From preventive health behavior to health promotion: Advancing a positive construct of health

A concept analysis of preventive health behavior provided the foundation for this review of current health promotion research in nursing. Studies selected for review described or explained behavior for health promotion, illness prevention, or preventive health behavior. The major focus of this critical review is on the conceptualization and measurement of health promotion behaviors being investigated. Despite nursing's claim to an holistic idea of health, the biomedical model continues to influence indicators of health behavior and the context for promotion of healthy life styles. Major issues for future health promotion research relate to the lack of attention to theoretical definitions and multidimensional aspects of health behavior, and the triad of national strategies for health promotion are discussed.

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DESPITE THE MOUNTING national initiative for *Healthy People 2000*,[1] the major research focus in nursing as well as in other disciplines in the past three decades was to examine a range of medically defined behaviors related to illness prevention.[2,3] Nurses profess a history of concern for wellness of the whole person and concern for the health level of populations, yet the dominant biomedical view of health continues to exert a strong influence on definitions of health behavior and the context for promotion of healthy life styles.[3-5] Scientific knowledge of the dimensions of behavior for health promotion, as well as illness prevention or preventive health behavior, is required to achieve the goal of health for all.

Many terms are used to describe behavior for health promotion. The earliest terms implied a negative health concept: preventive health behavior, disease and illness prevention, health protection, health-protecting be-

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havior, health-negating behavior, and risk-reducing behavior. More recently, the proliferation of health behavior terms is viewed as part of the movement to define health from a positive perspective.[6] These general terms linked to a positive health concept are: health behavior, health promotion, health-promoting behavior, health-enhancing behavior, health habits, health practices, health maintenance, and healthy life style.

Confusion exists regarding the definition and differentiation of these terms. In a linguistic analysis of health promotion, Brubaker[7] reported that in nursing, medicine, and community health, the term health promotion is rarely defined and is not consistently differentiated from disease prevention and health maintenance. Problems inherent in the definition of health itself have long been acknowledged.[8] The caveat is that unless there is a conscious effort to make nursing's renewed, positive view of health an empirical reality, the goal to promote health will remain beyond reach.

INFLUENCE OF THE BIOMEDICAL MODEL

An important historic and lasting influence on the evolution of the health promotion behavior construct is found in the work of Leavell and Clark[9] on the levels of prevention. Their classic definition of primary, secondary, and tertiary levels of prevention derives from an epidemiology of the natural history of disease, and is rooted in the biomedical model of health. In this model, primary prevention includes two distinct areas: health promotion and specific protection. Health promotion focused on education for healthy living and favorable environmental conditions, while specific protection involved the use of immunizations, hygiene, and protection from occupational hazards aimed at minimizing threats to health. Although primary prevention included promotion of health and protection from threats to health, the practical emphasis was on prevention of disease.

In 1979, the US Public Health Service (PHS), in *Healthy People*, identified a triad of national strategies for health: preventive health services, health protection, and health promotion.[10] Preserving health and preventing disease were considered high priorities figuratively and economically; however, health promotion did not receive the same attention. It was not until the issuance of the 1990 National Health Objectives, *Healthy People 2000*,[1] that a subtle, but compelling, shift was noted in the primary emphasis upon health promotion and individual responsibility. Health was considered to be a positive concept and individuals were viewed as able to influence their own health and the health of the nation. Although the 1990 report used the same triad of strategies for health as the 1979 report, the order in which these tactics were pursued was changed. The emphasis was upon health promotion first, then health protection, and finally, preventive services.

The health promotion tactics in these national objectives focused upon the potential effect of personal health choices made within the environment and on the impact of consumer initiatives for self-care.[1] However, the Secretary of Health and Human Services, Dr Louis Sullivan, considered the development of such a "'culture of character' [to be] 'prevention' in the broadest sense."[11(piii)] Again, although health promotion and wellness are spoken of highly in these national objectives, disease preven-

tion still remained an important, if not *the* important focus of health.

