CHAPTER 2

LITERATURE REVIEW

This chapter consists of two parts of literature review related to the study of factors influencing the success in implementing Health Promoting Schools (HPSs). The first part is a review about definition, concepts, and principles of health promotion in the current social setting. The second part of the review defines the concepts of the HPS and indicates a historical perspective of the schools in other countries and in Thailand. The details of the literature review are as follows:

Part One: Health Promotion in the Current Society

Definition of Health Promotion

The term "*health promotion*" entered public health literature in 1920s and has gained international attention in the past decade (WHO, 1991). In the past, the term was commonly known as "*health education*". Some authors considered the two terms to be synonymous (Maben & Clark, 1995; Steckler et al., 1995). Green and Kreuter (1991) defined the term "*health education*" as "*any combination of learning experiences designed to facilitate voluntary actions conducive to health*". Prior to the first international conference at Ottawa, Canada in 1986, the definition of health promotion has been examined in variety of ways and the scope has broadened (WHO, 1991). The Ottawa Charter (1986) defined health promotion as "*the process of*

enabling people to increase control over and to improve their health". Green and Kreuter (1991) defined the term "health promotion" as *"the combination of educational and environmental supports for actions and conditions of living conducive to health*". Maben and Clark (1995) conducted a concept analysis of "health promotion" and proposed its definition as *"to further well-being*" or *"encourage well-being*" containing the socio-environmental elements of equity, collaboration, and participation. Considering the meaning of the two terms, health education became rooted in the broader field of health promotion. Therefore, health promotion in this study can be defined as *"the process of providing learning experiences and environmental supports to enable people to improve their health".*

Revolution of Health Promotion Concept

The movement of health promotion was based on a socio-ecological view of health that linked together environmental change and personal preventive measures with therapeutic interventions (Colquhoun, 1996). The paradigm of health shifted to strengthen the wellness of the individual. The widely used concept of health promotion concept was influenced by national and international actions particularly the two international conferences held in Ottawa in 1986 and in Adelaide in 1988. The aim of health promotion is to foster health development through the attainment of the highest achievable level of good health. Health promotion incorporates both individual and social health advancements. It is an integral element of the primary health care strategy for achieving *Health for all by the year 2000*, as stated in the historic declaration of Alma-Ata, Kazakhstan in 1978. The Alma-Ata Declaration stressed that "education concerning prevailing health problems and the methods of

preventing and controlling them" were essential to creating a healthy society. At this time, health promotion or health education was included to be one of the eight basic elements of primary health care. At the 1988 international conference at Riga, Latvia the progress of health promotion since Alma-Ata was quite evident. Their analysis revealed the gaps in the progress of health care and suggested new strategies in *Health for all by the year 2000*. The strategies were suggested as 1) empowering people by providing information and decision making opportunities; 2) strengthening local systems of primary health care; 3) improving education and training programs in health promotion and prevention for health professionals; 4) applying science and technology to critical health problems; 5) using new approaches to health problems that have resisted solution; 6) providing special assistance to the least developed countries; 7) establishing a process for examination. These were the long-term challenges that must be addresses beyond the year 2000 in order to achieve health for one and all. The *Ottawa Charter for Health Promotion* was admired as the beginning of the new public health movement (Wass, 2000). The concepts of health promotion was discussed since the first conference in Ottawa, Canada in 1986 and in the following five conferences in Adelaide, Australia; Sunsvall, Sweden; Jakarta, Indonesia; Mexico city, Mexico; and Bangkok, Thailand respectively. The sixth international conference on health promotion was held in Bangkok, Thailand focused upon policy, partnership, and social determinants to the successful of health promotion in the challenge of globalization (Ministry of Public Health & WHO, 2006). Therefore, the concept of health promotion was concerned on the empowerment of individual and community to control over their living and the partnership among government and multisectoral organizations to promote healthy

physical and social environments. This new public health approach differed from the traditional approach in three ways. Firstly, it recognized the broad nature of health promotion and the need to work with government and private organizations. Secondly, it recognized the need to work with communities to increase community control over the issues affecting their health. Thirdly, it recognized the way people's physical and environmental environments to determined good or bad conditions of health (Wass, 2000).

Principles of Health Promotion

Prior to the first International conference at Ottawa, Canada in 1986, the WHO European Regional Office conducted a meeting in 1984 to discuss the "Concepts and Principles in Health Promotion". The concepts and principles in health promotion were developed on the basis that "health" was the magnitude that an individual is able. The concepts and principles included the following (O'Connor & Parker, 1995):

1) Health promotion involves the population as a whole in the context of their everyday life, rather than focusing on people at risk for specific disease;

2) Health promotion is directed towards action on the determinants cause of health;

3) Health promotion combines various methods including communication, education, legislation, finance, organizational change, community development, and natural local activities against health hazards;

4) Health promotion aims particularly at effective and actual public participation;

5) Health professionals have an important role in enabling health promotion.

The Ottawa Charter for Health Promotion (WHO, 1986) developed from the aforementioned principles and the five key strategies which are as follows (O'Connor & Parker, 1995):

1) *Build public policies that support health.* Health promotion goes beyond health care and the responsibility relies not only by health care professionals. It should be undertaken by decision-makers in all areas of governmental policy and implemented in the socio-economic and cultural arena.

2) *Create supportive environments.* Health promotion recognizes that at both the global and the local level living and working conditions that are safe, stimulating, satisfying, and enjoyable must be created.

3) *Strengthen community action.* The heart of health promotion is that communities have power and control over their own initiatives and activities. Health professionals must learn new ways of working with individuals and communities for improving their health.

4) *Develop personal skills.* Health promotion supports personal and social development through providing information and education for health and by helping people to develop the skills they need to make healthy choices. This process has to be assisted in the school, at home, at work, and community settings.

5) *Reorient health services.* Health services are shared among individuals, community groups, health professionals, and government and non-government organizations. They must work towards a health care system that contributes to health of people.

Since then WHO, in order to enhance health promotion, has collaborated with many organizations to conduct the following four global conferences in Adelaide, Australia (1988), Sundsvall, Sweden (1991), Jarkata, Indonesia (1997), and Mexico city, Mexico (2000). The issues focused on in these four conferences helped to create a new concept of health promotion. The conceptual difference from the previous conventional concept of health promotion is: 1) the new health promotion is concerned with social movement, not only health services; 2) its goal is to improve the health of the population and community; 3) it is a shared responsibility of society; 4) it emphasizes the socio- environmental factors related to health; 5) and it applies the five Ottawa Charter strategies (building healthy public policy, creating supportive environments, strengthening community action, developing personal skills, and reorienting health services) (Archananuphab, 1998). Hence Health promotion can focus on individuals, groups or whole populations and encompass educational components, including individual and group change and social movements. The interventions for health promotion should be applied with organizational, economic, regulatory and technological interventions. These make up a wide range of strategies for better health for the people. Research in this field indicates that health promotion interventions are more likely to be effective when combinations of strategies are employed (Steckler et al., 1995). Thus, the idea of the "setting" approach was introduced as a target for promoting health in many countries. Therefore, school is considered as one important setting because it is not only the place to help growing school children learn about the qualities of a healthy environment but also it is a place where people live, work, and learn.

Part Two: Health Promoting School

Definition of Health Promoting School

There were many organizations and authors who defined the term of "health promoting school (HPS)" such as: WHO (2006) defined HPS as "a school constantly strengthening its capacity as a healthy setting for living, learning and working". The Children's Health Development Foundation (1999) described HPS as "a school community that takes action and places priority on creating an environment that will have the best possible impact on the health of students, teachers and other school staff" (Children's Health Development Foundation, 1999); Rissel and Rowling (2000) defined a HPS as "a school which has an organized set of policies, procedures, activities, and structures, designed to protect and promote the health and well-being of students, staff, and the wider school community members".

In Thailand, the Ministry of Public Health which initiated and organized the HPS program has defined a HPS based on WHO's definition as "a school constantly strengthening its capacity as a healthy setting for living, learning and working" (Bureau of Health Promotion, Ministry of Public Health, 2001).

Therefore, the definition of a HPS can be concluded to be "a school which all members of school and community work together to set policies, provide school health education, school health services, school health programs, encourage community participation, and create healthy environment to promote health of school children, school personnel, and community members".

Concept of Health Promoting School

The concept of HPS reflects the new paradigm of health promotion. In this new model social responsibility and the concerns about the environment will be a crucial addition to the present public health services (Archananuphab, 1998). School is a setting for children's health promotion because of various reasons: children spend more time in school which provides a large window of access to this population; the learning, eating, and socializing activities can reinforce healthful decisions; the physical and social environment have an impact on children's health; and the school is a central focus for community activities (Parcel, Kelder, & Basen-Engquist, 2000). Considering the development stages of children, the environmental structures of schools that affect health behavior of children are as follows (Perry & Murray, 1982):

1) The model structure, this structure includes actual behavior of children. Children are greatly influenced by observing other people's habits such as; food selection habits, exercise habits, coping methods, smoking habits, and the use of alcohol by parents, teachers, and friends.

2) The network structure, this structure deals with the concerns about the interaction of children with other people such as peer groups, the neighborhood, and organizations with which they are involved.

3) The social system structure, the school is a social system that can have psychologically, socially, and ecologically unhealthy environments, which can be threats for promoting children's health.

4) The community message structure, this structure includes television programs, advertisements, community resources, and government regulations that can shape children' attitude on health.

