

Health promotion for the chronic patients

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DEFINITION OF HEALTH PROMOTION, HEALTH BEHAVIOR, AND HEALTH EDUCATION

O'Donnell(1989) defined health promotion as "the science and art of helping people change their lifestyle to move toward a state of optimal health. Lifestyle change can be facilitated by a combination of efforts to enhance awareness, change behavior, and create environment that support good health practice." Ottawa Charter for Health Promotion defines health promotion as "the process of enabling people to increase control over, helping people to cope with their circumstances, and creating environments conducive to health, in which people become more able to take care of themselves." (Epp, 1986). Recently Green and Kreuter (1991) defined the health promotion as "any combination of health education and related organizational, economic, and environmental supports for behavior change of individuals, groups, or communities conducive to health."

Health education covers the continuum from disease prevention and promotion of optimal health to the detection of illness to treatment, rehabilitation, and long-term care.

Health behavior is the central concern of health promotion and one of the most important factors of disease, since over 50% of chronic diseases are potentially preventable. Avoiding tobacco, alcohol, and drugs; stopping smoke; conducting exercise or controlling body weight; self-management of and cope with their illness are all health behaviors aimed at health promotion in a variety of settings including schools, worksites, clinical sites, and communities.

HEALTH BEHAVIORS COMMONLY FOCUSED FOR HEALTH PROMOTION:

1. AVOIDING OR STOPPING TOBACCO, ALCOHOL, AND DRUGS

2. SELF-MANAGEMENT OF ILLNESS

3. CONDUCTING EXERCISE AND CONTROLLING BODY WEIGHT

Among the previous 3 categories of health behavior, self-management of illness and conducting exercise will be explored further for the explanation of the behaviors of the elderly.

Complementary alternative therapies that are most frequently reported by patients with musculoskeletal disorders are acupuncture, homeopathy, osteopathy, and herbal medicine (Chandola et al., 1999). In a study of health behavior with the sample of 63 American people having rheumatoid arthritis, none of the respondents reported using complementary alternative medicine (CAMs) as their only treatment (Diana, et al, in submission). However, few respondents (22%) reported their RA had been treated only with medications. However, the vast majority of respondents (78%) reported their RA had been treated with both medications and CAMs. Since using CAMs has been delaying the diagnosis and optimal treatment of RA (Cho et al., 1998), combination of the CAMs and medication seems to be appropriate approaches.

FIVE FACTORS AFFECTING HEALTH BEHAVIOR:

1. INTRAPERSONAL FACTORS OR INDIVIDUALIZED NURSING
2. INTERPERSONAL FACTORS
3. INSTITUTIONAL OR ORGANIZATIONAL FACTORS
4. COMMUNITY FACTORS OR NURSING SYSTEM
5. PUBLIC POLICY FACTORS

Major causes of death in North East Asia are stroke, heart disease, cancer, and injuries in which behavioral factors are involved, such as tobacco use, diet, activity patterns, alcohol consumption, and avoidable injuries. The resurgence of infectious diseases including food-borne illness and tuber-

culosis and the emergence of new infectious diseases such as antibiotic-resistant infections, HIV and AIDS are also largely affected by human behaviors (Lederberg, Shope, and Oakes, 1992; Glanz and Yang, 1996; Glanz, Lewis, & Rimer, 1997).

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: (1) intrapersonal or individual factor; (2) interpersonal factors; (3) institutional or organizational factors; (4) community factors; and (5) public policy factors (McLeroy, Bibeau, Steckler, & Glanz, 1988). Most of the models of health behaviors are explaining the personal and interpersonal health behaviors

DEVELOPMENT OF THEORIES EXPLAINING HEALTH BEHAVIORS:

1. HEALTH BELIEF MODEL (Hockbaum, 1958; Rosentock, 1966)
2. SOCIAL COGNITIVE THEORY |-----OPERANT CONDITIONING BRANCH
|-----COGNITIVE BRANCH
3. THEORY OF REASONED ACTION & THEORY OF PLANNED BEHAVIOR (Fishbein & Ajzen, 1975)
4. TRANSTHEORETICAL THEORY (Prochaska et al, 1993)
5. HEALTH PROMOTION MODEL (Pender, 1987, 1996)

In the last fifty years, considerable progress has been made in understanding the determinants of individuals' health-related behaviors and ways to stimulate positive behavior changes.

HEALTH BELIEF MODEL(HBM)

During 1950s, researchers began to learn about how individuals make decisions concerning health and what determines health behavior. Rosenstock and Hockbaum began their pioneering work to understand why individuals participated in screening programs for tuberculosis.

