Services

The Group of Gold-Level Health Promoting Schools

The group of gold-level HPSs provided basic health care and school health services to the teachers and health personnel so they could administer them to the students.

Basic health cares. The school health teachers and the master of the class responsible to provide basic health services such as weight and height assessment, hygiene check up, and first aid for sick children. The serious cases of illness in children were referred to the health centers or district hospitals. All of the schools had an infirmary room for sick children and provided essential drugs. This was funded by the Ministry of Education. Most of the HPSs utilized herbs to treat some of the children's illnesses, one participant said, "*We used Ya-sarb-suea* to *stop bleeding in a* child's *injury from sharpening the pencil. In raining season, the children catch cold and cough...we gave them the guava leafs to chew and drink water. Then, we taught the children about the right time and method to use herbs".*

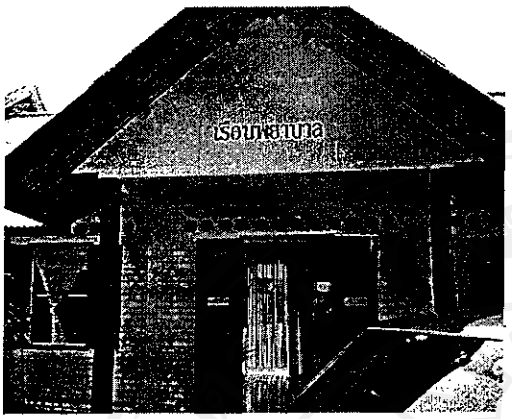


Figure 4-7, 4-8. Infirmary room in health promoting school.

School health services. The health personnel at the health centers or district hospitals provided health services as follows:

1) *Physical examination, Immunization, and Treatment.* The community health nurses and health personnel at the health centers and district hospitals provided physical examinations for the school children. The health services included an assessment of growth, screening for vision and hearing problems, screening for anemia and goiter in kindergarten to grade four school children, the provision of vaccinations for grade one and six school children, and providing health education about disease prevention and vaccination. Apart from this, the nurses and health personnel provided treatment for the sick children and managed the materials related to health such as posters, pamphlets, video cassettes, and the abatement sand necessary for eliminating the source of larvae of mosquitoes.

2) *Dental health services.* The dentists and dental assistants from the district hospitals checked up tooth cavities, and extracted the caries of school children.

3) *Consumer protection project for safety foods in school.* The pharmacists from the district hospitals took responsibility for the consumer protection project in

schools. They provided health education and supervision in regard to safe foods in the schools.

The Group of Comparative Schools

The group of CSs provided basic health care and school health services to the teachers and health personnel in which they administered them to the children, as follows:

Basic health cares. The school health teachers and the master of the class were responsible in providing basic health services such as weight and height assessment, hygiene check up, and first aid for sick children. The serious cases of children's illness were referred to the health centers or district hospitals. Three schools set up an infirmary room for the sick children and provided essential drugs This was funded by the Ministry of Education. The other two CSs did not have infirmary rooms. One school was not able to have an infirmary room because of the limitation of space, and another because the school was located in the same area as the health center. When the children became ill, the teachers could bring them to the health centers or hospitals immediately.

Figure 4-9. Infirmary room in comparative school.

School health services. The health personnel at the health centers or district hospitals provided health services as follows:

1) *Physical examination, Immunization, and Treatment.* The community health nurses and health personnel at the health centers and the district hospitals provided physical examinations for the school children. The health services included an assessment of growth, screening for vision and hearing problems, screening for anemia and goiter in kindergarten to grade four school children, the provision of vaccinations for grade one and grade six school children, and the provision of health education about disease prevention and vaccination. Apart from this, the nurses and health personnel provided treatment for sick children and managed the materials related to health such as posters, pamphlets, video cassettes, and abatement sand for eliminating the source of larvae of mosquitoes.

2) *Dental health services.* The dentists and dental assistants from the district hospitals checked up tooth cavities, and extracted the caries of school children.

3) *Consumer protection project for safety foods in school.* The pharmacists from district hospitals took responsibility for the consumer protection projects in schools. They provided health education and supervision about safe foods in the schools.

Comparison the Similarities and Differences of the Implementation of School Health Services

Comparison of Descriptive Information of School Health Services

Both of the groups, the HPSs and the CSs, provided school health services as presented in Table 4-8.

Table 4-8

Similarities and differences of school health services

	Similarities	Differences		Best practice health promoting schools
	Health promoting school and Comparative school	Health promoting school	Comparative school	
1. Basic health cares by teachers	*Basic health cares:* weight and height assessment, personal hygiene check up, first aid for sick children	*Health data record:* weight and height, dental, vision and hearing, anemia, goiter	-	*Basic health cares:* weight and height assessment, personal hygiene check up, first aid for sick children
2. Health services by health personnel	*Health services by health personnel* - Physical examination, Immunization, and Treatment. - Dental health services. - Surveillance of safety foods due to Consumer protection	-	-	*Health services by team of health personnel* - Physical examination, Immunization, and Treatment. - Dental health services. - Surveillance of safety foods due to Consumer protection

Provision of basic health cares. In both of the school groups, the school health teachers and the master of the class responsible were in providing basic health

care such as weight and height assessment, personal hygiene check up, and first aid for ill children. In cases of serious illness children were referred to the health centers or district hospitals. All of the HPSs had made an infirmary room for the sick children and provided essential drugs (funded by the Ministry of Education). In contrast, two of the CSs did not have an infirmary room, one because of the lack of space and one because it was located in the same area as the health center. Most of HPSs has utilized herbs to treat the children, one participant said, *"We used Ya-sarb-suea (name of one type of Thai herb)* to *stop bleeding in the children injured from sharpening pencils. In the rainy season, the children caught colds and cough...we gave them the guava leafs to chew and made them drink water. Then, we taught the children about the right time and methods to use herbs."*

Provision of school health services. In both groups of schools, the school children received health services from the health personnel at the health centers or district hospitals as follows:

1) *Physical examination, immunization, and treatment.* The community health nurses and health personnel at the health centers and district hospitals provided physical examinations for school children. The health services included assessment of growth, screening for vision and hearing problems, screening for anemia and goiter in kindergarten to grade four school children, providing vaccination for grade one and grade six school children, providing health education about disease prevention and vaccination. Apart from this, the nurses and health personnel provided treatment for sick children and managed the materials related to health such as posters, pamphlets, video cassettes, and abatement sand to eliminate the source of larvae of mosquitoes.