In a concept analysis of preventive health behavior, Kulbok[4] examined research published from 1958 to 1980. Although the literature review included medical, nursing, psychological, and social science journals, the key words used in the search (ie, health behavior, health protective behavior, preventive health behavior, and preventive health care) identified only one nursing research report published in a non-nursing journal.

PREVENTIVE HEALTH BEHAVIOR: GENERAL HEALTH RESEARCH FROM 1958 TO 1980

The health literature of the 1950s through the 1970s focused upon preventive health, as did the national objectives in *Healthy People.*[10] The majority of the studies reviewed by Kulbok[4] were designed to explain why people fail to use preventive health services (Table 1). These studies dealt primarily with single preventive actions (ie, chest radiograph, influenza vaccine, dental checkup). In the 1970s, a few studies attempted to determine why people act as they do regarding a range of health promotion, health protection, and illness-prevention behaviors. Harris and Guten[12] proposed the most comprehensive range of practices, including some outside the realm of medically defined behaviors.

The impact of internal forces (attitudes and beliefs) and external forces (reference group or social position) on preventive health behavior was key to all of these explanatory models.

Several social and psychological models described the mechanisms underlying health behavior.[13-18] The impact of internal forces (attitudes and beliefs) and external forces (reference group or social position) on preventive health behavior was key to all of these explanatory models. No singular determinant or set of multiple factors was associated with positive health behaviors.

In addition, definitions of health behavior varied widely across studies, with definitions often unspecified or implied.[4] Evidence of general agreement among scientists emerged in two distinct schools of thought. The *limited* view of health behavior is characterized by these terms: voluntary, medically defined, disease related, professionally organized, and preventive. The individual is asymptomatic and perceived to be healthy. The *expansive* approach subsumes these characteristics and includes the terms self-defined, nonorganized, and health-protective, regardless of the individual's state of perceived wellness. Categorizing these definitions as either limited or expansive, only 4 of the 32 studies reviewed were compatible with an expansive approach.[12,19-21]

Measures of variables were also quite diverse, ranging from the simplest level of nominal, dichotomous, single variables,[14,22-24] to complex ordinal scales measuring multiple behaviors.[12,19,25,26] Most of the studies did not include a theoretical definition of health behavior; therefore, the ability to assess the correspondence of definitions and measures was limited.

In addition, the question of dimensionality of health behaviors was not addressed until the 1970s.[4] In fact, Steele and

Table 1. Preventive health behavior: A summary of research

Author and year	Sample N/ design	Operationalization of concept
Hochbaum (1958)	Random N=1201 survey	Chest radiograph in past 7 years
Kegeles (1963)	Random N=277 survey	One dental checkup in past 3 years
Haefner and Kirscht (1970)	Nonrandom N=166 experiment	Physician visit in absence of symptoms Radiograph in absence of symptoms
Belloc and Breslow (1972)	Random N=6,928 survey	7 hours of sleep Eat breakfast almost every day Eat between meals rarely or occasionally Weight/height ratio relative to desirable mean: 5% below to 5% above Physical activity: active sports, swim, exercise often Cigarette smoking history: never Amount drink: none, 1–2 at a time
Bullough (1972)	Nonrandom N=806 survey	Checkup for a new baby, immunization for older children, checkup for older children, dental care for older children, mother's dental care, prenatal care first trimester, postpartum checkup, percentage of pregnancies planned, last pregnancy planned
Cummings et al (1979)	Random N=286 survey	Received swine flu shot
Harris and Guten (1979)	Random N=842 survey	Five clusters of health-protective behaviors: personal health practices, safety practices, preventive health care, environmental hazard avoidance, harmful substance avoidance
Mechanic and Cleary (1980)	Nonrandom N=302 survey	Takes few risks Prepared for health emergencies Drinks (heavily) Smokes Wears seat belt: most recent time Preventive medical care Physically active Exercise

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McBroom[27] noted that earlier studies that reported an association between socioeconomic status and specific health actions led to the hypothesis that health behavior was unidimensional. Williams and Wechsler[28] suggested that the context of behavior differs and behaviors may be one-time-only (immunization) or sporadic (physical examination) or daily (dental habits). A limited number of correlational studies supported several independent dimensions of health behavior.[12,27-29]

In summary, based on Kulbok's[4] analysis of research prior to 1980, the lack of clarity regarding relationships among variables in complex explanatory models, and the inconsistent definition and measurement of health behavior, contributed to the weak association of social and psychological variables and health behavior. Supportive evidence of multiple dimensions of health behavior was beginning to accrue during the 1970s, although the interpretation of health behavior dimensions differed depending on the variables included in the analysis. Kulbok[4] recommended further exploration of the fundamental nature of the concept of health behavior as being essential to nursing research for health promotion.

