HEALTH DEFINITION AND HEALTH BEHAVIOR

OF WELL ADULTS

A THESIS

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DEDICATION

This thesis is dedicated to Bob, my friend and partner in life, in the hope that we may always find happiness in each other's personal achievements.

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CHAPTER 1

INTRODUCTION

Nursing is concerned not only with the prevention of disease, but also with the promotion of health. As the largest group of health professionals providing health education to the public (<u>Preventive Medicine USA</u>, 1976), nurses must understand the determinants of health behaviors. Based on this understanding, nurses can more effectively direct their client's perceptions and behaviors toward healthful outcomes.

The health belief model can predict health protecting behaviors which are actions based on the avoidance of illness, disability, or death (Becker, 1974; N. Pender, 1982). Health promoting behaviors, however, are actions aimed at enhancing health status in the absence of a particular threat (N. Pender, 1982). If nursing interventions are to be aimed at client growth and wellness and not merely toward the avoidance of illness, a new model for intervention is needed.

N. Pender (1982) proposed the health promotion model as an organizational framework for the explanation and prediction of health promoting behaviors. Health promoting

behaviors are self-initiated, life style activities aimed at higher levels of health. These behaviors include physical exercise, nutritious eating, stress management, and the development of social support systems (Clark, 1981; O'Donnell & Ainsworth, 1984; N. Pender, 1982; Travis, 1980). The health promotion model suggests that the definition of health to which an individual subscribes is likely to influence the extent to which he/she engages in health promoting behaviors (N. Pender, 1982). Research is needed to test this proposed relationship and its usefulness in directing health promoting intervention.

Problem of the Study

The problem of this study was to determine if there is a relationship between an individual's personal health definition and the individual's health behaviors. The specific questions to be answered were:

1. Is there a difference in the number of health promoting behaviors reported by individuals who subscribe to an actualizing definition of health and individuals who subscribe to a stabilizing definition of health?

2. Is there a difference in the number of health protecting behaviors reported by individuals who subscribe to an actualizing definition of health and individuals who subscribe to a stabilizing definition of health?

Justification of the Problem

The Surgeon General of the United States has called for a major emphasis on changing unhealthy life styles as a national health priority (Public Health Service, Since that time, health priorities have been 1979). further elaborated by two subsequent documents: Promoting Health and Preventing Disease: Objectives for the Nation and Strategies for Promoting Health for Specific Populations (Public Health Service, 1980, 1981). As a result of these landmark reports, increasing the frequency of health promoting behaviors among individuals is being given increased national attention. This effort is an attempt to decrease the incidence of life style illness, increase the quality of life for the American people, and contain health care costs. "Not enough attention has been focused on how individuals attain health as 'producers' of this commodity rather than 'consumers' of health care services" (Dowie, 1975, p. 619).

Experts agree that the leading causes of morbidity today are life style related (Ainsworth, 1984; Berry, 1981; Knowles, 1980). Epidemiological efforts and improved sanitary conditions have freed society from many communicable diseases. Technology and pharmacology have improved early diagnosis and medical treatment of disease. The

leading causes of death today--heart disease, cancer, and accidents--are not caused by a single bacteria or virus but are associated with life style induced risk factors.

Documentation of the effects of unhealthy life style habits on health status accumulates at alarming rates. Sedentary life styles are major contributing factors to many chronic health problems (O'Donnell, 1984). Dietary inadequacies plague 30% to 50% of Americans in all socioeconomic levels (N. Pender, 1982). People are dying from stress-related disorders in greater numbers than ever before (Manuso, 1984). Unfortunately, scientific knowledge about how to promote healthy life styles is limited. This research is important because it contributes to the efforts of nursing to test a model for promoting health behavior in the adult population.

In 1974, Fuchs warned that the health of Americans has less to do with what they spend on medical care than with personal life styles. However, since that time, health care expenditures in the United States have continued to rise sharply. In 1982, total health care expenditures provided the public with \$247 billion worth of goods and services; 96% of that money went toward treatment and disease. Only 4% went toward prevention and health promotion (Ainsworth, 1984). While costs continue to

climb, the life expectancy of Americans is not increasing significantly (A. Pender, 1982).

Studies have shown that illness prevention is more cost effective than illness treatment (Berry, 1981; Knobel, 1983; A. Pender, 1982). The cost effectiveness of health promotion, however, has been given very little attention. A classic epidemiological study of 7,000 persons in California in 1965 revealed a strong relationship between health habits and life expectancy (Belloc, 1973). Α. Pender (1982) demonstrated the immense economic advantage of these health habits by converting the increased life expectancy into additional years of productivity in wages and earnings. Cooper (1982) reviewed the cost effectiveness of employee wellness programs and concluded that they "improve employee attitudes and morale at work, reduce turnover, and decrease sick pay and the cost of company health insurance premiums" (p. 213). Nursing research efforts must be responsive to socioeconomic Research in the area of health behavior determitrends. nants will have a positive impact on health care costs.

The major thrust of nursing practice models is in the direction of health skill deficits and identified health threats (Neuman, 1982; Orem, 1980; Roy, 1980). These models guide the nurse in fostering illness-avoidance

behaviors in clients. Sources agree, however, that as nursing develops its body of knowledge, a more positive goal will emerge. Wellness is being emphasized as a paramount objective for recipients of nursing care (American Nurse's Association, 1980; Dayani, 1979; Oelbaum, 1974; N. Pender, 1982; Smith, 1983; Turnbull, 1976). Nurses must recognize that while their role involves teaching and guiding individuals toward wellness, ultimately it is the individual who must take responsibility for his/her own health actions (Christiansen, 1981). Presently, nursing's knowledge base is deficient in its ability to predict sources of motivation for wellness behaviors.

N. Pender (1982) proposed that the motivation for health promoting behavior is distinctly different from the motivation for other forms of health behavior. The health promotion model, based on this premise, offers cognitive-perceptual factors hypothesized to have motivational significance for explaining the predicting health promoting behaviors. Studies are needed to test the usefulness of the model in explaining and predicting health promoting behaviors. Until nursing accumulates empirically based knowledge on the nature of wellness behavior, interventions directed at fostering such behavior will be no more than well-meaning guesses.

