Principles and Foundations of
Health Promotion and Education
Cottrell   Girvan   Mckenzie
Fifth Edition

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2008b). Theory also "provides a useful reference point to help keep research and implementation activities clearly focused" (Crosby et al., 2009, p. 11), and it infuses ethics and social justice into practice (Goodson, 2010). In addition, "using theory as a foundation for program planning and development is consistent with the current emphasis on using evidence-based interventions in public health, behavioral medicine, and medicine" (Rimer & Glanz, 2005, p. 5).

In the rest of this chapter, some of the theories and models used by health education specialists are presented in two main groups. The first group contains theories that focus on behavior change. Through their constructs, these theories help explain how change might take place. The second group contains planning models, which give structure and organization to the program planning process. These models provide health education specialists with step-by-step procedures, "integrating multiple theories to explain and address health problems," (Rimer & Glanz, 2005, p. 36) as they plan, implement, and evaluate health education/promotion programs.

Behavior Change Theories

Health education specialists can use multiple theories to design interventions to encourage behavior change. Each theory works better in some situations than in others, depending on which level of influence is used to plan a health education/promotion program.

"Levels of influence" are at the heart of the **socio-ecological approach** (also called the ecological perspective). This multilevel, interactive approach examines how physical, social, political, economic, and cultural dimensions influence behaviors and conditions. The socio-ecological approach "emphasizes the interaction between, and the interdependence of factors within and across all levels of a health problem" (Rimer & Glanz, 2005, p. 10). In other words, changes in health behavior do not take place in a vacuum. "Individuals influence and are influenced by their families, social networks, the organizations in which they participate (workplaces, schools, religious organizations), the communities of which they are a part, and the society in which they live" (IOM, 2001, p. 26).

McLeroy, Bibeau, Steckler, and Glanz (1988) identified five levels of influence: (1) intrapersonal or individual factors, (2) interpersonal factors, (3) institutional or organizational factors, (4) community factors, and (5) public policy factors. **Table 1** lists and defines each of the five levels. **Figure 1**, created by Eng (1997), provides a visual representation of the socio-ecological framework. By examining a health problem using this multilevel approach health education specialists can get a better understanding of how to "attack" the problem.

Consider how the levels of influence can be applied to cigarette smoking in the United States. At the *intrapersonal* (or *individual*) *level*, a large majority of smokers know that smoking is bad for them, and a slightly smaller majority have indicated they would like to quit. Many have tried to quit—some have tried on many occasions. At the *interpersonal level*, many smokers are encouraged to quit by those in their social networks, such as their physician and/or family and friends. Some smokers may attempt to quit on their own, or they may join a formal smoking cessation group.

At the *institutional* (or *organizational*) *level,* institutions, such as churches and businesses, often have policies that regulate smoking. These institutions may offer smoking cessation classes or support groups to assist those who "belong" to the organization, to quit smoking. At the *community level,* some towns, cities, and counties have ordinances

Table 1   An ecological perspective: levels of influence

Concept	Definition
Intrapersonal Level	Individual characteristics that influence behavior, such as knowledge, attitudes, beliefs, and personality traits
Interpersonal Level	Interpersonal processes and primary groups, including family, friends, and peers that provide social identity, support, and role definition
Community Level	
Institutional Factors	Rules, regulations, policies, and informal structures, which may constrain or promote recommended behaviors
Community Factors	Social networks and norms, or standards, which exist as formal or informal among individuals, groups, and organizations
Public Policy	Local, state, and federal policies and laws that regulate or support healthy actions and practices for disease prevention, early detection, control, and management

Source: Rimer, B. K. & Glanz, K. (2005). *Theory at a Glance: A Guide for Health Promotion Practice,* 2nd ed. (NIH Pub. No. 05-3896). Washington, DC: National Cancer Institute.

that prohibit smoking in public places. At the *public policy or population level*, many states have higher cigarette taxes and/or laws that limit smoking. Also at this level, the federal government spends many dollars for public service announcements (PSAs) and other forms of media advertising the dangers of tobacco use.

In addition to the levels shown in Figure 1, there are four terms in bold print: *theory, practice, environments,* and *research.* Eng (1997) noted that for a socio-ecological approach to be successful, the theory must be put into practice in multiple environments where research can be conducted to determine its effectiveness.

Figure 1 Socio-ecological framework

Source: From Eng, E. "Room with a View for a Change." Keynote address to the 1997 Annual Meeting of the Society for Public Health Education, Indianapolis, IN. Used by permission of the author.