Hence, school is a setting in which to enhance healthy behavior for school children by creating a supportive environment and encouraging socialization inside and outside the school community. The people who partake in promoting health should include teachers, school children, parents, health personnel, and other community members.

The HPS was one important aspect in the "setting approach" of new public health movement. WHO established the Division of Health Promotion, Education and Communication, which provided working group to develop the Global School Health Initiative. The general direction of a Global School Health Initiative was guided by the results from Ottawa Charter for Health Promotion (1986) and the Declaration of the Fourth International Conference on Health promotion held in Jakarta (1997). It was also guided by the recommendations of WHO's Expert Committee on Comprehensive School Health Education and Promotion (1995).

In 1986, in Ottawa, Canada, WHO conducted the global conference entitled A New Public Health Movement. The Ottawa Charter focused WHO's initiative on creating good health as well as the prevention health problems. The five key strategies for health promotion were identified as:

1. Building healthy public policy
2. Creating supportive environment
3. Strengthening community action
4. Developing personal skills

5. Reorienting health services

WHO encouraged schools to enable individuals to care for themselves and others, make decisions and that have control over their life circumstances and create conditions that were conducive to health. The actions needed to achieve a state of complete physical, mental, and social well being the individual should be added to school health programs to prevent disease, disability, and death in children.

In 1997, WHO conducted the conference: The Jakarta Declaration on Health promotion into the twenty first centuries at Jakarta, Indonesia. The Jakarta Declaration focused WHO's Initiative on creating *sustainable* health promoting programs. They called for international, national, districts, and local action to promote social responsibility, increase investments, expand partnership, build community capacity, empower individuals and strengthen infrastructure for health promotion through schools. To support the effectiveness of health promotion that be enable people to develop the lifestyle, the social and economic status, and an environment conducive to health the conference came to the following conclusions (Archananuphab, 1998):

1) The five key strategies of health promotion should be conducted comprehensively.

2) The initiation of health promotion at the base of community structure such as city, community, market, school, workplace, health center etc. can provide the challenge for the strategies.

3) People's participation is the focal point of health promotion.

4) Health education and information is essential to empower the people and community.

The WHO Expert Committee on Comprehensive School Health Education and Promotion reviewed the barriers to the development of school health programs. They identified five barriers at each organizational level were:

1) Inadequate vision and strategic planning

2) Inadequate understanding and acceptance of programs

3) Lack of responsibility and accountability

4) Inadequate collaboration among people addressing health in school.

5) Lack of programs infrastructure, including financial, human, and material as well as organizing mechanisms.

The WHO Committee provided recommendations for promoting school health as following:

1) Provide a safe learning and working environment for students and staff.

2) Serve as a gate for health promotion and a location for health intervention.

3) Enable children and adolescents to learn critical health and life skills. Furthermore, the WHO expert Committee also provided recommendations for supporting education and health promotion.

Addressing the significant issues of the Ottawa Charter, the Jakarta Declaration, and the recommendations of WHO's Expert Committee, WHO launched the foundation for Global School Health Initiative in 1995. It was designed to improve the health of students, school personnel, families, and other members in the community by implementing a HPS.

Health Promoting School in Other Countries

Health Promoting Schools (HPSs) have been major initiatives in the European and Western Pacific Regions of WHO (St. Leger, 1999). In 1991 the European Network for HPSs (ENHPS) was created in Copenhagen, Denmark. A pilot project began in 1991 in Poland, Hungary, and Czechoslovakia (St. Leger, 1999). The WHO in Geneva invited their regional offices to adopt the concept of HPS. The legitimacy of HPSs in these regions is to be found in a key document entitled *New Horizons in Health* which was eventually adopted by the region's 32 member states in 1995 (St. Leger, 1999).

The United States of America has been providing school health programs for a long period of time. The School Health Program in U.S.A. has focused on activities related to health problems and the need for more collaboration from stakeholders to promote health of students and staff. The Center for Diseases Control and Prevention (CDC) under the U.S. Department of Health and Human Services is the organization that provided school health services. The concept of "Comprehensive School Health Program" was developed to describe this program. It is defined as "an organized set of policies, procedures, and activities designed to protect and promote health and well being of students and staff" (Meeks & Heit, 1992). It is composed of the following three components:

1. *School health services.* School health services have long been initiated for school children in Western societies. The conceptualization of school health services in U.S.A. actualized by a health team including physician, nurses, dentists, health educators, health personnel, social workers, and teachers. This group of

professionals collaborated with each other to develop a school readiness program, appraise and evaluate health status of students, counsel students, parents, and personnel, refer the students with health problems to health care organizations, and then follow up on the students who has health problem.

2. *School health environment.* This part focuses on the school buildings, the environment, specific school activities, procedures, and policies that protect the health and safety of students, and staff. A healthful school environment involves all the internal and external factors that affect the individual during the school day. This term is sometimes referred to *healthful school living* (Cornacchia, Olsen, & Ozias, 1996). Healthful school living is the promotion, maintenance, and use of safe surroundings, learning procedures, and the organization management to influence emotional, physical, and social health. The teachers play an important role in teaching, supporting, and modeling for students to develop positive attitude in the learning process. The parents, community members, health professionals are also an important resource to coordinate and work together as a team to promote student's health. The "school health team" who are responsible for healthy school environment and must work together as follows (Cornacchia et al., 1996):

a. To promote positive relationships among teachers, staff, and students.

b. To set the schedule to be conducive to learn and enhance the well being.

c. To plan an adequate school size and suitable location.

d. To assure that school construction meets high standards in terms of sanitation, safety, lighting, heating, cooling, ventilation, acoustics, and furnishing.

e. To provide for proper school maintenance and inspection.

f. To develop procedures to follow for fire and disaster and conduct regular practice drills.

g. To provide adequate and safe physical education and recreational activities.

h. To implement safe school transportation.

i. To train children to stay safe at school and during the way to and from school.

j. To meet standards for school lunches, milk program, and parties at school.

3. School health education. This part of the program includes the development, implementation, and evaluation of a planned instructional program and other activities for students through grade 12. Teachers who are responsible for school health education are referred to as school health educators. There are three solutions mentioned to promote health of children in America including (Cornacchia et al., 1996):

a. Emphasizing family life and family values and promoting healthful family behavior.

b. Promoting community involvement.

c. Having school programs that promote life skills within a caring environment.

The school health services in U.S.A. have been developed to serve the situation of children's problems. Since the late 1980s, the model of "Comprehensive School Health Program (CSHP)" has been carried out throughout the U.S.A.

(Resnicow & Allensworth, 1996). The CSHP model consisted of eight components that expanded from prior three components of school health education, school health environment/policy, and school health services to be 8 components. The five new components included school physical education, school food services, health promotion for staff, school counseling, school psychological and social services, and parent/community involvement (Allensworth & Kolbe, 1987).

The HPS concept was also carried out in European countries. Williams and Jones (1993) reported that the School Health Education Commission was making efforts to improve school health education in the European Community. The school health education began in the late 1960s in northern Europe, particularly in the countries of Denmark, Holland, and the United Kingdom. These countries had a more successful health movement than Greece and Portugal, in the southern Europe. The European Community countries used a model of HPS that modeled a cooperative effort involving schools, families, and community. The concept of HPS advocate healthful social, psychological, and physical environments the schools based on the interaction with families, and the community. The three elements in implementing HPS included the classroom, the school milieu, and families and the community. The classroom element concentrated on integrating health education in the teaching of the subjects such as science or physical education. The school milieu element was the environment to support health education. The examples included setting clear school policies relating to nutrition, smoking, bullying, and hygiene; developing clean and safe environment; supporting good relationships within and between the group of teachers and students; providing opportunities for all students to succeed; and coordinating with families, community. The families and communities element

concerned the partnership among schools, families, and community institutions interested in health promotion. There was a study completed based on the factors of success in implementing HPSs in the United Kingdom (U.K.) (Moon, 2002). The results revealed that the factors of success were as follows: senior management commitment and support; good communication systems within the school; a health education curriculum with high status and support from senior management, staff and parents within the school community, and from the health services and education authorities externally; a healthy schools coordinator with high status amongst staff and pupils, the skills and the time available to lead and manage the project; full consultation with and involvement of all staff, including non-teaching staff, and their confident support; training and support for staff; consultation with and the active involvement of pupils, parents, and wider community groups; a dedicated budget and resources.

The HPS in Australia focused on the strategy and structure to promote health of children (Egger, Spark, Lawson, & Donovan, 1999). An example was the success of Western Australian School Health Project (WASH Project) in which the school health committees planned together to provide health knowledge for students, teachers and parents, health promotion activities. The program included school health promotional activities such as healthy breakfast and the development of school structure, for example, writing school's health policies, forming health committees, and developing healthy canteens (Booth & Samdal, 1997). Another study was a randomized controlled study of the Hunter Region HPS project in New South Wales, Australia (Lynagh et al., 1999). This project used HPS concept and evaluated itseffectiveness in 22 public secondary schools. The intervention program was

designed to reduce three health risk behaviors including smoking, unsafe alcohol consumption and inadequate solar protection. One study, in New South Wales, revealed the association between school environment and health behavior. The study (adjusting for age, sex, and average weekly pocket money) showed students who had positive perceptions regarding their school environment were significantly more likely to engage in health promoting behaviors (McLellana et al., 1999). Regarding to the evaluation of HPS, there was one study conducted in South Western Sydney. The study was the second phase of South Western Sydney HPSs project in 41 HPSs that primarily launched in 1992. The workshop for school staff was held with the provision of resource kit in seven pilot schools during the initial phase, involvement of staff from project school, and support school based activities by the project coordinator. Twenty-two schools were randomly assigned as intervention group and nineteen schools were assigned as control group. The questionnaire about the respondent's awareness of the HPS concept and health-related policy and practice were sent to the 41 schools before and after intervention. The results showed that there was an increased level of awareness of the health promoting school concept among intervention schools.