Conceptual Framework

The conceptual framework for this study was N. Pender's health promotion model (Appendix A). According to N. Pender (1982), the major source of motivation for human behavior can be identified as actualizing or stabilizing tendencies. The actualizing tendency is an active, selfinitiated force directed toward increasing states of positive tension to promote change, growth, and maturation. Health promoting behaviors, such as regular exercise and optimal nutrition, are directed at enhancing well-being and are an expression of the actualizing tendency. The stabilizing tendency is an active force responsible for maintaining internal and external environmental variables within a steady range compatible with existence. Health protecting behaviors, such as smoking cessation and environmental pollution control, are directed at reacting to health threats and are an expression of the stabilizing tendency.

N. Pender (1982) and Rosenstock (1974) have questioned the extent to which disease-avoidance oriented models, primarily the health belief model, have value for explaining positive health action. The health promotion model is based on the premise that health promoting behaviors have conceptually distinct motivations and goals. The

model is offered as an organizational framework for research efforts directed toward identifying and explaining factors that influence health promoting behavior (N. Pender, 1982).

Determinants of health promoting behavior are categorized as individual perceptions, modifying factors, and factors affecting the likelihood of taking action. Individual perceptions are personal factors that facilitate or sustain health promoting behavior. These factors have motivational significance and are identified as (a) importance of health, (b) perceived control, (c) desire for competence, (d) self-awareness, (e) self-esteem, (f) definition of health (actualization versus stabilization), (g) perceived health status, and (h) perceived benefits of health promoting behaviors. These eight factors influence readiness to engage in health promoting behavior.

The second determinant of health promoting behavior, modifying factors, also influences the decision to engage in health promoting behaviors. Modifying factors are (a) demographic variables, such as sex and age; (b) interpersonal variables, such as expectations of others; and (c) situational variables, such as health options available. The first two determinants of health promoting behavior,

individual perceptions and modifying factors, comprise the decision-making phase of the health promotion model.

The third determinant of health promoting behavior are factors affecting the likelihood of taking action and include (a) perceived barriers, such as cost, and (b) cues to action, such as the mass media. These two factors are proposed as particularly salient during the action phase of health promoting behavior. Research is needed to investigate the relationships of these model components and their significance in predicting health promoting behavior.

As proposed in the health promotion model, an individual's definition of health is likely to influence the extent to which that person engages in health promoting behavior. "Since how goals are defined determines the means used to achieve them, differences in definitions of health would predict differing patterns of health-related behaviors" (N. Pender, 1982, p. 70). The model hypothesizes that defining health as stabilization would predispose individuals toward health protecting behavior; whereas, defining health primarily as actualization would predispose individuals toward health promoting behavior (N. Pender, 1982). The present study tested the relationship between

health definition and health behavior as conceptualized in the health promotion model.

Assumptions

The assumptions for this study were:

1. Individuals have a personal definition of health.

2. Health is a concept which can be linguistically defined.

3. Subjects reported honestly and accurately their perception of health definition and performance of health behavior.

Hypotheses

The research hypotheses for this study were:

1. Well adults who subscribe to an actualizing definition of health have more health promoting behaviors, as measured by the Health Protection/Promotion Behavior Index, than those adults who subscribe to a stabilizing definition.

2. The incidence of health protecting behaviors, as measured by the Health Protection/Promotion Behavior Index, is not different between well adults who subscribe to an actualizing definition of health and those who subscribe to a stabilizing definition of health.

Definition of Terms

The following terms were operationally defined for use in this study:

1. <u>Health definition</u>--the personal meaning which health has for a given individual.

(a) <u>Actualizing definition of health</u>--the meaning of health to which an individual subscribes which is based on the realization of potential and goals through purposeful, self-directed activity (Dunn, 1980, N. Pender, 1982; Smith, 1983). This definition views health as a progressive process of maturation toward increasingly higher levels of functioning throughout life. An individual with an actualizing definition of health may view health as the process of living life to the fullest. Defining health as actualization predisposes individuals toward health promoting behaviors (N. Pender, 1982). For the purpose of this study, an actualizing definition of health was measured by a score greater than 245 on the Laffrey Health Conception Scale.

(b) <u>Stabilizing definition of health</u>--the meaning of health to which an individual subscribes which is based on the maintenance of effective functioning by protecting oneself from disease, discomfort, and disability (Dubos, 1965; N. Pender, 1982; Smith, 1983). This definition views health as a condition that enables an individual to adapt to the impact of environmental changes. An individual with a stabilizing definition of health may view health as being free from symptoms of disease. Defining health as stability predisposes individuals toward health protecting behaviors (N. Pender, 1982). For the purposes of this study, a stabilizing definition of health was measured by scores less than 245 on the Laffrey Health Conception Scale.

2. <u>Health behaviors</u>--purposeful activity of an individual aimed at influencing personal health.

(a) <u>Health promoting behavior</u>--activity "directed toward sustaining or increasing the level of well-being, self-actualization, and fulfillment of a given individual" (N. Pender, 1982, p. 65). Health promoting behavior is self-initiated, life style activity which represents "man acting on his environment as he moves toward higher levels of health" (p. 67). The individual seeks positive tension or arousal to reach his goals and maximize potentials. Examples of health promoting behaviors are regular physical exercise, optimum nutritional eating patterns, and the development of social support networks. It is proposed that health promoting behavior is an expression of a personal actualizing definition of health (N. Pender,

1982). For the purpose of this study, health promoting behavior was measured by the Health Promotion Subindex of the Health Protection/Promotion Behavior Index. This subindex is a list of specific health promoting behaviors. The higher the score on the Health Promotion Subindex, the greater is the incidence of health promoting behaviors in the individual's life style.

(b) Health protecting behaviors--activity which is directed toward "decreasing the probability of encountering illness by active protection of the body against unnecessary stress or detecting illness at an early stage" (N. Pender, 1982, p. 65). This behavior represents man reacting to external influences or threats posed by the environment. Examples of health protecting behaviors are smoking cessation to prevent disease, divorce counseling to deal with loss, and minimizing environmental pollution contacts. It is proposed that protecting behavior is an expression of a personal stabilizing definition of health (N. Pender, 1982). For the purpose of this study, health protecting behavior was measured by the Health Protection Subindex of the Health Protection/Promotion Behavior Index. This subindex is a list of specific health protecting behaviors. The higher the score on the Health Protection Subindex, the greater is the incidence

of health protecting behaviors in the individual's life style.