2) *Dental health services.* The dentists and dental assistants from the district hospitals checked the teeth and filled and extracted the caries of school children.

3) *Surveillance of safe foods due to Consumer protection project.* The pharmacists from district hospitals took responsibility for the consumer protection project in the schools. They provided health education and supervised the providing of safe foods in schools.

Comparison of Similarities and Differences of School Health Services

1) Similarities

Coverage of school health services. All of the school children in the HPSs and the CSs received basic health care from the teachers and health services from nurses and health personnel.

2. Differences

Management of health data record. Most of the HPSs kept a health record regarding weight and height measurement, dental check up, vision and hearing tests, and the screening for anemia and goiter whereas most of the CSs kept only the weight and height data of school children because of the changing of the school health teachers.

Factors Influencing the Similarities, Differences, and Success in School Health Services

Factors Influencing the Similarities of School Health Services

Support from health and educational organizations. Both groups of schools received support from the Ministry of Education and Ministry of Public

Health. The educational service areas provided support of household remedies used in schools and the health personnel provided leaflets, manuals, posters, and other documents related to health information.

Factors Influencing the Differences of School Health Services

Effective management through provision of school health services. The group of teachers in HPSs had experience to plan and coordinate with other teachers and health personnel for providing school health services. Whereas the group of CSs changed school health teachers and the new school health teachers lacked of experience to coordinate with other teachers and health personnel for providing school health services.

Factor Influencing the Success of School Health Services

Effective management through provision of school health services. The group of teachers in HPSs had experience to plan and coordinate with other teachers and health personnel for providing school health services.

Effective management of health data record. The HPSs collected health data record that could use as baseline data for identifying and planning health activities.

Effective communication in school. The health personnel mentioned that when they planned to provide health services in HPSs, the teachers had good communication and they prepared the children ready for physical examination. Whereas the health personnel of CSs complaint that when they contacted with the teachers for physical examination, some teachers did not know about the activity.

Health Education in School

Description of the Implementation of Health Education in School

The Group of Gold-Level Health Promoting Schools

The group of gold-level HPSs provided health education through both intra and extra curricular activities.

Intra curriculum activities. All of the schools integrated health content in various subjects in school. Most of gold-level HPSs did not develop the new curriculum that was specific to health promotion. They followed the new curriculum of Ministry of Education and the school children studied about health in subjects of health and physical education. A teacher in one HPS integrated the issues/contents about herbs in the subject of science. Another teacher in HPSs taught the school children to use herbs to produce a deodorant solution and mouth wash solution and used Citrus hystrix (Ma-grude) to kill lice. The purpose was to avoid the use of a chemical substance that could be harmful to a person's health. Other teachers in some of the health promoting schools taught the school children to plant corn, and cowpea in the subject of agriculture. They also used corn and cowpea to explain about essential foods in the subject of health, taught the school children to count the seeds in mathematics, and explained the concept of plant growth in science. There was one HPS where the teachers developed the school curriculum about health and health promotion. "*Our school developed the curriculum about health including the environment and health promotion. We analyzed each topic due to the needs and problems of children. We set the theme of healthy promotion and teachers in each class taught the same topic. We started with using herbs to bathe, drinking herbal water, and eating milled but unpolished rice.*"

Extra curriculum activities. Health personnel from the health centers and the district hospitals provided health education for school children that dealt with the prevention of communicable disease, consumption of safe foods, testing of unpurified vinegar, and avoiding carbonated soft drinks. The school children from HPSs mentioned, *"In the past, there were the carbonated soft drink sellers in our school but after we learned about the disadvantages of carbonated soft drinks we changed to drink fruit juice"*. Furthermore, the school children in one health promoting school received health education from a non-organization's trainers about the danger of some foods. The school children stated that, *"We had a chance to see role playing; it was the story about the vulture that selects to eat a child's body. The vulture did not eat the body of the children who die from eating snacks because their liver and kidney were damaged. We have learned from the story about brushing teeth and avoiding some snacks composed of monosodium glutamate or dye that might be harmful to our health"*.

The Group of Comparative Schools

The group of CSs provided health education through both intra and extra curricular activities.

Intra curriculum activities. All schools integrated health issues/contents in other subjects in school. All CSs did not develop the new curriculum that specific to health promotion. They followed the new curriculum of Ministry of Education and the school children studied about health in the subjects of health and physical education.

Extra curriculum activities. Health personnel from health centers and district hospitals provided health education for school children that dealt with the prevention of communicable diseases, consumption of safe foods, testing of unpurified vinegar, and avoiding carbonated soft drinks.

Comparison the Similarities and Differences of the Implementation of Health Education in School

Comparison of Descriptive Information of Health Education in School

Both of the groups, the HPSs and the CSs, provided school health education as presented in Table 4-9.

Table 4-9

Similarities and differences of health education in school

	Similarities	Differences		Best practice health promoting schools
	health promoting school and Comparative school	health promoting school	Comparative school	
1. Intra curriculum activities	*Integration of health content in regular subjects:* science, mathematics, health education, physical education	*Create specific curriculum for health promotion:* environment, health promotion	-	*-Integration of health content in regular subjects -Create specific curriculum for health promotion*
2. Extra curriculum activities	*Health education by health personnel and non organization's trainers*	-	-	*Health education by health personnel and others*

Intra curriculum activities.