The following sections describe some of the theories and models that focus on behavior change. These theories/models are grouped according to the levels of influence where they may be most effective. The last three levels—institutional, community, and public policy factors—are combined into a single "community" level. This modification of the socio-ecological approach was used by Glanz and Rimer (1995).

Intrapersonal (Individual) Theories

Intrapersonal theories focus on factors within individuals such as knowledge, attitudes, beliefs, self-concept, developmental history, past experiences, motivation, skills, and behavior (Rimer & Glanz, 2005). Several of the theories used by health education specialists to develop interventions at the intrapersonal level are the Health Belief Model (HBM), the Theory of Planned Behavior (TPB), the Elaboration Likelihood Model of Persuasion (ELM), the Information-Motivation-Behavioral Skills Model (IMB), the Transtheoretical Model (TTM), the Precaution Adoption Process Model (PAPM), and the Health Action Process Approach (HAPA).

Although all of the theories listed above fall into the intrapersonal theories category, they can be divided further into continuum theories or stage theories. A **continuum theory** identifies variables that influence actions (i.e., beliefs, attitudes), and combines those variables into a single equation that predicts the likelihood of action (Weinstein, Rothman, & Sutton, 1998; Weinstein, Sandman, & Blalock, 2008). These theories "acknowledge *quantitative* differences among people in their positions on different variables" (Weinstein et al., 2008, p. 122) and "thus, each person is placed along a continuum of action likelihood" (Weinstein et al., 1998, p. 291). The HBM (Rosenstock, 1966), TPB (Ajzen, 2006), ELM (Petty & Cacioppo, 1986), and IMB (Fisher & Fisher, 1992) are examples of continuum theories that are appropriate for use at the intrapersonal level.

A **stage theory** consists of an ordered set of categories into which people can be classified. It identifies factors that could induce movement from one category to the next (Weinstein & Sandman, 2002). More specifically, stage theories have four principal elements: (1) a category system to define the stages, (2) an ordering of stages, (3) barriers to change that are common to people in the same stage, and (4) different barriers to change, facing people in different stages (Weinstein et al., 1998). Advocates of stage theories "claim that there are *qualitative* differences among people and question whether changes in health behaviors can be described by a single prediction equation" (Weinstein et al., 2008, pp. 124–125). Some of the most commonly reported stage theories are the TTM (Prochaska, 1979; Prochaska & DiClemente, 1983), PAPM (Weinstein, 1988; Weinstein et al., 1998), and HAPA (Schwarzer, 2001).

Health Belief Model (HBM)   The Health Belief Model (HBM) was developed in the 1950s by a group of psychologists to help explain why people would or would not use health services (Rosenstock, 1966). The HBM "addresses the individual's perceptions of the threat posed by a health problem (susceptibility, severity), the benefits of avoiding the threat, and factors influencing the decision to act (barriers, cues to action, and self-efficacy)" (Rimer & Glanz, 2005, p. 12). As you read the following example of why a person may or may not do self-screening for cancer, refer to the graphic representation of the HBM in **Figure 2**.

Suppose a person sees an advertisement about self-screening for cancer, while reading a weekly news magazine. This is a **cue to action** that gets the person thinking about his possibility of getting cancer (see **Figure 3**). There may be some variables (demographic, sociopsychological, and structural) that cause the person to think

