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PLANNING HEALTH PROMOTION PROGRAMS

AN INTERVENTION MAPPING APPROACH

FOURTH EDITION

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Fourth Edition

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An instructor's supplement, which includes case studies, PowerPoint lecture slides, and student assessments, is available at http://www.wiley.com/go/bartholomew4e. Please follow the URL and select the link for "Companion Site" in the "For Instructors" box. You will be instructed to sign-up and then a Wiley representative will contact you and provide you with access to the site. Additional materials, such as videos, podcasts, and readings, can be found at www.josseybasspublichealth.com. Comments about this book are invited and can be sent to publichealth@wiley.com.

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PART ONE

FOUNDATIONS

CHAPTER 1

OVERVIEW OF INTERVENTION MAPPING

Competency

- Choose and use a systematic approach to planning health promotion programs.

In this chapter we present the perspectives underlying Intervention Mapping and a preview of the program-planning framework. The purpose of Intervention Mapping is to provide health promotion program planners with a framework for effective decision making at each step in intervention planning, implementation, and evaluation. Health promotion has been defined as combinations of educational, political, regulatory, and organizational supports for behavior and environmental changes that are conducive to health (Green & Kreuter, 2005), and health education is a subset of health promotion applications that are primarily based on education. This book uses the terms *health educator, health promoter,* and *program planner* interchangeably to mean someone who is planning an intervention meant to produce health outcomes. One difficulty which planners may encounter is that of knowing exactly how to create health promotion or education programs that are based on theory, empirical findings from the literature, and data collected from a population. Existing literature, appropriate theories, and additional research data are basic tools for any health educator, but often it is unclear how and where these tools should be used in program planning. In Intervention Mapping, these tools are systematically applied in each step of program development.

LEARNING OBJECTIVES AND TASKS

- Explain the rationale for a systematic approach to intervention development
- Describe ecological and systems approaches to intervention development
- Explain the causal logic of public health problems and solutions
- List the steps, tasks, and processes of Intervention Mapping
- Explain how to use theory and evidence in intervention development

BOX 1.1. MAYOR'S PROJECT

Imagine a health promoter in a city health department. The city's mayor, who has recently received strong criticism for inattention to a number of critical health issues, has now announced that a local foundation has agreed to work with the city to provide funding to address health issues. Youth violence, childhood obesity, adolescent smoking, and other substance abuse as well as the high incidence of HIV/AIDS are among the many issues competing for the mayor's attention. Not only does the allocated sum of money represent a gross underestimation of what is needed to address these issues, but also the city council is strongly divided on which health issue should receive priority. Council members do agree, however, that to dilute effort among the different issues would be a questionable decision, likely resulting in little or no impact on any single issue. As a response to increasing pressures, the mayor makes a bold political move and invites stakeholders who have advocated for these health issues and others to work with the health department to decide on the issue that should be chosen and to build and implement an intervention. The mayor agrees to help secure yearly funds, contingent on the project's effectiveness in producing significant, measurable improvements in the chosen issue at the end of each fiscal year.

The health promoter is to be the project lead from the city health department. Although she is apprehensive about the professional challenge as well as the complications inherent in facilitating a highly visible, political project, the health promoter feels encouraged by the prospect of working with community and public health leaders and is energized by the possibilities in the new project.

The first step the health promoter takes is to put together the planning group for the project. She considers the stakeholders concerned with health in the city. These are individuals, groups, or other entities that can affect or be affected by whatever project is chosen. She develops a list of community, health services, and public health leaders and invites these individuals to an initial meeting where they will discuss the project and make plans to expand this core group. She uses a "snowball" approach whereby each attendee suggests other community members who may be interested in this project. The superintendent of schools begins the process by suggesting interested parents, teachers, and administrators. After the first meeting, the health educator has a list of 25 people to invite to join the planning group.

Twenty-five people is a lot for one group, and the project lead knows that this multifaceted group will have to develop a common vocabulary and understanding, work toward consensus to make decisions, maintain respect during conflicts, and involve additional people throughout the community in the process. Members must be engaged, create working groups, believe that the effort is a partnership and not an involuntary mandate, and work toward sustainability of the project (Becker, Israel, & Allen, 2005; Cavanaugh & Cheney, 2002; Economos & Irish-Hauser, 2007; Faridi, Grunbaum, Gray, Franks, & Simoes, 2007).

