

# Behavioral Theories and Conceptual Frameworks Used in the 5 A Day for Better Health Program

This appendix is provided as a primer to briefly define the major concepts (constructs) of the theories used in the 5 A Day outcome evaluation projects. The theories are grouped into three model categories: individual behavior, interpersonal behavior, and community and group intervention.

## **MODEL OF INDIVIDUAL BEHAVIOR: TRANSTHEORETICAL MODEL**

The Transtheoretical/Stages-of-Change Model emerged from the field of psychology as an attempt to systematically integrate constructs (or concepts) across a large number of theories. An important part of the theory is the construct of stage. The model postulates that as people change a given behavior, they move through six stages, although not necessarily in a linear fashion:

- People in precontemplation, the earliest stage, are not yet aware that there may be a need to make a change, or they may have firmly decided that they do not want to make a change. People in this stage are unmotivated.
- Individuals in the contemplation stage are thinking about change and intend to make a change within the next 6 months. People in this stage may be ambivalent.
- People in the preparation stage intend to take action in the immediate future, usually within the next month.

- Individuals in the action stage have begun to make changes.
- Individuals in the maintenance stage have practiced the behavior for at least 6 months and are on their way to creating a new habit.
- People in relapse may have temporarily fallen back into old habits and can re-enter the cycle at any stage.

Other constructs from the model that are sometimes applied include decisional balance, self-efficacy (see below), and processes of change (Glanz et al., 1997). Across the 5 A Day studies that used this stage model, the stages were consistently applied through a common algorithm (Campbell et al., 1999).

## **MODELS OF INTERPERSONAL BEHAVIOR**

### **Social Cognitive Theory**

Bandura, in 1986, applied the name Social Cognitive Theory to what had originated in 1941 as social learning theory. A number of subsequent modifications have been made to this theory, including the addition of the self-efficacy construct (Glanz et al., 1997). This theory postulates that a person's behavior is determined by an interaction among behavioral, personal, and environmental factors. This interaction is called Reciprocal Determinism.

Examples of the personal factors are the individual's ability to learn by the observation of others' behaviors, to predict outcomes of behavior, and to be confident about performing a behavior. Behavioral factors include the knowledge and skills necessary to perform a behavior. For example, for the 5 A Day Program, individuals need to know the target behavior of eating five or more servings of vegetables and fruit a day and need to have the skills to choose food wisely throughout the day. Environmental factors may include the opportunities for practicing the new skills or learning through observing appropriate role models. The environment also can provide cues both to action (such as posters or labels on foods in the cafeteria) and to the reinforcement of new behaviors. Alternatively, the environment can be unsupportive of the change that the individual is attempting to make. For example, if the selection of vegetables and fruit is limited in a worksite cafeteria, it may be difficult for individuals to increase their daily consumption.

As discussed earlier, the construct of self-efficacy was recently added to the social cognitive theory. Self-efficacy is an individual's confidence in his or her ability to perform a behavior. A person's confidence increases when he or she is successful at performing components of a task or the entire task or when he or she can observe a relevant role model successfully perform the task. Successful task repetition, task modeling, and persuasion increase self-efficacy. Glanz and colleagues (1997) provided more details on other constructs of Social Cognitive Theory, such as self-control, reinforcement, observational learning, outcome expectations (anticipated results), and outcome expectancies (values placed on outcomes).

### **Resiliency Theory**

The premise of the Resiliency Theory is that negative health behaviors can be prevented by reducing the factors that place individuals at risk and by developing protective factors that buffer negative social and physical influences (California Department of Education, 1991). Some of the protective factors are belonging, reward, and recognition. This theory is used in the California Power Play! project. Even though this project was not one of the nine randomized community-based research grants funded by the National Cancer

Institute, it is included because it is a well-designed and ongoing effort of the original California 5 a Day—For Better Health! Campaign (see Chapter 10).

### **Social Networks, Social Support**

Studies have demonstrated that a person's social relationships can affect health (House et al., 1988). Social networks are linkages between people who may or may not provide social support (Israel, 1982; Israel and Rounds, 1987). The terms "social networks" and "social support" are not theories per se, but are concepts that describe the structure, processes, and functions of social relationships (Glanz et al., 1997).

Selected social network characteristics are reciprocity (the exchange in a dyadic relationship), intensity (emotional closeness), complexity (the extent to which relationships serve many functions), and density (the extent to which network members know and relate to each other). Types of social support are emotional, instrumental (tangible assistance), informational (advice), and appraisal (feedback). Social network interventions either enhance existing network linkages or create new ones. A common typology is the use of either a lay health adviser or friends to deliver interventions (see Chapters 9 and 11).