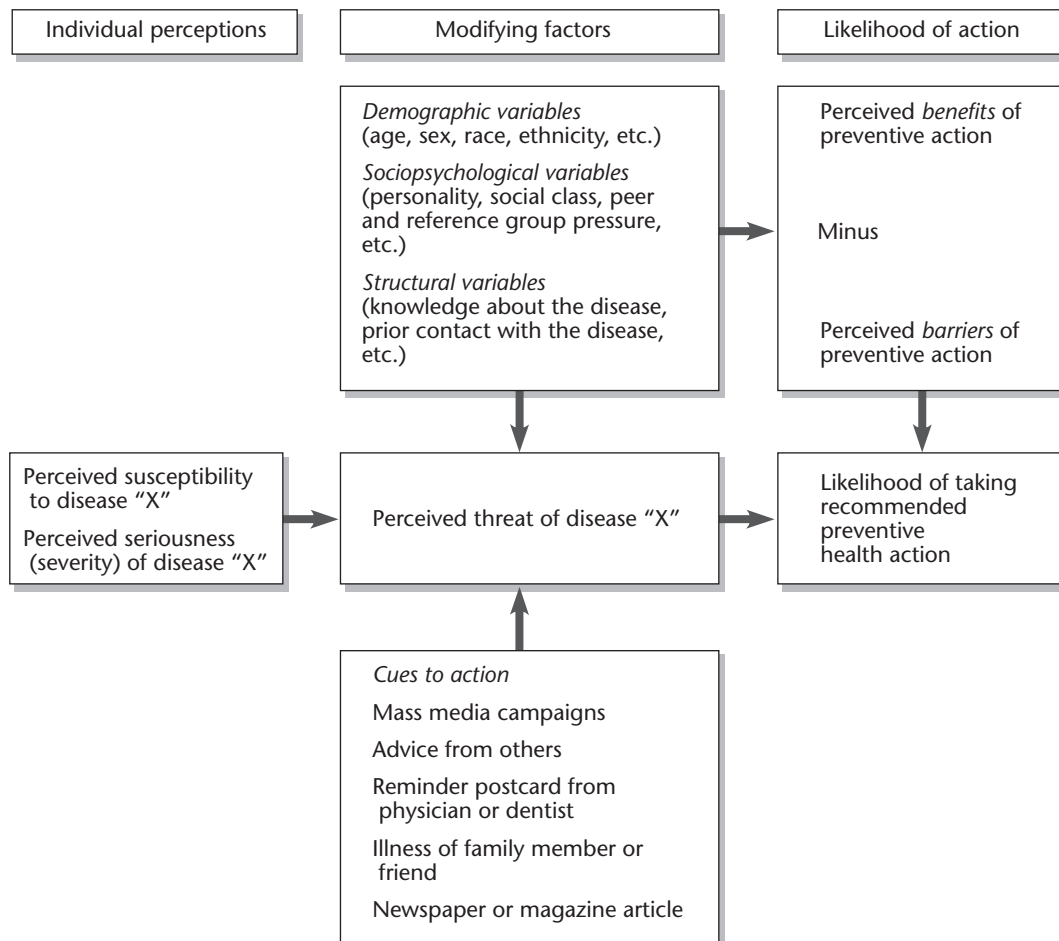| Individual perceptions	Modifying factors	Likelihood of action

Figure 2 Health Belief Model as a predictor of preventive health behavior

Source: Becker, M.H. et al., from "A New Approach to Explaining Sick-Role Behavior in Low Income Populations," *American Journal of Public Health* 64, March 1974: 205–216, Fig 1. Used by permission of Sheridan Press.

about it a little more. The person remembers his college health course, which included information about self-screenings and cancer. This person knows he is at a higher than normal risk for cancer because of family history, age, and less than desirable health behavior. Therefore, he comes to the conclusion that he is susceptible to cancer (**perceived susceptibility**). The person also believes that, if he develops cancer, it can be very serious (**perceived seriousness/severity**).

Based on these factors, the person thinks that there is reason to be concerned about cancer (**perceived threat**). This person knows that self-screening can help detect cancer earlier and thus reduce the severity (**perceived benefits**). But self-screening takes time, and this person does not always remember to do it (**perceived barriers**). He must now analyze the difference between the benefits of self-screening and the barriers to self-screening (**reduction of threat**). For this person, the **likelihood of taking action**

Figure 3 A single billboard along a highway can serve as a cue to action for many people.
(Kevin Schafer/Photo Library)

(self-screening) will be determined by weighing the perceived threat against the reduction of threat.

When the HBM was first conceived, **self-efficacy** (confidence in one's own ability to perform a certain task or function) was not part of the model. However, because evidence showed self-efficacy was a meaningful concept in the perceived barriers construct, it was recommended that self-efficacy be added to the HBM (Rosenstock, Strecher, & Becker, 1988). "For behavior change to succeed, people must (as the original HBM theorizes) feel threatened by their current behavioral patterns (perceived susceptibility and severity) and believe that change of a specific kind will result in a valued outcome at an acceptable cost (perceived benefit). They also must feel themselves competent (self-efficacious) to overcome perceived barriers to take action" (Champion & Skinner, 2008, p. 50).

