

ANALYSIS OF PENDER'S HEALTH-PROMOTION BEHAVIOUR MODEL

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Pender's Health-promotion Behaviour Model (HPBM) will be the focus of this paper. The model components will be analyzed, research related to the model will be presented to examine its validity, perceived benefits will be synthesized, and new questions and issues that assess the model's usefulness and approximation to the real world will be outlined.

Analysis of Components

Pender's model (Figure 1) attempts to provide a complementary counterpart to models of health-protecting behaviour, specifically the Health Belief Model developed in the 1950s by Rosenstock, Hochbaum, and Kegeles (Becker, 1984). Salient dimensions of the Health Belief Model are goal-setting that is based on perceived consequences, subjective estimates of desired outcomes, and decision-making under uncertainty. The Health Belief Model is disease and action-specific. Rather than focusing on behaviour that is directed toward decreasing the probability of encountering illness, Pender's model focuses on movement of the individual toward increased health and well-being. She developed the model because of her belief that health is a positive state in its own right, rather than simply the opposite of a negative state (illness).

According to Pender (1982), the goals of health-promotive behaviour are growth, maturation, and expression of human potential. She claims that while the Health Belief Model has predictive potential useful for developing preventive behaviours, it is inadequate to explain positive health actions that are directed toward the achievement of higher levels of health, self-actualization, and fulfillment. Similar to the Health Belief Model, Pender's model includes individual perceptions, modifying factors, and variables affecting the likelihood of action, and has both a decision-making and action phase.

The underlying beliefs in the HPBM include the following:

1. A phenomenological orientation is evident. It assumes that the subjective world of the perceiver determines behaviour rather than the objective environment, except as the objective environment comes to be represented in the mind of the behaving individual.

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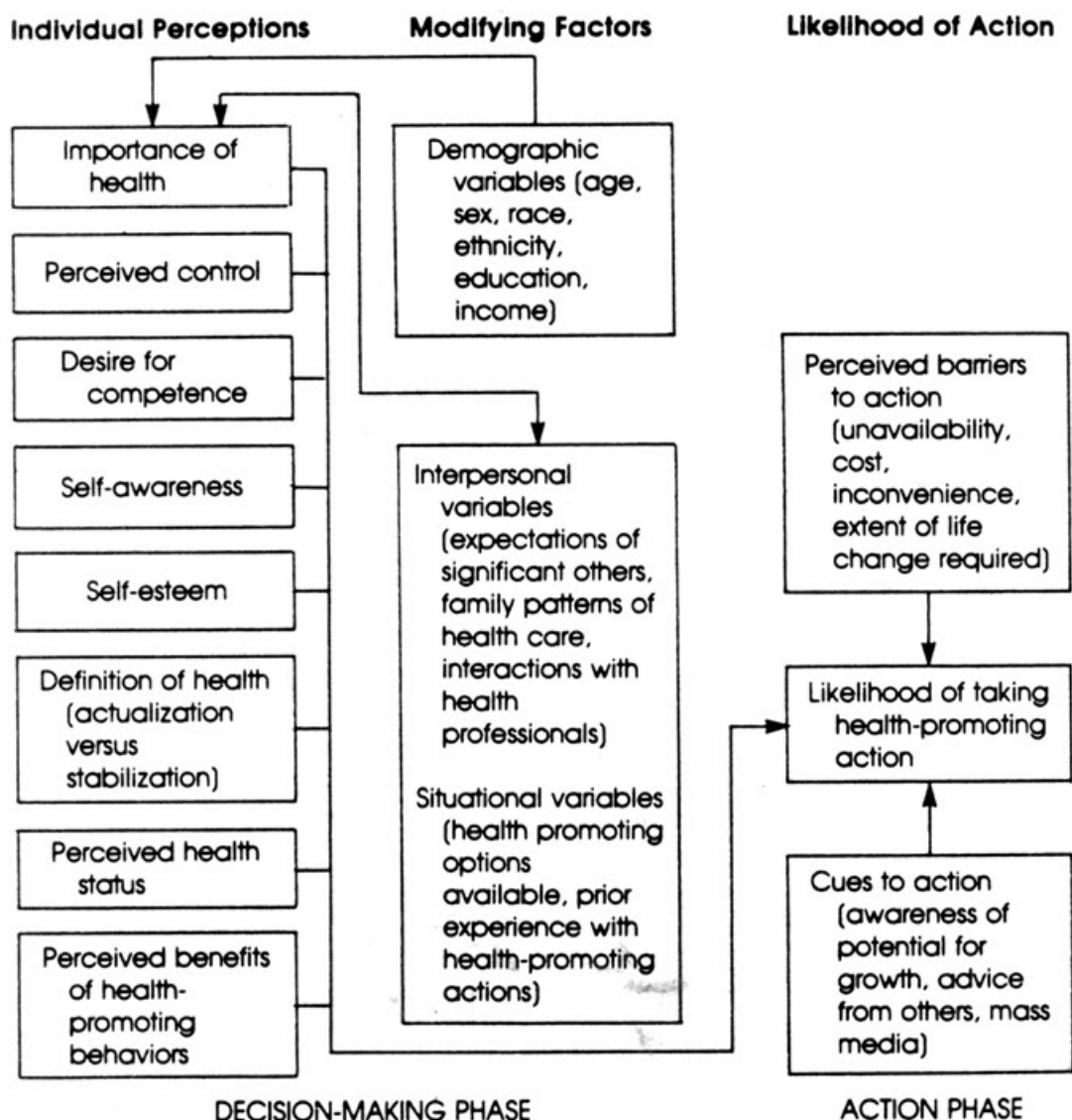