A comprehensive program of "healthy schools" has been conducted in Hong Kong to encourage the widespread development of the HPS concept. The program focused on the improvement of communication between health services and education staff at all levels (Lee et al., 2003). The author reported that the success of HPSs depended on teacher training and curriculum development. The key determinant of the successful and efficient implementation of health and education program is the ability of teachers to understand the basic concepts and communicate their meaning to

others. The two year courses included the holistic approach to health, and practical skills in the implementation of school health education and promotional programs. The results of the training indicated the change in the participant's attitude about health from one of merely eliminating disease to taking into account the importance of psychological and social wellbeing (Lee et al., 2003).

In conclusion, the HPS program in western and Asian countries exhibited similarities in the use of the six components of the HPS; school policy, school management, school curriculum, participation of parents and community, school health services, and healthy environment. Regarding the factors related to the implementation of HPSs, the United Kingdom and Hong Kong presented similar types of techniques in the training of health and educational staff about health promotion. A few studies had mentioned the factors influential in the successful implementation of the HPS. One study in the U.K. found the following components necessary for the success of the HPS; administrator's management commitment and support; communication systems, health education; healthy school coordinator; and involvement of all staff.

Health Promoting School in Thailand

The health promoting school (HPS) in Thailand became a national policy under the development of health promotion for school age children. Since the Alma-Ata Declaration 1978, Thailand has formerly provided public health services for people, and adopted the nations of primary health care. The policy of *"Health for all by the year 2000"* was announced in order to promote quality of life of Thai people. The four key strategies utilized by the primary health care system were

(1) community participation (2) appropriate technology (3) intersectional collaboration and (4) basic services. These strategies were widely used throughout the country. In the past, the primary health care in Thailand has been conducted quite successfully, but the concept of health promotion was not prominently considered (Kanchana, 2000). With regard to the development of health care services and primary health care in Thailand, some successful programs were reported such as family planning, immunization, prevention of malnutrition, smoking campaign etc. However, the former strategies in which the public health sectors were responsible for were not sufficiently applicable to the transition of people's lifestyles and health in the new society (Archananuphab, 1998). During the Eight National National Socioeconomic Development Plan (1997-2001) Thailand clearly stated health promotion as a strategy for human development. The strategies for health promotion began with the use of three approaches: age group, issue, and setting. The new version of health promotion introduced the concept that people themselves should initiate well being, which would be facilitated by public health personnel and other organizations (Boonyuen, 1999). Currently, Thai government has set the policy of "Healthy Thailand" and declared to the sixth global conference in Bangkok, Thailand. The policy aimed to promote physical, mental, social, and spiritual health of all age group of Thai people. The government emphasized six important aspects of good healthfood, exercise, community health, emotional and balance, absence of disease, and refraining from destructive behaviors (Ministry of Public Health & WHO, 2006).

The school community was established as an important setting for promoting health of the Thai people. During December 2-5,1997, the Ministry of Public Health, the Ministry of Education, and WHO conducted the "Intercountry Consultation on

Health Promoting School" in Bangkok. The participants consisted of representatives from the Ministry of Public Health, the Ministry of Education, the Ministry of University Affairs and delegates from seven countries in Southeast Asia. Representative from WHO presented concepts and strategies to implement the HPS. Every country accepted the suggestions and created a vision in order to establish a national network for exchanging information. The Ministry of Public Health in Thailand accepted HPS to be a vehicle for the development of a youth health policy. They proposed the arrangement of national HPS committee that consisted of representatives from the Ministry of Public Health, the Ministry of Education, the Ministry of Interior, and other sectors. At this time the national HPS proposed the policy to establish all school as a HPS. And they developed the guidelines for implementing the HPS which include definition, characteristics, components, and the stages of implementation in order to create an awareness about the promotion of child's health. The guidelines were developed based on WHO's recommendations and applied to the cultural situation of Thailand. The Ministry of Public Health initiated HPS program by encouraging the pilot schools in each province to implement as the concept of HPS. The implement of HPS during the beginning period was carried out under the five key strategies of setting healthy public policy, create environmental health, develop personal skill about health, strengthen community action, and reorient health services (WHO, 1986). A case study in pilot HPSs in Chiang Mai province found that both schools implemented the project in similar processes including establishment of HPS committees, conduct orientation meeting for teachers and school staffs, set the plan, implementation and evaluation. Both schools had integrated health projects such as nutrition, exercise, and school health project

together, integrated health promotion contents in teaching-learning methods, and improved school buildings and school environment Factors relating to the implementation of HPSs were school policy, awareness and participation of stakeholders, and partnership. The participants from pilot schools specified problems of implementation that were lack of personnel, deficit in evaluation of procedures, lack of continuation of problem solving, economic status of students, and lack of understanding the concept of health promotion. (Buddhirakkul & Suchaxaya, 2005). Later, the Department of Health, Ministry of Pubic Health conducted a national meeting for related organizations to disseminate the policies, and strategy of the HPS throughout the country (Jiaskul & Kannakhum, 1999).

Definition of health promoting school. The Ministry of Public Health defined a HPS as "the school that has the strength and ability to be a healthy place for living, learning, and working" (Bureau of Health Promotion, Ministry of Public Health, 2001).

National goal of health promoting school. The ultimate goal of a HPS program in Thailand is to develop a school setting which would be the starting place and center for promoting health among children, teachers, school personnel, and members in community.

Target of health promoting school program. During the Eight National Health Plan (1997-2001) the Ministry of Public Health set the target for expanding HPS program in Thailand as follows:

1. In 1998, Regional Health Promotion Centers coordinated with Provincial Health Offices and implemented the first pilot HPS in each province.

2. In 1999, Each province expanded the HPS at least one school at the district level.

3. In 2000, each province expanded HPS to cover 25% of the total schools.

4. In 2001, each province expanded HPS to cover 50% of the total schools.

5. In 2005, at least 80% of schools under the Institute of Primary Education in Thailand will follow the guidelines of HPS and 40% should pass the minimum requirement of standard assessment (Bureau of Health Promotion, Ministry of Public Health, 2005).

Strategies for health promoting school. The Ministry of Public Health suggested the strategies for implementing HPS as follows (Bureau of Health Promotion, Ministry of Public Health, 2001):

1. Advocacy: This strategy focused on the dissemination information to public in order to create awareness in understanding building health issues. All related organizations should be advocated to understand the concept and be able to implement follow the national policy.

2. Partnerships and Alliances: This crucial strategy was the encouragement of participation at village, district, and provincial levels.

3. Strengthening Local Capacity: This strategy focused on the strengthening the ability of people, community, and schools to implement the HPS. The organizations and schools should develop the plan and find the appropriate strategies to enhance the ability of the people to make it become a reality.

4. Research, Monitoring, and Evaluation: All organizations should participate in developing a clear plan and conduct the proper research to evaluate the program.

Components of a health promoting school. The Ministry of Public Health determined the ten essential components for HPS based on WHO's recommendation they are as follows (Bureau of Health Promotion, Ministry of Public Health, 2001):

1. School policies
2. School Management
3. School/Community Projects
4. Healthy School Environment
5. School Health Services
6. School Health Education
7. Nutrition/Food Safety
8. Exercise, Sport, and Recreation
9. Counseling/ Social Support
10. Health promotion for Staff

Stages of implementing a health promoting school. The Ministry of Public Health suggested the schools to implement the following stages (Bureau of Health Promotion, Ministry of Public Health, 2001):

1. The school should enhance social action through the HPS. The focus of health promotion is social action (WHO, 1991). Establishment of the HPS needs the awareness of stakeholders and participation of the community as well. The first stage

to enhance HPS should be a strategy describing the principles and advantages of HPS to stakeholders, students, families, and communities.

2. The school should establish a HPS committee. The committee may include the principal, teachers, students, parents, community leaders, and leaders of private organization. The committee can provide suggestion for implementing health promoting school.

3. The school should a group of community consultants. The community committee consists of responsible leaders who reside in the area of that school. They are individual resources who understand the health problems and factors related to health in their community.

4. The school committee should analyze the school health situation by assessing the current policy, problems, and health promotion in each school.

5. The school committee should create the vision of the HPS. The teachers and community leaders should use brainstorming techniques to analyze the data and identify the needs and problems of their community.

6. The school committee should develop a plan of action. After prioritizing the problems, the committee should plan together by setting targets, objectives, an implementation plan, and procure the resources, and responsible people to attain these goals

7. The school committee should follow up and evaluate. It is necessary to follow up and evaluate the HPS continuously in order to measure the progress and solve the ensuing problems.

Characteristics of health promoting school. The Ministry of Public Health set the characteristics of HPS based on the WHO's recommendation (1996) as follows:

1. Enhance the educational personnel, health personnel, school personnel, students, parents, and community leaders to participate in promoting health in their community.

2. Strives to provide a healthy and safe environment for children, protect them from violence, provide them with love, trust, respect, and a caring environment. And establish a safe playground for children.