1) *Integration of health content in other subjects.* Most of the HPSs and the CSs did not develop the new curriculum that was specific to health promotion. They followed the new curriculum of the Ministry of Education and the school children studied about health in the subjects of health and physical education. Most of the teachers integrated the issues/contents of health in other subjects when they taught the children. The teacher in one HPS integrated the issues/contents about herbs in the subject of science. Another teacher in HPSs taught the school children to use herbs to produce deodorant solution and mouth wash solution and use Citrus hystrix (Ma-grude) to kill lice. The purpose was to avoid chemical substances that were harmful to their health. Other teachers in some HPSs taught the school children to plant corn, and cowpea in the subject of agriculture, used corn and cowpea to explain about essential foods in the health subject, taught the school children to count the seeds in mathematics, and explained the growth of plants in science. There was one HPS where the teachers themselves developed the school curriculum about health and health promotion.

> *"Our school developed the curriculum about health including environment, health promotion. We analyzed each topic due to the needs and problem of children. We changed the content by utilizing the content that our teachers had learned at the health course in the hospital. We set the theme of healthy promotion and teachers in each class taught the same topic. We started with using herbs to bath, drinking herbal water, and eating milled but unpolished rice."*

In the comparative schools, most of teachers integrated the health content in the subjects of health and physical education. *"We did not develop curriculum or a lesson plan about health promotion; we just followed the curriculum of Ministry of Education." "If we received new information related to health, we integrated when we taught health education and physical education subjects."*

Extra curriculum activities .

1) *Health education by health personnel.* Most of school children in both groups of schools gained knowledge about health from health education by the health personnel. The health education was related to the prevention of communicable disease, consumption of safe foods, testing of unpurified vinegar, and avoiding carbonated carbonated soft drinks. The school children from the HPSs mentioned, *"In the past, there were carbonated carbonated soft drink sellers in our school but after we learned about the disadvantages of carbonated carbonated soft drinks we changed to drink fruit juice".*

2) *Health education by non-organization's trainers.* In addition, the school children in one HPS received health education from a non-organization's trainers about danger of some foods. The school children from this health promoting school stated that,

"We had a chance to see role playing; it was the story about the vulture that selected a child's body to eat. The vulture did not eat the body of the children who died from eating snacks because their liver and kidney were damaged. We have learned from the story about brushing teeth and avoiding some

snacks composed of monosodium glutamate or dye that might be harmful to our health."

Comparison of Similarities and Differences of Health Education in School

1) Similarities

Integration of health content in regular subjects. Most of HPSs and CSs taught about health in the subjects of health and physical education. Both groups of school integrated issues/contents by adding some contents about health but teachers in HPSs explained clearly in integrating activities such as school lunch and exercise to the subjects.

2) Differences

(a) *Create specific curriculum for health promotion.* One HPS had created specific curriculum for health promotion. The teachers taught children the same topic of health promotion. For example, the theme was about environmental health, all teachers taught about garbage disposal for the whole school.

(b) *Health education by non-governmental organization.* The school children in the HPS group received health education related to nutrition and safe foods, and aerobic exercise from non-governmental organizations.

Factors Influencing the Similarities, Differences, and Success in Health Education in School

Factors Influencing the Similarities of Health Education in School

The integration of health content in the school curriculum. Both groups of school integrated health education in many subjects.

Factors Influencing the Differences of Health Education

1) *Establishment of health promotion curriculum in school.* The teachers at a HPS had established a health promotion curriculum in the school. The curriculum had been used by all of the teachers for all of the school children in the school.

2) *Participation of private organization in health education.* The teachers of HPSs coordinated with the trainer from non governmental organizations to provide health education regarding nutrition and exercise for school children.

Factors Influencing the Success of Health Education in School

Effective management through creation of specific curriculum on health promotion. One HPS had created specific curriculum for health promotion that all school children learnt the same topic about health.

Effective management through linkage between learning and teaching and health promotion activities. The HPS linked the health promotion activities in the curriculum. The evidence were shown as follows: one HPS taught the school children to analyze school meal and integrate in other subject, one HPS taught school children to separate garbage and recycling paper from garbage and garbage disposal, one HPS taught school children about growing local herbs in agriculture subject and producing of toilet detergent from herbs in science subject.

Creation of networking through participation of private organization in health education. The teachers of HPSs coordinated with the trainer from non governmental organizations to provide health education regarding nutrition and exercise for school children.

Nutrition and Safety Foods in School

Description of the Implementation of Nutrition and Safety Foods in School

The Group of Gold-Level Health Promoting Schools

The group of gold-level HPSs provided nutrition and safety food services in school as follows:

School lunch. All of the HPSs participated in a Consumer health protection project and integrated this into the school lunch. One HPS had sold breakfast to provide essential foods for the children. Most of the HPSs hired lady cooks and fewer schools bid for the seller to cook and clean the essential foods for all school children. The malnourished school children were allocated free lunches. Furthermore, most of the health promoting schools had student volunteers who administered the committee of consumer health protection project and the committee of cooperation project. These students helped to select the proper foods and snacks to sell in their schools.

Supplementary milk. All HPSs provided supplementary milk every day to kindergarten to grade four school children.

Establishment of cooperative shop. Most of HPSs established the cooperative shop which sold foods and snacks to the school children.

Figure 4-10. Cooperative shop in health promoting school.

The Group of Comparative Schools

The group of CSs provided nutrition and safety foods in school as follows:

School lunch. All of the CSs tried to find a budget that would provide for school lunches. Most of the CSs hired lady cooks and fewer schools bid for the seller to cook and clean and the essential foods for all of the school children. The malnourished school children were allocated free lunches. Few of the schools had established the cooperative shop which selected the proper foods and snacks for the school children. And some did not establish the cooperative shop at all. The teachers requested that the food sellers avoid selling candy and carbonated carbonated soft drinks to the school children.

Supplementary milk. All schools provided supplementary milk for all kindergarten to grade four children every day.

Cooperative shop. Few of the schools had established the cooperative shop for selling snacks. Few of the schools had encouraged the school children to participate as the cooperative shop's committee.

Figure 4-11. Cooperative shop in comparative school.

Comparison the Similarities and Differences of

Nutrition and Safety Foods in School

Comparison of Descriptive Information of Nutrition and Safety Food in School

Both groups of HPSs and CSs provided nutrition and safe foods as presented in Table 4-10.