Focus: Preventive health behavior of individuals, compliance later

Basic premises: Rational belief model (Leventhal, 1987)

Outcome expectation through logical thought process

Three factors led to development of HBM:

1) Influence of Kurt Lewin (social psychologist, behavioral theorist)

Life sapce composed of regions: positive, negative, neutral values -->person's behavior

Disease --> negative region

Action to avoid disease --> positive region

Value placed by an individual --> particular outcome

Individual's estimate of likelihood that a given action will result in that outcome.

2) Original investigators' phenomenological orientation Hochbaum, Kegeles, Leventhal, Rosenstock

Subjective world of the perceiver determines behavior

3) Philosophical commitment to building theories based on scientific knowledge

Concepts: Susceptibility <-- demographic, sociopsychologic, structural variables,

Severity: Judged by the degree of emotional arousal created by the thought of the disease

Benefit(outcome expectation) <-- particular action

Barrier: cost, inconvenience, pain, embarrassment

Cue to action: internal ---perception of bodily state
external-such as poster

Intensity of cue is related to the perceived susceptibility or seriousness.

Health motivation--value of reduction of perceived threat

Empirical studies:

Comprehensive review of 46 studies (Janz & Becker 1984)

24--preventive behavior (immunization, physical check-up)

19--sick role behavior(diet for diabetes, hypertension, uremia, hospital visit, compliance)

18--prospective study

28--retrospective study

Ratio of significance:

Perceived barrier--89%,

Perceived susceptibility--81%

Perceived benefit--65%

Review of 33 Korean studies (Ku & Lee, 1990)

All-retrospective studies

Ratio of significance:

Perceived benefit--65%

Perceived barrier--50%

Perceived susceptibility--30.3%

Conclusion: Various study results especially in prediction of patient's behavior

Limitation: choosing diet not for health, but for weight loss

Health is not always highly valued

Motivation is combination of susceptibility and severity not address the issues of coping skill

focus on rational, intentional behavior, not focus on spontaneous activity

However, Rosenstock & Strecher (1988) recognized the limitation of this theory and recommended the support of other concept such as self-efficacy.

SOCIAL COGNITIVE THEORIES

Gradual development of models to explain and modify behavior from learning theories derived from two major sources: Stimulus Response theory; cognitive theory. In the Skinner's SR theory or SOR theory, concepts such as reasoning or thinking are not required to explain behavior. Cognitive theorists emphasize the role of subjective expectation. Behavior is a function of the subjective value of an outcome and of the subjective probability (Value expectancy theories).

Social cognitive theory including theory of self-efficacy, social support, health locus of control, addresses both the psychosocial dynamics influencing health behavior and the methods of promoting behavioral changes. Social cognitive theory includes two branches: operant conditioning branch and a cognitive branch. The operant conditioning branch emphasizes the effects of external reinforcements and expectancies on a person's performance and expectations for future performance outcomes. The cognitive branch emphasizes how a person's cognition, including expectations and imparted meaning about an event or situation, affect his or her performance and expectation. The operant conditioning branch views the person as a doer, while the cognitive branch views the person as a thinker and an analyst.

THEORY OF SELF-EFFICACY

It was originated by Bandura (1977) and known as social learning theory or social cognitive theory. It emphasizes the reciprocal determinism such as 1) Personal factor, 2) Environmental event, and 3) Behavior. Its basic premises are that behavior is determined by expectancies and incentives. One's belief in the ability to perform a behavior is the

expectation of personal mastery and success which determines engaging in particular behavior.

Concepts used for the explanation of the model are as follows:

Outcome expectancy--conviction that certain behaviors will lead to certain outcome

Self-efficacy expectancy--conviction that one can successfully execute the behavior required to produce the outcome.

Expectancy about environmental cues--Beliefs about how events are connected and about what leads to what.

Incentives (or reinforcement)--value of a particular object or outcome (health status, physical appearance, approval of others, economic gain)

PERSON----->BEHAVIOR ----->OUTCOME



EFFICACY EXPECTANCY OUTCOME EXPECTANCY

Hypothesis: If the outcome expectation is desirable, person will more likely be motivated to change their behavior.

Four sources of information to lead self-efficacy are very important because these four factors are the focus of the intervention.