3. Provide health education including a curriculum development for health.

4. Provide efficient school health services.

5. Implement policies and practices through health promotion as:

- Allocate resources and activities to promote health.
- Provide equality of health services for all.
- Prevent alcohol and drug addiction, violence, and provide first aid treatment.

6. Strive to improve the health of the community, and encourage the participation of families and communities.

Based on the above-mentioned six characteristics of a HPS by the Ministry of Public Health designated that the school should be composed of ten components as school policy; school management; school/community projects; school environment; school health services; nutrition/food safety; school health education; exercise, sport,

and recreation; counseling/social support; and health promotion for staff. The literature review explaining theses ten components were as follows:

School policy. The term "policy" is a flexible concept used in different ways on different occasions. Webster's dictionary provided this definition; "a definite course or method of action selected (by government, institution, group or individual) from among alternatives and in the light of given conditions to guide and determine present and future decisions" (Food and Drug Administration, Ministry of Public Health, 2002). The HPS program was a national policy distributed to all of the schools in Thailand. The basic premise of the policy was the school should establish health promoting school committees who work together to establish a school policy. Therefore, the policy would include mission, goals of the school, identification of problems, priority setting, planning, implementing, and follow up and evaluation to help promote the health of school children and the community.

School management. The term "management" and "administration" has been known to have the same meaning and used interchangeably. The term "management" is often used in the business organization and "administration" used in the governmental or nonprofit organization (Kast & Rosenzweig, 1985; Sanrattana, 2002). Hannagan (2002) stated that the term "management" was traditionally defined as to get things done by the others. In the past, the manager's role was to organize, supervise and control personnel so that there was a productive outcome to work. In the field of economics, the definition was argued as "the process of optimizing human, material, and financial contribution for the achievement of organization goals". The challenge of the management would the be to maintain control over the processes of an organization while at the same time leading, inspiring, directing and

making decisions on all sorts of matters. The HPS program in Thailand has been the national policy since 1998. In the beginning period of the program, there was a study on "Situational Analysis for Developing Health Promoting Schools in Thailand" (Suwan et al., 1999). The study aimed at analyzing the existing and potential resources for school health programs at various levels and determining the obstacles of the development of HPS in Thailand. The research team mailed out questionnaires to 1,636 sample personnel from the Ministry of Education and Ministry of Public Health. They also conducted a focus group discussion with 864 elementary and 456 secondary schools from 12 provinces where the Regional Health Promotion Center was located. The results revealed that there was an urgent need to establish precise health promotional policies at every level; develop a more effective collaborative mechanism between the Ministry of Education, the Ministry of Public Health, and other non-governmental agencies; develop in-service and pre-service teacher training programs to explain the new concept and skills necessary in the HPS; and initiate a quality managerial and assurance systems which would be conducive to the school personnel's health. Another study was conducted by the Regional health Promotion Center in Chiang Mai. The study's aim was to analyze the administrative situation of HPS in the northern part of Thailand in 2001 (Wannajak & Wipulakorn, 2002). The researcher team analyzed the organization in six components including: 1) policy/plan; 2) budget and material resources; 3) human resource; 4) team work; 5) community and social participation; 6) supervision and follow up; and 7) research and evaluation. The studied was conducted in six HPSs, which were the pilot schools of this project in Chiang Rai, Lam Pang, and Lum Phun provinces, located in the northern part of Thailand. The samples consisted of sixty administrators and teachers from the six

schools. The results showed that Lam Pang province had high mean score in all components while Chiang Rai had a low mean score in all components. There was a significant relationship in all the components of administration. Both studies focused on an evaluating process, which would identify the needs of implementing the program in order to provide suggestions to the related organizations. Therefore, the management in school refers to the process that administrator and teachers optimize human, material, and financial contribution for promoting health of school children and people in school community.

School/community participation. Proper health behavior in school children is enhanced by the participation among the school, family, and community (Leeyavanich, 1992). School children will avoid conflict if they receive a congruent learning experience among school, family, and community. The HPS program is a strategy to promote health actions in all levels of society. The purpose of the program is to encourage participation among administrators, teachers, school children, parents, community members, school personnel, health professional in providing school health services, health education, and also create a healthy environmental for promoting health status of school children. The participation of school children in school health promotion programs is the main focus of the programs because it can influence the consequences of promoting healthy behavior through adulthood (Pender, 1987).

Participation is a broad concept and has been widely used in the disclosure of development (Civil Society Organizations and Participation Programme of the United Nations Development Programme, 2000). There are many definitions of participation depending upon the purpose of users. The core definition of participation is the action or state of people when they are partaking of something. It can be defined as the

social interaction of people in a group, family, or community, especially when they attend regularly and contribute to the group activities (*Merriam-Webster's Third New International Dictionary*, 1986). The WHO (2002) defined the term "participation" as "*a process by which people are enabled to become actively and genuinely involved in defining the issues of concern to them, in making decisions about factors that affect their lives, informulating and implementing policies, in planning, developing and delivering services and in taking action to achieve change*". Cohen and Uphoff (1980) viewed participation as the involvement of a significant number of persons whose actions would enhance their well being. They presented the framework of rural development participation based on the assumption that "participation" is not a thing that either exists or does not exist and which can be measured in the same way as you measure a dam's capacity to hold water. The Framework of Cohen and Uphoff consisted of three dimensions of participation. The three dimensions were designed to answer the questions about what kinds of participation take place, who participates in them, and how the process of participation takes place. The first dimension about the types or kinds of participation consisted of (a) participation in decision-making; (b) participation in implementation; (c) participation in benefits (or harmful consequence); and (d) participation in evaluation. The second dimension was concerned about the people who participate were (a) local residents; (b) local leaders; (c) government personnel; and (d) foreign personnel (non-governmental organizations). The third dimension about the ways in which participation has occurred consisted of (a) the initiative of participation comes from the grass roots level or national center; (b) the participation is voluntary or coerced; (c) the structure of participation is whether a person enters into participation as a member of the group;

(d) the channels of participation is whether someone participates directly or is represented by someone; (e) the time required of participants that affects the amount of participation; (f) the intensity of participation that is related to the range of activities; and (g) empowerment of participation that range from no power of influence to the existence of power. Therefore, the participation among school-family-community in the HPS would include the involvement these people in decision-making, planning, implementing of the health promotion activities, evaluating, and receiving benefits from the program.

In Thailand, the Ministry of Education and Ministry of Public Health has conducted activities to encourage participation of stakeholders in school health activities as follows (Bureau of Health Promotion, Ministry of Public Health, 1997):

1) School-home meetings to share experiences and resources; teachers, health personnel, and parents form a partnership to promote parents relationship to student health.

2) Promotion of student leaders' role in family and community.

3) Promotion of parents involvement in school activities.

The two studies related to the participation of stakeholders in implementing HPS in Thailand were reviewed. The first study focused on the participation of stakeholders in implementing HPS. The program to promote health showed positive results. Lorlowhakorn (2001) conducted a participatory action research on "Participatory Management in Health promoting School: Ban-Markprok School, Phuket Province" during July, 2000-August, 2001. The researcher accumulated data by using questionnaires, participatory observations, in-depth interviews and focus group discussion and then analyzed the means difference and the relationships of

intervening factors at the sixth and the ninth month of the program by pair t-test and RMANOVA. The results after six months showed that the average score of management skills and participatory management behaviors in developing a HPS program, and opinions concerning management at the ninth month of program of the stakeholders had increased, significantly when compared to the first evaluation ($p < 0.5$). The interaction factor affecting the change of management skill was "ever been trained/knowing about health promoting school" and the change of opinion concerning participatory management in implementing HPS program was "government position and attending meeting more than three times". The researcher was also found that students had received better health services during the last three months of the program and had more positive attitudes toward the cleanliness of body and personal effects. School teachers and personnel had found the school climate more supportive and rewarding which increased their job satisfaction. The average score of participatory behaviors of the representatives of guardians and villagers in the developing of HPS was increased. The second study was a research survey aimed at examining the participation of school personnel in the implementation of health promotion activities in schools under the office of Primary Education, Pitsanuloke province (Thanakhun, 2002). The questionnaires were developed by the researcher based on the ten components of the HPS. These components were school policy in health promotion, management in health promotion, physical environment, social environment, relationship with community, personal skills, and school health services. The samples were 1,396 respondents selected by a multistage sampling from 460 schools in Pitsanuloke province. Findings revealed that administrators, school health teachers, health personnel, class teachers, and guardians had a high level of

participation whereas the students and school committee had moderate participation. The size of the participation working personnel and the distance between school and health center or hospital did not alter the results. Problems founded in the study included the incapability of students to apply knowledge to practice, lack of understanding about the implementation, and lack of participation in policy setting and planning of personnel. The results of studies showed that training is useful to gain participation among stakeholders. Therefore, HPS required participation of teachers, school children parents, health personnel, and community members to a project by which people in school and community are enabled to become actively and genuinely involved in defining the issues of concern to them, in making decisions about factors that affect their lives, informulating and implementing policies, in planning, developing and delivering services and in taking action to achieve change.

School environment. Merriam-Webster Online Dictionary (2006) defined the term *environment* as "the circumstances, objects, or conditions by which one is surrounded". Environment could be physical, chemical, and biotic factors (as climate, soil, and living things) that act upon an organism or an ecological community and ultimately determine its form and survival. It also could be the aggregate of social and cultural conditions that influence the life of an individual or community.

A HPS should manage and promote a safe and clean environment for school children and people in school and community. Environment should include both physical and psycho-social that good to promote health.

