EMERGING THEORIES IN HEALTH PROMOTION PRACTICE AND RESEARCH

CHAPTER

1

THEORY IN HEALTH PROMOTION PRACTICE AND RESEARCH

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PROMOTING HEALTHY BEHAVIOR

One commonly used definition of public health is "the science and art of protecting and improving community health through health education, promotion, research, and disease prevention strategies" (Association of Schools of Public Health, 2006). Notably important in this definition is that "public health" is not synonymous with "health care." Indeed, the lion's share of any health care system's resources is dedicated to providing clinical and diagnostic services. For example, in the United States, our health care budget exceeds $1 trillion annually; however, only about 1 percent is allocated to population-based prevention. A landmark report in the 1970s noted that health is based largely on human biology, environment, and lifestyle, with health care playing a much smaller role in preventing mortality (Lalonde, 1974). Although adequate health care services remain critical, equally critical are efforts to "move upstream" and prevent the causes of morbidity. Thus, public health adopts a proactive approach that is based solidly on the premise that health is a product of lifestyle, shaped heavily by social and physical environments. As such, diverse strategies can be employed to substantially alter risk behaviors and environments and, in so doing, markedly change the disease trajectory and reduce morbidity. The mission of public health is to fulfill "society's interest in assuring conditions in which people can be healthy" (IOM, 1998, page 7). This mission is based on the premise that multiple aspects of the environment (physical, economic, legal, political, cultural, and so on) act as powerful determinants of health as well as health-related behaviors. The differences between treating disease, as exemplified in the health care approach, versus modifying lifestyle and environments, as exemplified in a public health approach, have been eloquently described in a recent text entitled, *Prescription for a Healthy Nation* (Farley and Cohen, 2005).

The practice of public health, then, can be viewed as a diverse array of strategies, methods, and efforts that are designed to protect people by mitigating risk factors associated with morbidity and premature mortality and by creating environments that are conducive to healthy practices. Given that the basic purpose of public health practice is to prevent morbidity and premature mortality, it is important to have an understanding of the causes of disease, disability, and death. In a classic article, McGinnis and Foege (1993) articulated actual causes of death in the United States. A recent update of this work provides a foundation for understanding how changing health behavior can lead to improvements in the health of the public (Mokdad et al. 2004). The top ten "offenders" are shown below in descending order of importance.

- Tobacco use
- Poor diet and physical inactivity
- Alcohol use
- Infection with microbes
- Toxins
- Motor vehicle crashes

- Firearm trauma
- Sexual risk behaviors
- Illicit drug use

Consider just the first two actual causes of death. Collectively, tobacco use, poor diet, and physical inactivity account for about 35 percent of all premature deaths in the United States. The implications for public health are simple and obvious, yet the solutions are elusive and complex. It is obvious that the health of the public would be greatly improved if people would stop smoking and overeating and begin exercising on a routine basis. But identifying solutions to these health problems is "elusive and complex." Smoking, overeating, and sedentary lifestyles are culturally ingrained for many Americans. Moreover, private sector forces with vested fiscal interests have supported, reinforced, and promoted behaviors that are clearly deleterious to the health of Americans. The obvious question then is: Where does one even begin the seemingly insurmountable task of reversing this trend?

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Looking at the remainder of the items representing actual causes of death, it becomes apparent that changing health behavior is the likely turning point for protecting the public from harm. Even relatively "small" changes in health behavior may yield substantial benefits to public health.

For example, the simple elimination of table salt could result in a 20 percent nationwide decrease of stroke (Law et al., 1991). Of course, removing salt-shakers from all eating tables in the United States is a formidable challenge. Meeting this challenge involves providing health education about the health hazard of adding salt to foods and is contingent upon people's willingness to comply with this health-protective information, a type of "medical advice," when they feel perfectly healthy and, as important, have cultivated a taste for salt in their food. The question then becomes, are health promotion efforts always at the mercy of public acceptance? To answer this question, a second example is needed.

Tobacco use illustrates how even a seemingly small change in health behavior can yield substantive rewards in public health. In 1989, the state of California imposed a tax on the sale of cigarettes (25 cents per pack). Estimates suggest that this tax led to at least a 5 percent decline in tobacco use (Flewelling et al., 1992), to which, in the ensuing decade, the 20 percent decline in heart disease-related mortality was partly attributable (Fichtenberg et al., 2003). In this example, the change in health behavior was related to a carefully calibrated change in policy (increasing cigarette tax) as a means of discouraging use. The additional financial pressure exerted through the tax acted as a catalyst by providing a tangible, and important, incentive to reduce smoking.