Table 4-10

Similarities and differences of nutrition and safety food services in school

	Similarities	Differences		Best practice health promoting schools
	Health promoting schools and Comparative school	Health promoting school	Comparative school	
1. Provision of school lunch	*School lunch:* cover all school children	*Integration of nutrition project in school system:* surveillance of safety foods by teachers and school children	-	*-School lunch:* cover all school children *-Integration of nutrition project in school system*
2. Provision of supplementary milk	*Supplementary milk:* cover all school children from kindergarten to grade four	-	-	*Supplementary milk:* cover all school children from kindergarten to grade four
3. Establishment of cooperative shop	*Cooperative shop: selling selected snack*	-	-	*Cooperative shop: selling selected snack*

Provision of school lunch. All of the HPSs participated in a consumer health protection project that emphasized safe foods in school. The teachers and student health leaders were trained how to choose safe and essential foods for the school children. The teachers conducted a consumer health protection project by providing safe and essential foods during the school lunch and choosing the snacks to sell in school. Most of the HPSs hired the lady cooks and a few of the schools bid for the sellers to cook and clean and the essential foods for all of the school children. The malnourished school children were given for free lunches. The student health leaders participated by volunteering to be on the committee for the consumer health protection project called "*or yaw noi*". They would monitor the selecting of proper foods and snacks to sell in their schools. One HPS created the idea of selling breakfast because the teachers found that most of the school children bought breakfast from the sellers around the schools. Most of the CSs did not begin to participate in the consumer health protection project until 2003. The CSs started providing safe and essential foods for the school lunch. Most of CSs hired the lady cooks and a few schools bid for the sellers to cook and clean and essential foods for all the school children. Less of the CSs encouraged school children to volunteer to be on the committee for the consumer health protection project.

Provision of supplementary milk. All of the HPSs and CSs provided supplementary milk for kindergarten to grade four school children every day.

Establishment of Cooperative shop. Most of the HPSs established the cooperative shop for selling selected snacks for school children. Whereas only a few CSs established the cooperative shops for selling selected snacks for school children.

Comparison of Similarities and Differences of Nutrition and Safety Foods in School

1) Similarities

Coverage of school lunch and supplementary milk. Both groups of schools implemented the nutrition project in the same way. All schools allocated the budget to provide school lunch for all school children and supplementary milk for the children from kindergarten to grade four. Most of schools hired the lady cooks and fewer schools bid for the seller to cook, clean, and make cheap essential foods for all school children. The malnourished school children were given free lunches. All of the schools received support from the local administrative organizations to provide supplementary milk for school children from kindergarten to grade four.

1. Differences

Integration of nutrition project in school system. The HPSs integrated a nutrition project into the regular school system. The school children received safety foods under the supervision of teachers and the student health leader committee, and teachers integrated the health content into the school curriculum.

Factors Influencing the Similarities, Differences, and Success in Nutrition and Safety Foods in School

Factors Influencing the Similarities of Nutrition and Safety Foods in School

Coverage of school lunch services. All schools in both groups had provided school lunches for all school children. The malnourished children and children who were poor received a coupon for free school lunch. All of the school children from kindergarten to grade four received a bag of supplementary milk every

day. The budget for the school lunch and supplementary milk were supported by sub district administrative organizations.

Factors Influencing the Differences of Nutrition and Safety Foods in School

Integration of school lunch services in teaching system. The HPSs had integrated school lunch services in the teaching program. The school children learned about the foods that they ate and how to recognize safe foods.

Factors Influencing the Success of Nutrition and Safety Foods in School

1) *Leadership of responsible teachers.* The participants from HPSs mentioned, *"leadership of responsible teacher is important, she can convince other teachers to participate in the project".*

2) *Effective management through linkage between teaching-learning activities and provision of nutrition and safety foods activities.* The HPSs had integrated school lunch services in the teaching program.

Exercise, Sport, and Recreation in School

Description of the Implementation of Exercise, Sport, and Recreation in School

The Group of Gold-Level Health Promoting Schools

The group of gold-level HPSs provided exercise, sports, and recreational activities as follows:

Intra curriculum activities. All of the gold-level HPSs created a schedule for physical education for the school children that they would participate in from one

to one and half-hours every week. As dictated in the curriculum of Ministry of Education, the school children had the opportunity to exercise and play sports.

Extra curriculum activities. Most of the HPSs conducted extra class activities to encourage teachers, school children, and community members to participate in aerobic exercise. One HPS provided additional sessions of exercise by introducing northern Thai traditional exercise and dance once a week such as *" Tob-ma-phab, Fon-jerng".*

Figure 4-12, 4-13. "Tob-ma-phab" in health promoting school.

The Group of Comparative Schools

The group of CSs provided exercise, sport, and recreational activities as follows:

Intra curriculum activities. All of the CSs set a schedule in the subject of physical education where school children could exercise from one to one and half-hours every week. As dictated in the curriculum of the Ministry of Education, school children had the opportunity to exercise and play sports.

Extra curriculum activities. Most of CSs conducted extra class activities to encourage teachers, school children, and community members to participate in

aerobic exercise. One CS added a weekly morning activity called the "move for health".

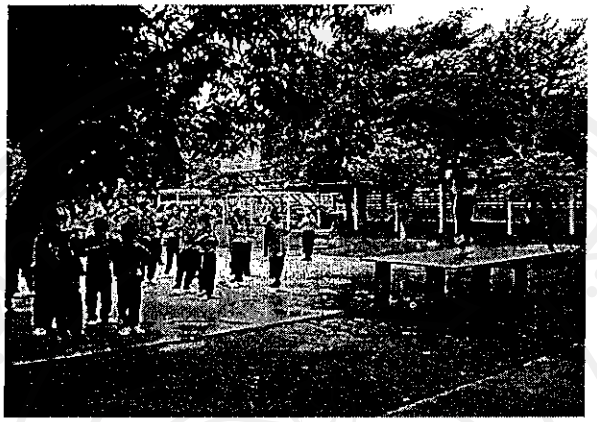

Figure 4-14. "Move for health" in comparative school

Comparison the Similarities and Differences of the Implementation of Exercise, Sport, and Recreation in School

Comparison of Descriptive Information of Exercise, Sport, and Recreation in School

Both of the groups, the health promoting schools and the comparative schools, established exercise, sport, and recreation activities as presented in Table 4-11.

