

6 The Importance and Use of Theories in Health Education and Health Promotion

Key Terms: model, theory, perceived susceptibility, perceived severity, perceived benefits, perceived barriers, precontemplation, contemplation, decision/determination, action, maintenance, reciprocal determinism, behavioral capability, reinforcement, expectations, observational learning, compatibility, trialability, relative advantage

Both Jose and Dee remember from when they were in college that all their professors kept using the term *theory-based*. Fortunately, they both remembered to take a look at some of these theories while they were developing the needs assessment plans. Several of the theoretical concepts they measured became priorities that they will address with the target populations. But how will they do that?

This chapter gives a brief overview of the use of theories in program planning. It is intended to give you some background information and examples, but it cannot, in one chapter, give you a full understanding of theory and its uses. At the end of the chapter, you will find a list of recommended reading to expand your understanding in this area.

What Are Theories?

Goldman and Schmalz describe theories as “summaries of formal or informal observations, presented in a systematic way, that help explain, predict, describe, or manage behavior” (2001, p. 277). Theories contain factors that attempt to

describe the behaviors, explain the relationships among the factors, and outline the conditions under which these relationships exist. Some theories focus on explaining why a problem or behavior might exist, while other theories focus on concepts and relationships that will help us to put a program into place in a way that will increase its likelihood of being successful and reaching its intended group (Glanz & Rimer, 2005). Just as there are varying levels at which program planners can work to effect change, there are varying theories associated with these levels. Various theories can assist us further in identifying specific information that may be collected to more completely paint the picture of our population and our problem. Table 6.1 reviews these various levels and indicates where they may fit into the Precede–Proceed model. Table 6.2 presents commonly used theories in health at various levels and provides the related concepts we may assess or use to guide us in our planning.

Why Use Theories and Models?

Using theories helps program planners think beyond the individual when conducting needs assessments and planning programs. As a result, they help planners understand the influences on health behaviors and environments (Goldman & Schmalz, 2001; Glanz & Rimer, 2005). The ability to consider factors within and beyond the individual enable program planners to select appropriate targets for interventions, develop strategies and materials that will make our interventions more successful, and save time and money (Glanz, Lewis & Rimer, 1997; Goldman & Schmalz, 2001).

How to Choose a Theory

It is important to be familiar with several theories, because not all theories will apply in all situations. One can find descriptions of theories to consider in many health education and health promotion books, in the professional literature, and as part of program descriptions. Some resources are listed at the end of the chapter. So, what does one consider when selecting theoretical concepts for a needs assessment or as a theoretical base for a program?

First of all, consider what populations will be involved as targets of the intervention and what behaviors are being addressed (Goldman & Schmalz, 2001). When investigating theories, pay attention to the targets for which the theories were developed and on which the theories were tested. Also note the behaviors and environments to which the theories have been successfully applied.

Next, consider the purpose of the intervention under development (Goldman & Schmalz, 2001). Is the purpose to change people's behaviors or to change an environment or organization? The most powerful interventions will attempt

Table 6.1

Theory Level Relationship to Precede-Proceed Model

Level	Definition	Related Portions of Precede-Proceed Model
Intrapersonal factors	Characteristics of individuals affecting their behavior, including knowledge, attitudes, beliefs, personality traits, and skills	Educational and ecological assessment ■ Predisposing factors ■ Enabling factors
Interpersonal factors	Beliefs and actions of important others, including family, friends, peers, and coworkers who provide social identity, social support, and role definitions for individuals	Educational and ecological assessment ■ Reinforcing factors
Institutional or organizational factors	Rules, regulations, policies, and practices of religious, civic, social, political, and other organizations with which individuals are associated (these may constrain or support recommended behaviors or programs)	Environmental factors Educational and ecological assessment ■ Enabling factors Administrative and policy assessment
Community factors	Formal or informal social norms, social networks, standards, or attributes that exist among individuals, groups, and organizations with which individuals are associated	Environmental factors Educational and ecological assessment ■ Reinforcing factors
Public policy	Local, state, and federal policies and laws that affect individuals' abilities to engage in health-enhancing or health-compromising behaviors	Educational and ecological assessment ■ Enabling factors Administrative and policy assessment

Sources: Goldman, K. D. & Schmalz, K. J. (2001). Theoretically speaking: Overview and summary of key health education theories. *Health Promotion Practice*, 2(1), 277-281; Glanz, K., Rimer, B. K. & Su, S. M. (2005). *Theory at a glance: A guide for health promotion practice*. Washington, DC: US Department of Health and Human Services, US Public Health Service, National Institutes of Health; Green, L. W. & Kreuter, M. W. (2005). *Health promotion planning: An educational and ecological approach* (4th ed.). Mountain View, CA: Mayfield.