HEALTH PROMOTION AND DISEASE PREVENTION: NURSING RESEARCH FROM 1970 TO 1990

Pender[30] critically reviewed selected nursing research related to health promotion and illness prevention from 1970 to 1982. Preventive health behaviors were examined in several of the nursing studies reviewed, and included utilization of preventive services, personal health practices, and health habits.[30] Some studies explored characteristics associated with single health actions (ie, well-child clinic visits),[31] cancer detection clinic visits,[32] and breast self-examination.[33]

Other studies measured a range of different types of health behavior. Bullough's study[26] examined preventive services. The measure of preventive services included well-baby checkups, immunizations, dental care for children and mothers, prenatal care, postpartum checkups, and percentage of planned pregnancies. Turnball[34] examined personal health practices (ie, breast self-examination and nutrition, weight control, and exercise). Pesznecker and McNeil[35] studied health habits, an inventory of 19 items that was general and broad.

During the period from 1970 to 1982, these nurse researchers did not clarify definitions of health behavior with respect to health promotion or disease prevention. Many of the health behaviors examined by nurse researchers were clearly behaviors adopted for the purpose of preventing illness or detecting disease. Although some of the researchers examined a range of health behaviors, these studies did not address the issues of the conceptual definition of health behavior and the dimensionality of the behaviors being investigated.

Although an emphasis upon health promotion over preventive health was beginning to be evident in the health literature in the 1980s, inconsistency of definitions and the variety of terms used posed problems for this current review of health promotion behavior research in nursing. Key words for the literature search were expanded to include health behavior, health promotion, health protection, preventive health behavior, life style, and research. Over 60 research reports were found. Abstracts were

reviewed to select nursing research on health promotion or preventive health behavior, since the meanings of these terms continued to be synonymous. The final list included 30 nursing research reports (see Appendix).

DEFINITIONS AND MEASURES OF HEALTH PROMOTION BEHAVIOR

The majority of studies examined health promotion behavior in well adults; however, theoretical definitions of health behavior were still not reported. Several investigations focused on a single action or a limited number of specific, illness prevention or risk reduction behaviors.[36–40] The specific medical context for the risk reduction behavior was generally presented (ie, fetal abnormalities,[38] chronic illness,[36] coronary artery disease risk factors[39]). Sennot-Miller and Miller[41] examined a set of 10 cardiovascular risk reduction behaviors requiring life-style management; although the study definition of health behavior was not specified, various conceptions of health promotion and risk reduction were proposed.

While the concept of health promotion activities was not defined, the need to identify these activities somewhat more clearly was evident in that several health behavior inventories were recently developed for use in nursing research.[42–44] Brown, Muhlenkamp, and others sought to explain the relationship between adult clients' health beliefs and values and "the combined health-promotion activities of safety, nutrition, prevention, substance use, relaxation, and exercise."[42(p157)] The Personal Lifestyle Questionnaire (PLQ)[42] consisted of 24 items reported by Harris and Guten[12] to be the most common behaviors performed by people to protect their health. Acceptable reliability coefficients were reported for the total instrument. A total life-style activity score was computed from the PLQ and used in the analysis, thus suggesting a single, unidimensional construct of health behavior.

Difficulty identifying health promotion or even health protection activities as predictors of life style was noted in another study where correlates of the six subscales of the PLQ were analyzed.[45] In this study, different variables were found to be associated with different subscales. As analyses were also done on life-style scores plus measures of clinic visits, the inconsistency of predictors was attributed to the differences between self-report and actual behavior.