Although vastly different from each other, the aforementioned examples regarding table salt elimination (a lifestyle change) and taxation of cigarettes (a change to the environment) illustrate that changes in health behavior can markedly effect reductions in morbidity and mortality. In fact, a nearly infinite number of health-protective behaviors could be listed. Many of these may be simple, one-time acts, such as testing your

home for radon or being vaccinated for diseases like tetanus or measles. Others may require periodic repetition, such as semi-annual dental cleanings, Pap testing, or screening for high cholesterol. However, the majority of health-protective behaviors require constant (often daily) repetition. Examples include: eating high-fiber, low-fat foods; drinking clean water; engaging in aerobic exercise, and maintaining musculoskeletal health through stretching and weight-bearing exercises. Many of the behaviors requiring constant repetition are avoidance behaviors, such as avoiding toxins in the environment (including environmental tobacco smoke); abstaining from the use of illicit drugs and the use of more than moderate amounts of alcohol; not using tobacco; not consuming foods associated with an increased risk of heart disease, cancer, or diabetes; and not engaging in unprotected sex that could lead to infection with sexually transmitted pathogens, including HIV. Still other repetitive behaviors entail daily habits such as safe driving practices and the intentional practice of home and workplace safety.

The profound role of **social determinants** in shaping health behavior is becoming increasingly apparent. The influence of social capital, for example, is well-documented. Culturally ingrained health-risk behaviors are common in every nation of the world and serve to remind us that social norms are powerful antecedents of health behavior. Entire epidemics can rightfully be said to proliferate as a consequence of unyielding adherence to socially accepted practices, as happened with the AIDS epidemic in that millions of people resisted advice to use condoms to prevent acquisition and transmission of HIV. With respect to chronic disease, two extremely critical health behaviors, diet and physical activity, are largely products of social customs, traditions, and norms. Given the strength of social determinants in shaping health behavior, the expanding role of macro-level theory in fostering the long-term adoption of health-protective behaviors is clearly a valuable asset to public health practice.

Regardless of the exact approach used, public health is achieved through carefully designed efforts to foster health-protective behavior, not through surgery or medicine. In the words of former Surgeon General C. Everett Koop, “Health care is vital to all of us some of the time, but public health is vital to all of us all of the time.” Thus, the mandate of public health is deeply rooted in the process of influencing people to adopt healthy behaviors. Herein lies the ultimate challenge to public health: “how can such change be achieved?” The answers to this fundamental question are nearly as infinite as the number of health behaviors; however, they all share one common thread—theory! Although theory is not a panacea, it has been embraced by the public health profession as a means of guiding investigation (research) and informing the content of health education and health promotion efforts.

THE ROLE OF THEORY IN HEALTH BEHAVIOR

Understanding the application of theory to changing health behavior requires mastery of a few fundamental concepts. This section of the chapter will begin by briefly addressing these.

Fundamental Concept 1: Theory Is Dynamic

Theories are seldom static; instead they change and evolve to better serve public health (Crosby, Kegler, and DiClemente, 2002). The evolution of theory refers generically to the discipline of health promotion rather than focusing on the improvements made within existing theories. For example, the concept of natural helper models is a relatively new method of effectively leveraging change in health behaviors. Rather than being an improvement over a previous version of a single theory, natural helper models represent a true innovation in the paradigm used to change behavior. Indeed, innovative paradigms are the seed of this evolutionary process. The evolutionary process is vital because the challenges in public health change, as do the populations served. As practice needs change, research is conducted to help identify new solutions in the form of health promotion strategies, methods, techniques, and policy. Theories are utilized to inform these solutions. Solutions are tested using rigorous evaluation methodologies designed to isolate and quantify the effect of the solution on health behavior. By identifying efficacious "solutions" and assessing the link between the underlying theory and behavior change, we strengthen the empirical evidence in support of theory. Theory, however, must also be able to accommodate new and emergent challenges to public health. Thus, theory must be capable of adapting to the needs imposed by established or emergent threats to public health.