Table 4-11

Similarity and differences of exercise, sport, and recreation activities in school

	Similarities	Differences		Best practice health promoting schools
	health promoting school and Comparative school	health promoting school	Comparative school	
1. Intra-curriculum activities	*Class exercise in physical education subject.*	-	-	*Class exercise in physical education subject.*
2. Extra-curriculum activities	*-Extra group exercise -Enhancement of recreation activities.*	-	-	*-Extra group exercise -Enhancement of recreation activities.*
3. Building health park	-	*Building health park*	-	*Building health park*

Both HPSs and CSs promoted exercise for school children and the school staff by providing the activities and environment as follows:

Intra-curriculum activities.

1) *Class exercise in the physical education subject.* All of the HPSs and the CSs set a schedule of one to one and half-hours every week for school children to participate in physical education. Following the curriculum of Ministry of Education the school children had the opportunity to exercise and play sports.

Extra-curriculum activities.

1) Extra group exercise. Most of the HPSs conducted extra class activities to encourage teachers, school children, and community members to perform aerobic exercise. Some HPSs provided additional sessions of exercise by introducing, once a week, the northern Thai traditional exercise and dance known as *" Tob-ma-phab, Fon-jerng"*. Some of the comparative schools introduced Thai boxing or *"Mae mai muay Thai"*, once a week into the exercise schedule.

2) *Enhancement of recreation activities.* All of the HPSs and CSs organized a sports club and sports contest to enhance exercise for school children. Most of the schools encouraged the school children to play Thai traditional musical, local musical, modern musical instruments, and perform traditional dance. The school children had a chance to join community activities by performing music and dance on special occasions. This was helpful in increasing the school children's self esteem and social participation.

3) *Building a health park.* Most of the HPSs built a playground for the school children and a health park for teachers, school personnel, school children, and

community members, whereas of all the CSs only one built a playground for the school children.

Comparison of Similariies and Differences of Exercise, Sport, and Recreation in School

1) Similarities

Enhancement of exercise activities. Both school groups enhanced the need to exercise for school children, school staff, and community members by providing intra-curriculum and extra-curriculum activities.

2) Differences

Create physical environment to enhance exercise. Most of the HPSs improved the physical environment to promote exercise such as a health park with exercise equipment. In contrast, the CSs did not develop the physical environment to promote exercise.

Factors Influencing the Similarities, Differences, and Success of Exercise, Sport, and Recreation in School

Factors Influencing the Similarities of Exercise, Sport, and Recreation in School

Full support of administrators. All of the directors and principals of both groups of schools were concerned about exercise, sport, and recreation for school children. All of the schools had conducted similar intra and extra curriculum activities to promote exercise, sport, and recreation in the schools. The directors mentioned, *"I am concerned about the significance of exercise and will strengthen the policy of extra curriculum exercise once a week, and create the clubs for recreational activities".*

Factors Influencing the Differences of Exercise, Sport, and Recreation in School

Regarding the factors influencing the differences of exercise, sport, and recreation, there was no remarkable factors in both schools.

Factors Influencing the Success of Exercise, Sport, and Recreation in School

Effective management through creation of health promotion environment. The HPSs built fitness park, health park, or mathematics park. Some HPSs built the exercise area in the fitness park and one HPS built stone walkway for foot massage.

Counseling and Social Support in School

Description of the Implementation of Counseling and Social Support in School

The Group of Gold-Level Health Promoting Schools

The group of gold-level HPSs provided routine counseling by the master of the class and student guidance teachers. The master of the class took responsibility to survey the families of the children in his or her class and give support to the children who had problems. The participants said,

> *"The master of the classes was responsible for the students in their classes, they had home visiting while to analyze the student's problems"*
>
> *"We have guidance teachers and master teachers to be the counselors for students who have problems."*

Most of the HPSs held weekly training sessions in morals and ethics. Furthermore, the schools conducted additional activities to enhance the ethics and morals of the students, such as, the older students helped the younger ones to line up during the morning activities, to have lunch, and brush their teeth etc.

One HPS started a project to support mental health of school children last year. The teachers set a special room called "*relaxation room"* and assigned a teacher whose children always consult responsible as a counselor. This project aimed to support the school children that had stress from any problem but few school children came to consult in this room. The teachers discussed that children did not like to come to *"relaxation room"* and master of the class knew about the problems of children in their classes. Later, the teachers stopped the activity of *"relaxation room"*.

The Group of Comparative Schools

The group of CSs provided routine counseling by the master of the class and student guidance teachers. The master of the class took responsibility to survey the families of the children in their class and give support to the children who had problems. The participants said,

> *"Our school asked the master of the class to provide counseling for children."*
>
> *"The master of the class conducted a survey for each family of the students."*

Most of CSs held weekly training sessions in morals and ethics. Schools conducted additional activities to enhance the ethics and morals of the students, such as the older students helping the younger ones to line up during the morning activities, to have lunch, and brush their teeth etc.

Comparison the Similarities and Differences of the Implementation of Counseling and Social Support in School

Comparison of Descriptive Information of Counseling and Social Support activities in School

Both school groups provided counseling and social support activities for school children as presented in Table 4-12.

Table 4-12

Similarities and differences of counseling and social support activities in school

	Similarities	Differences		Best practice health promoting schools
	health promoting school and Comparative school	health promoting school	Comparative school	
1. Provision of routine counseling.	*Routine counseling by the master of a class, guidance teachers.*	-	-	*Routine counseling by the master of a class, guidance teachers.*
2. Provision activities to enhance ethics and moral attitude for school children	*Provision activities to enhance ethics and moral attitude for school children*	-	-	*Provision activities to enhance ethics and moral attitude for school children*

Both the HPSs and the CSs provided counseling and social support for school children as follows:

Provision of routine counseling by the master of the class, guidance teachers. All of the HPSs and the CSs had the master of the class provide routine counseling for school children. The master of the class took responsibility to survey

the families of the children in their class and gave support to the children who had problems. The participants said,

"Our school asked the master of the class to provide counseling for children."

