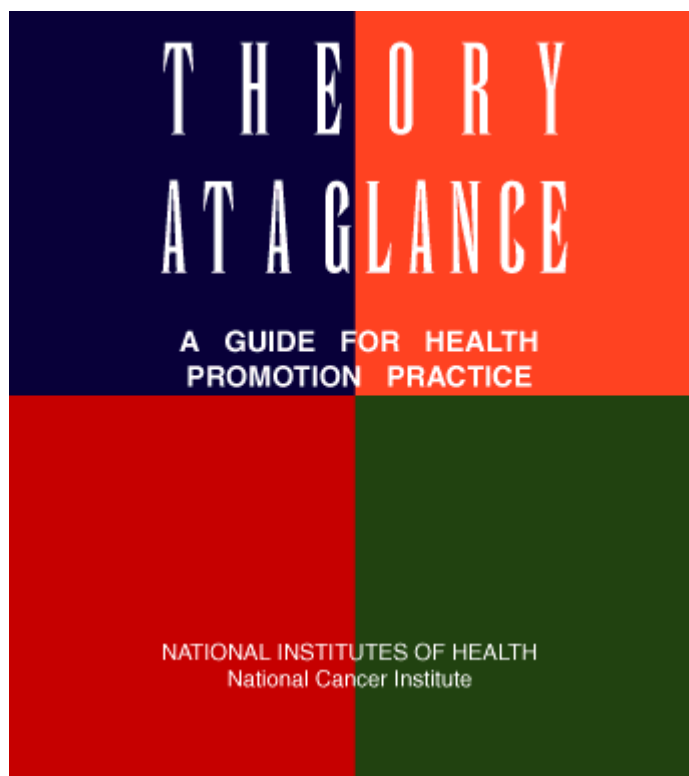


Theories of Health Behavior, HPR 8540

Theory at a Glance, Edited for Class

Selected Readings from
Theory at a Glance: A Guide for Health Promotion Practice
by the National Institutes of Health



This document available through the National Cancer Institute can be found in its entirety at the following website: http://oc.nci.nih.gov/services/Theory_at_glance/HOME.html

Foundations of Applying Theory in Health Promotion Practice

Why Are Theories and Models Important in Health Promotion?

Public health and health promotion programs can help to improve health, reduce disease risks, manage chronic illnesses, and improve the well-being and self-sufficiency of individuals, families, organizations, and communities. But not all health promotion programs and initiatives are equally successful. The programs that are most likely to succeed are based on a clear understanding of the targeted health behaviors and their environmental context. They are developed and managed using strategic planning models, and are continually improved through meaningful evaluation. Theories of health behavior can play a critical role in all of these areas.

Theory can help us during the various stages of planning, implementing, and evaluating an intervention. Program planners use theories to shape the pursuit of answers to WHY? WHAT? and HOW? That is, theories can be used to guide the search for reasons WHY people are or are not following public health and medical advice, or not caring for themselves in healthy ways. They can help pinpoint WHAT you need to know before developing or organizing an intervention program. They can provide insight into HOW you shape program strategies to reach people and organizations and make an impact on them. They also help you identify WHAT should be monitored, measured, and/or compared in the program evaluation.

Theories can help us understand the nature of targeted health behaviors. They can explain the dynamics of the behavior, the processes for changing the behavior, and the effects of external influences on the behavior. Theories can help us identify the most suitable targets for programs, the methods for accomplishing change, and the outcomes for evaluation. Theories and models EXPLAIN behavior and suggest ways to achieve behavior CHANGE.

Models that support program planning processes include Green and Kreuter's PRECEDE-PROCEED model and Social Marketing. Processes such as these are what get the job done. These processes involve research, thought, and action at all stages. Theory directs our research strategy (what to look for), intervention goals (what to achieve), and what might explain outcomes of interventions. Theory also helps us think of ideas we might never have considered. And, when we look at multiple theories, it helps us to keep our minds open and disciplined at once, resulting in more effective programs. While theory alone does not produce effective programs, theory-based planning, implementation, and monitoring does.