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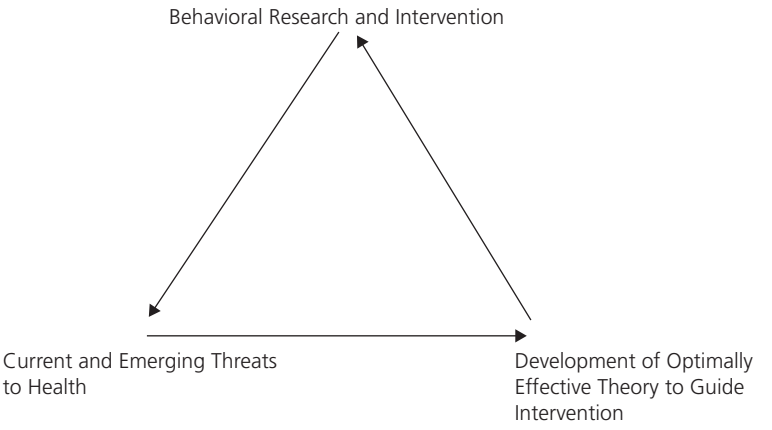
Theory cannot be rigid, simply because people and public health issues are diverse and continually evolve. This concept is illustrated in Figure 1.1.

Fundamental Concept 2: Theories Have Different Paradigms

A paradigm may or may not be something that is a recognized part of thinking and problem solving. Frequently, however, scholars may fail to recognize that their

FIGURE 1.1 *Relationship Between Theory, Research, and Practice in Public Health*

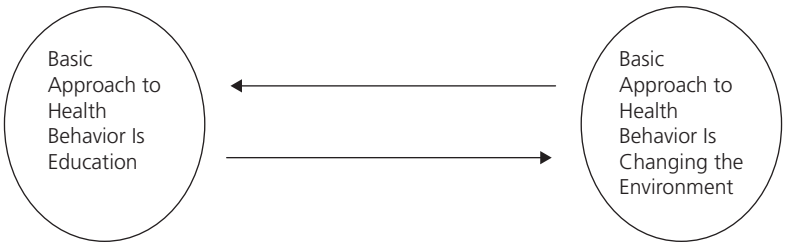


thinking is restricted by a given paradigm. In fact, paradigms can sometimes act as blinders, precluding alternative views. Consider, for example, the relatively common problem of hospital-acquired infections. One way to reduce the incidence of these infections is to ensure that all clinical staff thoroughly wash their hands between seeing patients. In an "education paradigm" the solution to this problem would be constantly reminding clinical staff about the problem of hospital-acquired infections and the benefits of thorough hand-washing. Unfortunately, this **education-based** paradigm often fails to solve the problem, and it offers no other solution beyond intensifying education efforts. Now, consider an **ecological approach** as an alternative paradigm. Ecological approaches to health behavior change go beyond education by actions such as influencing social norms, building community infrastructures, providing skills and resources that people need to practice healthy behaviors, and by making changes to the physical, economic, legal, political, and cultural environment. Actions that may result from this paradigm might then lead to the discovery that clinical staff members are frequently "pressed for time," to the point that traversing a long hospital hallway to wash their hands is inconvenient. One potential solution would be installing large hand-washing stations along the hallway to reduce the distance staff have to travel, thus enhancing convenience and, as a direct outcome, hand-washing behavior.

The two examples reflect different perspectives on how best to catalyze behavior change and represent opposing ends on a continuum of theory, as illustrated in Figure 1.2.

Health promotion is exciting because it is dynamic. For example, rather than implementing a staff educational campaign alone or modifying the hospital environment alone, a more effective approach may involve both a change in hospital environment and concomitant staff education regarding the benefits of hand-washing. Together, modification of the hospital environment and staff education may be more effective at promoting the desired behavior change than either strategy alone. Creatively designing "solutions" to enhance health implies the necessity of understanding the barriers to adopting health-protective behaviors. It also means developing new strategies to inform and motivate individuals and manipulate social/environmental contingencies to catalyze the long-term adoption of health-protective behaviors.

FIGURE 1.2 *A Continuum of Theory*



Fundamental Concept 3: Theories Have Multiple Functions

Students of behavioral theory have often raised inquiries such as "Why couldn't there be just one theory that does it all?" or "Would it be possible to know just one or two theories really well and still serve the goals of public health?" Unfortunately, the answer to both questions would be "no," simply because theory aids public health intervention efforts in multiple ways, depending on the specified objectives to be achieved.