In 1988, Muhlenkamp and Broerman[46] tested a causal model to predict positive health behaviors in adults. The model of health beliefs and values accounted for 12% of life style. Muhlenkamp and Broerman acknowledged that "free will" may compromise the ability to account for variance in individual behavior and the possibility of different types of health behavior, with respect to the range of behavior assessed in the PLQ, that may easily be influenced by will, genetic factors, and basic drives.

A new Resource Model of Preventive Health Behavior, incorporating social and health resources as correlates of good health habits, was proposed by Kulbok.[47] Preventive health behavior (PHB) was described as a broad range of primary and secondary preventive health behaviors. PHBs were defined as voluntary actions, regardless of the individual's perceived or actual health status, undertaken to promote or maintain health, whether or not these actions were effective toward that end.[12]

This study tested the dimensionality of PHB in adults through factor analysis of 16 health behaviors. Five PHB factors were reported: dental, checkup, harmful consumption, health protection, and fitness. Correlations among the PHB factors were low. It was concluded that the factors represented several distinct and unrelated types of preventive health behavior. Moreover, Kulbok[47] reported that several different *patterns* for the prediction of PHB factors were found.

Laffrey[48] also recognized the lack of conceptualization of health behavior and the influence of the medical model on existing health behavior indicators. Influenced by the work of Belloc and Breslow,[25] Harris and Guten,[12] and Maslow's[49] interpretation of the meaning of behavior, Laffrey proposed a Health Behavior Choice Scale (HBCS). The HBCS contained 15 behavior statements and related reasons for engaging in the behavior (ie, prevention, maintenance, or promotion). Preliminary reliability and validity testing were reported on the HBCS. This novel approach is conceptually derived and holds promise for further explication of the meaning and purpose of lifestyle practices.

The authors of the Health-Promoting Lifestyle Profile (HPLP) defined health-promoting life style as "a multidimensional pattern of self-initiated actions or perceptions that serve to maintain or enhance the level of wellness, self-actualization, and fulfillment of the individual."[43(p77)] The HPLP is not an exclusive behavioral construct; rather, it is a life-style construct including actions and perceptions. The HPLP was derived from Pender's[50] clinical nursing assessment tool. Pilot testing, content validity assessment, and empirical validation of the HPLP was reported by Walker and others.[43] The most recent version of the HPLP contains 48 items "worded as desirable or positive actions or perceptions."[43(p78)] Items measuring undesirable practices were eliminated from the final HPLP based on the results of psychometric evaluation.

Several studies report using the HPLP as a major variable.[51-54] In general, the aims of these studies include the examination of associations among health-promoting behavior or health practices and selected correlates (ie, sociodemographic variables, social support, self-reported health status, perceived stress). The HPLP total score is used as a measure of health-promoting behavior or health practices; again, the use of the total score suggests a singular, unidimensional construct.

In light of the conceptual confusion regarding behavior for health promotion, combining the concepts "actions" and "perceptions" under the general rubric of behavior is a serious concern. Moreover, the ability to understand relationships among critical predictor variables is limited when there is a lack of clarity and precision in theoretical and operational definitions of the criterion variable.

Although the construct of health promotion behavior continued to be nebulous, studies proliferated regarding health promotion and the patterns of both positive and compromising health behaviors exhibited in the life styles of adolescents as well as a range of adults and cultures. A few studies examined different tests of general health behaviors in adolescents. Denyes[55] tested relationships important to health promotion from Orem's[56] model of nursing. Self-care practices (ie, general and specific actions taken to maintain life, health, and well-being) constituted one construct in the health promotion model. Once again, a summative

or total self-care score was used as an independent variable to predict health outcomes. Kulbok, Earls, and Montgomery[57] examined patterns of health and social activities that represent ways of living in high-risk adolescents. The clustering of behaviors in three dimensions (ie, health promoting, health-compromising, and social activities) was consistent with research on many dimensions of adult health behavior.