Explanatory Theory = Theory of the Problem

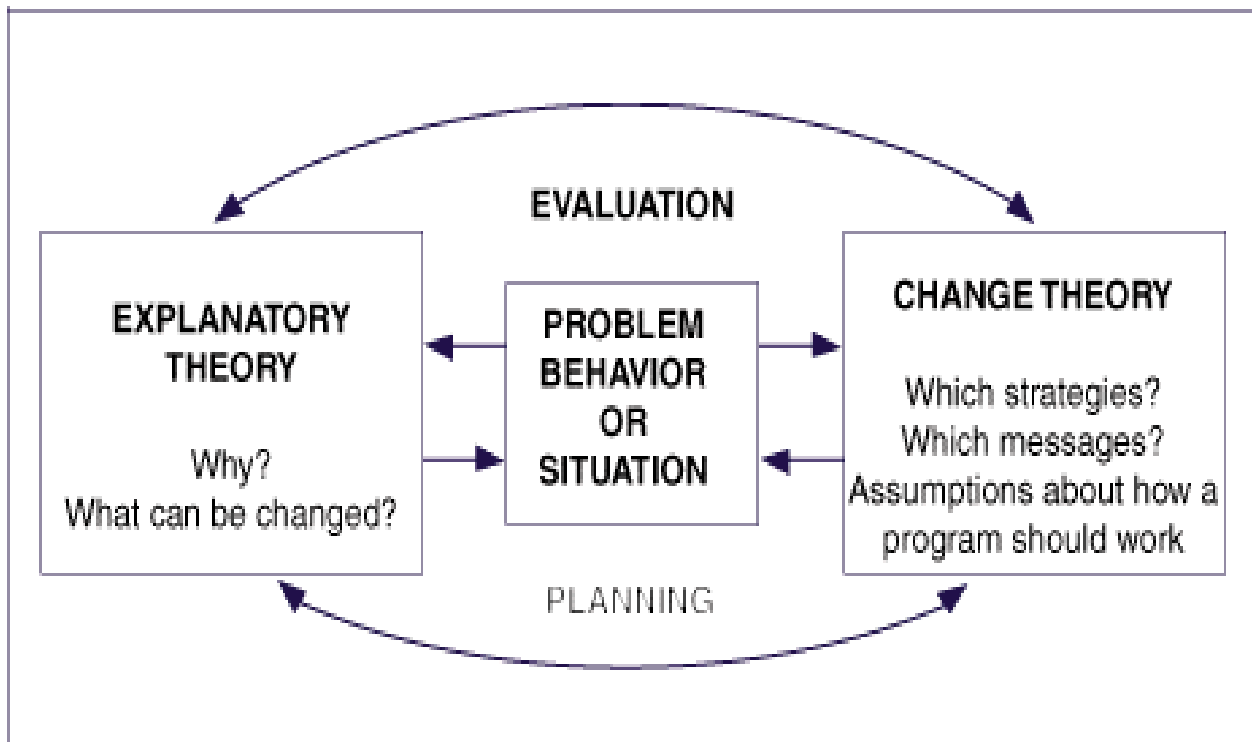
Helps describe factors influencing behavior or a situation and identify WHY a problem exists. These theories guide the search for modifiable factors like knowledge, attitudes, self-efficacy, social support, lack of resources, and so on.

Change Theory = Theory of Action

Guides the development of health promotion interventions. These theories spell out concepts that can be translated into program messages and strategies. They are the jumping-off point for using theory as a basis for *evaluation*, and they push you to make *explicit* your assumptions about how a program should work (i.e., how your "theory of action" will affect your "theory of the problem").

FIGURE 1

Explanatory Theory and Change Theory in the Process of Program Planning and Evaluation



Theory can take you beyond being a technician or a mechanic. It can help you to step back and think about the larger picture. An awareness of different behavior theories and the ability to apply them skillfully in practice is what distinguishes a professional and leader from someone simply carrying out a set of activities. A public health professional theory can solve problems. Like an expert chef, a theoretically grounded health education professional does not blindly follow a cookbook recipe, but constantly creates it anew, depending on the circumstances. Without theory, she or he has only the skills of a cafeteria line worker.

Health promotion has adapted ideas from the behavioral and social sciences to fit the concerns of public health workers. These adaptations are based on what we have learned over many years. Currently, theory is more accessible than ever. Concrete examples and brief explanations, comparisons across theories and models, and theories and models at multiple levels can be found here and in the sources listed in the bibliography. People in the field recognize the value of theory.

What People in the Field Are Saying

"Theory is different from most of the tools I use in my work. It's more abstract, but that can be a plus too. A solid grounding in a handful of theories goes a long way toward helping me think through why I approach a health problem the way I do."

--County Health Educator

"I used to think theory was just for students and researchers. But now I have a better grasp of it, I appreciate how practical it can be."

--State Chronic Disease Administrator

"By translating concepts from theory into real-world terms, I can get my staff and community volunteers to take a closer look at WHY we're conducting programs the way we do, and HOW they can succeed or fail."

--City Tobacco Control Coordinator

"A good grasp of theory is essential for leadership. It gives you a broader way of viewing your work. And it helps create a vision for the future. But, of course, it's only worthwhile if I can translate it clearly and simply to my co-workers."

--Regional Health Promotion Chief

"It's not as hard as I thought it would be to keep up with current theories. More than ever these days, there are tools and workshops to update us often."

--Patient Education Coordinator

What Is Theory?

A theory is a set of interrelated concepts, definitions, and propositions that present a *systematic* view of events or situations by specifying relations among variables, in order to *explain* and *predict* the events or situations. The notion of *generality*, or broad application, is important. Also, theories are by their nature *abstract*: that is, they don't have a specified content or topic area. Like an empty coffee cup, they have a shape and boundaries but nothing concrete inside. They only come alive when they're filled with practical topics, goals, and problems.

- CONCEPTS are the building blocks of theory, the primary elements of theory.
- A CONSTRUCT is the term used for a concept developed or adopted for use *in a particular theory*. Thus, a CONSTRUCT has a very specific and technical meaning. "Key concepts" of a given theory are its constructs.
- VARIABLES are the operational forms of constructs. They state how a construct is to be measured in a specific situation. It is important to keep in mind that VARIABLES should be matched to CONSTRUCTS when you are identifying what needs to be assessed in the evaluation of a theory-driven program.
- MODELS are generalized, hypothetical descriptions, often based on an analogy, used to analyze or explain something.

Most health promotion theories come from the social and behavioral sciences, but their application often requires familiarity with epidemiology and physical sciences, too. They borrow from various disciplines such as psychology, sociology, anthropology, consumer behavior, and marketing. Many theories are not highly developed or have not been rigorously tested. Because of this, we often label them as conceptual frameworks or theoretical frameworks; here the terms are used interchangeably.