Figure 1. Pender's proposed Health Promotion Model
(Pender 1982, p.66)

2. The individual exists in a life space composed of regions, some of which are positively valued (positive valence), others negatively valued (negative valence), and still others relatively neutral.

3. Unlike the Health Belief Model where a person is pulled by positive forces and repelled by negative forces, in the HPBM a person acts on the environment rather than reacting to external influences or threats posed by the environment.

4. The individual behaves in ways that maximize positive tension in order to promote change, growth, and maturation; these health-promoting behaviours are expressions of the actualizing tendency.

5. Health-promoting behaviours are directed toward increasing well-being and toward expressions of human potential.

The model assumes that motivation is a necessary condition for action, and that readiness to take action is related to the following individual perceptions: perceived importance of health; perceived control of health, with clarification needed between the desire for control and the perceived probability of control; the desire for competence as differentiated into motives such as mastery, achievement, power, and autonomy; self-awareness and self-esteem; and personal definition of health, perception of personal health status, and perception of benefits of health-promotive behaviour. These components are interdependent and are influenced by demographic, interpersonal, and situational variables.

The outcome or likelihood of action is influenced by such internal or external cues and barriers, real or imagined, as perception of unavailability, inconvenience, or the difficulty of a particular option. Pender emphasizes the inherent, dynamic, cyclical process in which the individual moves back and forth between phases of decision-making and action.

Discussion of the logical adequacy, testability, usefulness, and generalizability of the model will follow in subsequent sections.

Prior Findings

Several research reports were noted as theoretical development support in the Pender presentation of the model. Reference will not be made to those studies since they are readily available in the book. Because the model is new (it was not published until 1982), its empirical adequacy and testability have not yet been reported, but its components can be analyzed. Studies related to health value, control, health beliefs, perceived benefits, modifying factors, and outcomes can support or challenge its validity.

A number of findings dealing with the internal/external locus of health control provide support. Pender's assumption is that an individual's perception of control of health leads to better health outcomes. Wallston, Wallston, Kaplan, and Maides (1976) analyzed health value, taking into account that the value of the outcome is a determinant of behaviour. They found an improved response to weight-reduction programs when those programs were tailored to meet the differing expectancies of those subjects with internal control and those subjects with external control. This illustrates the importance of correct assessment of the individual. Kaplan and Cowles (1978) reported that individuals who had an internal health locus of control, and who valued health highly, were most successful in achieving and maintaining changes in their smoking behaviour. In Sonstroem and Walker's (1973) study, internally oriented undergraduate men had a more favourable attitude toward physical activity; they participated more in planned sports programs than externally oriented men. These findings demonstrate that internal locus of control is more effective for achieving certain changes in behaviour, and they support the importance of

control in health-promoting behaviour.