Table 6.2 **Examples of Theories Used in Health Education and Health Promotion**

Level	Theories	Related Concepts from Theories
Intrapersonal factors	Health Belief Model* Stages of Change (Transtheoretical Model)**	Perceived susceptibility, perceived severity, perceived benefits, perceived barriers to action, and self-efficacy Precontemplation, contemplation, decision and determination, action, and maintenance
Interpersonal factors	Social Cognitive Theory***	Self-efficacy, reciprocal determinism, behavioral capability, reinforcement, expectations, and observational learning
Institutional or organizational factors	Stage theories of organizational change	Problem definition, action initiation, implementation of change, and institutionalization of change
Community factors	Community organizational theories****	Community competence, empowerment, participation, relevance, and critical consciousness

Sources: *Strecher, V. J. & Rosenstock, I. (1997). The health belief model. In Glanz, K., Lewis, F. M. & Rimer, B. (eds.), *Health behavior and health education: Theory, research, and practice* (2nd ed.) (pp. 41–59). San Francisco: Jossey-Bass. **Prochaska, J. O., Redding, C. A. & Evers, K. E. (1997). The transtheoretical model and stages of change. In Glanz, K., Lewis, F. M. & Rimer, B. (eds.), *Health behavior and health education: Theory, research, and practice* (2nd ed.) (pp. 60–84). San Francisco: Jossey-Bass. ***Bandura, A. C. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ: Prentice-Hall. ****Minkler, M. & Wallerstein, N. (1999). Improving health through community organization and community building: A health education perspective. In Minkler, K. (ed.), *Community organizing and community building for health* (pp. 30–52). New Brunswick, NJ: Rutgers University.

to do both (Glanz & Rimer, 2005), but resources may not allow for both to be addressed.

Is the theory “logical, consistent with everyday observations, similar to those used in previous successful program examples you have read or heard about, and supported by past research in the same or related areas” (Glanz & Rimer, 2005, p. 7)? Basically, does the theory make sense in this situation (Box 6.1)?

Box 6.1 Selecting theories for use in program planning.

Ask yourself these questions about any theory you are considering.

- Was the theory developed for and used with the same targets of intervention as your program?
- Has the theory been successfully applied to the same behaviors as those addressed in your program?
- Has the theory been successfully applied to the same environmental factors as those addressed in your program?
- Is the theory logical?
- Is the theory consistent with everyday observations?
- Is the theory similar to those used in successful programs you know about?
- Is the theory supported by research published in the professional literature?

Intrapersonal Theories

Stages of Change

The Stages of Change or Transtheoretical Model (Prochaska & DiClemente, 1982; Prochaska, Redding & Evers, 2005) concerns readiness to attempt or change a health behavior. The model consists of five stages of readiness that an individual moves through in the behavior change process: precontemplation, contemplation, decision/determination (sometimes called preparation), action, and maintenance. Different strategies are suggested for moving people among the different stages.

Those in the precontemplation stage are unaware that there is a problem and have no thoughts about changing. Thus, strategies such as health-risk appraisals, confrontations, and media campaigns that are tailored to the risks and benefits of the particular target group could be used to move them into the next stage.

Those who recognize that there is a problem and are intending to change within six months are said to be in the contemplation stage. Strategies that provide motivation to change, such as self-reevaluation, social reevaluation, and encouragement, are suggested for those in this stage. Decision/determination includes those who intend to change within 30 days, have taken some steps toward change, or have made plans to change. Providing opportunities to learn goal-setting skills, to increase self-efficacy, and to obtain help in making concrete, realistic change plans are strategies used to help those in this stage to act on their plans.

Those who have recently (within the past six months) put their change plans into effect are in the action stage. Social support identification and creation, reinforcement, assisting with problem-solving, and providing feedback

are strategies used to help maintain the change. When participants continue the health-enhancing action for more than six months, they are considered to be in the maintenance stage. Continued reinforcement, assistance with identifying behavioral alternatives to the former health-compromising behavior, reminders of the benefits of the new health behavior, and help with implementing relapse plans are common strategies used for individuals and groups in this stage.

