

CHAPTER III

CONCEPTUAL FRAMEWORK

3.1 Introduction

The PRECEDE-PROCEED is a model for health planning and evaluation. It provides a platform whereby planners understand the need for intervention. It provides a systematic process for the development, implementation and evaluation of a school health promotion program. This model is considered an ecological approach to health planning and has been applied in a number of community settings.

This chapter provides a rationale for the use of this model in this current study. In this study, the PRECEDE-PROCEED Model was divided into three major stages: 1) situation analysis, 2) program development and implementation, and 3) evaluation.

3.2 Study Perspectives

The Precede-Proceed model is a theoretical framework for planning and evaluating health promotion programs. Health promotion programs usually can operate at any of the three stages of prevention (primary, secondary and tertiary). Health promotion provides actions to either, stop the progress of an illness or injury, increase health and enhance quality of life through the modification of harmful behaviors or harmful environmental conditions. The Precede-Proceed model provides a holistic approach in determining health and quality of life. The model has nine phases – beginning at social assessment and ending at outcome evaluation (see Figure 2.6, page 72). The phases include the following: Phase 1-social assessment; Phase 2-

epidemiological assessment; Phase 3-behavioral and environmental assessment; Phase 4-educational and ecological assessment; Phase 5-administrative and policy assessment; Phase 6-implementation; Phase 7-process evaluation; Phase 8-impact evaluation; and Phase 9-outcome evaluation. As illustrated in Figure 2.6, the model shows the lines of causation from inputs to outcomes by the direction of the arrows, and it shows the order of analysis in planning and evaluation in the phases (Green and Kreuter, 1999). The assessment of situation, detection of priorities and setting objectives in the Precede phases paves the way for policy development, program implementation and evaluation in the Proceed phases.

Statistics in a number of countries show that eating behaviors among children is poor. Poor eating behavior coupled with physical inactivity contribute to the increasing prevalence of overweight and obesity. As a result chronic health problems as a result of this unhealthy lifestyle are escalating worldwide. Socio-demographic, behavioral, psychosocial and environmental factors are linked to eating habits and low physical activity.

The accessibility of this school-age population contributes to the cost-effectiveness of some school-based health, nutrition and other health programs. Simple preventive services such as health education can improve health for a group that is often underserved by the health system. Health education is one of the most timely and effective ways of promoting healthier lifestyles. The long-term impact is averting the emerging pandemic of non-communicable diseases.

The attainment of appropriate eating and physical activity habits and improved nutritional status among children is not mainly dependent upon the implementation of

nutrition-related programs. Experiences show that success in nutrition [also] entails good process to achieve outcomes.

The Precede-Proceed model was applied in this study to conduct a situation analysis, develop and implement a school health promotion program and evaluate program effectiveness. Taking into consideration the multiple differences that exist among the students, this research systematically collected epidemiological, behavioral and environmental assessments to obtain a clear understanding of the eating behavior, physical activity/inactivity and nutritional status among students at ASB.

The concept of coordinated school health program was used as the structural framework for school health because it has already been shown to be harmonious with the key principles of the Precede-Proceed model. The four components of the school health promotion program that were implemented at ASB include nutrition policy, nutrition curriculum/instruction, enhancement of physical activity, and improvement of school food service.

3.3 Conceptual Framework

The conceptual framework serves as an outline of this study. It describes various factors associated with eating behavior, physical activity/inactivity and nutritional status among ASB students. It also provides a flat-form for the development of school health promotion program in an attempt to enhance healthful eating and physical activity among ASB students. Please refer to Figure 3.1 (page 95).

Schools constitute the center of learning for large number of school-age children. Schools can help promote the health of students. Many studies support the association between education and health. The school is place where school-age

children spend most of their time in. To many children, the school may be the only setting for learning healthful behaviors. It is a setting where education and health promotion programs can have the greatest impact in their most crucial stages in life—childhood and adolescence (WHO, 2000). According to WHO's Global School Health Initiative (1996), schools are expected to be places of learning and that investments in schools are expected to produce benefits to individuals, communities and nations. Social and economic development can be better achieved if all schools could promote the healthy development of young people as actively as they promote learning. This section explains how the Precede-Proceed model can be applied in schools to help students, school personnel and parents initiate a health-promoting school. The following are the steps of Precede-Proceed relating to school health promotion program as ASB.

3.3.1 Situation analysis

1. Social assessment

Objective data relating to health risks among school-age children is vital to convince health authorities as well as school authorities that school is a critical point for health promotion. Data like this can be collected through questionnaires or focus groups. According to Green and Kreuter (1999), findings from social assessment will show the cause-effect association between education and health. In fact, many studies have shown the effects of poor nutritional status on learning.