Physical environment: A healthy, safe, violence-free physical environment is necessary for optimal growth and development. It encompassed things like safe water, air, lighting, minimal to toxic substance, and the ergonomic aspects of chairs

and desks. Physical environment should include school buildings and classroom, playground, canteen, drinking water and water supply, toilet, hand and wash basin, first aids room, library, garbage management, waste water drainage and the control of diseases transmitted by animals or insects. (Bureau of Health Promotion, Ministry of Public Health, 1997).

Psycho-social environment: refers to psychological and social support available within the social and in relation to the home and community. This support can be informal (friends, peers, and teachers), formal (school policy, rules, clubs, and support groups).

Therefore, school environment refers to both physical and psycho-social environment. Physical environment included school buildings and classroom, playground, canteen, drinking water and water supply, toilet, hand and wash basin, first aids room, library, garbage management, waste water drainage and the control of diseases transmitted by animals or insects. Psycho-social environment included the psychological and social activities that conducive to health of school children and people in school community.

School health programs/services. School health services in U.S.A. were initiated by a group of physicians who went to visit schools in Paris during 1842 and 1843 (Haag, 1972). They were requested to inspect the school building and the method to examine children's health.

The first public school medical officer in U.S.A. was appointed in 1892. The Boston Board of Health in 1894, initiated the first medical inspection of school children. In 1919 White House Conference on Child Welfare Standards has recommended about vision and hearing testing, the compilation of health records,

control of communicable diseases, and establishment of dental and nutrition in school health services.

In 1926, the publication in that period was first attempting the health of teachers as a part of school health services. Later on, the American Association of School Physicians was established in 1927, and became to be The American School Health Association in 1938. The American School Health Association has published *The Journal of School Health.* The 1940 White House conference on Children and Youth recognized the deficiencies in school health services. The delegates proposed that adequate school health services include examinations, vision and hearing tests, medical examination. In 1947, there was the Mid-Century White House Conference on Children and Youth that focused on the handicapped child.

During 1960, school nurses established standards for functions and preparation of school nurses. During 1960-1971, there was the involvement of health personnel in school health services as the disclosure in *The Journal of School Health.*

William A. Alcott firstly recognized healthful school living in the Essay on the Construction of Schoolhouses in 1829. In 1930 White House Conference on Child Health Protection indicated that healthful school living was the most important phase of education and made recommendations regarding environmental factors and the school day. The environmental factors were including adequate lighting, heating, ventilation, water supply, toilet, and shower room facilities. The recommendations about school day were planning activities, arrangement of curriculum, and discipline. More comprehensive statements about healthful school living were made at the 1940 Conference than at previous White House Conference. The quality of daily school meals was stressed for both educational and dietary values. Later, many professional

societies and government agencies have assisted in promoting healthful school living through publication. In 1957, *Healthful School Living* was published by the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association. In 1962, the Joint Committee published *Health Aspects of the School Lunch Program* and in 1969, *Healthful School Environment.*

The school health services in Thailand has been started since 1925, the history of school services in Thailand has gone through many changes made by responsible organizations who concentrated on the development of school activities. The first concept of school health services was initiated by Prince of Songklanakarin in 1925 (Leeyavanich, 1992; Poolsiri, 1992). The prince utilized a western school health model that included the elements of health education, sanitation, communication disease control, health monitoring, and detect disability in school children. The organization responsible for administering these services was the sanitation section of the Ministry of Thammakarn which collaborated with Thai Red Cross, the Department of Public Health, and Siriraj Hospital. At the beginning, these services were voluntarily launched by a team of the physicians and nurses. Later in 1933, there was a reorganizational change in the Ministry of Thammakarn. The sanitation section was promoted to be the School Sanitation Section under the Department of Physical education.

In 1942, The Ministry of Public Health was established and the School Sanitation Section was transferred to be administered by the Department of Health, Ministry of Public Health and now became titled the School Health Division. The area of responsibility of the School Health Division included schools in the urban and

rural areas, but mostly in urban areas. The school's health responsibility consisted of sanitation, communicable disease control and prevention, physical examination, health education, and health statistics collection (Leeyavanich, 1992; Poolsiri, 1992).

In 1952, The Ministry of Public Health expanded school health services to the rural areas. During the period, the Department of Health received support from the United States of America and established the first regional school health section and dental health section in Nakhon Ratchasima province. Later on, the school health section was expanded to include the provinces of Chiang Mai, Ubon Ratchathani, Songkhla, Kanchanaburi, Udon Thani, Nakhon Si Thammarat, and Samut Songkhram (Leeyavanich, 1992; Poolsiri, 1992).

In 1962, School health project was incorporated into the First National Economic Development Plan (1962-1966). A "School Health Committee" was established which consisted of members from the Ministry of Public Health and related ministries.

In 1968, the Department of Health received funding support from UNICEF. They implemented school health services dictated by the policy of the Ministry of Interior and Ministry of Education. Many training programs were provided for health personnel and teachers to be able to provide school health services. The School Health Division supported funding and materials for school health services. The result of training programs aided in the expansion of school health services to various provinces. The provincial health office was the responsible for having each province mobilize the services in their own area.

During the Second National Economic Development Plan (1967-1971), school health projects were improved in order to provide services for school children in rural area according to the resources of health personnel and communities.

In 1972, UNICEF stopped supporting the budget and school health services was continued under the support from the Royal Thai government. In the current situation, the school health section is under the direction of the Health Promotion Centers that were expanded to cover twelve regions in the country and provide technical support to the responsible provinces. School health activities had been provided throughout the country. Furthermore, there were various training programs such as student leaders project in primary school, training of teachers and health personals project, and the training of youth health leaders in secondary schools. The School Health Division under the auspices of the Department of Health produced the manuals that recorded school health activities for health personnel and teachers so that they would be able to assess school health services and the health status of students. The information was useful for teachers and health personnel to analyze health problems and plan ways to solve the problems in school. In 1971, School Health Division determined nine items that were considered to be basic school health services that the health personal and teachers could provide for the students (Leeyavanich, 1992):

1) All students should have an individual health record.
2) Schools should have school sanitation and proper hygiene of toilets.
3) Children should receive immunization according to their age.
4) Enhance school health education.

5) Children should receive physical health examinations, iodine deficiency screening, and vision and hearing tests.

6) Sick children should receive treatment.

7) Schools should provide school lunch for children.

8) Schools should have clean drinking water.

9) Schools should follow up treatment for sick children.

In order to encourage the awareness of teachers and health personal to improve the health status of students, these nine items of services were used to calculate the level of services in each school.

Level 1: means the schools that provide the activities from item 1-9.

Level 2: means the schools that provide the activities from item 1-8.

Level 3: means the schools that provide the activities from item 1-4.

Level 4: means the schools that provide the activities from item 1-3.

In 1973, Division of Health, Ministry of Public Health found that there were difficulties in providing some items of services. These nine items were reviewed and re-ordered again as follows (Leeyavanich, 1992):

1) All students should have an individual health record.

2) Schools should have proper hygiene, in terms of an adequate numbers of toilets, garbage container, infirmary room, good environment, wastewater disposal, and food sanitation.

3) Children should receive immunization according to their age including BCG in grade one, OPV, MMR in grade one, Diptheria-Tetunus toxoid in grade one and in grade six, and German measles vaccine in grade six girls.

4) Enhance health education in school.

5) Children should receive physical health examination, iodine deficiency screening, and vision and hearing tests.

6) Sick children should receive treatment.

7) School should have follow up treatment for sick children.

8) School should have clean drinking water.

9) School should have nutritional surveillance that includes these activities; provide lunch for all students, weighing and height measurement, treatment for malnourished and over weight children.

In order to improve the quality of school health services, the level of school health services was shorten to three levels (Leeyavanich, 1992):

Level 1: means the schools that provide the activities from item 1-9.

Level 2: means the schools that provide the activities from item 1-7.

Level 3: means the schools that provide the activities from item 1-4.

The schools that provided less than four items of the activities were considered the standards of typical school health services. The strategy for assessing the level of school health services was utilized by the health personnel in order to encourage the participation of teachers and parents in school health activities. After the Department of Health, Ministry of Public Health started the HPS program, this strategy for assessing the levels of school health services was cancelled. The school health services were considered as one of the component of the HPS. The researcher has conducted a research study in the pilot primary schools of HPS project in Chiang Mai in 2002. The aim of the study was to evaluate the process of implementing the HPS. The participants were two administrators, sixteen teachers, fifteen students, eight food sellers, two janitors, and two health personnel from a public and a private

school. Data collection was carried out by focus group discussions, interviewing, observations, and documentation. Data was analyzed by using a content analysis method. Results of the study revealed that both schools had implemented the project in similar processes including; the establishment of HPS committees, conducting of orientation meetings for teachers and the school staffs, setting the plan, implementation and evaluation. For the implementation, both schools began by integrating various of related health projects in the schools such as, provision of nutrition and supplementary milk, promotion of exercise activities, provision of dental health, provision of health care services, improvement of environment, and integration of health contents in teaching-learning methods. School health services should include the health activities provided by teachers and health personnel to prevent of diseases in school children, promote their health, and gave treatment for the sick children.

School health education. Health education in U.S.A. was initiated by Horace Mann who emphasized the need for the study of hygiene and physiology as parts of the elementary and secondary school curriculum. The development of health education moved continuously during the period between 1850 and 1900, the success was in having legislation passed concerning the teaching of the effects of alcohol, tobacco, and narcotics in the curriculum as well as hygiene and physiology.