Fitting a Theory or Theories to the Field of Practice

No single theory dominates health education and promotion. Nor should it: the health problems, behaviors, populations, cultures, and contexts of public health are broad and varied. In addition, the importance of some types of problems--for example, smallpox and certain strains of influenza--change over time because of new technology and successful public health activities. Other kinds of problems--like AIDS and environmental hazards--are emerging because of a combination of biological and social factors. Some theories focus on individuals as the unit of change, while others focus on change in organizations or cultures. Because of these different frames of reference, theories that were very important to public health education a generation ago may be of limited use today.

This monograph includes descriptions and applications of some theories that are dominant in health promotion today. Still, no one theory will be right in all cases! Depending on the unit of analysis or change (individuals, groups, organizations, communities) and the topic and type of behavior you are concerned with (one-shot or repetitive behaviors, addictive or habitual behaviors, or those involving choice of "brands"), different theoretical frameworks will have a good fit and be practical and useful.

You may notice that theories often overlap, and that some seem as if they can fit "within" broader models. Also, you might recognize that more than one theory is needed to adequately address an issue. For comprehensive health promotion programs, this is almost always true. It is also evident in the use and description of applied theories in the professional literature. The last section of this monograph will give specific examples of combining theories for greater impact.

One of the greatest challenges to public health professionals is to learn to analyze the "fit" of a theory or model for issues one is working with. A working knowledge of a handful of theories and how they have been applied will go a long way to improve one's skill in this area. However, the first rule, and best advice to keep in mind, is this:

“think before you leap”

Theories, or conceptual frameworks, can be and are useful for health promotion practice. They enrich, inform, and complement practical skills and technologies and enable you to solve problems. They are an excellent basis for critical appraisal of what is (or is not) being accomplished in your work.

Theories and Applications

The Importance of a Multi-Level, Interactive Approach

Contemporary health promotion includes not only educational activities but also advocacy, organizational change efforts, policy development, economic supports, environmental change, and multi-method programs. This highlights the importance of approaching public health problems at multiple levels, and stressing the interaction and integration of factors within and across levels. This approach has been referred to as an *Ecological Perspective*.

Two key ideas from an ecological perspective help direct the identification of personal and environmental leverage points for health promotion interventions.

First, behavior is viewed as being affected by, and affecting, *multiple levels of influence*. Five levels of influence for health-related behaviors and conditions have been identified. They are: (1) intrapersonal, or individual factors; (2) interpersonal factors; (3) institutional, or organizational factors; (4) community factors; and (5) public policy factors (McLeroy et al., 1988).

For example, a woman might delay getting a recommended cancer screening test (a mammogram) because she is afraid of finding out she has cancer. This is an individual-level, or intrapersonal factor. However, her inaction might also be influenced by her doctor's not recommending mammography, the difficulty of scheduling an appointment because there is only a part-time radiologist at the clinic, and her inability to pay the high fee. These interpersonal, organizational, and policy factors also influence behavior. These factors are defined in Table 1.

The second key idea relates to the possibility of *reciprocal causation* between individuals *and* their environments; that is, behavior both influences and is influenced by the social environment.

A man with high cholesterol might have a hard time following his prescribed low-fat diet because his company cafeteria doesn't offer low-fat food choices that he likes. He can try to change the environment by talking with the cafeteria manager or the company medical or health department staff, and asking that healthy food choices be added to the menu. Or, if employees start to dine elsewhere in order to eat low-fat lunches, the cafeteria may change its menu to maintain its lunch business.

This multi-level, interactive perspective clearly shows the advantages of multi-level interventions, such as those that combine behavioral and environmental components. For example, employee smoking cessation clinics are more successful if there is also a no-smoking policy at the workplace and a city clean indoor air ordinance. Adolescents are less likely to take

up smoking if their peer groups disapprove of the habit and if laws that prohibit tobacco sales to minors are strictly enforced.

Health promotion will succeed most when problems are analyzed and programs are planned, keeping in mind the various levels of influence the ecological perspective comprises. Thus, the comprehensive planning systems, PRECEDE_PROCEED and Social Marketing both start with extensive research to assess needs at multiple levels. This often involves consumer and market analysis; epidemiological assessment; behavioral, educational, environmental, and organizational diagnosis; and administrative and policy assessment. It is in the research and diagnostic phases of program development, in particular, that social and behavioral theories are most valuable.

TABLE 1:

An Ecological Perspective: Levels of Influence

Concept	Definition
Intrapersonal Factors	Individual characteristics that influence behavior, such as knowledge, attitudes, beliefs, and personality traits
Interpersonal Factors	Interpersonal processes, and primary groups including family, friends, peers, that provide social identity, support, and role definition
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, federal policies and laws that regulate or support healthy actions and practices for disease prevention, early detection, control, and management

At this point, it is useful to examine theories and their applications in three levels consistent with the ecological perspective: individual (intrapersonal), interpersonal, and community. The third level--community--represents the combined elements of institutional factors, community factors, and public policy. The third level of influence represents a composite of factors related to larger social structures, which share common aspects under the general heading of "community."

Cognitive-Behavioral Models: Leading the Way in Individual and Interpersonal Theories

Contemporary models of health behavior at the individual and interpersonal levels usually fall within the broad category of CONGNITIVE-BEHAVIORAL theories. Two key concepts cut across these theories:

1. Behavior is considered to be mediated through cognitions; that is, what we know and think affects how we act.
 2. Knowledge is *necessary but not sufficient* to produce behavior change. Perceptions, motivation, skills, and factors in the social environment also play important roles.
-

Individual- (or Intrapersonal-) Level Model

Individual is the most basic level of health promotion practice. All other levels of health promotion, including groups, organizations, communities, and nations, are composed of individuals. They are the entities that comprise groups, manage organizations, elect or appoint leaders, and legislate policies. Thus, individual-level models can be pieces of broader-level theories; even policy and institutional changes require, at some point, influencing individuals.