Understanding the social context of the school from the perspective of those within the school is important. According to Green and Kreuter, doing this is both pragmatic and morally imperative. It is pragmatic in a way that actions needed to

resolve health issues require joint participation from multiple community institutions and individuals. It is also pragmatic because those who are affected by the problem have the knowledge and insights for which the professionals might not have. Secondly, the imperative is moral, based on the ethics of informed consent and respect. People should be informed and their views respected by including their opinions. It is unethical to refuse their input on matters that ultimately affect them. Social assessment is founded by these imperatives.

Social assessment is the application of several sources of information intended to broaden the understanding of people about their own health and quality of life. Social assessment is the first phase in the Precede-Proceed model.

2. Epidemiological assessment

Epidemiological assessment is conducted to investigate what health problems the target population is experiencing. The data is measured objectively and problems are prioritized. The information collected from the social and epidemiological assessments are merged in the planning process. The linkages between the two assessments should be determined—causes and effects or means and ends. Epidemiological assessment relies on the principles and practice of epidemiology - the study of the distribution and determinants of health-related conditions or events in a given population (Green & Kreuter). The application of this study is to control health problems. Epidemiological study is conducted through a number of methods including observation and surveillance and interpretive analysis. These are the questions for which the researchers work on:

1. What is the problem?

2. Who has the problem?
3. Why do those with the problem have it?

The indicators of health problems are mortality, morbidity and disability. In this study, eating behavior, physical activity and nutritional status (not a direct indicator) were used as health indicators.

3. Behavioral assessment

Behavioral assessment is a methodical analysis behavioral links to the problems determined in the two previous assessments – social and epidemiological. The assessment basically identifies factors that contribute to the problem. They are also called “determinants of health”. These are factors that increase the probability of developing a disease or health problem. Two other terms are presented by Green and Kreuter - risk factors and risk conditions. Risk factors are normally measured at the individual level and thus interventions tend to be geared toward an individual. Risk conditions are determinants of health, which are classified by epidemiologists as subclass of risk factors. They are characteristics of the environment that may contribute to health problems. Determinants of health reflect broad classes of factors seen compelling in their combined and collective impact on the health of population because they shape behavioral and environmental risk factors.

Determinants of health rather than risk factors and risk conditions were considered in this study. Behavioral data such as eating habits and physical activity among students were gathered through questionnaires or focus groups. Results from this assessment shed light on the kinds of issues children at ASB were facing. Although behavioral and environmental assessment for health promotion was directed toward

changeable factors in eating and physical activity among ASB students, it also looked at unchangeable factors such as age, gender, and ethnicity.

Approaches of educational and ecological nature were successfully used to improve the behavioral, biological, social and environmental risk factors. Some programs for which this has been successfully carried out include smoking cessation, heart healthy eating, seatbelt use and exercise.

4. Educational and ecological assessment

Green and Kreuter identified three classifications of factors affecting individual or cumulative behavior: predisposing, enabling and reinforcing factors. Predisposing factors are antecedents to behavior that provide the reason or motivation for the behavior. Examples of these factors include knowledge, beliefs, values, attitude and confidence. Enabling factors are antecedents to behavior that allow a motivation to be realized. Examples of enabling factors are availability of health resources and accessibility of resources. Reinforcing factors are factors following a behavior that provide the continuing reward for the maintenance of the behavior. An example of this factor is support from family, peers or teachers. In this study, predisposing factors that were studied include gender, age, ethnicity, parental education, parental work status, family income, knowledge, attitudes, and beliefs. Enabling factors include school health promotion program and skills to make food choices. Reinforcing factor include regular weight and height monitoring and reduction in BMI.

5. Administrative and policy assessment

After completing the four phases, it is time to translate these assessment results

into program action. The success of program implementation is improved when programmatic supports and barriers have been identified and properly addressed. There are three main factors that need to be considered in administrative and policy assessment including:

1. The resources needed and available to launch and sustain the program
2. The organizational barriers that can affect program implementation
3. The policies that can be used to support the program or policies that need to be changed to enable the program to proceed

3.3.2 Program development and implementation

After completing the assessments, data were analyzed, interpreted and used for program development. There are five components to the Shape-for-Health program at ASB: 1) policy development, 2) nutrition education, 3) physical activity enhancement, 4) school food service, and 5) BMI monitoring. Implementation means that act of converting program objectives into actions through policy changes, regulation and organization.

3.3.3 Evaluation

Evaluation means to judge the worth of the program. Green and Kreuter define evaluation in health education and health promotion context as the comparison of an object of interest against a standard of acceptability.

In this study, evaluation was a vital element to discover whether the program was effective or not. It was envisaged that the results of the evaluation would broaden the awareness of the need for continuance of the school health promotion program.