3. <u>Well adults</u>--male or female individuals, 20 to 45 years of age, who were not at the time of the study under medical treatment or supervision for an illness or disability.

Limitations

Limitations identified for this study were:

1. The Health Protection/Promotion Behavior Index devised for this study was developed by the investigator and has not been used in any previous study.

2. Generalization of the findings is limited by the specific items that are designated to represent health promoting and health protecting behaviors.

3. Subjects were obtained through convenience sampling technique.

4. Paper and pencil testing was used to measure health behaviors rather than actually observing the behaviors of interest.

Summary

Nursing is concerned not only with the prevention of disease but also with the promotion of health. As nurses and the general public begin to define health as wellness and not merely the absence of disease, the nature of behavior directed toward health should also change. Nurses will be able to direct their clients' behaviors toward the most healthful outcomes only when they understand the factors which influence an individual's likelihood of taking health promoting action.

A new and relatively untested model for explaining and predicting health promoting behavior has been introduced to nursing practice. The health promotion model (N. Pender, 1982) has potential for guiding clients' actions toward the wellness objective. This study tested a relationship proposed in the model in an effort to begin accumulating empirically based knowledge on the factors which contribute to health promoting behavior.

The problem of this investigation was to determine if there was a relationship between an individual's personal definition of health and the individual's health behavior. It is hoped that findings will contribute to an understanding of the cognitive/perceptual factors which influence an individual's readiness to engage in health promoting behavior. A better understanding of such factors will facilitate the attainment of national health goals, as well as nurses' goals for their clients.

CHAPTER 2

REVIEW OF THE LITERATURE

The review of literature related to this study addresses three areas: (a) definition of health; (b) health behavior, with an emphasis on health promoting behavior; and (c) explanations of health behavior, with an emphsis on the health promotion model. In the past decade, health promotion has received increasing attention in the nursing literature. This trend is not surprising in that nurses are the largest group of professionals providing health services and education to the public. The increasing number of studies in nursing which focus on positive health behavior seems to parallel nursing's increasingly positive concept of health. The health promotion model brings together findings from studies to date that have examined factors which influence health promoting behavior (N. Pender, 1982). One factor proposed in the model has been given very little attention in the literature. This factor is health definition, the focus of the present study.

Definition of Health

It is clear that there is no universal concensus on the meaning of health. However, predominant themes on health definition emerge from the literature. Themes on health definition include the following: (a) health as broad or narrow in score; (b) health viewed as being on one continuum with illness or on a separate continuum from illness; (c) health as stabilizing, actualizing, or both stabilizing and actualizing in nature; and (d) health as an expansive progression viewed as four models: clinical model, role-performance model, adaptive model, and eudaimonistic model.

Broad or Narrow

The widely quoted and influential World Health Organization (WHO) definition of health is an example of a broad, all-encompassing definition. This definition describes health as a state of complete physical, mental, and social well-being and not merely the absence of disease (WHO, 1976). This broad definition has been criticized because it implies the only alternative to complete wellness is illness, with no middle ground (Murray & Zentner, 1975). It is further criticized for not being a functional concept of health which can be measured in an individual (Patrick, Bush, & Chen, 1973). Callahan (1977) described

the WHO definition as being so broad that it prohibits defining a health problem. The WHO definition is praised, however, for its contribution to a positive conceptualization of health. N. Pender (1982) recognized the definition for its concern for the whole individual, its view of health as encompassing both internal and external environments, and its equating health with productive living.

The most narrow and conservative view of health is the medical or clinical view. This view is illness oriented, and health is narrowly defined as the absence of disease. Physicians have traditionally utilized this concept of health in the treatment of man as a physiochemical system. This view facilitates diagnosing a malfunction of the system, since deviation from a standard of normal can be assessed. However, defining health as merely the absence of disease ignores the sociopsychological person and neglects to address the need for improving health status in the asymptomatic individual (Smith, 1983).

Health-Illness Continuum

Health and illness have been viewed as opposite ends of one health continuum (Bruhn, Cordova, Williams, & Suentes, 1977; Dunn, 1980). Dunn (1980) viewed death at one end of the scale and peak wellness at the opposite

end. The continuum allows for varying levels of health and illness. However, N. Pender (1982) asserted that when health and illness represent a single continuum, it is difficult to discuss healthy aspects of the ill individual.

Twaddle and Hessler (1977) and N. Pender (1982) have discussed health and illness as qualitatively different. From their perspective, health is viewed on a separate continuum from illness and death. Health is defined as more than the mere absence of disease. In this view, a person can manifest degrees of health in the presence of illness. Oelbaum (1974) stressed the interrelationship of health and illness, though she also viewed the concepts as separate entities, rather than opposite ends of one continuum.

Stabilizing or Actualizing

N. Pender (1982) classified definitions of health in three categories: (a) definitions focusing on actualization, (b) definitions focusing on stability, and (c) definitions emphasizing both actualization and stability. Actualizing definitions of health emphasize human potential. Defining health in this way, however, has been given less attention than other definitions. According to Dunn (1959), a leading proponent of a definition of health

focusing on actualization, "high level wellness" is defined as:

An integrated method of functioning which is oriented toward maximizing the potential of which the individual is capable. It requires that the individual maintain a continuum of balance and purposeful direction within the environment where he is functioning. (p. 447)

The major emphasis of this definition is on growth and the realization of potential through self-directed activity.

Definitions of health focusing on stability are based on the premise that the environment is hostile to human existence. The individual must defend itself or lessen the environmental impact. Dubos (1965), a major advocate of the stability position, viewed health as a condition which enables an individual to adapt to the environment. In the nursing literature, Murray and Zentner (1975) presented a definition of health focusing on stability: "Health is a purposeful, adaptive response, physically, mentally, emotionally, and socially to internal and external stimuli in order to maintain stability and comfort" (p. 7).

Stability oriented definitions emphasize normality. Parsons (1979) defined health in terms of social norms. Parsons described health as the effective performance of valued roles and tasks for which an individual has been socialized. N. Pender (1982) contended that a major problem with normative definitions of health is that they view health as a normative standard of adequacy and neglect growth, maturation, and the realization of human potential.