Wallston and Wallston (1978) verified the predictive value of the Multidimensional Health Locus of Control Scale (MHLC), using health status as the criterion for community men and women, for YMCA Health Fair participants, and for graduate, professional, and clerical women. Correlations between health status and internal control were positive ($r=.403$); between health status and chance they were negative ($r=.275$); and between health status and powerful others they were not significant. Brown, Muhlenkamp, Fox, and Osborn (1983) found correlations between internal locus of control and powerful others and between internal control and chance were negative, but that they were strongly positive between powerful others and chance. This is logical, since individuals who believe they have little personal control over events would have little reason to engage in health-promotion activities. Health value was not related to any other variable. No relationships between internal control or high health value and health-related information-seeking behaviour were found; a possible explanation given was that an individual's intention to engage in an activity may not become the actual behaviour. This finding lends support to Pender's two phases of decision-making and action. It also supports Sandelowski's (1981) statement that individuals do not always act on their beliefs. McCusker and Morrow's study (1979) however, offers no support for Pender's model. They found no relationship between locus of control, alone or in combination with health value, and the subject's engagement in breast self-examination.

Demographic and interpersonal variables are also important in the determination of health-promoting behaviour. Palmore and Luikart (1972) found that life satisfaction in middle age was largely influenced by self-rated health, rather than by career anchorage, income, education, or social activity.

Laffrey's (1983) study on factors related to choice of health behaviour choice tested relationships among self-actualization and health conception in adults. A significant relationship ($r=.44$) was found between health conception and health behaviour choice, but neither factor was significantly related to the personal orientation inventory. Laffrey suggested possible incongruity between self-actualization theory and the nursing framework from which the tools were developed. This study supports the component relationships in Pender's model.

Heinzelmann and Bagley (1970) reported on reasons for participation in physical activity programs and on perceived outcomes. The two most important reasons given for participation were the desire to feel better and the desire to lessen the chance of a heart attack. One of the major perceived outcomes of participation was a feeling of decreased vulnerability to specific health threats, including heart attacks. To this writer, this finding illustrates a shortcoming of Pender's model that is related to the

interaction between health protection and health promotion: this relationship is not delineated, but it should be. In addition, statistics on illness indicate that, from mid-life on, a large percentage of individuals will have some form of long-term disability with which to cope. According to Crase, Hamrick, and Rosato (1977), who refer to several large research studies, the goal of youth fitness is on the wane, but, there is a growing quest for adult wellness through physical exercise that is a result of an individual desire for self-expression and health maintenance. How can one differentiate clearly between avoidance and approach behaviour, particularly when the participating group is at risk?

Researchers in the Soviet Union (cited in Crase et al., 1979) have documented the economic benefits of exercise and have found that workers who exercised regularly were more productive, visited the doctor less frequently, were far less prone to industrial accidents, and were absent from the job three to five days less per year than other workers. Communities that are devoted to physical fitness for the elderly have been compared to others that do not emphasize fitness activities; results indicate that the active people live longer than the inactive. It appears that exercise contributes to health attitudes and to behaviours commensurate with preventive and holistic health (Crase et al., 1977). This finding supports Pender's view of the dynamic cyclical process between decision-making and action.

Brown et al., (1983) had opposing support for Pender's model. They studied the relationships among health beliefs, health values, and health promotion activity. No significant relationships were found between income, education, or age and the MHLC sub-scales, nor between those demographic variables and health value. However they did find that 30% ranked health as their highest value, and that no one ranked health lower than third. No significant difference was found between church and secretarial groups. The level of health promotion activity was not associated with socio-economic status. This differs from McCusker and Morrow's (1979) results. Brown et al., (1983) also found that married subjects engaged in more health-promotion activity than do widowed, separated, divorced, or single people.

Other researchers looked at modifying factors. Douglass (1971) stated that individual interaction with the health care environment can influence health attitudes and behaviours; these in turn influence the other variables in the system. Coburn and Pope (1974) studied interpersonal variables and found family ties were influential in establishing the values of family members. Knutson (1969) stated that women seem to pursue health as a goal more than men.