New concepts of health education appeared from 1900-1915. Open-air classrooms demonstrated practical health education. The White House Conference on the Care of Dependent Children stressed that every child should receive health instruction. From 1915-1920, rapid growth occurred in school health education. The Modern House Crusade of the National Tuberculosis Association emerged with

100,000 children receiving health information and developing health habits. The Child Health Organization of America, found in 1918, changed the concepts of health education. The term "hygiene" was placed by "health education". Later, health education was developed by the disseminating the concepts through publication and also concerning with the preparation of qualified teachers. During the forties, fifties, and sixties of the twentieth century health education as a single subject matter field won recognition as an essential part of the modern school curriculum. The 1940 White House Conference on Children stressed mental health and the need for health education in elementary and secondary schools. The Mid-Century White House Conference recommend that teaching of health ought to be given more time in the curriculum and teachers of health ought to be better prepared. Resulting from the conference, the specific areas of health education were mentioned as follows: mental health, alcoholism, tobacco, safety education, nutrition, accident prevention, family life education, dental health and fluoridation, and community health.

School health education in Thailand has been introduced both intra-curriculum and extra-curriculum.

Intra-curriculum health education was the curriculum taught in the classroom and in activities outside the classroom. In the past the school curriculum of the primary school in Thailand contained few subjects related to healthy promotion of the Ten National Health Practices. The Ten National Health practices were the health education strategy to enhance health behavior of school children and people in Thailand (Bureau of Health Promotion, Ministry of Public Health, 1992). The initiation concept of the National Health Practices guideline was started in 1933 by the Siam Red Cross Society. The Siam Red Cross society established twelve health

guidelines for the young members to perform for good health. In 1960, the Ministry of Education has mentioned the "Ten Health Practices" and they were utilized in school curriculum at the elementary schools. In 1978, there was a curriculum developed to integrate health education, sociology, and science and it was titled "Enhance of Life Experience Group". The content of the Ten Health Practices was integrated with sociology and science to and became known as "health behavior". In 1992 the Ministry of Public Health revised the National Health Practices (NHP) to be congruent with the situation. The contents of NHP included the following six components; personal hygiene; nutrition; exercise; mental health; accident prevention; and environmental health. The national health education committee proposed and announced the NHP in 1992 to be disseminated to Thai school children. The scope of ten national health practices included the following topics:

1) Cleaning the body and belongings.

2) Brushing teeth every day.

3) Washing hands before and after the toilet.

4) Avoid eating over colorful foods, some ingredients containing sodium glutamate, borax, and vegetables or fruits contaminated with pesticides.

5) Stop smoking tobacco and drinking alcohol, and avoid risky sexual behavior.

6) Enhance family relationships.

7) Prevent the causes of accident.

8) Perform regular exercise and receive physical check ups.

9) Practice healthy emotions.

10) Create an awareness of well being in the community and society.

Extra-curriculum health education were training programs and activities designed by the Ministry of Public Health. Two of the programs were life skill training with emphasis on AIDS and Drug abuse prevention, and the training of student leaders in health-related issues. Along with the implementation of the HPS program, the Ministry of Public Health also initiated the consumer protection project in schools in 2002. The student leaders were trained to identify safe foods and disseminate information to peer and community groups (Food and Drug Administration, Ministry of Public Health, 2002).

In regard to the student training about health there were two studies done, one in the Amnatcharoen Province and another in the Pathumthani province. The first was the quasi-experimental study aim at enabling students to understand improper smoking behavior (Khokpho, 2000). The researchers designed an anti-smoking program based on Bandura's Self Efficacy theory, and Life Skill concept developed by World Health Organization. The samples consisted of 80 students, which 39 students assigned to be in the experimental group and 41 students in the comparison group. The mean scores of perception of self-efficacy, outcome expectation, self esteem, decision making skills, refusal skills, and smoking after intervention were significantly higher than before the intervention and than the comparison group. The result showed that skill training could effectively change smoking behavior in students. The second study was an experimental study conducted by Gomutvong (1998) on "Model Developing for Health Promoting School to Improve Personal Hygiene among Grade Five and Six students, Pathumthani province" in 1997. The researcher modified the six components of HPS (health policy, physical environment, social environment, school and community relationships, lifeskill development, and

health services) to improve personal hygiene among fifth and sixth grade students in local schools. The results showed that, the modification of the components in the HPS model, effectively improved the personal hygiene status of the students. The changes were in the areas of: school policy, which included procedures on how to enhance personal hygiene; physical environment, which enabled personal hygiene practices; social environment, which established peer groups to support student behavior; the development of a personal hygiene module; dissemination of students' health information to parents; and more involvement of health personnel in the HPS program.

Education in Thailand changed radically after the announcement of National Education Act in 1999 (Office of the National Education Commission, 2000). The educational system was reformed and now all schools were encouraged to improve the quality of teaching. The Ministry of Education also developed the primary school curriculum for all schools in 2001. The content of the new curriculum contained of more subjects related to health such as health promotion and prevention, lifestyle and family, life and environment, and life safety. The Ministry of Public Health and Ministry of Education indicated that the components of HPS and the standard of education have congruence in the following categories (Ministry of Public Health & Ministry of Education, 2004):

(1) School policies: The first component of HPS is congruent to the educational standard number 13 that schools should rearrange the organizational, structural and management systems to achieve the goals of education.

(2) Management in school: The second component of HPS is congruent to the same educational standard number 13 as described in the first component.

(3) Collaborative project between school and community: The third component of health promoting school is congruent to the educational standard number 14 that school should promote a relationship and collaboration with the community in education and to standard number 27 community members and parents should be able to support that education. For this component school curriculum and content should be about lifestyle and family in the areas occupation and technology.

(4) Environmental health: The fourth component of HPS is congruent to the educational standard number three that students should develop an awareness of the need to participate in social activities and conserve the environment, standard no. 15 that schools should improve the environment to promote student's health and safety, and standard number 26 that schools should have buildings and facilities for education. For this component school curriculum and content should be based on life and the environment in the area of science, health promotion and disease prevention, life safety in the areas health education and physical education.

(5) School health services: The fifth component of HPS is congruent to the educational standard number 10 that students should have good physical, emotional health and health promoting behavior, and standard number 18 schools should use teaching-learning methodology based on student centering. For this component school curriculum and content should be about lifestyle and family in the area of science, health promotion and disease prevention in the areas health education and physical education.

(6) School health education: The sixth component of HPS is congruent to the educational standard number 10 that students should have good physical, emotional health and health promoting behavior, and standard number 11 that

students should be avoided from drug addiction and alcohol. For this component school curriculum should be about life and environment, health promotion and disease prevention, and life safety in the areas of health education and physical education.

(7) Nutrition and safety foods; (8) Exercise, sports, and recreation; (9) Counseling and social support; and (10) Health promotion for school personnel: The seventh to tenth component of HPS are congruent to the educational standard number standard number 10 that students should have good physical, emotional health and health promoting behavior. For these components school curriculum and content are about lifestyle and family in the science group, contents about life and environment, physical activity, exercise, games, Thai sports, international sports, health promotion and disease prevention, and life safety in the areas of health education and physical education.

Therefore, school health education included both intra and extra curriculum activities to promote health of school children.

Nutrition and safety foods. Nutrition is one essential elements of human's life. School-age children need a well-balanced diet for growth with average of 2,400 calories per day (Edelman & Mandle, 2002). School is an important setting in which to promote healthful diet because the topic of nutrition was a part of the health education and the State supported for school lunch in U.S.A. (Pigg, 1989). Concern today is focused on school-age children having less nutritious food intake patterns and fewer quality snacks (Edelman & Mandle, 2002). Therefore, schools should collaborate with parents, school children, health personnel, and community members to teach, provide food services, and improve environment to establish healthy eating behavior of school children and promote health of people in school community.

Schools in Thailand had followed the policy to provide school lunch for all children. The topic of nutrition was also included in school curriculum. In the past, schools were encourage to consider food sanitation as one important component in healthy school environment (Leeyavanich, 1992). The education and health organizations were suggested to implement the food sanitation as follows:

1. To support schools to build the standard canteen.
2. Schools should collaborate with health sectors to train teachers, cooks , and students about how to cook clean foods.
3. Schools should plan the surveillance system to control food sanitation and encourage student participation.
4. To set standard activities and evaluate in providing safety foods.
5. To support the contest of modeling canteen in schools.
6. To support the dissemination of food sanitation information by using poster, slides, movies, and documents.
7. To support food sanitation campaign in school.
8. Schools should assigned teachers to responsible for food sanitation in school.

In conclusion, the HPS should encourage participation of all teachers, parents, school children, and community members to provide safe food and supplementary foods; information about safety foods for school children and people in school community.

Exercise, sport, and recreation. Exercise, sport, and recreation were set as a component in health promoting school because it effect to health of children and people in the school community.

Considering the basic meaning of the terms, Merriam-Webster Dictionary (2006) gave the meaning of *exercise* as "repeated use of bodily organ"; sport meant, "engage in a sport"; and *recreation* meant, "refreshment of strength after work". The results showed that three terms were associated with the activities that related to bodily movement of people. In the field of health science and education, there were another terms has been used that related to exercise like physical *activity and physical fitness* that have been used interchangeably but different meanings (Rice & Howell, 2000). Caspersen, Powell, and Christenson (1985) defined the three terms of exercise, physical activity, and physical fitness as follows:

Exercise was defined as "physical activity that is planned, structure, repetitive and purposive in the sense that improvement or maintenance of one or more components of physical fitness is an objective".