In addition, many health professionals spend most of their time and effort working at the individual level in one-on-one encounters such as counseling and patient education. Individuals are often the prime audiences for health educational materials, too. For many different reasons, therefore, health practitioners must be able to explain and influence the behavior of individuals.

Theories at the individual level also focus on *intrapersonal* ("within individuals") factors. These are characteristics of individuals such as their knowledge, attitudes, beliefs, motivation, self-concept, developmental history, past experience, skills, and behavior. We will discuss two theories at this level: Stages of Change and the Health Belief Model. Each has a distinct focus:

- The Stages of Change Model concerns individuals' *readiness* to change or attempt to change toward healthy behaviors.
- The Health Belief Model addresses a person's perceptions of the threat of a health problem and the accompanying appraisal of a recommended behavior for preventing or managing the problem.

Stages of Change

Suppose you were working with a large company with about 200 smokers to plan a smoking cessation program. You might provide group cessation clinics and offer them at various times and locations. However, if several months passed and only 50 of the smokers had signed up for the clinics, you might face a problem regarding what to do next: How to reach the many smokers who did not take part in the clinics? The Stages of Change Model, introduced by Prochaska and DiClemente, suggests one perspective for approaching this problem.

The Stages of Change Model evolved from work with smoking cessation and the treatment of drug and alcohol addiction and has recently been applied to a variety of other health behaviors. The basic premise is that behavior change is a *process* and not an event, and that individuals are at varying levels of motivation, or *readiness*, to change. People at different points in the process of change can benefit from different interventions, matched to their stage at that time.

Five distinct stages are identified in the Stages of Change Model: pre-contemplation, contemplation, decision/ determination, action, and maintenance. It is important to note that this is a *circular*, not a linear model. People don't go through the stages and "graduate"; they can enter and exit at any point, and often recycle. Studies have shown that individuals go through the same changes when using self-help or self-management methods, or when they seek professional help or go to organized programs. Also, there appear to be differences in how the stages fit the situation for different problem areas. For example, with a problem that involves overt, easily recognized behavior and includes a physical addiction component (e.g., alcoholism), the stages might have a different meaning than with a problem where target goals are not easily identified and where undesirable habits may have been formed without physiological addiction (e.g., following a diet with no more than 30 percent calories from fat).

The Stages of Change Model can be used both to help understand (*explain*) why employees who smoke might not take part in the group clinics and to develop a smoking control program that reaches more smokers (*change*). First, to *explain* the situation: Current or former smokers can be classified according to the stage that they are in by asking a few simple questions--are they interested in trying to quit, thinking about quitting soon, ready to plan a quit attempt, in the process of cessation, or trying to stay smoke-free? By knowing their current stage, you can help set realistic program goals--perhaps movement to the next stage, or joining a clinic and actually quitting or staying smoke-free. When it comes to *change* efforts, you can tailor messages, strategies, and programs to the appropriate stage. This might mean developing materials and activities focusing mainly on motivation, such as carbon monoxide testing, or holding a one-session "free sample" smoking cessation seminar for people considering quitting. These stage-based strategies would probably appeal to smoking employees who are not yet ready to join a quitting group.

TABLE 2
Stages of Change Model

Concept	Definition	Application
Pre-contemplation	Unaware of problem, hasn't thought about change	Increase awareness of need for change, personalize information on risks and benefits.
Contemplation	Thinking about change in the near future	Motivate, encourage to make specific plans.
Decision/Determination	Making a plan to change	Assist in developing concrete action plans, setting gradual goals.
Action	Implementation of specific action plans	Assist with feedback, problem solving, social support, reinforcement.
Maintenance	Continuation of desirable actions, or repeating periodic recommended step(s)	Assist in coping, reminders, finding alternatives, avoiding slips/relapses(as applies).

Health Belief Model

High blood pressure screening campaigns often identify people who are at high risk for heart disease and stroke, but who do not experience any symptoms. Thus, they may not think it is necessary to discuss the condition with a physician, or might not follow instructions to take prescribed medicine or lose weight. The Health Belief Model (HBM) can be useful in analyzing these people's inaction or noncompliance.

The HBM was one of the first models that adapted theory from the behavioral sciences to health problems, and it remains one of the most widely recognized conceptual frameworks of health behavior. It was originally introduced in the 1950s by psychologists working in the U.S. Public Health Service (Hochbaum, Rosenstock, Leventhal, and Kegeles). Their focus was on increasing the use of then-available preventive services, such as chest x-rays for tuberculosis screening and immunizations such as flu vaccines. They assumed that people feared diseases, and that health actions were motivated in relation to the degree of fear (perceived threat) and expected fear-reduction potential of actions, as long as that potential outweighed practical and psychological obstacles to taking action (net benefits).

The HBM was spelled out in terms of four constructs representing the perceived threat and net benefits: perceived *susceptibility*, perceived *severity*, perceived *benefits*, and perceived *barriers*. These concepts were proposed as accounting for people's "readiness to act." An added concept, *cues to action*, would activate that readiness and stimulate overt behavior. A recent addition to the HBM is the concept of *self-efficacy*, or one's confidence in the ability to successfully perform an action. This concept was added by Rosenstock and others in 1988 to help the HBM better fit the challenges of changing habitual unhealthy behaviors, such as being sedentary, smoking, or overeating.