A convenient way to think about any intervention effort is to view the process as occurring in three sequential phases. The first phase would be to ask and empirically answer two fundamentally discrete, though related, questions: (1) Why do people engage in behaviors that increase their risk for adverse health outcomes; and (2) What factors predict adoption of health-protective behaviors? For convenience, we can refer to the first phase as the "why" phase. In this phase of the overall effort to develop an effective health promotion program, the program objectives will be developed based on theory-guided investigation.

The next phase involves understanding how people go about the somewhat cumbersome process of actually adopting, performing, and possibly repeating the health-protective behavior in question. For convenience, we can refer to this as the "how" phase. In this phase the content of the health promotion program will be developed. Content refers to the strategies, techniques, and methods that will be employed to achieve the objectives. Stated differently, the content is the specific "action plan" to help people adopt and maintain health-protective behavior. Development of the specific action plan or program content is, of course, critically important, loosely analogous to a "drug" in medicine. For all intents and purposes, the program content is the "active ingredient" that catalyzes behavior change. Thus, substantial time and resources are dedicated to developing program content. The end product of this stage is usually an action plan or intervention manual that spells out in great detail the program content in a step-by-step plan for achieving the objectives identified in the "why" phase.

Fundamental Concept 4: Theory Guided Planning

Health promotion programs generally follow a well-established and sequential process that is generically known as program planning. This process begins with a needs assessment of individuals and their community. Broadly speaking, these assessments seek to understand the "why" phase previously described. Community assessments include extensive identification of physical, social, legal, cultural, economic, and policy-related factors that may be related to the health behaviors in question. **Theory-based planning frameworks** can be used to guide these assessments, which in turn can be used to plan the action steps of the health promotion program.

One example of a planning model is PRECEDE-PROCEED (Green and Kreuter, 2005). In this approach to planning, assessment of the social context and general quality-of-life indicators in a community is considered a first and paramount step.

Assessment at multiple levels leads to identification of important and "changeable" behaviors and environments, as well as identification of predisposing, reinforcing, and enabling factors related to the priority health behaviors. The planning process then shifts focus to examine the relevant policy, regulation, and organizational factors that can be changed or used in any way to influence the predisposing, reinforcing, or enabling factors. Moreover, the planning framework provides for the use of behavioral theory to guide the process of changing these factors. Different theories may be used in combination to target the full range of factors that affect the health behavior. In essence, theory-guided planning frameworks, such as PRECEDE-PROCEED, provide a "blueprint" for health promotion specialists to follow.

Ultimately, the blueprint created through the process of theory-guided program planning yields a set of criteria that can be used to evaluate the effectiveness of both the process and the targeted outcomes. Indeed, evaluation is the mainstay of planning, as it is the only mechanism that provides corrective feedback to the health promotion program and the various objectives specified by the blueprint.

Theory and evaluation are inexorably linked; the choice of theory-guided planning models then has direct implications for what to measure in an evaluation. For example, if a community-needs assessment finds that elderly residents of an urban area are largely sedentary because they feel threatened by crime when they leave their homes, then one objective of the planned program may be to construct designated and secure recreational areas for these elderly residents. Process objectives tied to this larger objective can readily become the target of evaluation efforts. One process objective might be the formation and maintenance of a community coalition that advocates for public funding to build secure recreational areas. The formation, functionality, and ongoing level of effort from this coalition can each be measured, and can serve as a part of a larger evaluation process. Theories can also help to identify a program's model of change, as well as specific outcome objectives that can be measured in an evaluation, such as increased self-efficacy or increased behavioral intention to exercise.

Fundamental Concept 5: Theory Is a Tool

Much like biostatistics, theory is a necessary system of thinking needed to efficiently understand and address public health problems. It is a means to an end, with the "end" being some form of tangible benefit to public health. As a tool, then, this volume may be viewed as a repository of the emerging theories and models used in the trade of health promotion. The selection of a single "tool" is rarely, if ever, adequate. Thus, the wise professional will be dedicated to a working knowledge of multiple tools to better meet the diversity of prevention opportunities in health promotion practice. Theories, as a set of tools, have the potential to facilitate or streamline the planning process. Indeed, nearly every prevention opportunity will have a corresponding theory (or theories) that can greatly aid the task of intervention development and dissemination.