"The master of the class conducted the survey each family of the students."

"The master of the classes responsible for the student in their classes, had home visiting in order to analyze the student's problems."

"We have guidance teachers and master teachers to be the counselors for students who had the problems."

Provision of activities to enhance ethics and moral attitude for school children. Most of the HPSs and the CSs held weekly training sessions in morals and ethics in home rooms activity. Furthermore, the schools conducted additional activities to enhance the ethics and the morals of the students such as, the older students helping the younger ones to line up during the morning activities, to make sure they eat lunch, and brush their teeth etc.

Comparison of Similarities and Differences of Counseling and Social Support in School

1) Similarities

Provision of counseling and social support activities. Both groups of schools were concerned about counseling and social support activities. Mostly the schools held counseling activities by the master of the class and provided a teacher responsible for guidance.

2) Differences

Regarding the differences in terms of counseling and social support, neither schools showed remarkable differences.

Factors Influencing the Similarities, Differences, and Success in Counseling and Social Support in School

Factors Influencing the Similarities of Counseling and Social Support

Provision of counseling as the guidelines. All of the schools had provided guidance and counseling activities by the master of the class and an advisor, which was following the guidelines of the Ministry of Education.

Factors Influencing the Differences of Counseling and Social Support

Regarding the factors influencing the differences of counseling and social support, there was no remarkable factors in both schools.

Factors Influencing the Success of Counseling and Social Support

Effective management of administrators and teachers. All teachers helped to look after school children in their class and discussed together to solve the children's problems.

Health Promotion for Staffs in School

Description of the Implementation of Health Promotion for Staffs in School

The Group of Gold-Level Health Promoting Schools

The group of gold-level HPSs provided health promotion for the staffs as follows:

Annual physical checks up. Most of the HPSs assigned the school health teachers the task of assessing the needs of the personnel in regard to physical check

ups. The school health teachers contacted the hospitals so that they might provide annual physical check ups for their teachers in the school.

> *"Our school supported the annual physical check up for the staff. We coordinated with the district hospital and they sent the health personnel for physical check up. If the health personnel checked that some teachers should receive special investigation...such as ultrasound checking...they appointed those teachers to the hospital."*

Provision of health information. Most of the HPSs provided health information for students, school personnel, and community members by creating an exhibition board that posted information regarding to health, such as nutrition, prevention of habit-forming drugs, and prevention of hemorrhagic fever etc.

Health insurance. Few of the HPSs applied for health insurance for the teachers and school children in case of accident.

Nutrition and safety foods. The teachers in HPSs had eaten the same menu as children's lunch and paid monthly.

Exercise, sport, and recreation. School health teachers of HPSs conducted the aerobic exercise project for teachers, school children, and community members one day per week. One participant said, *"we had set schedule for aerobic exercise in the afternoon once a week".*

The Group of Comparative Schools

The group of CSs provided health promotion for staffs as follows:

Annual physical checks up. Most of CSs assigned the school health teachers the task of assessing the needs of the personnel regarding physical check up.

The school health teachers contacted the hospitals so that they might provide annual physical check ups for their teachers in the school.

"Physical check up...we have the a teacher responsible for this and she listed the number of teachers who need to receive physical check up and contacted to the hospital."

Provision of health information. Most of the CSs provided health information for students, school personnel, and community members by creating an exhibition board that displayed information regarding to health, such as nutrition, prevention of habit-forming drugs and prevention of hemorrhagic fever etc.

Health insurance. Few CSs applied for health insurance for teachers and school children in case of accident.

Nutrition and safety foods. The teachers in CSs had eaten the same menu as children's lunch and paid monthly.

Exercise, sport, and recreation. School health teachers of three CSs conducted the aerobic exercise project for teachers, school children, and community members one day per week. This activity was discontinued in some CSs, one participant said, "*the school health teacher used to conduct aerobic exercise in the afternoon but it stopped because we had other urgent job to do*".

Comparison the Similarities and Differences of the Implementation of Health Promotion for Staff in Schools

Comparison of Descriptive Information of Health Promotion for Staff in School

Both of the groups, the HPSs and the CSs, provided health promotion for staff as presented in Table 4-13.

Table 4-13

Similarities and differences of health promotion activities for staff in school

	Similarities	Differences		Best practice health promoting schools
	health promoting school and Comparative school	health promoting school	Comparative school	
1. Annual physical checks up	*Annual physical checks up*	-	-	*-Annual physical checks up*
2. Provision of health information.	*Provision of health information: By setting exhibition board*	-	-	*Provision of health information: By setting exhibition board*
3. Health insurance	*Health insurance in case of accident*	-	-	-
4. Nutrition and safety foods	-	-	-	-
5. Exercise, sport, and recreation	*Conduct special session of aerobic exercise for teachers, school personnel, children, and community members*	-	-	*Conduct special session of aerobic exercise for teachers, school personnel, children, and community members*

Annual physical checks up. Both the HPSs and the CSs assigned the school health teachers assessed the needs of the personnel in regard to physical check ups. Results indicated that the school health teachers contacted the hospitals to provide free annual physical check up for the teachers in their school.

> *"Our school supports the annual physical check up for the staff. We coordinated with the district hospital and they sent the health personnel for administering physical check ups. If the health personnel found that some teachers should receive special investigation...such as ultrasound checking...they made appointment for those teachers to the hospital."*
>
> *"Physical check ups...we have a teacher responsible to list the number of teachers who need to receive physical check ups and she contacted the hospital."*

Provision of health information. Most of the HPSs and the CSs provided health information for the students, school personnel, and community members by setting up an exhibition board which displayed health information such as, nutrition, prevention of drug abuse etc.

Health insurance. Few HPSs and few CSs applied health insurance for teachers and school children in case of accidents.

Nutrition and safety foods. Most of teachers in HPSs and CSs had lunch in schools with the same menu as childrenn.