Yarcheski and Mahon[58] tested a causal model of positive health practices for adolescents developed a priori from theoretical formulations, using the same variables as Muhlenkamp and Sayles[59] in a study of adults. The PLQ was the measure of health practices. The researchers reported a relatively good fit of the model for adolescents. However, the assumption that health behavior is a unidimensional concept, implied by using the PLQ total score as the dependent measure, is a concern with respect to predictions of different types of positive health practices. There is no empirical evidence of a singular, generalizable pattern of health behavior in adolescents and adults.[2,4,60]

Five qualitative investigations explored health beliefs and practices,[61,62] or health-illness behavior,[63] the meaning of being healthy,[64] and patterns of health behavior[65] from unique cultural perspectives. Hautman and Harrison identified health maintenance activities or "behaviors to keep their health"[62(p56)] in middle-income Anglo-Americans. O'Brien[63] studied adult Mexican-American migrant workers and found a pattern of health-illness behaviors for maintenance of low-level wellness. The results of these studies emphasized both health maintenance and health restoration. In contrast, Woods and others studied images of being healthy in predominantly white females 18 to 45 years of age. One category of health images included a number of actions to promote health or to prevent disease and was described as "practicing healthy life ways."[64(p40)]

Duffy[61] used qualitative and quantitative methods to describe primary prevention behaviors (PPBs) practiced by members of female-headed, one-parent families and the barriers that prevent regular practice of PPBs. Women recognized purposeful behaviors to promote health or prevent disease as conscious health practices. Regular daily routines that were part of their life style rather than for health promotion or illness prevention were viewed as unconscious health practices. The results suggest that families have differing perspectives of lifestyle routines, as well as what might be labeled health promotion or illness prevention.

The need for reliable and valid measures of the many dimensions of health behavior in general, and of health-promoting behavior specifically, is underscored by Laffrey's[65] exploratory study of patterns of health behaviors as recounted by adults with and without chronic illness and citing the primary reasons given for performing the behaviors. The predominant reasons were: illness prevention, health maintenance, and health promotion. The percentage of persons who related each category of reason for 12 clusters of behavior was analyzed. It was notable that many of the same health behaviors were performed by different persons for different reasons.

There is a need for continuing investigation of different approaches and perspectives for explanation of health behavior.

In summary, findings from current nursing research point to the existence of discrete clusters of behavior for health promotion in different samples. There is a need for continuing investigation of different approaches and perspectives for explanation of health behavior. However, an equally important emphasis is required on the conceptualization and measurement of behavior for health promotion.

THEORETICAL FOUNDATIONS: HEALTH PROMOTION AND SELF-CARE

There is a limited agreement regarding the evolution of a multidimensional construct of behavior for health promotion, in that Kulbok,[47] Laffrey,[48,65] and Duffy[61] present similar theoretical origins and definitions of health behavior. Preventive health behavior, primary preventive behavior, and health behavior were defined to include health promotion, illness prevention, and health maintenance. Walker and others[43] differentiated health-promoting behavior from health-protecting behavior, to the exclusion of the latter. Kulbok[47] and Walker and others[43] dealt with multidimensionality. Kulbok[47] focused on patterns of positive and negative health behaviors, while the Walker and others study[43] discussed dimensions of health-promoting life style that included actions and perceptions. This conceptualization of life style, combining actions and perceptions, as a synonym for or operational measure of behavior, requires critical scientific examination.

Pender[50] and Duffy[66] emphasized the equivalency of health-promoting behavior and activities of high-level wellness.[67,68] Laffrey[48] suggested that individual choice and self-actualization determines health-promoting behavior. Kulbok[47,57] concurred in the belief that understanding the dimensions of individual choices and resources is imperative for nurses to facilitate health-promoting behavior.