The composition of the city's planning group is diverse, and group members are spurred by the mayor's challenge and enthusiastic to contribute their expertise. With this early momentum, the group devotes several weeks to a needs assessment, guided by the PRECEDE model (Green

& Kreuter, 1999). The members consider the various quality-of-life issues relevant to each of the health problems, the segments of the population affected by each issue, associated environmental and behavioral risk factors for each health problem, and determinants of the risk factors.

Planning group members recognize the importance of all of the health issues discussed by the group, and they want to work with community members to ascertain what problem might be most relevant to the community and most feasible to address. Even though the planning group comprises many segments of the city's leadership, health sector, and neighborhoods, the members realize that they do not have a deep enough understanding of what health problems might be of most relevance in their community. A subgroup takes on the role of community liaison to meet with members of various communities within the city to discuss health problems. The community liaison group wants to understand community members' perceptions of their needs, but it is equally concerned with understanding the strengths of the communities and their unique potential contributions to a partnership to tackle a health problem. The subgroup invites members of each interested neighborhood to join the planning group. Jointly, the planning group, the communities, and the funders agree to select a problem as the focus of an intervention. The health promoter knows that with a group this large she will have to strategize about using smaller work groups for different tasks. However, knowing the history of the city and the feeling of some stakeholder groups that they are often excluded from initiatives, she welcomes all interested participants.

The group's initial work on the needs assessment identifies childhood obesity as an important problem, one that the community members could agree to work on, and one that disproportionately affects lower-income and minority children. This initial work facilitates group cohesion and cultivates even greater enthusiasm about generating a solution for the health problem; however, despite the considerable needs assessment work that remains to be done (see Mayor's Project, Chapter 4), several members of the group even begin to imagine the victory that would be had if the group were to produce a change in half the allotted time because so much of the needed background information has already been gathered. The project lead knows that there remains a lot of work to be done but is comfortable with the group's enthusiasm as well as their pace and productivity. Once the group decides which issue to address, it faces the challenge of moving to the program-planning phase. In her previous work the health promoter used Intervention Mapping to develop programs and felt fairly confident about scheduling the first planning meeting devoted specifically to intervention.

What the health promoter hasn't anticipated is that in the course of conducting the initial part of the needs assessment, each group member independently began to conceive of the next step in the planning process as well as to visualize the kind of intervention that would be most suitable to address the problem. The day of the meeting arrives, and on the agenda is a discussion of how the group should begin program planning. What follows is a snapshot of dialogue from the planning group that illustrates several differing perspectives.

School Board Member: As we see from the work of our community liaison group, parents are concerned about obesity in children. According to community development techniques, we have to start where the people are. I think we should begin by conducting a series of focus groups with parents and have them tell us what to do.

City Council Representative: But we also heard a lot about the barriers to eating good food and exercising. Some of these barriers are environmental. I think we ought to develop a program for the Department of Parks and Recreation.

Community Member Parent: Well, I think a school-based program is most important. Our children need to learn what to eat.

Community Member/Teacher: Yes, children do have a role. Helping children make nutritious choices is important, but what about the quality of food they are served at home and in the schools?

Community Agency Participant: I think the program should focus on excess television watching and sedentary behavior. All community members just need to get up and move!

Parks and Recreation Representative: We are talking about one dimension of the problem at a time. This is a very big, very complicated problem. How will we ever address everything? Maybe it is just too big. Maybe we need to take on a simpler problem.

Religious Leader: Well, it is big. Maybe we will need an agency coordinator. I say we find a nonprofit group to serve as a community coordinating center from which various interventions and services can be implemented. That way, programs are sustainable and a variety of activities can be offered.

Youth Club Board Member: One of the national obesity programs has great brochures and videos—in three languages. We have numerous testimonials from kids, teachers, and parents about how motivated they were by these interventions. This approach is quick and easy; it's low cost; and I've already made sure we can get the materials. Plus, if the materials come from a national center, they must be effective.

Community Member: But, are those materials really powerful enough? It seems like a problem as complex as obesity would have to be addressed in many different ways. For example, what about the food service providers in schools? I think we have to think more carefully about how to address the many factors that may be causing this problem and making it hard to solve.

Health Care Provider: We know it takes more than learning information to change behavior. We have to address factors such as attitudes and self-efficacy. But how do we measure a change in attitudes? I think we should measure behavior directly.