The model, therefore, receives some support for the influence of several of its components and their relationships to each other; for its cyclical, dynamic interaction; and for its phases of decision-making and action.

Synthesis of Perceived Benefits

The benefits and potential of the model far outweigh its liabilities. Through a holistic approach, it has systematically identified relevant components in a significant area where study is needed. Because it focuses on the individual and involves a myriad of variables, generalizability will be difficult, although possible. The model has potential for application to a wide variety of health-related actions; its various concepts are broad, but have been pulled together logically.

The model stimulates thinking and provides direction for research. Many hypotheses can be derived from it for study, such as:

- Individuals who regard themselves highly are more likely to be involved in health-promoting behaviours than are those with low self-esteem.
- Increased well-being and improved health status lead to more extensive lifestyle changes which the individual perceives as being more difficult to make.
- Individuals who perceive their health to be a static condition use more health-protecting behaviours than health-promoting behaviours. Individuals who perceive that their health may be modified through their actions use more health-promoting than health-protecting behaviours.

The model also provides direction for practice. A useful theory should enable the practitioner to exert control in a situation by manipulating or influencing the major variables that are part of the theory (Mikhail, 1981). This model's orientation to such concepts as motivators, barriers, and trigger cues, and to factors in decision-making and action provide direction for encouraging health-promoting behaviour.

New Questions and Topics

Despite the logical structure of the model's concepts and statements, some questions do come to mind. Pender acknowledges the dynamic interaction between decision-making and action, but in the description of the components, it is not clear how self-esteem and self-awareness are part of the decision-making phase. The examples Pender gives portray self-esteem and self-awareness as increasing with action and leading to continued participation, rather than as being the initial motivators of participation. Further exploration is needed into the direction of influence: do attitudes precede behavioural change, or vice versa, or do they alternate?

This writer questions why it is that Pender's diagram of the model displays interaction between interpersonal/situational

variables and individual perceptions, but only shows a one-way influence of demographic variables on individual perceptions. Although most of the demographic variables she lists cannot be manipulated, income and education can be.

The writer also questions Pender's statement that health threats that are relevant to health-protecting behaviours have little relevance to health-promotion behaviours (p.65). No research supports this dichotomy: in fact, research leads to the opposite conclusion (see Heinzelmann, 1970). Indeed, Pender does acknowledge that individuals who initially begin jogging because they are at risk for cardiovascular disorders (avoidance motive) may just as likely start jogging as a health-promoting (approach motive) function.

Pender claims that while the Health Belief Model has predictive potential that is useful for developing preventive behaviours, it is inadequate to explain behaviour that is directed toward health promotion. Although she states that the HPBM is a complementary counterpart, there is no further development of that relationship and no indication as to how the models can link together. To fulfill this need for a link between the two models, the writer attempted an elementary conceptualization of the models in interaction, which is displayed in Figure 2. This link would provide for the interaction between health promotive behaviours that are a result of avoidance motive and those resulting from an approach motive. It enlarges the modifying factors, combining those in the Health Belief and Pender's model. It also illustrates the linkages among all components in a cyclic, interacting manner.

Summary and Conclusion

This paper has analyzed the Pender model of health promotion in terms of its components, research support, benefits, and missing linkages. The model has potential for helping health professionals to assist people in wellness orientation.