Originally, the HBM was developed to help *explain* health-related behaviors. It could guide the search for "why" and help identify leverage points for change. It can be a useful framework for designing *change* strategies, too. The most promising application of the HBM is for helping to develop messages that are likely to persuade individuals to make healthy decisions. The messages can be delivered in print educational materials, through electronic mass media, or in one-to-one counseling.

TABLE 3
Health Belief Model

Concept	Definition	Application
Perceived Susceptibility	One's opinion of chances of getting a condition	Define population(s) at risk, risk levels; personalize risk based on a person's features or behavior; heighten perceived susceptibility if too low.
Perceived Severity	One's opinion of how serious a condition and its sequelae are	Specify consequences of the risk and the condition
Perceived Benefits	One's opinion of the efficacy of the advised action to reduce risk or seriousness of impact	Define action to take; how, where, when; clarify the positive effects to be expected.
Perceived Barriers	One's opinion of the tangible and psychological costs of the advised action	Identify and reduce barriers through reassurance, incentives, assistance.
Cues to Action	Strategies to activate "readiness"	Provide how-to information, promote awareness, reminders.
Self-Efficacy	Confidence in one's ability to take action	Provide training, guidance in performing action.

Messages that are suited to health education for hypertension control illustrate the components of the HBM. Before one will accept a diagnosis of hypertension and follow a prescribed treatment regimen, one must believe that one can have the condition without symptoms (*is susceptible*), that hypertension can lead to heart attacks and strokes (the *severity* is great), and that taking prescribed medication or following a recommended weight loss program will reduce the risk (*benefits*) without negative side effects or excessive difficulty (*barriers*). Print materials, reminder letters, or pill calendars might promote consistent adherence (*cues to action*). And if the individual has had a hard time losing weight and keeping it off in the past, a behavioral contracting strategy might be used to establish achievable short-term goals so that his or her confidence can increase (*self-efficacy*). (See Table 3 for application of concepts.)

The HBM has a "good fit" when the problem behavior or condition evokes *health* motivation, since that is its central focus. While HBM concepts also can be stretched to relate to social or economic motivations (for example, greater attractiveness after weight loss, saving money by quitting smoking), these matters might be better addressed by other theories and models.

Theories of Interpersonal Health Behavior

Theories of health behavior at the interpersonal level assume that individuals exist within environments where other people's thoughts, advice, examples, assistance, and emotional support affect their own feelings, behaviors, and health. The significant individuals and groups include family members, co-workers, peers, health professionals, and other social entities who are similar to or influential for them. People are both influenced by, and influential in, their social environments.

Theories of interpersonal health behavior are not limited to developing an understanding of interactions, though the dynamics of relationships are often at the core of these theoretical frameworks. The theories at this level include factors related to individuals' experience and perceptions of their environments in combination with their personal characteristics.

Social Learning Theory (SLT) is complex and includes many concepts that are useful in health promotion. For this reason, we concentrate here on describing and applying SLT. Other theories of interpersonal influence, including social power, interpersonal communication, social networks, and social support, are also useful, but they are not discussed in depth in this monograph because of length constraints.

Social Learning Theory assumes that people and their environments interact continuously. It is important to recognize that SLT clearly addresses both the psychosocial factors that determine health behavior and strategies to promote behavior change.

Social Learning Theory or Social Cognitive Theory

As the prevalence of sexually transmitted diseases in adolescents rises, the importance of consistent use of condoms by sexually active teens has come to the attention of health educators. It appears that there are several reasons why these youth do not routinely use protection: some do not know what kind of condoms are best and how to use them properly; others fear that potential partners will reject them if they insist on condoms; and some who believe condoms are important find it hard to be assertive in intimate situations. The SLT can be used to turn these explanations into successful health education strategies.

Another example involves a new mother who wants to breastfeed but has just returned to work, where lack of privacy, a busy schedule, and lack of refrigeration keep her away from her infant for long hours and preclude pumping breast milk for later use. Social Learning Theory suggests possible responses to this problem, also.

In Social Learning Theory, human behavior is explained in terms of a three-way, dynamic, reciprocal theory in which personal factors, environmental influences, and behavior continually interact. A basic premise of SLT is that people learn not only through their own experiences, but also by observing the actions of others and the results of those actions. In the 1970s, Albert Bandura published a comprehensive framework for understanding human behavior, based on a cognitive formulation which he named the Social Cognitive Theory. That framework is currently the dominant version used in health behavior and health promotion; however, it is still often referred to as SLT, the term we will use in this section.

Social Learning Theory synthesizes concepts and processes from cognitive, behavioristic, and emotional models of behavior change. As a result, it is very complex and includes many key constructs. Selected key concepts are defined and their applications presented in Table 5. The first concept, *reciprocal determinism*, means that behavior and the environment are reciprocal systems and that the influence is in both directions. (This idea is also central to the ecological perspective.) That is, the environment shapes, maintains, and constrains behavior; but people are not passive in the process, as they can create and change their environments.

Consider the dilemma of the new mother described above. If she becomes an advocate for flextime and begins a support group or advocacy effort to persuade management to provide mothers' rooms and refrigerators, her personal views and behavior may change. Her opportunities for breastfeeding and/or for storing pumped breast milk will increase, as will her confidence that motherhood can be compatible with her job.