3.4 Summary

Chapter III extensively discussed the Precede-Proceed in health planning and evaluation as a model that was used for the development and implementation of the “Shape for Health” program among ASB students. The need to determine eating behavior as well as assess the determinants of physical activity/inactivity patterns, and nutritional status through a systematic method was explained. These assessments were used to formulate effective strategies in enhancing healthful eating and physical activity among the students in the study.

Nutrition program development and implementation in an international school setting like ASB was also discussed concomitantly with the importance of program process and outcomes. The development and implementation of program intervention including policy development, curriculum development/instruction, physical activity enhancement, food service and weight/height monitoring as an integrated school health promotion program was considered.

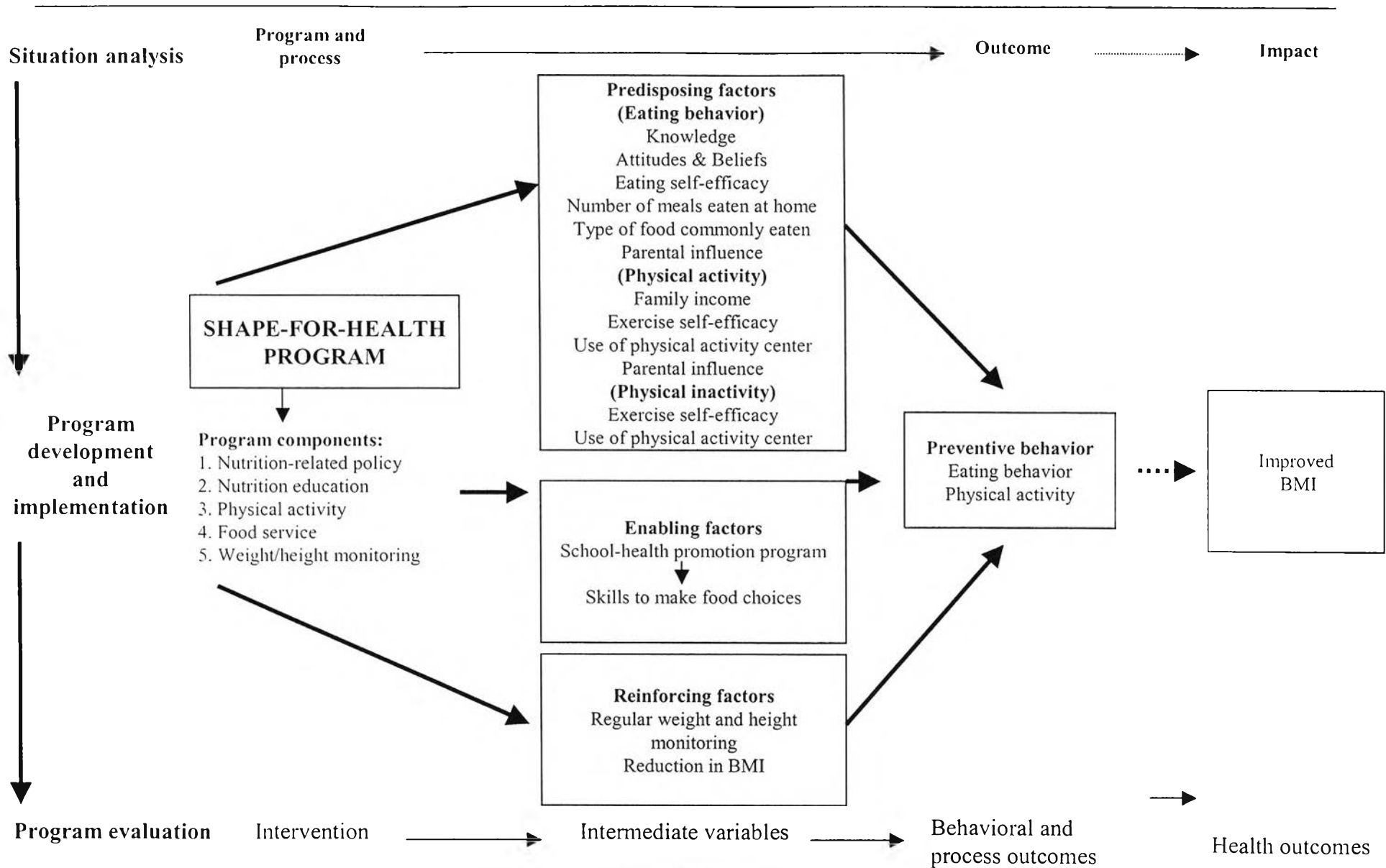


Figure 3.1 Research Framework: Enhancing Healthful Eating and Physical Activity Among Grades 4-6 Students Enrolled at the American School of Bangkok, Thailand