- 1) Performance accomplishment: successful mastery through personal experience
- 2) Vicarious experiences: observing successful performance, with positive reward, without adverse consequences (modeling)
- 3) Verbal persuasion: main intervention
- 4) Emotional/physiological arousal: conditions of low adverse arousal

Dimensions of self-efficacy are as follows:

- 1) Magnitude: From capability to perform simple task to complex task
- 2) Generality: Expectation is generalized to other situation
- 3) Strength: Strong or weak expectation of mastery

Empirical studies: 21 studies (Strecher, et al, 1986):

Types of behavior: smoking, weight control, contraceptive behavior, alcohol abuse, exercise

Conclusion: Self-efficacy was a predictor of both short term and long term success.

Lawrance's review of self-efficacy studies (1986):

Types of behavior: educational achievement, career choices, sales performance, smoking, substance abuse, pain control, adherence to prescribed regimen

Conclusion: Predictor of health behavior and other behavior

Relapsers can be distinguished from abstainers by ratings of perceived self-efficacy

Recommendation: More research is needed to determine the generalizability of the perception of self-efficacy

In addition, appropriate skill and adequate incentive are necessary for behavioral changes

Normative belief: Person's perception of social pressure to perform or not perform the behavior

Motivation to comply: Motivation to comply with the specific referents

Related elements:

Action: Beliefs about smoking cigarettes may be different from beliefs about selling cigarettes.

Target: Beliefs about smoking cigarettes may be different from beliefs about smoking marijuana.

Context: Beliefs about smoking cigarettes in the elevator may be different from beliefs about smoking cigarettes in his office.

Time: Beliefs about smoking cigarettes before breakfast may be different from beliefs about smoking cigarettes in the day.

Empirical studies:

Types of behavior: family planning, occupational choices, voting behavior, weight reduction, marketing research

Conclusion: good predictor of behavior only if behavioral intention is a good predictor of behavior (Montano, 1986)

Table1 Similarity of theory of self-efficacy and health belief model

Social Cognitive Theory	Health Belief Model
Expectancy about environmental severity	Perceived susceptibility and cues of illness or its sequela (threat)
Expectation about outcome (No inclusion of barriers)	Perceived benefits and to action barriers
Expectation about self-efficacy	No inclusion of self-efficacy
Incentive	Health motive: value of reduction of perceived threat

THEORY OF REASONED ACTION

The theory of reasoned action and the theory of planned behavior have been developed by Fishbein and Ajzen (1975) in which behavioral intentions and behavior result from a rational process of decision making. These two theories have been used to intervene many health behaviors, including having mammograms, smoking cessation, controlling weight, family planning, and preventing AIDS.

Basic premises: People are rational beings;

They consider their actions before they decide to perform or not perform a behavior.

Excluding personality traits and traditional measures of attitude because of inconsistent results.

Concepts:

Intention: Immediate determinant of behavior

Attitude toward the behavior: Judgment about whether the behavior is good or bad

Behavioral belief: Strength of belief that performing the behavior will lead to those consequences

Outcome evaluation: Evaluation of each of consequence

Subjective norm:

The Expanded Theory of Reasoned Action (Triandis, 1980)

Triandis(1980)'s expanded theory of TRA

1) **Habit:** a measure of past behavior; affects actual behavior.

As behavior becomes more habitual, attitude and intention become relatively less important in determining behavior.

2) **Facilitating conditions:** Characteristics of the individual or environment; affects actual behavior.

3) **Affect:** a measure of the individual's emotional reactions to the thought of the behavior; affects behavioral intention.

Montano & Taplin's study (1991) supported 2) and 3)(income and education level) in behaviors of mammography, while past behavior not predicted the mammography probably due to types of target behavior (fear inducing behavior).

Facilitating factors are also related to the types of target behavior.

The Theory of Planned Behavior

(Ajzen & Madden, 1986)

- 1) Perceived behavior control directly influences intention.
- 2) Perceived behavioral control influences actual behavior.

Schifter & Ajzen (1985) supported 1) and 2) in weight control study.

Kim, Y. A.'s Feeding behavior study (1995) supported 1), but not 2).

Miller & Grush (1986) supported that persons with high self-conscious and low elf-monitoring (unconcerned about the opinions of others) personality showed high attitude-behavior correspondence, while persons with low in self-conscious and high in self-monitoring and other combination of personality showed high norm-behavior correspondence in a study of school work.

Godin & Shephard's study (1990) supported that efficacy expectation, affect, perceived barrier and habit influenced the behavioral intention and target behavior.

Tedesco, Keffer, & Fleck-Kandath (1991) supported that self-efficacy influenced behavioral intention and target behavior in the study of oral health behavior.