Theory, research, and practice are interrelated. As theory-guided practice and research unfold, empirical findings subsequently suggest needed refinements in the theory that was applied (Jenson, 1999).

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Although the evolution of theory is an expected and desirable consequence of research and practice, one inherent difficulty is conveying the substance of these emerging theories to health-promotion professionals. The purpose of this volume is to provide the reader with an understanding of new developments in the field of behavioral and social science theory as applied to health promotion practice and research. Because the discipline of health promotion is newly emerging and transdisciplinary, it does not have a long legacy of scientific theory, principles, and axioms to provide a foundation for informing research relative to other social and behavioral sciences. The range of theoretical approaches in health promotion practice is a reflection of the discipline itself, eclectic and diverse. Theoretical approaches from a broad spectrum of disciplines have been utilized. Indeed, health promotion is currently a highly diverse and interdisciplinary field of practice and research. This diversity is important because advances in health promotion are most readily made through the use of interdisciplinary approaches. In a sense, theory can be viewed as a focal point that brings this diversity into a unified set of propositions about people and their health behaviors.

Although theory is not a panacea, it does provide a conceptual framework for selecting key constructs hypothesized to influence health behavior and, as such, provides a foundation for empirical investigations, intervention development, implementation, and evaluation. Theory also facilitates the complex process of organizing and understanding information obtained from these efforts. In addition, theory provides a useful reference point to help keep research and implementation activities clearly focused.

With increasing recognition that morbidity and mortality, for both adolescents and adults, are predominantly linked to behavioral and social factors (Smedley and Syme, 2000), the role of behavioral and social science theory in public health becomes paramount. In the coming years, noncommunicable disease (for example, tobacco-associated coronary heart and pulmonary disease and malignancies) will account for an increasingly larger proportion of the global disease burden. Fortunately, these diseases are typically amenable to behavioral and social interventions. Communicable diseases (for example, HIV and tuberculosis) and emerging communicable diseases (for example, Lyme disease and pulmonary hantavirus) may also require solutions that include modification of behavioral and social factors; the HIV epidemic is a primary example. Thus, there is a continual need to expand and refine theories that may ultimately prove valuable in informing and guiding the design and implementation of health promotion programs. As described in this volume, theory expansion and refinement is occurring in response to accumulating empirical evidence obtained through research and evaluation, in combination with the iterative process of theory development and testing.

A TRAJECTORY OF THEORY DEVELOPMENT

Theory development is a dynamic process. Systematic and consistent use of theory across a range of behaviors, populations, and settings is necessary to advance the science of health promotion.

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Robust theories are flexible, accommodating a wide range of populations with different cultural perspectives. Constantly reevaluating the explanatory and predictive capacity of theory allows the discipline of health promotion to grow and mature. By definition, any maturational process involves change. Thus, as theories become less useful (that is, they explain an insufficient amount of variance, particularly in risk behaviors) or are found wanting as a foundation for guiding the design and implementation of behavior change interventions, they are modified or even discarded in favor of potentially more useful theories. This process of development, evaluation, elimination/refinement, and replacement is incremental. As new theories are synthesized and embraced, they too are subject to empirical validation and, if found lacking, are similarly discarded.

Individual-Level Approaches

Traditionally, behavioral and social science theories tended to focus on identifying, quantifying, and understanding the impact of individual-level determinants of specific health behaviors. For example, the health belief model, the theory of reasoned action, and the theory of planned behavior have been widely applied to health issues such as vaccine acceptance (Armstrong, Berlin, Schwartz, et al. 2001; Liau and Zimet 2000; Zimet, Blythe, and Fortenberry, 2000), understanding why people do not adopt HIV-protective behaviors (see Fisher and Fisher, 2000 for a review), and what psychosocial factors predict mammography use (Michels et al., 1995; Montano, Kasprzyk, and Taplin, 1997). Theories have also been developed to guide intervention programs that target individual-level determinants of health behavior (for example, the Transtheoretical Model).

