

# Theories and Intervention Approaches to Health-Behaviour Change

John P. Elder, PhD, MPH, Guadalupe X. Ayala, MA, Stewart Harris, MD, MPH  
Graduate School of Public Health, San Diego State University, San Diego, California

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Clinicians typically rely on health information ("Informational power") and their professional status ("expert power") to convince patients to change.<sup>1</sup> Health-behavior theories and models suggest more effective methods for accomplishing patient compliance and other behavior change related to treatment regimens. Awareness of the elements of current behavior-change theories will assist Cardiac Rehabilitation professionals in optimizing the effectiveness and efficiency of their interactions with patients.

## Theories and Models

In this article, popular models and theories including the Health Belief Model,<sup>2,3</sup> Social Cognitive (Learning) Theory,<sup>4,5</sup> the Theory of Reasoned Action,<sup>6-8</sup> the Theory of Planned Behaviour,<sup>6,9</sup> and the Transtheoretical model,<sup>10</sup> are reviewed and strategies for implementing elements of these theories into practice are offered. Many of the theories share the following factors: intentions to behave, environmental constraints impeding the behavior, skills, outcome expectancies, norms for the behavior, self-standards, affect, and self-confidence with respect to the behavior. Efforts to change patient behavior via education and counseling must take these factors into account and address those deemed relevant to the individual patients and their health problem. Critical dimensions of each theoretical framework are presented in [Table 1](#).

## Health Belief Model

Developers of the Health Belief Model<sup>8, 2,11,12</sup> maintain that health-related behaviors are determined by whether individuals (1) perceive themselves to be susceptible to a particular health problem; (2) see this problem as serious; (3) are convinced that treatment or prevention activities are effective yet not overly costly in terms of money, effort, or pain; and (4) are exposed to a cue to take a health action.

## Strategies

One of the first things clinicians can do is determine the patient's preconceived notions about the role of health behavior change in illness prevention.<sup>13</sup> The simplest technique clinicians can use is to assess the patient's perceived barriers and benefits to engaging in the behavior.<sup>14,15</sup> The clinician can engage in this process by discussing with the patient his/her perception of the pros and cons for engaging in the behavior. A discussion of benefits has been demonstrated to help motivate weight-loss patients to begin exercising and eating a low-fat diet.<sup>15</sup> During a discussion of the barriers, the patient can begin addressing how to overcome some of the obstacles to the performance of the behavior, thereby increasing self-efficacy for its performance.

Cues to action also influence whether a person will be motivated for lifestyle change.<sup>16</sup> Cues can include illness in other family members, information from the media, and concurrent symptoms experienced by the individual. Cardiac Rehabilitation professionals can elicit from the patient potential cues he/she is exposed to on a daily basis and then use these cues as reminders of the potential consequences of failing to change unhealthy behavior practices.

### **Social Cognitive (Learning) Theory**

Social Cognitive Theory<sup>4</sup> emphasizes the interactions between a person's cognitions, on the one hand, and his/her behavior on the other, through processes such as self-efficacy and outcome expectancies (or response efficacy). Outcome expectancies, overlapping substantially with parallel concepts in the Theory of Reasoned Action and the Health Belief Model, represent the expectancy that a positive outcome or consequence will occur as a function of the behavior. Self-efficacy (or self-confidence specific to a behavior) is a self-perception of having skills to perform a behavior. The theory describes behaviour change as a three-part description of "person," "behavior," and "environment" interacting dynamically in a process called "reciprocal determinism."

### **Strategies**

There are several strategies clinicians can use to enhance self-efficacy and address issues related to outcome expectancies. Believing that one has the requisite skills to engage in a particular behavior and then mastering these skills is critical for health-behavior change.<sup>17</sup> Therapists can teach their patients how to engage in certain preventive measures, arrange for the patient to engage in behavioral rehearsal by having her perform the behaviour in the cardiac rehabilitation setting, after being taught by a professional, and provide feedback on their performance. Professionals can also model the behavior or provide a videotaped example of the behavior in order to facilitate learning the new behavior.<sup>14</sup>

Previous experience with the health-behavior change in question should also be addressed with the patient. The clinician can explore both failed attempts to change the targeted behavior and success with other types of health behavior change. Because of past experiences with diets, the patient may doubt his/her ability to lose weight.<sup>15</sup> The patient may have attempted several diets in the past without much long-term success. The clinician should address this lack of confidence, and a discussion should ensue about how to construct a plan that is workable for the individual. It is essential that the clinician help the patient find strategies for realizing change and provide feedback on the progress toward his/her goal.<sup>14</sup> Past successes with other types of health-behavior change should also be explored to discover potentially generalizable strategies that could be employed in the current effort. Identification of such strategies would also provide evidence to the patient that all past attempts have not been unsuccessful. In addition to increasing the patient's self-efficacy for a given behavior, the clinician should make an attempt to address the outcome expectancies held by the patient for that behavior. For example, the clinician should assess the extent to which the patient views smoking cessation as a way to both improve personal attractiveness and reduce the risk of heart disease before engaging in a discussion of the short- and long-term benefits of not smoking.

### **Theory of Reasoned Action and Theory of Planned Behaviour**

The Theory of Reasoned Action<sup>6</sup> and the Theory of Planned Behaviour<sup>6</sup> place relatively more emphasis on the concept of "behavioral intention," which in turn can be predicted by the person's expectancies regarding the outcomes of a behavior, attitudes toward the behavior, and normative beliefs the person has with respect to what "influentials" (especially peers) would do in a specific situation. The theory of planned behaviour extends beyond the original Theory of Reasoned Action to include the concept of perceived behavioural control (PBC), which can influence intentions and behaviour.<sup>9</sup> The addition of PBC attempts to account for factors outside the individual's control including the absence of resources or skills and impediments to behavioural performance.<sup>12</sup> The PBC construct is very similar to the concept of self-efficacy described by the social cognitive theory however they are operationalized somewhat differently.