TRANSTHEORETICAL MODEL

The transtheoretical model was developed by Prochaska and DiClemente (1993) and has achieved widespread use and accepted by researchers and practitioners in health behavior over a relatively short period of time. Recently one of our graduate students tested the theory through smoking cessation program.

The transtheoretical model is a dynamic model to understand the individual progress, and the cognitive and behavioral processes they use while changing health behaviors. Moreover, exercise interventions that classify populations by stage of motivational readiness for change can provide targeted cognitive messages appropriate to each individual's stage of readiness to change. The model proposes that individuals engaging in a behavior move through precontemplation, contemplation, preparation, action, and maintenance. In this model, individuals are considered to be in a maintenance stage of a behavior (such as exercise) when the behavior is sustained for 6 months or longer (Prochaska, 1992). In my own recent study, 284 RA patients (72.8%) among 390 reported that they did not exercise at all, in which 137 patients (35.1%) are in the stage of

precontemplation, 119 patients (30.5%) in the stage of contemplation, 28 patients (7.2%) in the stage of preparation. One hundred and six patients (27.2%) reported that they exercise on the regular basis in which 90 patients (23.1%) reported they have been exercised more than 6 months (Table 2).

Table2 Exercerize Stage in patients with Rheumatoid Arthritis

exercise stage	n	%
precontemplation	137	35.1
contemplation	119	30.5
preparation	28	7.2
action	16	4.1
maintenance	90	23.1

HEALTH PROMOTION MODEL

Pender's comprehensive model of health promotion is one of the explanatory nursing models which predicts the health behavior. Revised health promotion model (Pender, 1996, p67) based on social learning theory was modified to identify the factors associated with exercise behavior. According to the revised health promotion model, exercise as a health promoting behavior is influenced by personal and behavior-specific cognitions and affect (Pender, 1996). Behavior-specific cognitions and affect are the categories to be of major motivational significance. These factors are critical for intervention, as they are subject to modification through nursing actions.

ANALYSIS OF PREVIOUS STUDEIS OF SNU FACULTIES AND GRADUATE STUDNETS

Eighty eight research papers of health promotion conducted by our faculty members and the graduate students for previous 10 years were analyzed in terms of types of researches.

Majority of the experimental studies were different kinds of exercise, activity limitation, ADL in normal populations and in patients with various diseases. Here, health behaviors were included either as independent variables or dependent variables in the experimental studies. Effects of humor, biofeedback, and music were tested for utilization

in the patients and normal persons.

Majority of educational programs such as self-help courses, self care education, and self-regulation program tested Bandura's social cognitive theory and Pender's health promotion model. Healthy lifestyle, health-promoting behavior, treatment-seeking behavior, coping behavior, and compliance were mainly included in the survey, correlational studies, and the model development.

However, the long-term effects of the interventions with standard outcome variables and cost-effectiveness of various interventions for health promotion have not been conducted.

Other behavioral factors such as tobacco use, diet, alcohol consumption, avoidable injuries, and other newly found infectious diseases have been the less focus of studies. Moreover, wider search for the theoretical explanation has not been found in the previous studies of health behaviors.

FUTURE DIRECTIONS FOR THE RESEARCH ACTIVITIES IN THE FIELD OF HEALTH PROMOTION

With the dawning of the twenty-first century, there is a crucial need for continuity of research activities in the dimension of health promotion, because the number of the elderly and especially the chronic patients are increasing more and more and they have the limited resources.

1. The outcome criterion for selection of an optimal intervention strategy is its benefit to society at large, measured in terms of intensity, reach, efficacy. Therefore, impact, cost-effectiveness or quality-adjusted life-years saved must be used in future research of health behavior.

2. Actual number of truly distinct concepts needed to explain health-related action is considerably smaller. Cummings and others (1980) and Weinstein (1993) observed the few detailed comparisons between models. Therefore, they recommended an empirical approach to comparing theories of health promotion. Actually, studies to compare models in terms of effective health behaviors can lead us to a better understanding of the strengths and weakness of existing theories. The comparison of theories are related to further testing of the explanatory mechanisms of effect, further refinement of methods to change behavior, and further refinement of the conditions under which the theories either do or do not apply, or need to be modified in order to apply better.

3. The long-term effects of the interventions with standard outcome variables and cost-effectiveness of various interventions for health promotion need to be conducted.

4. Influencing factors for maintenance of health behavior as well as those initiating the health behavior must

5. Finally, various culturally different and similar aspects of nursing should be focused for joint investigation.

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