In many respects, **individual-level theories** have dominated health promotion efforts. For example, Waldo and Coates (2000) noted, that "Virtually all of the psychological theories that have been applied to explain HIV risk behavior locate it at the individual level" (page S24). Possible reasons for the widespread use of individual-level theories may be that: (1) they tacitly posit the individual as the key decision-maker responsible for his or her health and, as a corollary, individuals can implement changes to enhance their health; (2) they assume that people value good health and will make the necessary changes to reduce behaviors associated with adverse health outcomes; (3) they assume that behavior is under volitional control; (4) they assume that cognitive predisposition (that is, beliefs, attitudes, and perceptions) drives health behavior; (5) they entail relatively manageable study designs and data analytic procedures (for example, the randomized, controlled clinical trial design can be used to test the efficacy of interventions delivered to individuals and small groups); (6) a substantial proportion of health promotion researchers are trained in psychology, a discipline that traditionally focuses on cognitive processes as a cornerstone of individual-level change; and (7) the accumulating empirical evidence suggests that theory-based, individual-level approaches to changing health behaviors can be effective. Given the popularity of this approach and the wealth of associated theories, researchers have

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continued the quest to develop and improve individual-level behavioral theories. One such example is the information-motivation-behavioral skills model (**Chapter Two** of this volume) that represents an eloquent synthesis of many of the individual-level theories that preceded this model.

Although many well-established individual-level theories have been refined, others have been newly created, based largely on the lessons learned from application of the established theories. An example of this is social influence theory, found in **Chapter Three** of this volume. Self-esteem enhancement theory (**Chapter Four**) and conservation of resources theory (**Chapter Five**) are two important innovations on traditional individual-level approaches that have great potential for application in health promotion research and practice. The former aims to build resilience in people, thereby conferring protection against health-compromising behaviors; the latter is designed for application with populations experiencing extreme stress or trauma. Yet another example is self-determination theory (**Chapter Six**), which is predicated on the humanistic perspective that people are inherently seeking growth and health. The next chapter in this first section provides insight into how people change their attitudes toward given health behaviors as a product of exposure to messages promulgated through mass media (**Chapter Seven**). The final chapter in this section provides an example of a theory (the theory of reasoned action) that has effectively changed to better predict health-related behaviors: The integrative model for behavioral prediction (**Chapter Eight**) includes the extremely important construct of self-efficacy in addition to the previous constructs of attitude toward the behavioral and subjective norms.

While the repertoire of individual-level theories has been expanding, researchers have questioned the wisdom of relying exclusively on individual-level approaches to achieve substantive changes in health behavior and, as important, sustain these changes over time in the face of countervailing social influences and pressures (McLeroy, Bibeau, Steckler, and Glanz, 1988; Rutten 1995; Salis and Owen, 1997; Smedley and Syme, 2000). Thus, **community-based approaches** are an important complement or alternative to individual-level approaches.

Community-Based Approaches

Community-based approaches and associated theories that transcend the individual level have been much more difficult to develop, refine, make operational, and evaluate. Yet they hold great potential to promote and support health behavior change and the long-term maintenance of newly adopted health behaviors necessary to achieve reductions in morbidity and mortality. It is important to realize that theories applied at this level seek to utilize the strength of local leaders and the "will" of the public (or key sectors in a community) to leverage changes in social norms, local policy, and community practices that will ultimately lead to changes in health behavior. The principles of these approaches are often used without formal recognition of an underlying theory or model. One of the best examples is the global work conducted by the Carter Center to eradicate dracunculiasis (Guinea worm). The prevention challenge with this disease

was that all community residents needed to filter their drinking water through finely woven cloth. A second, and equally daunting, challenge was to keep people with Guinea worms from wading in the waters that others would eventually drink. Yet another challenge was to convince local residents that treating water supplies with a commercially produced pesticide would avert future cases of Guinea worm infection. Each of these challenges was met—in communities across countries such as Kenya, India, Senegal, Yemen, Cameroon, and Chad—through skilled negotiation with community leaders combined with the assistance of local volunteers to educate community residents about preventive measures and to distribute needed supplies (Carter, 2007).

The principles used by the Carter Center in this and many of their other disease prevention efforts are covered in the section of this volume delineating various community-based approaches to health promotion. Paramount among these are coalition theory (**Chapter Nine**), and the concept of developing community capacity (**Chapter Ten**). Natural helper models (**Chapter Eleven**) are then described as a method of enhancing the implementation of prevention plans created through community efforts. The final chapter of this section (**Chapter Twelve**) provides a framework for using the principles of community-based health promotion in conjunction with the individual-level theories described in the previous section and in conjunction with principles from the field of marketing. Given the mandate of health promotion to effect behavioral and environmental changes in the United States and globally, these emerging community-based approaches have substantial implications for public health practice.