Definitions of health encompassing both actualizing and stabilizing views take into account the need for growth and the need for stability. N. Pender (1982) proposed a definition of health which contains both concepts:

Health is the actualization of inherent and acquired human potential through satisfying relationships with others, goal directed behavior, and competent personal care while adjustments are made as needed to maintain stability and structural integrity. (p. 37)

Four Progressive Models

Smith (1983) formulated four models of health based on a review of historical and contemporary literature. The four models of health should be viewed as forming a scale--a progressive expansion of the idea of health. The most narrow view of health, the clinical model, views individuals as physiologic systems. Health is defined as the absence of symptoms of malfunctioning in the system.

Next on the expanding scale is the concept of health as role-performance. This concept adds a social-psychological

dimension to health. From this viewpoint, health is the ability to adequately fulfill one's central social roles.

The third model, the adaptive model, incorporates and expands on the previous two models. Individuals must be physiologically healthy and perform their social roles but must also have adaptive behavior. This model is drawn largely from the work of Dubos (1965). Health is defined as effective interaction and adjustment between man and his constantly changing environment.

The fourth model, the eudaimonistic model, is the most comprehensive and expansive idea of health proposed by Smith (1983). Based on Maslow's (1962) description of self-actualized individuals, this view of health presents an ideal of continuous growth, creativity, and self-fulfillment. Health is the process of developing one's full potential (Smith, 1983).

Studies of Health Definition

Studies which explore individual health definition are limited. In one descriptive study, grade school children were found to describe health as a positive attribute which enabled people to do what they want to do (Natapoff, 1978). In 1980, Laffrey (1982) surveyed 78 adults using an open-ended question to determine what

one means when they say they are very healthy. Laffrey reported that subjects' responses reflected Smith's (1983) four models of health: clinical, role-performance, adaptive, and eudaimonistic. From this observation, the Health Conception Measure was devised. This instrument was the antecedent to the Laffrey Health Conception Scale (LHCS). The LHCS measures personal health definition with reference to the four models mentioned. Laffrey (1982) used the LHCS in a card sort technique to survey the health definition of 94 adults. The mean health definition score was slightly high, indicating that subjects tended to view health more toward the eudaimonistic model.

Christiansen (1981) explored individuals' health definitions in a survey of 387 adults in an attempt to elucidate the determinants of health promoting behavior. Christiansen's health definition tool was composed of three health definitions drawn from the literature. Subjects chose an open-ended definition (a complete wellbeing view), a functional definition (a role-performance view), or an absence of disease definition. The majority of respondents clustered in the open-ended definition (N. Pender, 1984). A profile of an individual who defined health as complete well-being emerged as one who has some education beyond high school, is between 35 and

44 years of age, believes he/she is more healthy than an average person of his/her age and sex, and is internally controlled. Those choosing the open-ended definition of health had the highest education; while those choosing a functional, more narrow definition of health had the lowest mean education.

While it is clear that there is no consensus on the definition of health, the trend in nursing is toward an increasingly positive and complex conceptualization of health. Investigators are just beginning to look at the significance of an individual's personal health definition. The literature to date contains more suppositions about the concept of health definition than it contains empirical investigations of personal health definitions.

Health Behavior

The study of behavior directed toward preventing illness or remaining healthy as a distinctive class of behavior was first undertaken by Hochbaum (1958) and by Rosenstock (1974). Researchers since that time have agreed that health behavior is immensely complex, involving a multitude of interlocking factors (Becker et al., 1977: Haefner & Kirscht, 1970; Hochbaum, 1970; Steele & McBroom, 1972).

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Generally, health behavior has been looked at as an action taken by an individual to avoid illness or as the utilization of health services (Kasl & Cobb, 1966; Rosenstock, 1975; Steele & McBroom, 1972; Wu, 1973). Preventive health behavior was defined by Kasl and Cobb (1966) as "any activity undertaken by a person believing himself to be healthy, for the purpose of preventing disease or detecting it in an asymptomatic stage" (p. 246). Later, Harris and Guten (1979) used the term "preventive health behavior" as a synonym for both illness prevention and health promotion. They defined health protecting behavior as "any behavior performed by an individual, regardless of his or her health status, in order to protect, promote, or maintain his or her health, whether or not such behavior is objectively effective toward that end" (p. 18). N. Pender (1982) further clarified health protecting behavior and conceptually severed it from health promoting behavior. N. Pender defined health protecting behavior as activities which are directed toward decreasing the likeliness of encountering the threat of a specific illness by active protective measures. Examples of health protecting behaviors are smoking cessation, seeking out immunizations, and minimizing contamination by environmental pollutants.

As early as 1973, Dolfman pointed out in his historical and analytical examination of the concept of health, that the notion of health as the absence of something (illness) was becoming objectionable. He asserted that health should be viewed as a positive entity--the possession of certain qualities and attributes. As the concept of health definition became more positive in nature, researchers began to view health practices in this perspective also.

Belloc (1973), in a classic study, examined the relationship between personal health practices and mortality. The health practices of smoking, eating, drinking, hours of sleep, regularity of meals, and physical activity were found to be inversely related to mortality rates. Further findings from this study revealed that good health practices are associated with positive health, with the relationships being cumulative (Belloc & Breslow, 1972).

Harris and Guten's (1979) exploration of protective behavior as any behavior performed by a person in order to protect, promote, or maintain health paved the way for viewing health behavior as positive actions and not merely illness-referenced actions. Their study of 842 randomly selected individuals sought to measure how people defined health protection. Findings revealed that empirical

aspects of health behavior are personal, safety, preventive health care, and environmental hazard avoidance. The most common activities did not involve the utilization of the health care system but were elements of self-care.

N. Pender (1982) introduced the term health promoting behaviors. "Health promoting behaviors represent man acting on his environment as he moves toward higher levels of health rather than reacting to external influences or threats posed by the environment" (p. 67). Health promoting behaviors are an expression of the actualizing tendency or man's seeking to grow in more complex and positive directions. Health threats, which are significant to health protecting behaviors, have little conceptual significance to health promoting behaviors. Health promoting behaviors are directed toward growth and the actualization of human potential. Examples of health promoting behaviors are regular exercise, the practice of stress management techniques, and optimal nuritious eating. N. Pender devised an inventory of health promoting and health protecting behaviors titled The Lifestyle and Health Habits Assessment.