The health educator can use the Transtheoretical Model during the needs assessment to help explain reasons for engagement in health-compromising behaviors, or to assess which stages the target population is currently experiencing. This information can then be used to develop an intervention with components that match strategies and materials to each stage. One can also use this information to focus the program only on those individuals in particular stages.

Health Belief Model

The Health Belief Model (HBM) (Strecher & Rosenstock, 1997) suggests to us that the likelihood of someone engaging in a recommended health action is based predominantly on that individual's perceptions. Therefore, by changing individuals' perceptions, the likelihood of those individuals acting on the health behavior recommendation increases. The four important concepts from the HBM are perceived susceptibility, perceived severity, perceived benefits, and perceived barriers (Glanz & Rimer, 2005). Perceived susceptibility and perceived severity work together to create a sense of fear related to a particular health condition. This fear is referred to as a perceived threat. Perceived benefits and perceived barriers to

Checkpoint 6.1

You are designing a community health program to decrease skin cancer by increasing the appropriate use of sunblock products. Develop two messages based on HBM concepts that could be included in a media campaign.

engaging in the recommended action are weighed, along with the perceived level of threat and self-efficacy related to the specific behavior, to produce the likelihood of action. Cues to action, such as reminder cards, may activate the behavior. Other cues, such as the appearance of symptoms, may increase the level of threat. However, this appears to be the weakest part of the model (Strecher & Rosenstock, 1997). Health education and health promotion programs are designed to increase perceptions of suscep-

tibility and severity where appropriate, provide accurate information about benefits and barriers, reduce barriers when appropriate, increase self-efficacy, and provide cues to action.

The most appropriate uses of the HBM are for programs that are focused on a clear health problem (rather than social or economic problems), and the model lends itself well to guiding the development of messages that will encourage people to engage in recommended actions (Glanz & Rimer, 2005). Strecher and Rosenstock (1997) remind us that addressing the health beliefs of individuals and

groups will be more effective than just focusing on one level. The HBM recommended strategies include the following:

1. Conducting health-risk appraisals, presenting definitions of who is at risk, and initiating activities that prompt the target group to associate appropriate levels of risk with themselves to improve perceived susceptibility
2. Clearly and appropriately communicating the consequences of the health problem and the associated risk behavior(s) to improve perceived severity
3. Clearly and appropriately communicating what is involved in taking the recommended action (how, when, and where) and clarifying all the benefits of taking the recommended action to improve perceived benefits
4. Providing assistance with identifying and, when possible, reducing barriers to taking recommendation actions; correcting misinformation and misperceptions about barriers; and providing incentives to engage in the recommended action to improve perceived barriers
5. Reducing anxiety, demonstrating recommended actions, initiating skills training activities, giving guidance and assistance with performing recommended actions, providing role models, and providing verbal reinforcement to improve self-efficacy

Interpersonal Theories

Social Cognitive Theory

The underlying concept of Social Cognitive Theory (SCT) is called *reciprocal determinism*, which asserts that a behavior arises from the continuous, bidirectional interaction of people and their environments, and that resulting behaviors, in turn, affect people and their environments (Bandura, 1977, 1986). According to SCT confidence in one's ability to engage in a specific behavior, goals, and expectations that the behavior will have positive outcomes are the main contributors to health behavior. Glanz and Rimer explain that "if individuals have a sense of personal agency or self-efficacy, they can change behaviors even when faced with obstacles. If they do not feel that they can exercise control over their health behavior, they are not motivated to act, or to persist through challenges. As a person adopts new behaviors, this causes changes in both the environment and in the person" (2005, p. 20). For the program planner, the big message is the importance of designing programs that affect people, environments, and behaviors. Though a complex theory, SCT has many useful concepts and practical application suggestions for the program planner. These are summarized in Table 6.2. You may also find these concepts under Social Learning Theory, which is an earlier version of SCT.

Looking at expectations and self-efficacy, SCT suggests that in order for people to engage in health-enhancing behaviors, they not only need to be confident in their ability to perform the behavior but also need to believe that the outcome of the behavior is beneficial and worthwhile (Bandura, 1986). Thus, for example, in order for a group of adult females to breastfeed their infants, they need both to be confident in their abilities to successfully breastfeed and also to believe that breastfeeding is beneficial to the health of their children. Behavioral capability is the idea that knowledge and skills influence behavior (Bandura, 1986; Glanz & Rimer, 2005, p. 20). This is why the women need to acquire knowledge about breastfeeding and training in breastfeeding skills. Perhaps they believe that breastfeeding is uncomfortable, logistically difficult, and not worth the trouble. SCT would suggest talking with and observing others like themselves who are successfully breastfeeding. Finally, reinforcement can be provided for starting and maintaining breastfeeding. This may include praise from health care practitioners or breastfeeding support group members, assistance with problems from breastfeeding “buddies,” or arrangements for free diapers or other infant care items.