The concept of *behavioral capability* maintains that a person needs to know what to do and how to do it; thus, clear instructions and/or training may be needed. *Expectations* are the results that a person thinks will occur as a result of action. *Self-efficacy*, which Bandura considers the single

most important aspect of the sense of self that determines one's effort to change behavior, is self-confidence in one's ability to successfully perform a specific type of action.

TABLE 5

Social Learning Theory or Social Cognitive Theory

Concept	Definition	Application
Reciprocal Determinism	Behavior changes result from interaction between person and environment; change is bidirectional	Involve the individual and relevant others; work to change the environment, if warranted.
Behavioral Capability	Knowledge and skills to influence behavior	Provide information and training about action.
Expectations	Beliefs about likely results of action	Incorporate information about likely results of action in advice.
Self-Efficacy	Confidence in ability to take action and persist in action	Point out strengths; use persuasion and encouragement; approach behavior change in small steps.
Observational Learning	Beliefs based on observing others like self and/or visible physical results	Point out others' experience, physical changes; identify role models to emulate.
Reinforcement	Responses to a person's behavior that increase or decrease the chances of recurrence	Provide incentives, rewards, praise; encourage self-reward; decrease possibility of negative responses that deter positive changes.

In order for sexually active teens to consistently use condoms to protect them from sexually transmitted diseases, they need to know what type of condoms work best and how to use them properly (*behavioral capability*), to believe that potential sex partners won't reject them because they want to use condoms (*expectations*), and to have the strength of confidence in themselves to state their wishes clearly before or during an intimate encounter (*self-efficacy*).

Observational learning is often referred to as "modeling," that is, that people learn about what to expect through the experience of others. This means that people can gain a concrete understanding of the consequences of their actions by observing others and noting whether the modeled behaviors are desirable or not.

Observational learning is most powerful when the person being observed is powerful, respected, or considered to be like the observer.

- Children may observe their parents not using seatbelts, driving above the speed limit, and consuming too much alcohol. If they do not see any negative effects, they are more likely to adopt these behaviors themselves.
- A woman who has tried numerous weight-loss diets may feel discouraged until she sees an old friend who has much the same problem, but who has slimmed down. There is a good chance that woman will be motivated to try the approach (or diet) that worked so well for her friend.

Reinforcement is a response to a person's behavior that affects whether or not the behavior will be repeated. Positive reinforcements, often called "rewards," increase the chances that behaviors will be repeated. Negative reinforcements include punishment and lack of any response. Health promotion programs that provide tangible rewards or praise and encourage self-reward, encourage people to establish positive habits. Extrinsic rewards to help motivate behavior change should be used with caution to avoid developing dependence on external reinforcements. They are often useful as motivators for continued participation but not for sustaining long-term change.

Token reward systems and refundable deposits have been used successfully to increase participation rates and reduce attrition in a variety of health promotion programs that involve multiple sessions, such as smoking cessation, physical activity, and weight management programs

Because *self-efficacy* is considered so important in SLT, it is worth looking at ways to increase self-efficacy. The advantages of greater self-efficacy include higher motivation in the face of obstacles and better chances of persisting over time outside a situation of formal supervision. Three strategies for increasing self-efficacy are consistent with other aspects of SLT, too:

1. *Setting small, incremental goals*: When someone achieves a small goal, like exercising for 10 minutes each day, her self-efficacy increases. Thus, the next goal (longer periods each day, 5 days in a row) seems achievable, and her persistence is greater.
2. *Behavioral contracting*: By using a formalized process to establish goals and specify rewards (*reinforcement*), a patient trying to adhere to a self-care regimen can receive feedback about performance, praise, and a tangible, motivating reward.
3. *Monitoring and reinforcement*: Feedback from self-monitoring or recordkeeping can reduce anxiety about one's ability to achieve a behavior change, thus increasing self-efficacy.

Community-Level Models

Designing health promotion initiatives to serve communities and targeted populations, and not just single individuals, is at the heart of a public health orientation. The collective well-being of communities can be fostered by creating structures and policies that support healthy lifestyles, and by reducing or eliminating hazards in social and physical environments. Community-level models are frameworks for understanding how social systems function and change, and how communities and organizations can be activated.

Community-level models are essential for *comprehensive* health promotion efforts. These models embody an ecological perspective and are the foundations for pursuing goals of better health for individuals, groups, institutions, and communities. They complement individually oriented behavior change goals with broad aims that include advocacy and policy development. Community-level models suggest strategies and initiatives that are planned and led by organizations and institutions whose missions are to protect and improve health: schools, worksites, health care settings, community groups, and government agencies.

Ideally, comprehensive health promotion efforts build on strategies that have been tried and found effective for reaching health and health behavior goals. However, while strategies have been shown to be effective in many behavioral arenas (e.g., marketing, political), there are currently few health issues for which a variety of demonstrably effective strategies are known.

- Smoking prevention and control is one area for which effective interventions have been developed and evaluated. Thus, community-level tobacco control efforts are well defined. They involve simultaneous pursuit of four main goals within a defined locale: (1) raising the priority of smoking as a health concern, (2) improving communities' abilities to change smoking behavior, (3) increasing the influence of existing legal and economic factors that discourage smoking, and (4) strengthening social norms and values supporting nonsmoking.