Christiansen's (1981) study of 387 individuals revealed that the majority of behaviors which respondents were more likely to perform were health promoting in nature.

Most frequently performed behaviors included maintaining an optimistic outlook on life, not drinking more than six alcoholic beverages each week, driving within the speed limit, laughing out loud when something is humorous, and enjoying life. Behaviors which were found to be done less often reflected physical fitness and health protection. These behaviors included exercising vigorously 3 to 4 times each week, wearing a seat belt when traveling in a car, walking or riding a bike whenever possible, and using dental floss every day. Findings suggested that behaviors requiring less physical effort were done more frequently. Christiansen's study was one of the first studies which sought to study health promoting behavior as distinct from health protecting behavior.

Maddi (1985), a contemporary researcher in the area of the prevention of stress-related disorders, maintained that health practices such as relaxation, food selections, and exercise are symptomatic treatments. These practices offer a buffering effect against illness but cannot alleviate or prevent the body's reaction to stressful life events unless other factors are effectively operating. These factors which have an effect on the body's reaction to stress include personality hardiness, coping methods, and social supports. According to Maddi, coping has
been shown to be the most decisive factor in reducing the organism's reaction to stress. Coping involves dealing with stressful life events intently at the time of occurrence to decrease the body's reaction in the long run. While Maddi's work is aimed at exploring the relationship between stressful life events and illness, his unique perspective on health practices gives his work significance for health behavior research. The idea that health practices play a secondary role in preventing illness was not found elsewhere in the literature. Maddi's work suggested that coping strategies and personality hardiness factors may be the health behaviors of interest to future researchers.

While some demographic factors such as sex, age, income, and education have been shown to be correlated with the use of health services, their relationship to health action in the absence of symptoms is much less clear. Level of formal education has correlated positively with preventive health behavior in some studies. In other studies, formal education has not emerged as a significant predictor of preventive health action (N. Pender, 1982). In exploring health promoting behaviors, Christiansen (1981) found that the educational level of individuals reporting high health promoting behavior

was significantly higher than the educational level of those reporting low health promoting behavior. While the high health promoters had, on the average, at least some college experience, the low health promoters had, on the average, no education beyond high school.

While health behavior has traditionally been explored as an individual's use of the health care system or action taken to avoid illness (health protecting behavior), a new conceptualization emerges in the nursing literature. N. Pender (1982) proposed that health promoting behavior is conceptually distinct from health protecting behavior. Studies indicate that individuals do perform behaviors which are not exclusively illness-avoidance oriented. However, the significance of viewing health behavior as growth oriented as opposed to illness-avoidance oriented has yet to be determined.

Explanations of Health Behavior

Nurses have traditionally adapted theoretical explanations of behavior from the social sciences to explain the health behavior of their patients. More recently, however, nurses have developed their own health behavior models for nursing practice. Major health behavior models and theories utilized by nursing will be discussed.

The Health Belief Model

The health belief model, derived from learning theory, was designed in the early 1950s by a group of investigators in public health service to describe individuals who were likely to take preventive health action (Rosenstock, 1966). The model was modified by Becker (1974), and again modified by N. Pender (1982). The original model proposed that

persons will generally not seek preventive care or health screening unless they possess minimal levels of relevant health motivation and knowledge, view themselves as potentially vulnerable and the condition as threatening, are convinced of the efficacy of intervention and see few difficulties in undertaking the recommended action. (Becker et al., 1977, p. 29)

The health belief model, as modified by Becker (1974), is divided into individual perceptions (perceived susceptibility and perceived seriousness), modifying factors (such as sex, social class, knowledge, and cues to action), and variables that affect the likelihood of initiating action (perceived benefits and perceived barriers). Numerous studies have, for the most part, supported the relationships proposed in the model and the model's applicability to a variety of health issues (Antonovsky & Kats, 1970; Foster & Kousch, 1978; Haefner & Kirscht, 1970; Hallal, 1982; Kegeles, 1969). N. Pender (1982) proposed some modifications of the health belief model based on current research concerning the determinants of preventive health behavior. N. Pender suggested that the variables, perceived benefits and perceived value of early detection, are salient early in the decision-making phase rather than impacting later in the action phase. Two variables added to the model as individual perceptions were the importance of health and perceived control. Interpersonal variables added to the model as modifying factors were family patterns of health care and interactions with health professionals. Studies testing N. Pender's modifications of the health belief model were not found.

After years of the predominant use of the health belief model to explain health behavior, Rosenstock (1974), and later in the nursing literature, N. Pender (1982), questioned the mdoel's adequacy for explaining health promoting behavior. These theorists suggested that a preventive, illness oriented model which explains diseaseavoidance behavior may not be adequate to explain health promoting behaviors where actions are growth oriented.

The Health Promotion Model and Health Definition

Breaking with an exclusively preventive view of health behavior, N. Pender (1982) proposed the health promotion model for nursing practice. This model, discussed in Chapter 1 of the present study, provides a conceptual

framework for identifying and explaining factors which affect health promoting behavior. The model is a synthesis of the literature to date and serves as framework for research in the area of health promotion.

Studies exploring the usefulness of this model in explaining health behavior are currently underway. A major 3-year study at Northern Illinois University School of Nursing, led by N. Pender, is presently being conducted to test the validity of the health promotion model with four different populations. Personal health definition is among the variables under investigation (N. Pender, 1984). Other studies designed to test the model are in progress.

The health promotion model proposes that an individual's personal health definition may influence his health behavior. No empirical support for this relationship is found in the literature prior to its inclusion in the model. Studies reviewed in the literature which address the relationship between health definition and health behavior will be reported here.

Christiansen (1981) explored determinants of health behavior in a national survey of 387 adults. Personal health definition was among the variables studied. Participants were asked to choose from among three definitions

of health, the one that was closest to their own belief about health. Christiansen offered subjects three definitions of health from definitions in the current literature: (a) an open-ended, growth oriented definition, "Health is a state of complete physical, mental, and social wellbeing"; (b) a disease oriented definition, "Health is the absence of mental and physical disease"; and (c) a functional definition, "Health is the ability to work, to play, and to perform any desired task" (p. 59, p. 153).