Educator: Well, clearly we have to begin by designing a curriculum. What are our learning objectives?

The health promoter is worried but undeterred by the cacophony of comments about program development. She is prepared to lead group members through a series of systematic steps to construct the intervention and realizes that the group could work through their differences in the process. She is pleased to have a group with so much cumulative experience. The planning group decides to complete the needs assessment by organizing the information about obesity using an effective model that has been applied to many health issues (Green & Kreuter, 2005). (See Intervention Mapping [IM] Step 1, Chapter 4.) The members agree to take an ecological perspective, that is, the belief that most health problems are multidetermined and that one must intervene at individual, organizational, community, and societal levels to resolve a problem (Kok, Gottlieb, Commers, & Smerecnik, 2008). But, as the group dialogue indicates, each group member brought a different set of experiences and training to the meeting. This is a common experience in group activities. Each member makes an important and relevant contribution worthy of consideration in the creation of the intervention. To help the group move to solutions to the problem that they describe in the needs assessment, they will specify behavior and environmental conditions that should change and also the determinants of the desired change (IM Step 2, Chapter 5); design an intervention, including theory- and evidence-based change methods and applications (IM Step 3, Chapter 6); produce a deliverable program (IM Step 4, Chapter 7) and specify how it will be implemented (IM Step 5, Chapter 8); and make plans for program evaluation (IM Step 6, Chapter 9).

Perspectives

Intervention Mapping is a planning approach that is based on using theory and evidence as foundations for taking an ecological approach to assessing and intervening in health problems and engendering community participation.

Theory and Evidence

We agree with Kurt Lewin's adage that nothing is as useful as a good theory (Hochbaum, Sorenson, & Lorig, 1992). The use of theory is necessary in evidence-informed health promotion to ensure that we can describe and address the factors that cause health problems and the methods to achieve change. Teachers of health promotion and education suggest that the field would be well served with better guidance in how to use theory to understand health and social problems (DiClemente, Salazar, & Crosby, 2011; Glanz & Bishop, 2010; Glanz, Rimer, & Viswanath, 2015; Jones &

Donovan, 2004). In the text, we address this need by providing guidance on the how-to of theory selection and use (Brug, Oenema, & Ferreira, 2005).

In Intervention Mapping we use theory from a problem-driven perspective. Program planners, even those who are primarily researchers, often approach theory in a way that is fundamentally different from either theory generation or single theory-testing. A person who wants to find a solution to a public health problem has a different task from one who wants to create or test a theory. In practice, problem-driven, applied behavioral or social science may use one theory or multiple theories, empirical evidence, and new research to assess a problem and to solve or prevent a problem. In this approach, the main focus is on problem solving, and the criteria for success are formulated as outcomes related to the problem. Contributions to theory development may be quite useful, but they are peripheral to the problem-solving process.

Choices have to be made when developing an intervention, and theories are one tool to enable planners to make better choices. Health promotion planners are likely to bring multiple theoretical and experiential perspectives to a problem rather than to define a practice or research agenda around a specific theoretical approach. To understand a problem, the planning team begins with a question about a specific health or social problem (Buunk & Van Vugt, 2013; Ruiter, Massar, Van Vugt, & Kok, 2012). The team then accesses social and behavioral science theories and research evidence of causation of the health problem and its behavioral and environmental contributors. Causal theories help describe the health problem and its causes. Change theories suggest approaches to problem solutions. The planner then proceeds to gather evidence for the factors theory suggests. By the term *evidence,* we mean not only data from research studies as represented in the scientific literature but also the opinion and experience of community members and planners. In this way, theoretical and empirical evidence is brought to bear on meeting a health or social need. Intervention Mapping provides a detailed framework for this process.

Ecological Models and Systems Thinking

The social ecological model, an underpinning for Intervention Mapping, has been used extensively in health promotion and is consonant with and encompassed by systems thinking (Kok et al., 2008; *American Journal of Community Psychology*, 2007; McLeroy, 2006; National Cancer Institute, 2007; Trochim, Cabrera, Milstein, Gallagher, & Leischow, 2006). In the social ecological model, health is a function of individuals and of the environments in which individuals live, including family, social networks, organizations, communities, and societies (Berkman, Kawachi, & Glymour, 2014; Crosby, Salazar, & DiClemente, 2011; Marmot, 2000; Richard, Gauvin, & Raine, 2011; Stokols, 1996).