Achieving these goals means creating an environment for change. Similar goals can be applied to other important community health issues, also. Several conceptual frameworks in this section apply to one or more strategies aimed at these goals. For this introduction, only one will be covered: Diffusion of Innovations

Diffusion of Innovations

The availability of new screening technologies and medical self-care products for home use provides exciting opportunities to detect disease in earlier, more treatable stages and to reduce the cost and inconvenience of frequent medical visits. But it may be inconvenient to obtain cancer screening, and home blood pressure and diabetes testing kits can be difficult to understand and use. Diffusion of Innovations Theory is helpful for understanding these concerns and the dissemination of new health promotion tools and strategies, including prevention and health education curricula.

Diffusion of Innovations Theory addresses how new ideas, products, and social practices spread within a society or from one society to another. In public health and health promotion, it is a major challenge to disseminate new prevention, early detection, and treatment methods and to increase the use of programs and curricula that have been found to be successful. Sometimes, purchase decisions, or "adoption" decisions, are made on behalf of large organizations or communities. This happens when a school system adopts a curriculum, a teacher adopts a course textbook, a worksite health manager contracts for screening services, and a city council decides to acquire recycling bins. The challenge of diffusion requires approaches that differ from those focused solely on individuals or small groups. It involves paying attention to the innovation (a new idea, product, practice, or technology) as well as to communication channels and social systems (networks with members, norms, and social structures).

A focus on *characteristics of innovations* can improve the chances that they will be adopted, and hence diffused. It also has implications for how the innovation is positioned to maximize its appeal. (See Table 7.) Some of the most important characteristics of innovations are their relative advantage (is it better than what was there before?), compatibility (fit with the intended audience), complexity (ease of use), trialability (can it be tried out first?), and observability (visibility of results).

Communication channels are another important component of Diffusion of Innovations Theory. Diffusion theories view communication as a two-way process, rather than one of merely "persuading" an audience to take action. The two-step flow of communication, in which opinion leaders mediate the impact of mass media, emphasizes the value of social networks, or interpersonal channels, over and above mass media, for adoption decisions.

Physicians and community leaders are important allies in communicating about new practices or ideas to improve health. When they reiterate information that is provided through mass media channels, the chances that consumers will decide to act increase. If a nurse demonstrates a diabetes home testing kit in the health care setting, and supervises a patient's practice in using it, he or she will be more likely to use it properly at home.

TABLE 7
Diffusion of Innovations Theory

Concept	Definition	Application
Relative Advantage	The degree to which an innovation is seen as better than the idea, practice, program, or product it replaces	Point out unique benefits: monetary value convenience, time saving, prestige, etc.
Compatibility	How consistent the innovation is with values, habits, experience, and needs of potential adopters	Tailor innovation for the intended audience's values, norms, or situation.
Complexity	How difficult the innovation is to understand and/or use	Create program/idea/product to be uncomplicated, easy to use and understand.
Trialability	Extent to which the innovation can be experimented with before a commitment to adopt is required	Provide opportunities to try on a limited basis, e.g., free samples, introductory sessions, money-back guarantee.
Observability	Extent to which the innovation provides tangible or visible results	Assure visibility of results: feedback or publicity.

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- A mobile mammography unit that offers the same service as a hospital or doctor's office, but saves travel time and money, has advantages over a stationary facility (*relative advantage*).
 - Culturally sensitive AIDS education videotapes are more acceptable in Hispanic communities than the same materials produced for white or African-American audiences (*compatibility*).
 - A diabetes home testing kit might seem like a good idea, but if it is too difficult to use most people with diabetes will not use it regularly or effectively. But a digital blood pressure monitor may be appealing for home monitoring because it is easier to use and to understand than a traditional stethoscope model (*complexity*).
 - An open introductory session can help attract more employees to register for a multiple-session nutrition course than a course that permits only preregistered participants (*trialability*).
 - By providing feedback in the form of case examples or cumulative statistics, clinic users can get a concrete sense of the value of a cancer screening program (*observability*).

Putting It Together

Many health workers find that they can achieve the greatest impact by *combining* more than one theory to address a problem. The theories in this monograph are most effective if they are integrated within a *comprehensive planning system*. Such a system assigns a central role to research as input to determine the situation and needs of the population to be served, the resources available, and the progress and effectiveness of the program at various stages. Planning is a continuous process, in which new information is gathered to build or improve the program.

Although health behavior theories are critical tools, **the health educator cannot substitute theory for planning or research**. However, theories help us interpret problem situations and plan feasible interventions. Theory also plays an important role in program evaluation. Because it identifies the assumptions behind intervention strategies, it helps pinpoint intermediate steps that should be assessed in evaluation. These "mediating factors" help to clarify the reasons why programs achieve or fail to achieve our goals for success in changing behaviors or environments.

While theory alone does not produce effective programs, research, planning, implementing, and monitoring do. Two well-developed planning models that can be used to integrate diverse theoretical frameworks are Social Marketing and PRECEDE-PROCEED. For purposes of this class, we will only discuss Social Marketing.

Social Marketing

Social Marketing is a process to develop, implement, evaluate, and control behavior change programs by creating and maintaining exchanges, such as volunteer time for community recognition or individual effort for the health of future generations. Kotler and Andreasen define it as the adaptation of commercial marketing technologies to the analysis, planning, execution, and evaluation of programs designed to influence the behavior of target audiences in order to improve their physical and mental well-being and/or that of the society of which they are a part.