An analysis of variance was performed to determine how selected variables influence definition of health. Significant variables were education, age, comparison of health to others, and internal health locus of control. Individuals choosing the open-ended definition of health had a significantly higher education than those choosing the functional definition of health. Those choosing the functional definition of health were significantly older than those choosing the open-ended definiton. As Christiansen suggested, this may reflect the older person's concern about aging on their functional abilities. Individuals who chose the growth oriented definition rated their own health more favorably when compared to

the average individual than did those choosing the absence of disease definition.

Furthermore, Christiansen (1981) sought to determine the significance of health definition as a contributor to health promoting behavior. Health promoting behavior was measured by the Health Behavior Inventory. This inventory included only those behaviors over which an individual has control and no behavior which required intervention by a health professional was included. A factor analysis of the Health Behavior Inventory revealed five factors: enjoyment of life (included items such as "feel positive about myself"), physical fitness (included items such as "take stairs rather than waiting for an elevator"), sharing feelings (included items such as "don't keep problems to myself"), health protection (included items such as "use dental floss every day"), and prevention of disease (incldued items such as "do not use cigarettes, cigars, or pipes") (pp. 92-95). Subjects' responses indicated the relative amount of time the individual performed a behavior. Findings revealed that definition of health was not a significant contribution to the total health behavior score nor to any of the five behavior N. Pender (1984) suggested that Christiansen's factors. findings may be due to lack of reliable instrumentation

for measuring health definition or to the clustering of responses in the open-ended definition of health category.

In another study of health definition, Laffrey (1982) explored the relationship between health conception and health behavior choice. The Laffrey Health Conception Scale was developed in Laffrey's study, though in its original form it was the Health Conception Measure (HCM). Health conception was defined as the perception of health held by an individual. The researcher hypothesized that if health conception was related to one's health actions, a growth oriented conception may relate more to growth oriented behavior than would a narrow conception of health.

The method of administering the HCM in Laffrey's study was a card sort technique. The cards included 16 statements about the meaning of health, 4 statements to reflect each of Smith's 4 concepts of health: clinical, role-performance, adaptive, and eudaimonistic. Subjects were asked to sort the cards into three stacks: the first stack, containing 4 cards, included statements least consistent with their view of health; the second stack, also containing 4 cards, included statements most like their views; and the third stack, containing 8 cards, included left-over cards.

The Health Behavior Choice Scale (HBCS) was designed to measure the promotiveness of health behavior choice in Laffrey's study. Health behavior choice was defined as "the choice of a health behavior among alternatives, as a function of the meaning the behavior has for the individual" (p. 38). The 15 scale items were adapted from health practices discussed in the literature and were presented to subjects in a two-alternative, forcedchoice form. Subjects' responses were scored to differentiate a preventive, a maintenance, or a promotive pattern of behavior choice. Data were collected from questionnaires and interviews with 94 randomly selected adults, ages The HCM scores ranged from 4 to 16 (the 18 to 69 years. total possible range) with a mean score of 10.7. Higher scores reflect a more complex definition of health. The HBCS scores ranged from 12 to 28 (possible range 8.3 to 28.3) with a mean score of 20. Higher scores reflect more promotive responses.

Both the HBCS and HCM scores were found to be significantly and moderately correlated. "This indicates that subjects who have a more complex conception of health select more promotive behavior choices than do subjects with a less complex conception of health" (Laffrey, 1982, p. 98).

Interaction Model of Client Health Behavior

Cox's (1982) interaction model of client health behavior was recently presented in the nursing literature. This complex and comprehensive model emphasizes the process of facilitating client decisions and behavior to maintain and promote health. Cox criticized present models for neglecting to address client-provider interaction. Cox asserted that "because the client-provider relationship has shown that it can consistently result in positive health behavior, its systematic inclusion in explanatory models is essential" (p. 46). The interaction model proposes that an individual's background variables, intrinsic motivation, cognitive appraisal, affective response, and the interaction with health professionals will determine the elements of health outcome. Studies to test this The interaction model parallels model are in progress. the health promotion model in that positive health action is the desired outcome. However, the interaction model differs from the health promotion model, in that Cox emphasized the process of interaction while the health promotion model offers no framework for interacting with clients to move them toward positive health behavior.

Additional theories from the social science literature, such as theories of perception, learning, personality,

and motivation, attempt to explain human behavior. The theory of reasoned action, the theory of cognitive dissonance, and locus of control have been adapted by nurses for explaining health behavior.

Theory of Reasoned Action

The theory of reasoned action (Fishbein & Ajzen, 1975) was developed in social psychology to explain the relationship between intentions and behavior. According to the model, two factors are major determinants of behavioral intentions. These factors are (a) beliefs about the value the consequences have for the individual and (b) beliefs about what relevant others think the individual should do and his motivation to comply with their expecta-Factors proposed to affect the relationship between tions. intentions and behavior are time interval, exposure to new information, number of steps required to enact the behavior, abilities, memory, habits, specificity of measured intention and behavioral criterion, and congruity between stated and true intention. This model assumes that most human behaviors are volitional and, thus, guided by behavioral intent (Jaccard, 1975). The theory of reasoned action is emerging in the nursing literature as a framework for studies of positive health behavior (Miller, Wikoff,

McMahon, Garrett, & Johnson, 1982; N. Pender, 1984; Schmelling, 1982).

Theory of Cognitive Dissonance

Festinger's (1957) psychological theory of cognitive dissonance appears in nursing texts as a framework for explaining health behavior (N. Pender, 1982; Wu, 1973). Dissonance occurs when cognitions, or what an individual knows about himself, his behavior, and his environment, fail to fit together. The discomfort of dissonance will motivate the individual to try to reduce dissonance and achieve harmony and consistency among his opinions, beliefs, knowledge, and behaviors. As related to health behavior, dissonance may result from receiving new information that is incongruent with present behavior. A very limited number of studies was found in the nursing literature, however, utilizing cognitive dissonance theory to explain health behavior (Forchuk, 1984). It appears that nurses have drawn from this theory primarily for nursing education issues.