Exercise, sport, and recreation. Most of teachers in HPSs and CSs had opportunity to exercise when they taught children and conducted special sessions of aerobic exercise in the afternoon.

Comparison of Similarities and Differences of Health Promotion for Staff in School

1) Similarities

Coordination for annual physical checks up. Both groups of schools coordinated with the district hospitals to provide annual physical check ups for teachers and school personnel.

2) Differences

Regarding the differences in terms of health promotion for staff, neither schools showed remarkable differences.

Factors Influencing the Similarities, Differences, and Success in Health Promotion for Staff

Factors Influencing the Similarities of Health Promotion for Staff

Availability of health services system. The staffs in both groups of schools received free health services and treatment at health centers and government hospitals.

Factors Influencing the Differences of Health Promotion for Staff

Regarding the factors influencing the differences of health promotion for staff, there was no remarkable factors in both schools.

Factors Influencing the Success in Health Promotion for Staff

Effective management of administrators and teachers. The administrators and teachers in both groups of school managed health promotion activities such as nutrition, exercise, and annual physical check up for staffs.

PART III: CONCLUSION OF FACTORS INFLUENCING THE SIMILARITIES AND DIFFERENCES IN IMPLEMENTING HEALTH PROMOTING SCHOOLS AND FACTORS INFLUENCING THE SUCCESS IN IMPLEMENTING HEALTH PROMOTING SCHOOLS

Conclusion of Factors Influencing the Similarities of Implementing Health Promoting Schools

Factors influencing the similarities of implementing the ten components of health promoting school were concluded as follows:

a. Orientation of health promoting school project.
b. HPS became a national policy.
c. Utilization of school channels to disseminate health information.
d. Ability of resource exploration from inside and outside community.
e. Coverage of health promotion activities in school.
f. Relationships among the directors or principals, teachers, and community members.
g. Concern of environmental health.
h. Support from health and educational organizations.
i. Integration of health content in school curriculum.
j. Coverage of school lunch services.
k. Full support from administrators about exercise, sport, and recreation in the school.
l. Provision of counseling as follows the guidelines.
m. Availability of a health services system.

Conclusion of Factors Influencing the Differences of Implementing Health Promoting Schools

Factors influencing the differences of implementing the ten components of health promoting school were concluded as follows:

a. Creation the awareness of personnel by conducting a special training session about health promotion.
b. Creation the awareness of personnel by establishing of a specific health promoting school committee.
c. Establishment of commitment among stakeholders by set up a specific health promoting school policy.
d. Dissemination of clearly policy.
e. Active participation of community members of policy dissemination, planning, implementing, and evaluating processes.
f. Assignment of twining project's coordinator.
g. Creation of health promotion environment.
h. Management skills of administrators and teachers.
i. Effective management of school health services.
j. Establishment of health promotion curriculum in school.
k. Participation of private organizations in health education.
l. Integration of school lunch services in teaching system.

Conclusion of Factors Influencing the Success in Implementing Health Promoting Schools

a. Creation the awareness of personnel through interactive training about health promotion and HPS and setting a specific health promoting school committee.
b. Establishment of commitment among stakeholders by setting up HPS policy and disseminating policy through entire population.
c. Creation of networking through full participation of stakeholders.
d. Effective communication in school.
e. Effective management such as assignment of twining project's coordinator, linkage between learning and teaching and health promotion activities, creation of health promotion environment, creation of specific curriculum on health promotion, provision of health services and health data record.
f. Leadership of administrators responsible teachers.

DISCUSSIONS

The situation of the health promoting schools (HPSs) in Thailand was found to be in the midst of developing the process to assure that it would be implemented by schools at sub-district level. There were many schools at that level, and many of them had economic and social limitations. Although the HPS project was a shared responsibility of the Ministry of Education and the Ministry of Public Health, most of the responsibilities fell into the hands of the latter. Public health personnel were the ones who attempted to adjust the view of health-building, which was not just the provision of health services. The executives and public health personnel of the Ministry of Public Health took the leading role of moving and conveying the policy through practice and implementing it as a master plan and strategy to develop a HPS. The guidelines were also set up to go through with the health promoting school project, while the meetings were held to orientate the executives, school administrators, teachers and public health personnel on how to carry out the health promoting school project in pilot schools in each province.

In the past, there had been a situational analysis of development of the health promoting schools in Thailand (Suwan et al., 1999) and a periodic review of the implementation of the health promoting school project (Ruengdamrong, Thanamun, Puchakarn, & Thongon, 2002). The standard assessment criterion was then established to assess those HPSs as a part of establishing guidelines for self-development. The movement, however, was at a national level requiring the full cooperation from every sector in the society. It was an effort to create a new perspective in the general public's views that health promotion was to entail having

essential and safe foods, clean air, community health benefits, emotional and accident prevention. This required the education and knowledge to create an understanding among related staff, students and the general public.

The factors could be discussed as follows:

1) Creating the awareness of personnel through interactive training about health promotion and HPS. This factor was making the relevant persons understand the concept of HPSs. In order to gain understanding, HPSs tried to create understanding among their staff by inviting experts from health related agencies to inform their staff. One of those HPSs sent its teachers for training sessions about health promotion with the aim of bringing the gained knowledge back to adapt it with the curriculum. This was consistent with the study on experiences of the health promoting school project in Hong Kong (Lee, 2004), which showed that one of the factors affecting the success of the health promoting school project was the changes in the organization in terms of policy and budget, which were required to convey and train or educate the school administrators, teachers and staff.