Self-efficacy is considered to be the most important personal characteristic for influencing behavior. If I am a new mother and I know breastfeeding is important, believe it is good for my baby, and have breastfed for the first two weeks of my baby’s life, it is likely that I will continue to breastfeed. If I am not confident in my ability to continue to breastfeed once I go back to work, it is much less likely that I will. Those with higher self-efficacy are more likely to have the motivation to continue the behavior over time, even when confronted with barriers (Glanz & Rimer, 2005).

Checkpoint 6.2

Your program is going to focus on increasing the use of condoms by sexually active adolescent males. Describe two activities that may be appropriate to include in your program that would increase the condom self-efficacy of sexually active males. Be sure to describe each activity in a way that clearly links it to condom use.

Fortunately, there are clear strategies that appear to affect self-efficacy. According to SCT, self-efficacy can be increased by teaching people to control their negative emotional responses to performing the behavior; providing verbal persuasion and reinforcement to engage in and maintain the behavior; providing modeling of the behavior (live or through other means); making sure there are opportunities to practice the behavior in a way that will provide positive reinforcement; and ensuring the success of those engaging in the behavior (Bandura, 1977).

Behavioral capability is built by using strategies that provide knowledge about the recommended behavior and teach the skills necessary to adopt and maintain it (Bandura, 1986). Identifying positive role models and pointing out positive changes in others assist in addressing the observational learning concept of SCT. Reciprocal determinism reminds the program planner to address environmental factors and involve others who are important

to the target population in the intervention. Outcome expectations, the beliefs about the results of the recommended behavior, require strategies that clearly communicate information about the likely results of engaging in the behavior. Providing positive reinforcement for steps toward and maintenance of the recommended behavior is an important strategy suggested by SCT.

Stage Theory of Organization Change

The program planner should be aware of organizational barriers to developing and implementing health promotion and health education programs. Phase four of the Precede-Proceed model reminds us to assess this situation; however, being familiar with stage theories of organizational change may help avoid some barriers. These theories also offer strategies for getting a program accepted by those in charge of the approval process.

Stage theories of organizational change “explain how organizations innovate new goals, programs, technologies, and ideas” (Steckler, Goodman & Kegler, 2005, p. 337). These theories recognize that organizations (e.g., school districts, worksites, and health care facilities) evolve through a series of stages, and moving from one stage to the next requires different sets of strategies and activities. These strategies and activities must be focused on those people with the power or positions to effect change. The four basic stages of organizational change are problem definition (awareness), initiation of action (adoption), implementation, and institutionalization (Glanz & Rimer, 2005). In the problem definition stage, those in power become aware of a problem, the problem is analyzed, and ways to address the problem are investigated. Involving management (administrators) and others from the organization in the needs assessment process and making sure that they receive written and/or verbal summaries of problems will assist in moving the organization to the next stage.

During the initiation stage, mandates, policies, or directives that begin to address the problem are released, along with resources to begin the process. It is crucial at this stage to make sure that all decision-makers understand what is involved in adopting the program. The program is then implemented, along with the process evaluation activities. It is important to ensure that those delivering the program are adequately trained and that program development staff are available to provide implementation assistance and help when problems arise (Glanz, Lewis & Rimer, 1997).

Finally, when the program has become part of the organization—not something new, extra, or separate—and its goals have been internalized into the organizational culture, it is considered to be institutionalized. Institutionalization can be facilitated by developing strong supporters of the program at high levels of administration and attending to any barriers to the program’s institutionalization (Glanz & Rimer, 2005).

Community Organization Theories

Community organization theories and the strategies suggested by their concepts assist the program planner when working with target groups that are underserved, lack political and economic power, and lack community organization skills (Minkler & Wallerstein, 1999; Glanz & Rimer, 2005). Empowerment and community competence are just two of the concepts included in these theories. A full discussion of these theories is beyond the scope of this chapter, and the reader is referred to the resources listed in the next section.