Locus of Control

Locus of control theory is derived from Rotter's (1954) social learning theory, which hypothesizes that individuals develop expectations about the control they believe they have over the consequences of behavior in everyday living. People who believe that what happens to them is due to their own efforts are internally controlled. People who believe that what happens to them is due to chance, fate, or other people are externally controlled. Studies have supported the relationship between internal control and such health behaviors as seeking immunizations, smoking reduction, and weight loss (Dabbs & Kirscht, 1971; Kaplan & Cowles, 1978; Wallston, Wallston, Kaplan, & Maides, 1976).

The Health Locus of Control Scale was developed by Wallston, Wallston, and DeVellis (1978) as a general measure of expectancy, similar to Rotter's internal-external scale. The scale measured three dimensions: internal health locus of control, chance health locus of control, and powerful others health locus of control. It is proposed that a person will seek a course of action concerning a health threat if the person both values the outcome and believes that the action will influence health status. Studies have supported the relationship between internal health locus of control and positive health practices (Brown, Muhlenkamp, Fox, & Osborn, 1983; Christiansen, 1981).

While several explanations of health behavior are well supported in the literature, the usefulness of the

health promotion model has yet to be determined. Only recently introduced for nursing practice, the health promotion model is gaining the attention of nurse investigators. Several studies are in progress. One survey of health definition appears to support the positive relationship between health definition and health behavior proposed in the model (Laffrey, 1982). However, the present study measured subject's health behavior choice and not the individual's actual performance of the behavior.

Summary

This review of the literature has included information on the following areas: (a) conceptual themes on health definition; (b) studies which investigated health behaviors and categories of health behavior, such as health protecting and health promoting; and (c) studies supporting explanations of health behavior, with an emphasis on the relationship between health definition and health behavior proposed in the health promotion model. It is clear that no universally agreed upon definition of health currently exists, even though viewing health in a particular way may encourage positive health behavior.

Within nursing practice, a broad, complete well-being view of health is generally accepted. Like the concept of health, the concept of health behavior also appears

to be in a state of transition and is slowly emerging as more positive in nature. While nurses continue to draw on knowledge from the social sciences, they are beginning to generate their own explanations of health behavior. The health promotion model, which proposes that health definition influences health promoting action, is one such explanation. The variable of health definition is not included in any other model or theory reviewed. Two studies which explored the relationship of health definition to health behavior were covered in detail in the chapter. One study appeared to support the relationship of health definition and health behavior, and one study did not support this relationship. It is clear that much research is needed to clarify the determinants of health promoting behavior.

CHAPTER 3

PROCEDURE FOR COLLECTION AND TREATMENT OF DATA

This ex post facto research study was descriptive comparative in nature. According to Polit and Hungler (1983), the aim of descriptive research is to describe existing relationships among variables rather than to explore cause-and-effect relationships. The present study explored the relationship between an individual's personal health definition and the individual's health behavior. This was done by looking at the difference in the incidence of specific health behaviors between two groups who defined health differently. The independent variable for the study was personal health definition. The dependent variable was health behavior.

Setting

The setting for this study was a southwestern city in the United States with a regional population of 3.5 million persons. Subjects were obtained from a suburban community junior college. Data were collected during the spring semester from students enrolled in history

and biology courses. The questionnaires were administered in the classroom during official class time.

Population and Sample

The accessible population for this study included male and female individuals enrolled in spring semester courses in a suburban community junior college. The convenience sample included students enrolled in four conveniently selected history classes and one conveniently selected biology class. Data were collected at either the beginning or at the end of class time over an 8-week period. Of the 84 students in the classes, 7 declined to participate. Of the remaining 77 volunteer participants, 1 questionnairie was discarded due to incompletion, 9 respondents did not meet the minimum sample age criteria of 20 years, and 13 did not meet the sample wellness criteria due to reported illness or disability. Therefore, the sample studied consisted fo 54 subjects who met the following criteria:

1. Subjects reported that they were not under medical treatment or supervision for an illness or disability at the time of the study.

2. Subjects were enrolled in non health-related courses at the designated community college at the time of the study.

Subjects were limited to those students, age
to 45 years.

4. Subjects were able to read, understand, and communicate in English.

It was projected that an adequate sample size would be obtained from two college classes. Due to the unexpected number of teenage respondents and those reporting illness or disability, data were collected in two additional classes. After the researcher had collected data from four classes, 40 subjects who met the sample criteria had been obtained. Upon preliminary analysis of these 40 questionnaires, health definition groups were found to be markedly disproportionate. Therefore, a fifth college class was solicited by the researcher and 14 additional subjects were obtained. This brought the sample size to 54. None of these additional 14 subjects fell into the disproportionately small health definition The investigator proceeded with the group, however. study using the sample size of 54 subjects.

Protection of Human Subjects

This research study qualified as a Category I study according to the Human Subjects guidelines and was exempt from review by the Human Subjects Review Committee (Appendix B). Prior to initial recruitment of subjects, permission to conduct the study was obtained from the Texas Woman's University graduate school (Appendix C). Permission was also obtained from the president of the participating college and from the classroom instructors (Appendix D).

Completion and return of the questionnaires was construed as informed consent to participate in the study. The researcher verbally informed the students of the study's purpose and expected benefits, the risks involved with participation, the participant's right to withdraw at anytime, and the time requirement for questionnaire completion (Appendix E). Students were told that their consent or refusal to participate would not influence their course grade. To assure anonymity, volunteer subjects were asked not to place their names or other identifying information on the questionnaire.

Instruments

Three insturment were used to collect data for this study. The instrument which measured health definition was the Laffrey Health Conception Scale. The instrument which measured health behavior was the Health Protection/ Promotion Behavior Index. A Demographic Form was used to collect personal data.

Laffrey Health Conception Scale

The instrument used to measure personal health definition was the Laffrey Health Conception Scale (LHCS) (Appendix F). The scale was developed by Laffrey (1982) and is based on a theoretical continuum of health complexity. The theoretical basis for this tool is Smith's (1983) four models of health.

Smith (1983) proposed four models of health which can be viewed as a scale representing a progressive expansion of the idea of health. These four health views of health are clinical, role-performance, adaptive, and eudaimonistic. Eudaimonistic is a term derived from the Greek word meaning conducive to happiness (Guralnik, 1970). As a model of health, eudaimonistic implies a process which leads to good, joyful, and creative living (Smith, 1983). Progressive expansion and complexity in the four models of health increases in the eudaimonistic direction.