A system is activities, actors, and settings that are affected by or affect a certain problem situation (Foster-Fishman, Nowell, & Yang, 2007). Using a systems perspective to assess the needs and strengths of the population; to understand a health problem and its causes; to form a group of stakeholders to plan, conduct, and disseminate an intervention; and to select the most effective leverage points to address a health-related problem can increase the effectiveness of planning. In particular, planners should understand that interventions are events in systems and that other factors within a system can reinforce or dampen the influence of an intervention on the specific behavior or environmental change being targeted (Hawe, Shiell, & Riley, 2009). See Chapter 3.

The social ecological paradigm focuses on the interrelationships between individuals (biological, psychological, and behavioral characteristics) and their environments. These environments include physical, social, and cultural aspects that exist across the individual's life domains and social settings. A nested structure of environments allows for multiple influences both within levels and across levels. Throughout the book, we have adopted the approach of D. G. Simons-Morton, B. G. Simons-Morton, Parcel, and Bunker (1988) of looking at agents (decision makers or role actors) at each ecological level: interpersonal (e.g., parents), organizational (e.g., managers of school food services), community (e.g., newspaper editors), or societal (e.g., legislators). Interventions at the various levels focus on agents (individuals or groups, such as boards or committees) in positions to exercise control over aspects of the environment. For example, adolescent uptake of smoking might be influenced by peers and parents at the interpersonal level of environment and by regulations and access at the social and community levels of environment. The picture that emerges is a complex web or system of causation as well as a rich context for intervention.

We present, as a beginning point, a template for simple, linear logic models focusing on the presumed cause-effect pathways related to health problems and their solutions articulated from theory and empirical research (Bartholomew & Mullen, 2011). See Chapter 4. However, we encourage the reader to adapt the logic model template to the complexity of the problem being analyzed, and we assume that the intervention, the system activity being targeted, and the proposed outcome are part of a complex multilevel system. An intervention at one environmental level can influence causal factors at multiple levels. For example, a program to conduct health-related lobbying may influence a legislative behavior (passing laws) that may influence individual health behavior. In illustration, one of our colleagues worked with a coalition in a large metropolitan area to use media and social advocacy to influence the police department and the U.S. Department of Labor to crack down on the use of young Hispanic children as dancers in bars and nightclubs (an activity that can lead to such health risk

behaviors as substance abuse and prostitution). Once policy-level change occurred, parents expressed more resolve to manage their children.

Participation in Health Promotion Planning

All health promotion program development, implementation, and evaluation should be based on broad participation of community members (Israel et al., 2008; Krieger et al., 2002; Minkler, 2004, 2005; Minkler, Thompson, Bell, Rose, & Redman, 2002; Wallerstein & Duran, 2006; Yoo et al., 2004). Inclusive community participation helps ensure that program focus reflects concerns for the local community. Broad participation can bring a greater breadth of skills, knowledge, and expertise to a project and can improve external validity of interventions and evaluation by recognition of the local knowledge of community members and practitioners (Israel, Schulz, Parker, & Becker, 1998; Israel et al., 2008). Green and Mercer (2001) also suggested that evidence-based health promotion interventions may be more acceptable to communities and potential participants when the research that has produced the evidence does not originate under special circumstances in distant places. In a discussion of environmental health promotion, Kreuter, De Rosa, Howze, and Baldwin (2004) described community participation as particularly important for

> "wicked problems" wherein stakeholders may have conflicting interpretations of the problem and the science behind it, as well as different values, goals and life experiences. Accordingly, policy makers, public health professionals, and other stakeholders who grapple with these problems cannot expect to effectively resolve them by relying solely on expert-driven approaches to problem solving. (p. 441)

Planners can benefit greatly by applying principles for facilitating participatory action and partnerships suggested by Israel and colleagues (1998, 2008) and used by others to evaluate community-based participatory program efforts (Belansky, Cutforth, Chavez, Waters, & Bartlett-Horch, 2011; Horn, McCracken, Dino, & Brayboy, 2008; Israel et al., 2005 (see Chapter 4). Their principles are to:

- Recognize a partner community as a unit of identity
- Build upon community strengths and resources
- Facilitate collaborative, equitable decision making in which partners negotiate desired roles in all project phases and attend to social inequalities
- Foster colearning among partners
- Balance knowledge generation with community benefit