Other Theories

Diffusion of Innovations (DOI)

Diffusion of Innovations offers an explanation of how new ideas, practices (including social), and products spread through a population (Rogers, 1995). The underlying concept is that people and organizations move through five stages of innovation passage when making decisions to adopt a program or innovation:

- Knowledge—exposure to a program's existence and understanding of its functions
- Persuasion—the forming of a favorable attitude toward it
- Decision—committing to its adoption
- Implementation—putting it in place and to use
- Confirmation—reinforcement of the decision to adopt based on positive outcomes from it

There are several important characteristics of DOI that can be useful when planning implementation of a program (Oldenburg & Parcel, 2005). *Relative advantage* is the degree to which the new program, curriculum, or services are perceived to be better than what it replaces. *Compatibility* refers to the level of consistency your program has with existing values, past experiences, and habits and needs of the adopters and the target population. The difficulty in understanding and use of the new program is *complexity*. *Trialability* refers to how much a new program can be tried on a limited basis before committing to adoption. Finally, *observability* is the visibility and ease of measurability of the program's results. The ability to easily modify and/or discontinue a new program, the level of disruption to the current environment, and the ability to adopt the program with minimal risk and uncertainty also have an impact on the speed and level of a program's adoption.

Checkpoint 6.3

What would be the relative advantages of adopting a middle school health curriculum with an online component to replace the existing curriculum that is based entirely on a textbook?

Health education and health promotion draw from a wide variety of disciplines. Thus, theories from education, psychology, sociology, anthropology, political science, economics, and marketing may all be useful in the program planning process. The program planner is encouraged to consider a variety of theories that might apply to the particular population and situation at hand. A short list of other theories that you are encouraged to investigate follows:

- Problem-Behavior Theory (Jessor & Jessor, 1977)
- Theory of Reasoned Action/Theory of Planned Behavior (Ajzen, 1998; Ajzen & Fishbein, 1980)
- Health Locus of Control (Wallaston & Wallaston, 1978)

Dee realized that she is going to have to engage in some organizational changes to get the school district to be aware of the newer problems that the needs assessment has identified in the school-age population. Her wellness committees include school principals, but they are often too busy to attend the meetings. She will need to make sure that the principals and the superintendents all received the report prepared by the needs assessment work group. Jose is investigating other programs that have utilized SCT to get specific ideas for intervention strategies.

Summary

The consideration and use of theories and models is an important part of the program planner's need to paint a picture of the target population. Theories and models help determine factors that contribute to health behaviors in target populations, and they help program planners to think beyond the individual. The consideration of factors within and beyond the individual promotes the selection of appropriate targets for interventions and the development of strategies and materials that will make our interventions more successful, saving time and money.

Further Reading

Following are two of the most "user friendly" sources for learning about theories and models commonly used in health education and health promotion:

Glanz, K. & Rimer, B. K. (2005). *Theory at a glance: A guide for health promotion practice* (2nd ed.). Washington, DC: US Department of Health and Human Services; US Public Health Service; National Institutes of Health. Available from the National Cancer Institute, <http://www.cancer.gov/PDF/481f5d53-63df-41bc-bfaf-5aa48ee1da4d/TAAG3.pdf>

Goldman, K. D. & Schmalz, K. J. (2001). Theoretically speaking: Overview and summary of key health education theories. *Health Promotion Practice*, 2(1), 277-281.

QUESTIONS

1. Why is it important to use theories in program planning?
2. What strategies are associated with the HBM?
3. What is self-efficacy? Which theories is it associated with?
4. What are the benefits of using more than one theory in program planning?
5. What theories might be appropriate if one needs direction in working with an organization?
6. How is Diffusion of Innovations used in health education and health promotion?

EXERCISES

1. Go back to the theoretical concepts discussed in this chapter. In which part of the Precede–Proceed model would each fit?
2. Select one or two concepts from each of the health behavior theories discussed in the chapter. Go to the professional literature and locate articles describing how others have collected data about those concepts.
3. Describe the main points of each of the health behavior theories in your own words. Share your descriptions with a classmate for feedback.
4. You are developing a program to increase the physical activity levels of college students on a campus. Apply this situation to each of the theories. What would each theory suggest is behind a lack of physical activity in college undergraduates?
5. Use a professional literature abstract search engine for health or psychology available in your college library. Search for an article in a professional journal that reviews the literature associated with one of the theories discussed in this chapter. According to the article, for which target population was the theory developed and tested, and to what health behavior(s) and environments was the theory applied?

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