Physical activity was defined as "any bodily movement produced by skeletal muscles that result in energy expenditure".

Physical fitness was defined as "related to the movements that people perform; physical fitness is a set of attributes that people have or achieve".

All of these terms were related to the bodily movement of people with structure and unstructured design that affect to physical, emotional, mental, and social health. These terms were well known and widely discussed because it impacted to people's health. Growth of human body has been evidenced the association of physical activity with health and healthy lifestyle (Rice & Howell, 2000). Children spent one-third of a day in school. Children need to learn fundamental motor skills and develop health related physical fitness. Physical education, provided at school, is an ideal way to encourage activity and develop fitness among children. (Summerfield,

2005). The greatest benefits of physical activity came from engaging in planned and structured exercise. Walking or biking for pleasure r transportation, swimming, engaging in sport and games, participating in physical education, and doing tasks in the home and garden may all contribute to accumulated physical activity (Summerfield, 2005). In conclusion, exercise, sport, and recreation in health promoting school could refer to school activities both intra and extra curriculum that provide the use of bodily movement for school children. These activities could impact to health of school children and people in school community.

Counseling and social support. Guidance and counseling is one branch of science aimed to improve quality of life of students (Technical Department, Ministry of Education, 1988). Guidance in school has conducted to guide student about self-assessment, knew to set their future, adjusted to the change situation, and sustain healthy lifestyle.

Thailand has initiated guidance and counseling in schools since 1954 and the implementation in the past was quite slow. Therefore, Ministry of Education has announced two Guidance Development plans. The first plan was initiated in 1991 and the second plan (1997-2001) was announced to support the eight national social and economic plan that emphasis on human development (Technical Department, Ministry of Education, 1997). The schoolchildren were one specific group to be promoted for learning and playing freely suitable to age. Schools were guided to organize three to five sections for providing guidance activities as follows:

1. Information collection and follow up section. Schools should organize this section to produce information collection tools or forms of individual student.

The responsible teachers of this section should analyzed the information, follow up the students, and evaluated of guidance activities.

2. Information technology section. Schools should organize one section to disseminate educational information and other issues related to occupation, and self-development for students. The activity aimed to gain student's knowledge and experience in adjusting themselves, peer relationship, and additional experience.

3. Counseling section. Schools should organize this section for counseling individual student based on their problems. The responsible teacher should conduct the activities including survey, counseling, seek scholarship, finding jobs for students, school lunch, and encourage student club.

4. Individual counseling. Master of the class or advisor should responsible for collecting student information file and conducting home rooms activity that is the additional activity to provide experience for students (Choosingh, 1995). One home room activity is the training on ethic and moral issues to enhance mental health of school children.

5. Therefore, counseling and social support could refer to activities that teachers, peer, parents, and community provide to school children for adjusting themselves in the change situation and sustain healthy lifestyle.

Health promotion for staff. The concept of health promotion was earlier defined in this chapter as "the process of providing learning experiences and environmental supports to enable people to improve their health". Staff meant the group of people who work for an organization (Cambridge Advanced Learner's Dictionary, 2006). The groups of people who work in school were administrators, teachers, janitors, cooks.

Therefore, health promotion for staff in school could be concluded as the process of providing health knowledge and health activities, improving physical and social environment to enable improve health of people who work in school (administrators, teachers, janitors, and cooks).

Assessment criteria for a health promoting school. The Ministry of Public Health has produced the assessment criteria for health promoting school in 2000. The initial assessment criteria composed of five components to create a policy of health; enhance physical environment; develop personal skills; provide health services; and strengthen school and community participation.

In 2003, the Ministry of Public Health and Ministry of Education worked together to develop the assessment criteria for the HPS. The criteria and indicators were clearly stated and used to reassess the HPS throughout the country. The Ten components of the criteria are as follows (Ministry of Public Health & Ministry of Education, 2004):

1) school policies
2) management in school
3) collaborative project between school and community
4) environmental health
5) school health services
6) school health education
7) nutrition and safety foods
8) exercise, sport, and recreation
9) counseling and social support
10) health promotion for school personnel

The standards for each indicators for the HPS were set by criteria of each indicator, level of assessment, score of each level of assessment, and resources or documents for scoring of each indicator. The total scores for each component was totally set due to the sub items and classified into four levels, excellent (75%-100%), good (65-74%), pass the minimum (55-64%), and should be improved (lower than 55%).

The school policy component composed of two indicators related to the process of establishing school of a committee, setting school policies and disseminating policy to practice. The first indicator of the establishment of school policy consists of two categories, first of all that school set the formal HPS committee and set the policy. The school policy should cover nine items as follows: creation of environmental health; surveillance and solving health problems; development of health behavior following the patterns of the Ten National Health Practices; protection of the consumer in school; promotion of physical activities; promotion of mental health; development of student-centered learning; health promotion for school personnel; and enhancement of community participation to improve the health of school children, school personnel, and community. The second indicator is about the dissemination of policy into practice and consists of four categories. These categories are related to the plan that school sets for all nine policy items and the evaluation of the school children's, parent's and the school personnel's knowledge of the policy. The total score for school policy component is 29. The score for excellent is 22, good 19-21, fair 16-18, and should be developed 0-15.

The management in school component is composed of four indicators related to the process of planning, management of organization, follow up and

evaluation plan. The first indicator, planning consists of one category that schools should have systematic plans or projects. The management of organizational indicator consists of three categories: (1) that schools should have an advisory committee for the health promotion program, (2) responsible people for each plan or project, and (3) school health leaders. The follow up and evaluation plan or project indicators are that each school should report the follow up and evaluation of plans or projects. The total score for management in school component is 21. The score for excellent level is 16, good 14-15, fair 12-13, and should be developed 0-11.

The collaborative project between school and community component is composed of four indicators relating to the process of implementation. The first and second indicators are about the health project established so that schools should encourage community participation in identifying problems, planning, implementing, and solving problems. The third and fourth indicators are relative to the satisfaction of school children and community members in the collaborative projects. The total score for collaborative project between school and community component is 13. The score for excellent level is 10, good 8-9, fair 7, and should be developed 4-6.

The environmental health component is composed of four indicators related to the process and outcome of improving the environment and preventing accidents in school. The first indicator is about the process of improving environmental sanitation in school. This indicator consists of 58 items about sanitation in school. The second indicator is about the cases of absenteeism in school children because of accidents. The third indicator is about the outcome of improving environmental health by surveying the container index to hemorrhagic fever. The fourth indicator is about the satisfaction of school children in the school environment. The total score for

environmental health component is 108. The score for excellent level is 81, good 70-80, fair 59-69, and should be developed 5-58.

The school health services component is composed of three indicators related to the process and outcome of school health services. The first indicator is about the process of health screening. This indicator consists of two categories regarding the self-screening in fifth grade school children and health screening of first to fourth grade school children by health personnel. The second indicator consists of eight categories referring to the process of school health services and two categories about outcome of dental health. The eight categories of school health services include vision and hearing tests, dental checkups, and immunization in first grade and sixth grade school children. The last two categories are concerning the cases of dental caries and gingivitis in school children. The third indicator about basic treatment consists of three categories; provision of essential drugs, provision of treatment, and referring the school children with health problems, such as anemia and goiter to health center or hospital. The total score for school health services component is 45. The score for excellent level is 34, good 29-33, fair 23-32, and should be developed 10-22.

The school health education component is composed of four indicators related to the process and outcome of school health education. The first indicator is about the knowledge and attitude of school children regarding the Ten National Health Practices. The second indicator consists of nine categories about the knowledge and life skills training relating to personal hygiene, food selection, stress management, avoidance of drug addiction, and prevention of accidents and sexual abuse. The third indicator is about the teeth brushing skills. The fourth indicator is about the case of school children with head lice. The total score for school health

education component is 36. The score for excellent level is 27, good 23-36, fair 20-22, and should be developed 12-19.

The nutrition and safety foods component is composed of eleven indicators related to the process and outcome of a nutrition project in school. The three indicators are about the growth monitoring process and outcome of weight and height in school children. The fourth and fifth indicators are related to the process of anemia screening and provision of ferrous sulfate (60 mg) to school children. The sixth and seventh indicators are about assessment of goiter and cases of goiter. The eighth and ninth indicators are about the process to provide school lunch and supplementary foods for school children. The tenth indicator is about knowledge in the selection of safe foods. The eleventh indicator is food sanitation and it consists of 30 items. The total score for nutrition and safety food component is 60. The score for excellent level is 45, good 39-44, fair 33-38, and should be developed 10-32.

The exercise, sport, and recreation component is composed of six indicators related to the process and outcome of promoting exercise, sport, and recreation in school. Three indicators are about providing exercise equipment, the establishing of exercise activities for school children and community, and the establishing of an exercise club. Another three indicators are related to the test of physical ability, the outcome of school children who pass the criteria of physical ability, and counseling for school children who did not pass the assessment. The total score for exercise, sport, and recreation component is 13. The score for excellent level is 10, good 8-9, fair 7, and should be developed 0-6.

The counseling and social support component is composed of five indicators related to the process and outcome of counseling and social support in

school. The four indicator is about process of screening school children who have at risk behavior, primary solutions in risk cases, referring serious cases to a health center or hospital, and follow up. The last indicator is about the information that risk school children have peer or parent or relative for counseling. The total score for counseling and social support component is 15. The score for excellent level is 11, good 9-10, fair 7-8, and should be developed 0-6.