## **COMMUNITY AND GROUP INTERVENTION MODELS**

Community-level models are important for understanding how social systems function and change, as well as how they affect an individual's behavior. They also complement the individual-level theories, providing in essence the necessary supportive environment for change to be maintained. The behavior of organizations within the community can help create supportive norms through policies, advocacy, and legislation.

### **Community Organization, Organizational Change Theories**

Murray Ross developed the principles of community-organizing practice (Ross, 1955). Although no single unified model of community organization exists, a common element is empowerment of

community members to take control of their own lives and environment (Rappaport, 1984). Some of the other important concepts are participation and relevance, empowerment, critical consciousness, community competence, and issue selection. Individuals are empowered and issues become relevant when community members are engaged as equals and they are invited to identify and solve problems. Critical consciousness means developing an understanding of the root of the problem and giving it thoughtful consideration. Issue selection is a strategy that identifies solvable problems as a focus of community action.

### Diffusion of Innovations

Diffusion is the process by which an innovation is communicated through certain channels over time among members of a social system (Rogers, 1983). This concept comes from rural sociology where the initial interest was in determining how new farming techniques spread among farmers. The diffusion process requires paying attention to the innovation itself, to the communications channels among members of the social system, and to the environment in which the process takes place. Some of the characteristics of innovations that affect their adoption are their relative advantage (i.e., whether eating more vegetables and fruit would be better than the previous dietary behavior), their compatibility with the intended audience, their complexity (i.e., how easy it is to add vegetables and fruit to the diet), their adaptability to trials (i.e., whether an innovation can be tried before being adopted), and the visibility of their results (i.e., whether the adopter who eats more vegetables and fruit feels better). (See Glanz and Rimer (1995) for more discussion on the Diffusion of Innovations Model.)

### PRECEDE-PROCEED Planning Process

PRECEDE-PROCEED is a planning model that begins with clear definitions of the issues to be addressed before moving to the implementation and evaluation of an intervention. The model has nine phases:

- Social diagnosis;
- Epidemiological diagnosis;
- Behavioral and environmental diagnosis;
- Educational and organizational diagnosis;
- Administration and policy diagnosis;
- Implementation;
- Process evaluation;
- Impact evaluation; and
- Outcome evaluation.

This planning process seeks to empower individuals with skills and active engagement in community affairs. In the process, the predisposing, enabling, and reinforcing factors that affect behavior are identified. Predisposing factors—such as knowledge, attitudes, and readiness to change—provide the motivation for a behavior. Enabling factors, such as resources and policies, make it possible for a person to act on those motivations. Reinforcing factors, such as praise and social support, provide incentives to repeat those behaviors (Glanz and Rimer, 1995).

All of the above-mentioned models and theories were used in one or more of the nine community-based research grants under the national 5 A Day Program. These theories contributed significantly to the strength and utility of the grantee's research. The applications of these constructs in each grant are discussed further in Chapters 9 through 11.

## REFERENCES

- Bandura, A. *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, NJ: Prentice-Hall, 1986.
- California Department of Education. *Not Schools Alone—Guidelines for Schools and Communities to Prevent the Use of Tobacco, Alcohol, and Other Drugs Among Children and Youth*. Sacramento, CA: Office of Healthy Kids, Healthy California, 1991.
- Campbell, M.K., Reynolds, K.D., Havas, S., Curry, S., Bishop, D., Nicklas, T., Palombo, R., Buller, D., Feldman, R., Topor, M., Johnson, C., Beresford, S.A., Motsinger, B.M., Morrill, C., Heimendinger, J. Stages of change for improving fruit and vegetable consumption among adults and young adults participating in the national 5 A Day for Better Health community studies. *Health Education and Behavior* 26(4): 513-534, 1999.

- Glanz, K., Lewis, F.M., Rimer, B.K. *Health Behavior and Health Education: Theory, Research, and Practice* (2nd edition). San Francisco: Jossey-Bass, 1997.
- Glanz, K., Rimer, B.K. *Theory at a Glance: A Guide for Health Promotion Practice*. Bethesda, MD: U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, 1995.
- House, J.S., Umberson, D., Landis, K.R. Structures and processes of social support. *Annual Review of Sociology* 14: 293-318, 1988.
- Israel, B.A. Social networks and health status: Linking theory, research, and practice. *Patient Counseling and Health Education* 4: 65-79, 1982.
- Israel, B.A., Rounds, K.A. Social networks and social support: A synthesis for health educators. *Advances in Health Education and Promotion* 2: 311-351, 1987.
- Rappaport, J. Studies in empowerment: Introduction to the issue. *Prevention in Human Services* 3(2-3): 1-7, 1984.
- Rogers, E.M. *Diffusion of Innovations* (3rd edition). New York: Free Press, 1983.
- Ross, M. *Community Organization: Theory and Principles*. New York: Harper Collins, 1955.