Throughout the nursing literature examined, nurse researchers also were in agreement in recognizing the movement toward individual self-care. Emphases upon health beliefs, health values, support systems, resources, the individual's concept of health, and perceived locus of control, as well as perceived difficulty of accomplishing a behavior, are noted. Nursing researchers have long recognized the individual's right and ability to choose and perform self-care measures to enhance health.[47,48,55,56,69] In addition, Denyes "presents empirical evidence suggesting that health is promoted as self-care abilities and self-care are enhanced."[55(p13)] Kulbok stressed that individual health decisions are based on complex factors and that "health is a personal task."[4(p132)] Laffrey postulated that "valuing and choosing would increase in complexity with increasing development of the human being [toward self-actualization]."[48(p299)] There is renewed interest in encouraging health promotion programs that emphasize self-care and responsibility for all kinds of reasons, not the least of which are the economic realities of the cost of illness care in dollars, time, productivity, and human resources.[1]

IMPLICATIONS FOR NURSING RESEARCH

It is clear that although nurses are holistic in their practice, there has been minimal attention to explicit theoretical definition and the potency of the multidimensionality of the behaviors being studied. Although the

type and range of behaviors recently investigated by nurses were broader than merely medically recommended health practices, this research is just beginning to describe the linkages between perceptions or meaning of health and patterns of everyday living in individuals and populations. Is it possible to consider health promotion behaviors outside a disease prevention model? Many nurse researchers imply that it is possible and necessary; however, there continues to be an emphasis upon health promotion behaviors for the prevention of disease, rather than for the high-level wellness and self-actualization processes of the individual without necessarily having to be undertaken to prevent disease.

Multidimensionality of health promotion behavior goes beyond merely the 'types' or clusters of behavior. Dimensions may be related to the positive and negative value of each behavior, cultural perceptions, gender differences, developmental influences, or the perceived purpose of the action (ie, promotion, protection, prevention, or maintenance). Nursing models must be further developed or expanded to explore these conceptual dimensions of health behavior and the association with salient health-related constructs.

National priorities for health promotion, health protection, preventive services, and consumer self-care provide important directions for health promotion research to design healthy life-style interventions. Nurse researchers and practitioners are interested in unraveling the complexity of health promotion to foster healthy life styles. It is generally recognized that health promotion is more than the adoption of positive health habits or the avoidance of negative health behaviors. Health promotion involves a complicated web of knowledge, attitudes, and behavior related to health.

Health promotion at the individual level and the community level requires complex personal life-style choices made in the context of the uncertain economic, cultural, physical, and social environments. Emerging models of health that describe exuberant well-being, becoming, and growing are compatible with a view of health promotion as fostering an individual's control and social responsibility for health in the context of everyday life.[70] The health promotion construct being advanced by nursing will require greater precision and refinement of existing and future definitions of health promotion behavior leading to healthy life styles. Perhaps then there will be an enhancement of collective understanding and improved nursing practice focusing upon health promotion for the sake of healthy people.

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Table A-1. Continued

Author and year	Sample/N characteristics	Design	Behavior
Kulbok, Earls, and Montgomery (1988)	Non-random N=1,856 14–19 76% female 84% black	Survey Cross-sectional Questionnaire	General: problem (health negating) group/individual activities, conventional (health promoting) (26 items)
Muhlenkamp and Broerman (1988)	Non-random N=172 17–84 81% female White predominantly	Survey Cross-sectional Questionnaire	General: same as Brown et al (1983)
Walker, Volkan, Sechrist, and Pender (1988)	Non-random N=452 18–88 66% female	Survey Cross-sectional Questionnaire	General: same as Walker et al (1987)
Woods et al (1988)	Non-random systematic N=528 18–45 Female White predominantly	Qualitative Interview	General: practicing health lifestyle
Aaronson (1989)	Non-random N=529 18–41 Female	Survey Questionnaire Telephone interview	Specific (risk factors) caffeine, alcohol, smoking
Riffle, Yoho, and Sams (1989)	Non-random N=113 56–94 78% female 93% white	Survey Cross-sectional Questionnaire	General: same as Walker et al (1987)
Walker (1989)	Random N=173 17–40	Survey Cross-sectional Questionnaire	General: same as Walker et al (1987)
Yarcheski and Mahon (1989)	Non-random N=165 15–21 50% female 77% white	Survey Questionnaire Cross-sectional	General: same as Brown et al (1983)
Laffrey (1990)	Non-random N=85 22–88 80% female	Semi-structured Interview and Questionnaire	General: nutrition, exercise, well-being, relaxation, sleep/rest, health professional, work-school, substance avoidance, moral behaviors, hygiene, and general environment