## **Strategies**

In this case, it is important to assess how the patient views his/her family members' and friends' attitudes, whether positive or negative, about the behavior change. Among patients whose behavior is externally controlled (i.e., controlled by luck, chance, and powerful others), the greater the social pressure to engage in a behavior, the more likely patients are to comply with clinician recommendations.<sup>19</sup> The clinician should determine whether family members and friends endorse the behavior, highlight these endorsements if they exist, or provide opportunities for the patient to interact or communicate with similar others who are engaging in the behavior. It is also important to assess the extent to which the person intends to engage in the behavior. Those intending to engage in physical activity are more likely to begin and maintain an exercise program, compared with individuals who report no intention to exercise. Behavioral intentions should be assessed for each specific behavior targeted for change. Brief measures of behavioral intentions and social normative influences are available in the literature.<sup>19</sup>

## **Transtheoretical Model**

An error common to many counseling efforts relates to the assumption that most patients are ready to embark on any behavior-change prescription given by a health care professional.<sup>20</sup> According to Prochaska and DiClemente's<sup>10</sup> Transtheoretical, or Stages-of-Change (SOC), Model, cognitive/behavioral change progresses as the individual moves through the following stages: precontemplation (benefits of lifestyle change are not being considered); contemplation (starting to consider change but not yet begun to act on this intention); preparation (ready to change the behavior and preparing to act); action (making the initial steps toward behavior change); and maintenance (maintaining behavior change while often experiencing relapses).

## **Strategies**

Clinicians wanting to engage a patient in any type of behavior change need to assess the patient's readiness to change. Individuals in the contemplation stages are more likely to benefit from cognitive approaches to increase their motivation for engaging in behavior change. This can include discussing the benefits of weight loss and providing written materials illustrating the steps necessary to begin the change process.<sup>15</sup> Individuals in the preparation stage intend to lose weight within the next 30 days and are likely to benefit from behavioral-skills training, such as learning how to eat low-fat meals.<sup>15</sup> Those in the action stage are engaging in weight-loss behaviors and are also good candidates for specific interventions. Finally, patients in the maintenance stage need assistance in preventing relapse and consolidating gains. The clinician targets behaviour change in patients by using the most effective strategy for the patient's level of commitment to change.

## **Conclusion**

In short, clinicians can optimize patient behavior- change efforts by ensuring that the patients (1) have a strong positive intention or predisposition to perform a behavior; (2) face a minimum of information processing and physical, logistical, and social environmental barriers to performing the behavior; (3) perceive her/himself as having the requisite skills for the behavior; (4) believe that material, social, or other reinforcement will follow the behavior; (5) believe that there is normative pressure to perform and none sanctioning the behavior; (6) believe that the behavior is consistent with the person's self-image; (7) have a positive affect regarding the behavior; and (8) encounter cues or enablers to engage in the behavior at the appropriate time and place.<sup>21</sup>

Incorporating these theory-based tenets into one's practice is not a substitute for professional judgment. Rather, it should be used as a tool to help promote effective and efficient use of resources<sup>22</sup> and to facilitate lifestyle changes in the patient. Health care professionals often doubt their own abilities to help patients engage in theory based health-behavior change strategies.<sup>13,14,23,24</sup> Any counseling on lifestyle changes without a theoretically sound basis may well not be worth the clinicians' efforts. This brief introduction to various theories and associated strategies will provide those working in cardiac rehabilitation settings with some useful information for their practice.

**TABLE 1**  
**Guidelines for counseling actions as suggested by health behavior change theories**

**1 Health Belief Model**

- Assess the patient's perceived susceptibility and severity of disease and frame health message according to perceptions.
- Elicit perceived barriers to the health-behavior change in question and discuss how to overcome these barriers.
- Assess the perceived benefits for engaging in the behavior and incorporate these benefits as reinforcers for behavior.

**2 Theory of Reasoned Action**

- Determine whether the patient thinks family members and friends endorse the behavior.
- Highlight the social pressure, if it exists, to engage in the behavior.
- Provide examples of similar others who are currently engaging in the behavior.
- Use specific examples of behaviors when assessing behavioral intentions.

**3 Social Cognitive Theory**

- Increase self-efficacy for the behavior.
- Provide opportunities for the patient to master the necessary skills.
- Model or provide models of the targeted behavior.
- Ask the patient to rehearse the behavior and provide feedback on his/her performance.
- Address previously failed attempts, explore individual & environmental factors that have contributed to unsuccessful attempts.
- Explore successes with behavior change and techniques employed that may generalize to the targeted behavior change.

- Provide information to the patient on the efficacy of the behavior.
- Arrange for the patient to meet a similar other who has experience with the behavior and endorses its effectiveness.

#### 4 Transtheoretical Model

- Assess the patient's stage of change.
- Use motivational interviewing techniques such as expressing empathy, providing options and avoiding confrontation.
- Persons in the precontemplation stage should be made aware of consequences for not engaging in health-behavior change, be provided the opportunity to share their feelings about their condition and discuss how their behavior affects their family.
- People who are contemplators should be taught to closely monitor their motivations for engaging in the health behavior change and explore their ambivalence and reasons they think change might be beneficial.
- Individuals in the preparation stage should be asked to verbalize a commitment to change both to themselves and to their family.
- Action-stage individuals and those in the maintenance stage should work with the clinician to set up rewards for appropriate behavior and stress-management techniques and establish supportive relationships.

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