Ecological Approaches

Some theories shift the intervention emphasis from the individual to the environment. In this paradigm, behavior is viewed as a product of society's rules and regulations. These theories typically seek to change policy- and social-level determinants of health. Although the obstacles to achieving these changes are often formidable, the potential for influencing large numbers of people is substantial. Examples of this type of approach include mandatory installation of car air bags (Loo, Siegel, Dischinger, et al., 1996), tax levies on tobacco and alcohol that have resulted in lower consumption (Chaloupka, Grossman, and Saffer, 2002; Cook and Tauchen, 1982; Lee, 2007; Meier and Licari, 1997), and the widespread success of bans on smoking in public places (Sargent, Shepard, and Glantz, 2004; Siegel, Albers, Cheng, Biener, and Rigotti, 2005).

In the third section of this volume several emerging ecological approaches to health promotion are described. This adaptation aptly illustrates the principle that ecological approaches can embody principles from community-based approaches, as well as principles from individual-level approaches. For example, Ewart's social action theory (**Chapter Thirteen**) provides an eloquent synthesis of all three approaches to changing health behaviors. Next, the theory of gender and power is described (**Chapter Fourteen**) as an ecological approach to disease prevention with global implications, given the widespread prevalence of patriarchal societies and the continued repression of women. Although the changes in culture and policy necessitated by

this theory are immense, the potential for long-term payoffs in public health is tremendous. The behavioral ecological model (**Chapter Fifteen**) provides an equally important theory that functions at a super-structural level to shape behavior using principles from operant learning. Next, the theory of triadic influence (**Chapter Sixteen**) is presented. This theory draws on the academic disciplines of health education, social psychology, developmental psychology, sociology, and education, as well as general systems theories. The theory considers influence on behaviors emanating from intrapersonal, interpersonal, and sociocultural levels (again illustrating that ecological approaches do not necessarily preclude a focus on the individual level or the community level). In **Chapter Seventeen**, the interactive domain model is presented. This model posits that several domains and subdomains interact in the context of the sociopolitical, economic, psychological, and physical environments. Finally, **Chapter Eighteen** describes a planning model developed and used by the World Health Organization in more than fifty countries. The approach—known as communication for behavioral impact—is predicated on social mobilization, combined with principles from the disciplines of communication and social marketing.

THE UTILITY OF EMERGING THEORIES AND APPROACHES

The brief description of theory development suggests that the range of theories available for application in health promotion is rapidly expanding. We view this expansion as a positive development. Indeed, increasing the range of theories (that is, "tools") can lead to more options for practitioners and researchers alike, which may culminate in better theory selection. In turn, improved selection can optimize the ability of any program to mitigate health risk behaviors and subsequently promote protective behaviors.

Every level of theory (individual, community, and ecological) has utility and no one level is inherently "better" than another. Instead, the "best theory" is a function of how well it serves the objectives that must be met to achieve sustainable protective behaviors among a specified population. In essence, the range of behavioral and social science theories available for both health promotion practice and research affords the practitioner and researcher an opportunity to select the theories that are the most appropriate, feasible, and practical for a particular setting or population. Because global populations are extremely diverse in almost every conceivable respect, theory must be flexible and capable of adaptation.

Although this volume is not an exhaustive review of emerging theories, we believe it represents a well-rounded picture of new thinking and new applications of theory for health promotion practice and research. Given the rapid escalation of health care costs in many industrialized nations, and the nearly complete lack of health care in many other economically disadvantaged nations, prioritization of "prevention" over "treatment" may be an economic imperative. Consequently, this volume represents one step forward in the progress of public health toward the goal of preserving quality and quantity of life.

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SUMMARY

The rapidly changing landscapes of public health practice necessitate continued refinement of theory-based approaches to prevention. To serve public health effectively, theories need to be flexible, and capable of accommodating new ideas. Moreover, the evolution of theory should be passionately embraced by professionals, as doing so will greatly contribute to the overall effectiveness of health promotion efforts. Finally, it is vital to understand that theory can be an effective tool at multiple levels of influence, including the individual level, the community level, and the much broader ecological level.

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