Marketing takes a *consumer orientation*: Success will come to the organization that best determines the perceptions, needs, and wants of target markets and satisfies them through the design, communication, pricing, and delivery of appropriate, competitive, and visible offerings. The process is consumer-driven, not expert-driven. Social Marketing uses the principle of voluntary exchange: Individuals, groups, and organizations have resources (such as money, effort, or time) which they are willing to exchange for perceived benefits (such as looking and

feeling better, social prestige, and being independent). Marketing facilitates the exchange by providing the audience with benefits they value as being worth the cost-does so in a way that allows the marketer to continue to provide and improve that offering, and does so efficiently. The exchange satisfies the customer and the marketer.

Social Marketing concentrates on tailoring programs to serve a defined target group. That group can be health professionals, community leaders, legislators, corporate executives, retail store managers, media decision makers, public health officials, and various public audiences. It is not just "the individual." A tight, continuous focus on the particular consumers one is trying to affect (the "target") will assure the planner's ability to identify and meet consumer needs.

FIGURE 3
Social Marketing Wheel



Social Marketing is most successful when it is implemented as a systematic, continuous process which is driven at every step by decision-based research used as feedback to adjust the program. A clear, workable marketing process includes six stages: analysis, planning, development of plan elements, implementation, assessment of in-market effectiveness, and feedback to the first stage. There is constant research-based feedback and planning within each stage as well.

To change the consumer's behavior one must first understand both what drives and maintains current behavior and what "levers" in the consumer's life and environment might drive and maintain the new behavior. To create and run an effective program, one must also understand what drives, facilitates, and maintains the behavior of potential intermediaries, channels of distribution and communication, and actual and potential competitors (including internal and "friendly" competitors such as employees and other health organizations, respectively).

Analysis involves learning about the behaviors and environment to be changed. It includes learning about consumers' current behavior, what enables it, and what reinforces it, as well as the various factors in their environment that might be benefits or barriers to the desired behavior; consumers' current attitudes, opinions, interests, activities, and concerns; and consumers' product usage and media habits. Part of consumer analysis is to divide the market into subgroups that are relatively homogeneous in their needs and their likely response to different programs and messages (i.e., to "segment" it). For example, smokers may be divided by geography, demography, social setting, lifestyle, level of readiness for change, and media habits, among other factors. The more specific the target, the more customized the program offering can be to satisfy them--by reaching them with the right message about the right product at the right price in the right place and time.

Planning involves identification of clear, realistic, measurable behavior objectives that fit the organization's mission, the behavior and environment to be changed, and the organization's resources. It includes selecting the target segment(s) for the program. For each segment chosen, one must plan a distinctive *marketing mix* of "4 Ps": product, price, place (distribution), and promotion (communication). The product is the program and/or action you are encouraging. Price includes both tangible and intangible costs to engage in action or take part in a program; it includes money, time, opportunity costs, and even pain and fear of the action's consequences. Distribution involves the location or system for getting the program, product, or action to consumers, and communication involves all strategies to promote the program/action and to inform consumers about it and its advantages.

Much of the research conducted in marketing is *formative and process research* to know the consumer and to develop and refine concepts, messages, products, services, pricing, and distribution channels before they are implemented fully. Marketers view techniques such as focus groups, intercept interviews, and pilot studies as cost-efficient necessities to optimize program content and delivery and to avoid exposing expensive and irreversible disasters to the target audience. It is better (and cheaper) to avoid disasters than to measure them. *Summative*

research is also conducted in social marketing, often in the form of outcome monitoring. It is conducted to compare the impact and outcomes against planned program objectives so that one can tell (1) what worked and what needs improvement, and (2) whether the program has been worth its cost.

Where to Begin: The Range of Theories

In order to make good use of theory in a given practice situation, it is necessary to consider both the social or health problem at hand and the community or organizational context for which the intervention is intended. Remember, theories are abstractions, so it's best not to merely *begin* with a "favorite theory." Once a problem is identified, one or the other of the planning systems outlined here--Social Marketing or PRECEDE-PROCEED--can be used to identify the social science theories that are most appropriate for understanding the problem behavior or situation. As Burdine and McLeroy point out, the theories can then be used to identify potential points of intervention. Methods of intervention can then be examined for their "fit" to the working model, and the past successes of those intervention strategies can be explored. Finally, thoughtful reflection on whether those intervention strategies are likely to work in a given situation is invaluable before proceeding. That process of reflection can be extended to pretesting or actively discussing proposed strategies with the person, group, or community that is involved.

A Few Final Words

Once you are familiar with some contemporary theories of health behavior, the challenge is to use these critical tools within a comprehensive planning process. Planning systems like Social Marketing and PRECEDE-PROCEED increase the odds of success by examining health and behavior at multiple levels. This ecological perspective emphasizes our two main options:

- Change people
- Change the environment

The most powerful approaches will use both of these options together. Both are essential for truly comprehensive programs. Note, in the box above, how the activities most directly tied to changing people are derived from individual-level theories. In contrast, activities aimed at changing the *environment* draw on community-level theories. In between is Social Learning Theory, which has at its core a focus on the reciprocal causation between individuals and their environments.

If you regard theoretical frameworks as guides in your pursuit of successful efforts, you will maximize your flexibility and develop an ability to *apply* the abstract concepts of theory in a way that is most useful in your work settings and situations.

A knowledge of theory and comprehensive planning systems offers much. Other key elements of effective programs to remember are: a good program-to-people match (goals, needs, culture, educational and reading levels); accessible how-to information; active learning and getting involved; and skill building, practice, and reinforcement. Theory helps you ask the right questions, and effective planning lets you zero in on these elements in relation to a specific problem.