The health promotion for school personnel component is composed of five indicators related to the process and outcome of health services for staff. The first indicator is about process of annual health screening for school personnel. The second indicator is about receiving health information from school personnel every week. The third and fourth indicators are about cases of tobacco smoking and drinking alcohol in school. The last indicator is about the participation of school personnel in health promotion activities. The total score for health promotion for school personnel component is 19. The score for excellent level is 14, good 12-13, fair 10-11, and should be developed 0-9.

The Ministry of Public Health will announce which schools will receive a Health Promoting School certificate based on the following three levels:

Gold level: The school that passes with excellent in at least eight components and the last two components should be over 55%.

Silver level: The school that passes with excellent in at least six components and the last four components should be over 55%.

Bronze level: The school that passes with excellent in at least four components, the last six components should be over 55%.

Roles of community health nurses in health promoting school. Community health nurse is one of health profession who works closely with people in the community. The goal of community health nursing is primarily promotion of health and prevention of illness, rather than treatment of illness because the community focus is on wellness, the client population do not usually define themselves as ill (McMurray, 1990). The settings for community health nurses included clinics, home, schools, factories, and other community-based locations. The nurses had to work with other nurses, physicians, social workers, nutritionists, psychologists, therapists, and individuals (Edelman & Mandle, 2002). The roles of community health nurses included (1) clinician, (2) collaborator, (3) advocate, (4) manager, (5) educator, (6) leader, and (7) researcher (Spradley & Allender, 1996). In the current society, community health nurses should work as a team member for giving care and to communicate with other team as a collaborator. The nurses should act and speak on behalf of people and explained or interpret the feelings of individual to other. The nurses should manage care and deliver of services, an educator, and a researcher (Edelman & Mandle, 2002). A study of perception about roles and responsibilities of school nurses was conducted by Libbus et al. in U.S.A. in 2003. The results showed that school nurses perceive their roles as an anchor to cooperate with others. Furthermore, school nurses was the child advocate by facilitating teamwork activities including teaching and empowering parents, school personnel, and outside service providers to work together.

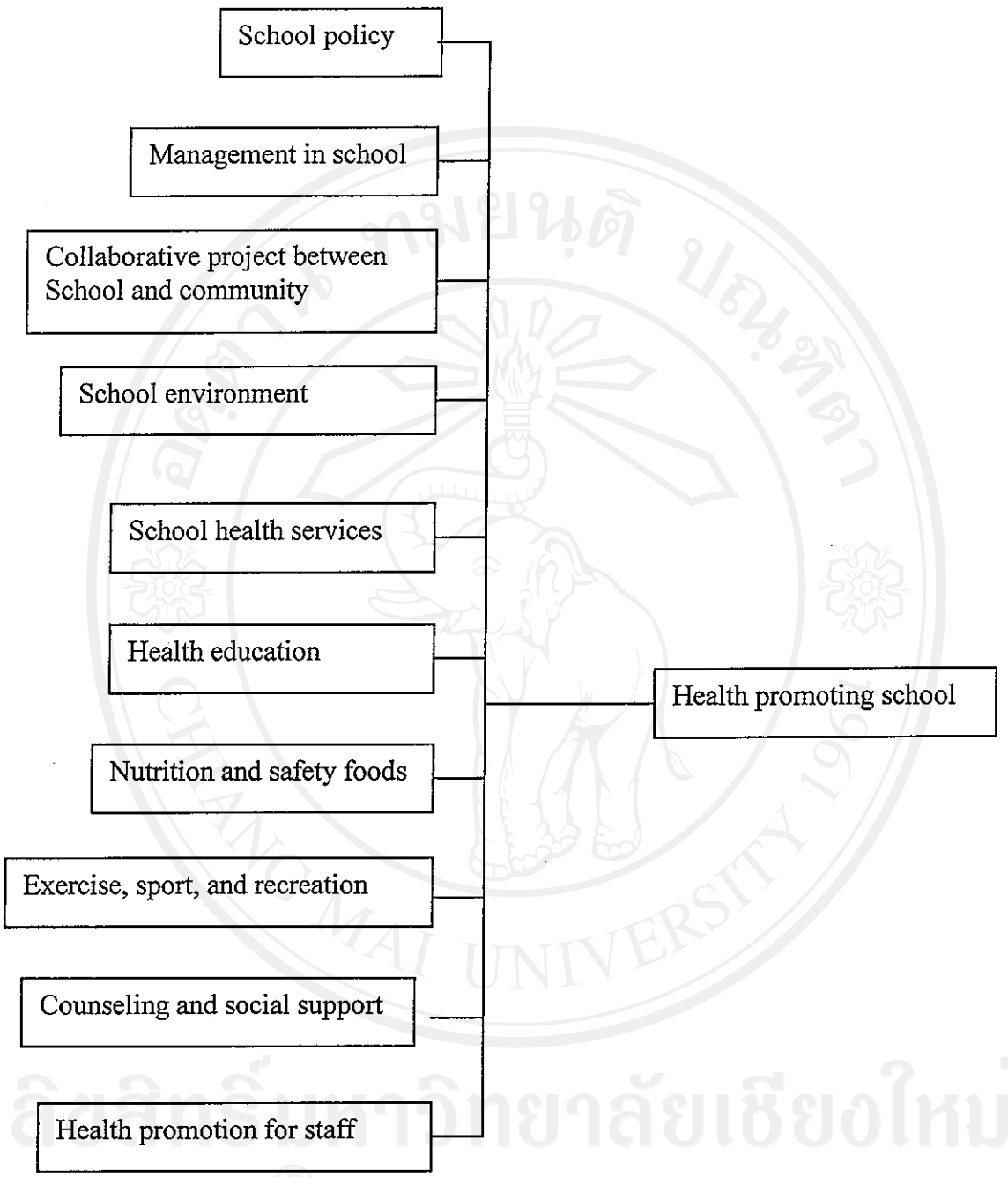
Schools were major group of settings for community health nurses (Spradley & Allender, 1996). The roles of school nurses are widening their practice from clinician to include more health education, collaboration, and client advocacy.

In Thailand, community health nurses mostly work at the health centers and district community. In school setting, community health nurses took responsibility in providing school health services including health assessment, immunization, and treatment for illness; health education; explaining or interpreting the feelings of individual to other. Therefore, in health promoting school, the nurses should responsible as service provider, health educator, manager, researcher, and collaborator in school to identify health needs and problems, plan, implement health activities, and evaluate health status of people in school.

The studies in Thailand in the beginning period attempted to present suggestions for implementing the HPS. Since then the government has set a national policy with an aim to encourage all schools to implement and become HPSs. The Ministry of Public Health and the Ministry of Education has also tried to develop the guidelines and standard criteria in order to create a practical expansion policy through practice at the grass root level. However, the HPS is a program that needs continuous development and study. There still has not been much research on how the schools at the district level have implemented and followed the policy and determined what factors influence the success in implementation of HPSs. Therefore, the researcher conducted this study to explore the factors that allowed some schools to pass the standard assessment criteria and other schools to not pass the standard assessment criteria in Chiang Mai. The information from this study will be beneficial in making suggestions to related organizations to develop and sustain the HPSs in the Thai social context.

Conceptual Framework

Health Promoting School was a school which all members of school and community work together to set policies, provide school health education, school health services, school health programs, encourage community participation, and create healthy environment to promote health of school children, school personnel, and community members. Thailand included the HPS program in the national policy to implement for the whole country. The Ministry of Public Health and Ministry of Education developed the guidelines and standard assessment criteria for the schools to become HPS. The standard assessment criteria consisted of ten components including school policy, management in school, collaborative project between school, school environment, school health services, health education, nutrition and safety foods, exercise, sport, and recreation, counseling and social support, and health promotion for staff. The conceptual framework of HPS could be draw in a diagram as follows:



School policy refers to the mission, goals of the school, identification of problems, priority setting, planning, implementing, and follow up and evaluation to help promote the health of school children and the community.

Management in school refers to the process that administrator and teachers optimize human, material, and financial contribution for promoting health of school children and people in school community.

Collaborative project between School and community refers to a project by which people in school and community are enabled to become actively and genuinely involved in defining the issues of concern to them, in making decisions about factors that affect their lives, informulating and implementing policies, in planning, developing and delivering services and in taking action to achieve change.

School environment refers to both physical and psycho-social environment. Physical environment included school buildings and classroom, playground, canteen, drinking water and water supply, toilet, hand and wash basin, first aids room, library, garbage management, waste water drainage and the control of diseases transmitted by animals or insects. Psychosocial environment included the psychological and social activities that conducive to health of school children and people in school community.

School health services refers to health activities provided by teachers and health personnel to prevent of diseases in school children, promote their health, and gave treatment for the sick children.

Health education school health education included both intra and extra curriculum activities to promote health of school children.

Nutrition and safety foods refers to the provision of safe food and supplementary foods; information about safety foods for school children and people in school community.

Exercise, sport, and recreation refers to school activities both intra and extra curriculum that provide the use of bodily movement for school children.

Counseling and social support refers to activities that teacher, peer, parents, and community members provide to school children for adjusting themselves in the change situation and sustain healthy lifestyle.

Health promotion for staff refers to the process of providing health knowledge and health activities, improving physical and social environment to enable improve health of people who work in school (administrators, teachers, janitors, and cooks).