MODIFYING FACTORS INDIVIDUAL PERCEPTIONS LIKELIHOOD OF ACTION ACTION

----- DECISION-MAKING PHASE ----- ACTION PHASE

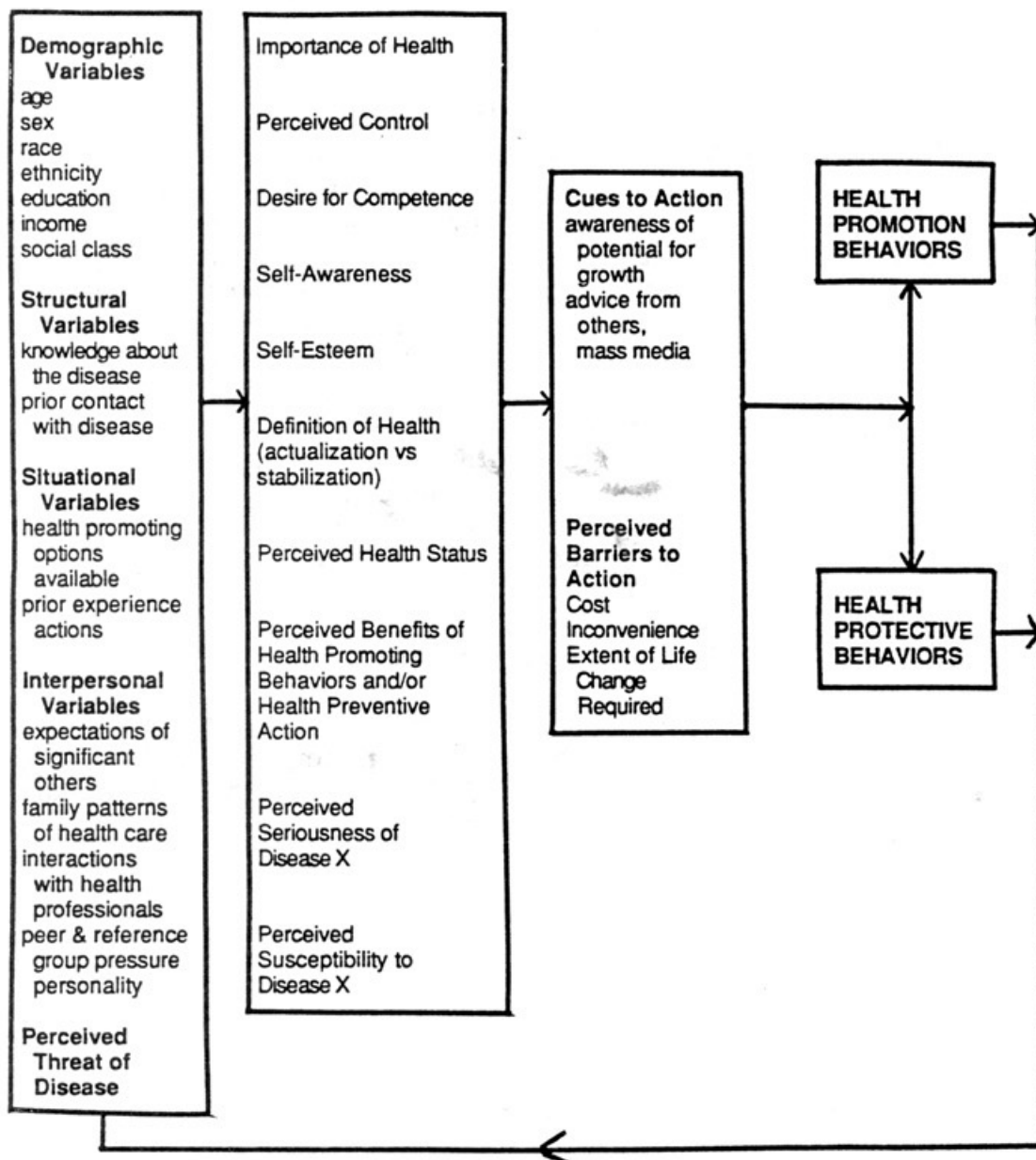


Figure 2. Hilton's perception of interaction between health promotive and protective models

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RÉSUMÉ

Analyse du modèle de comportement de Pender favorisant la santé

Le modèle de comportement de Pender favorisant la santé, qui est la contrepartie des modèles de comportement visant la protection de la santé, met l'accent sur les conditions et les aptitudes à prendre rapidement des mesures pour améliorer la santé et le bien-être. On étudie le modèle afin de s'assurer s'il est logique, vérifiable, utile, et généralisable. L'interaction entre les modèles favorisant la santé et les modèles protégeant la santé se reflète dans la description que l'auteur fait d'une nouvelle conceptualisation qui incorpore les deux modèles.