2) Establishment of commitment among stakeholders by setting up specific HPS policy and disseminating policy through the entire population. The policy was acknowledged by both groups of schools through agencies under the Ministry of Education and the Ministry of Public Health with the aims of making the school administrators aware of the importance of health promotion and to follow through with the policy. Most of the HPS administrators understood and realized the importance of implementing the health promoting school project; however, some administrators in the comparative group, though seeing the importance of health, viewed the HPS project as a competition between the schools. Also, they had already

conducted the routine health-related activities. The comparative schools stuck to their old ways and continued their own style of health promotional activities. The limitation of the comparative schools was borne out of the difficulties they had in involving parents, school children, school staff, and community members at the beginning of the process of analyzing and planning in order to create a sense of commitment and ownership. This sense is what encourages full participation, which is at the heart of health promoting schools (Lee, 2004). This was in line with a study by Suwan et al. (1999) on the situation of health promoting school implementation and establishing a plan for developing health promoting schools. The study found that the majority of school administrators and teachers realized the importance of health promoting schools, but lacked the conceptual understanding to put them into practice. Both groups of schools used communication channels to disseminate information to the community. It was noticeable that the gold-level HPSs applied more communication channels than the schools in the comparative group and as a result, described clearly the health promoting school policy to the community. In this form of communication, the entire community knew the schools had a policy which encouraged everyone to take part in. The health promoting campaign for students helped to educate people and create an awareness of the importance of participation. In contrast, most schools in the comparative group only conveyed their policies of education and the activities they planned to implement.

3) Creation of networking through full participation of stakeholders. Health promoting schools involved the community representatives and students in the project from the start by analyzing the students' and locals' health problems and establishing the school's vision and integrating it in the curriculum. By being a model

of change, the project played a social role whose purpose had an empowering effect on the people. It provided those who took part in the project with values, equity in decision, freedom to make decisions about implementation and acceptance in the responsibility (Rodwell, 1996). The school movement could encourage teachers, students' parents, school staff and community representatives to have a sense of ownership in conducting various health promoting activities in a space where everyone could mutually learn about health promotion (Brandis, 1993). According to this study, the researcher discovered the development process that takes place from mutual learning by the teachers and community. Not only being the source of education for students, schools became a community center for the learning of health. One gold-level HPS conducted an academic fair and focused on health issues, knowledge about health was conveyed to the community by teachers and students. In one instance, the teachers learned the nature of community interaction from the implementation of a health promoting project through problem solving by changing the composition of the health promoting school committee by inviting elders to participate more. Students gained self-esteem by training to be school health leaders, participating in problem identification, suggesting their own ideas for solutions and taking the operating as well as the beneficiary role in these activities (Rodwell, 1996). This was consistent with the study on the Hunter Region health promoting school project in New South Wales, Australia, which indicated that the success of the health promoting project depended on the establishment of a HPS committee including teachers, students, parents, a project team liaison officer, and other key stakeholders in the school community (Lynagh et al., 1999).

4) Effective communication in school. All of the schools received health services by public health personnel under the same conditions dictated by the policy of the Ministry of Public Health and the role of public health personnel itself. Thailand has developed the structure of the public health service system to expand the coverage of health care services for people in the rural areas. Community health nurses in the health centers and district hospitals in Thailand, were responsible for school health services and acted as coordinators in providing healthcare service for students with a team of physicians, dentists, pharmacists and other health-related personnel (Sirisawang, 1999).

The school health teachers took important role in coordinating with health care team and communicating with other teachers for providing health examination. The effective communication of teachers in HPSs facilitated health personnel to provide school health services.

5) Effective management through assignment of twining project's coordinator, linkage between learning and teaching and health promotion activities, creation of specific curriculum on health promotion, creation of a health promoting environment, and provision of health services and health data record. Both groups of schools needed the management to organize the HPS project, which was critically important, because all of the schools in both groups searched for and depended on resources inside and outside of the community, Some communities were more capable of assisting themselves than others. However, information and data derived from the gold-level health promoting schools showed clearly that they were better able to manage the resources to improve the physical environment for health promotion than the schools in the comparative group who found obstacles in their path for

improvement. This was consistent with the study by Lorlowhakarn (2001) on the participatory management of stakeholders in health promoting schools and the findings that the implementation of HPSs was statistically significant to the people responsible for management.. Another notable point was the establishment of a mechanism and system for organizing the HPSs. Most of the HPSs assigned the tasks to the twining project's coordinators in order that they might learn and carry on the tasks with each other. Problems were faced by the schools in the comparative group during the reshuffling of the people responsible for the HPS project. Not having a twin coordinator; they lacked the responsible personnel to push forward the project, resulting in the discontinuity of the project. The linkage between learning and teaching and health promotion activities was also a good example in implementing HPS. The teachers in HPSs taught health issues/contents by linking activities in schools, for example, some HPSs assigned school children to analyze ingredients of lunch and learned about essential foods, some teachers taught children to produce cleaning solution by using herbs. The linkage of daily activity with lesson learned was appropriate to school age learning ability. School children could understand and remember from the real situation. One gold-level HPS displayed the success that could be achieved in developing a curriculum by establishing a health theme and having the teachers and community collaborate together to incorporate the local nature and children's health problems into the curriculum. Teachers taught the same content and theme related to health promotion creating the continuity of behavioral performance which was also consistent to other health promoting activities in the schools. Both groups of schools recognized the importance of environmental management and focused on improving the school surroundings, not only as a

learning environment, but one that is beautiful, well organized and clean as well. The difference between the school groups was the limitations of resources, space and finances which mostly occurred in the comparative schools. However, the gold-level HPSs found the necessary resources to improve the physical environment to be a favorable one for health promotion. For example, a HPS renovated a deserted area, which used to be full of refuse, and upgraded it to be a playground and fitness park. Meanwhile, another HPS turned part of the school area into a stone walkway which anyone who walked on would have a foot massage, and another school used its already available natural resources to build a mathematics park. All of the schools utilized the enhancement of social activities to emphasize the promotion of school children's health. The interaction between school and community had been encouraged by the Ministry of Public Health when they developed the concept of primary health care which called upon community participation. This is the nature of the Thai people which has long been renowned as a society where people help each other. This was in line with the study in Australia that found students who perceived they were being supported by their educational environment and teachers would react positively to health promoting behavior (McLellana et al., 1999).

6) Leadership of administrators and responsible teachers. Many participants in HPSs mentioned about leadership of administrators and responsible teachers were factors influencing the success in implementing HPS. The administrators could convince attention of teachers, parents, school children, and community members to participate in implementing HPS. The responsible teachers could disseminate information about HPS to other teachers and lead to implement the

project. Later, another teachers had follow to implement health activities for school children.