Theory of Planned Behavior (TPB)   The Theory of Planned Behavior (TPB) (see **Figure 4**) is an extension of the Theory of Reasoned Action (Fishbein & Ajzen, 1975). According to the TPB, individuals' intention to perform a given behavior is a function of their attitude toward performing the behavior, their beliefs about what relevant others think they should do, and their perception of the ease or difficulty of performing the behavior. **Intention** "is an indication of a person's readiness to perform a given behavior, and it is considered to be the immediate antecedent of behavior" (Ajzen, 2006). Unlike the Theory of Reasoned Action, the TPB was developed to explain not just health behavior but all volitional behaviors ("behaviors that can be performed at will" [Luszczynski & Sutton, 2005, p. 73]). Using the example of the use of spit tobacco as a behavior not fully under volitional control, the TPB predicts that people intend to give up its use if they

- have a positive attitude toward quitting (**attitude toward the behavior**),
- think that others whom they value believe it would be good for them to quit (**subjective norm**) (see **Figure 5**),
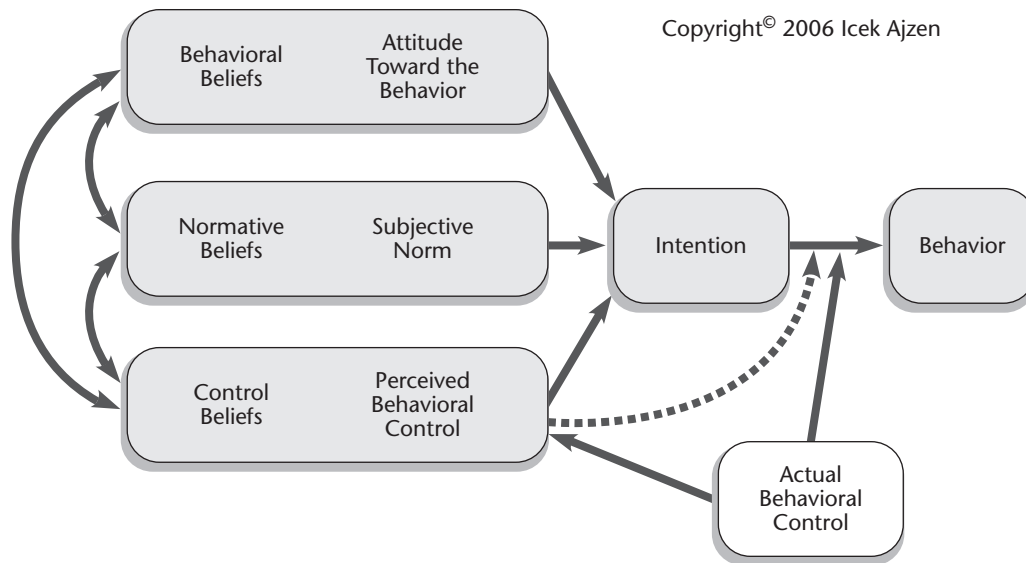
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Figure 4 Theory of Planned Behavior (TPB)

Source: "Theory of Planned Behavior Diagram" (TPB Diagram) by Dr. Icek Ajzen, http://www.people.umass.edu/aizen/tpb.diag. html. Reprinted by permission.

- perceive that they have control over whether or not they quit (**perceived behavioral control**), and
- have the skills, resources, and other prerequisites needed to quit (**actual behavioral control**).

Elaboration Likelihood Model of Persuasion (ELM)   The Elaboration Likelihood Model of Persuasion, or the Elaboration Likelihood Model (ELM) for short, was initially developed to help explain inconsistencies in research results from the study of attitudes (Petty, Barden, & Wheeler, 2009). Specifically, the ELM was designed to help explain how persuasion messages (communication), aimed at changing attitudes, are received and processed by people. Though not created specifically for health communication, the ELM has been used to interpret and predict the impact of health messages.

The ELM does three things. First, it proposes that attitudes can be formed via two different types of routes to persuasion: peripheral routes and central routes (Petty et al., 2009). The distinction between the two routes is the amount of elaboration. **Elaboration** refers to the amount of cognitive processing (i.e., thought) that a person puts into receiving messages. Peripheral route processing involves minimal thought and relies on superficial cues or mental shortcuts (called *heuristics*) about issue-relevant information, as the primary means for attitude change (Petty et al., 2009). For example, people may form an attitude after hearing a persuasive message simply because the person delivering the message is someone they admire.

On the other hand, central route processing involves thoughtful consideration (or effortful cognitive elaboration) of issue-relevant information and one's own cognitive responses as the primary bases for attitude change: "Two conditions are necessary for effortful processing to occur—the recipient of the message must be both *motivated* and