Scores on the LHCS which are toward the clinical and role-performance end of the continuum indicate that the individual defines health from a standard of normal. In this view, health is the absence of disease and the ability to perform one's central roles. These views of health are conceptually congruent with a stabilizing

concept of health (N. Pender, 1982; Smith, 1983). The score range on the LHCS is 70-420. For the purposes of this study, scores below the median of 245 indicated that an individual had a stabilizing definition of health. These individuals were considered an independent group.

Scores which are toward the adaptive and eudaimonistic end of the continuum indicate that the individual defines health as an active process of growth. In this view, health is the ability to creatively adapt to changing circumstances and to realize one's full potential. This view of health is conceptually congruent with an actualizing concept of health (N. Pender, 1982; Smith, 1983). For the purpose of this study, scores above the median of 245 on the LHCS indicated that an individual had an actualizing definition of health. These individuals were considered an independent group. It was predetermined that if a score of 245 was obtained from the sample, the subject's questionnaire would be dropped from the study sample. No score of 245 was obtained.

The LHCS is comprised of 28 items. A 6-point Likert response format is used. The total health conception score is obtained by summing all 28 items using a weighted scoring procedure. The weighting procedure assigns a "1" to each clinical items, a "2" to each role-performance

item, a "3" to each adaptive item, and a "4" to each eudaimonistic item.

Clinical items on the scale are items 4, 6, 9, 11, 15, 20, and 25. Role performance items on the scale are items 3, 5, 10, 17, 21, 24, and 26. Adaptive items are 2, 8, 13, 14, 19, 22, and 27. Eudaimonistic items are 1, 7, 12, 16, 18, 23, and 28. The total health conception score was computed as follows: (Clinical items) + (Role Performance items) x 2 + (Adaptive items) x 3 + (Eudaimonistic items) x 4. The possible score range was 70 to 420. Higher scores indicated a more eudaimonistic definition of health, and lower scores indicated a more clinical definition of health. Response choices for each of the 28 items ranged from strongly disagree (1) to strongly agree (6).

Construct validity of the LHCS was established by factor analysis, yielding four factors which were identical to the factors conceptualized for development of the instrument. Internal consistency of items within the four factors was obtained through alpha coefficients of clinical, $\underline{r} = .88$; role performance, $\underline{r} = .88$; adaptive, $\underline{r} = .87$; eudaimonistic, $\underline{r} = .87$. Test-retest reliability after a week interval was .78 (Laffrey, 1984).

<u>Health Protection/Promotion Behavior Index</u>

The instrument that was used to measure health behavior was the Health Protection/Promotion Behavior Index (HPPBI) (Appendix G). 'This tool consisted of two subindices: the Health Protection Subindex, which measured the incidence of specific health protecting behaviors in an individual's life style, and the Health Promotion Subindex, which measured the incidence of specific health promoting behaviors in an individual's life style.

The HPPBI was a modified version of N. Pender's (1982) Lifestyle and Health Habits Assessment. N. Pender's assessment is a list of 100 life style health behaviors. To develop the HPPBI, five items pertaining exclusively to one gender (i.e., "have a pap smear at intervals recommended by my physician") were excluded from the tool. One added item was "have a physical exam at intervals recommended by my nurse or physician." These revisions equalized the total possible points which males and females could score.

A panel of three nurse experts was asked to categorize the resulting 96 health behaviors as health protecting or health promoting in nature. Serving on the panel were three doctorally prepared nurses, each of whom held professorships in community health nursing at their

respective universities. Each nurse expert was an active researcher and author in the area of health promotion.

The three panel members were instructed to place each behavior in one of two categories: health protecting or health promoting. It was explained that designation of a behavior to a category would indicate that the expert perceived the behavior as more promoting or more protecting in nature (Appendix H).

After the panel completed this task, the researcher assigned each behavior to one of the two categories based on its designation to that category by two of the three experts. The result was a list of 31 protecting behaviors and a list of 57 promoting behaviors. To equalize the number of protecting and promoting behaviors on the final tool, the number of behaviors by which the longer subindex exceeded the shorter subindex was calculated. The number Therefore, 26 behaviors were eliminated from was 26. the list of health promoting behaviors (the longer list) by a table of random numbers. The HPPBI was then compiled by randomly listing the remaining 31 promoting behaviors and the 31 protecting behaviors by a table of random numbers. The resulting instrument, the HPPBI, contained a list of 62 health behaviors with a key demarcating the two subindices for scoring purposes (Appendix G).

During data collection, subjects were asked to indicate a "yes" or "no" answer after each behavior. Subjects replied yes if the behavior was generally present in their life style and no if the behavior was not generally present. Numerical conversion for yes answers was made, giving subjects 1 point for each behavior marked. The two subindices were summed separately, resulting in two scores for each subject. The possible range for each subject's health protecting score was 0 to 31. Higher scores indicated that the individual had a higher incidence of health protecting behaviors in his/her life style than lower scores would indicate. The possible range for health promoting scores was 0 to 31. Again, higher scores indicated that the individual had a higher incidence of health promoting behaviors in his life style than lower scores would indicate.

Demographic Form

Data concerning age and sex were collected on the Demographic Form (Appendix I) to describe the sample. In addition, the subject's current health status was determined by the subject's response to the question, "Are you currently under medical treatment or supervision for an illness or disbility?" This health status

information was used to eliminate any ill or disabled person from the desired sample of well adults.

Data Collection

Collection of data proceeded after written consent was obtained from the institution and verbal consent was obtained from the college class instructors. Potential subjects were approached as a group during their class time with a verbal explanation of the study. Benefits, risks, and time involvement in completing the questionnaire were explained. Participants were assured of their anonymity and that their consent or refusal to participate in the study would not affect their course grade. Completion and return of the questionnaire was construed as consent to participate in the study.

After the explanation, the researcher distributed questionnaires to the volunteers and verbally explained the directions. The researcher remained in the classroom while each volunteer student completed one questionnaire, which consisted of three instruments: the Laffrey Health Conception Scale, the Health Protection/Promotion Behavior Index, and the Demographic Form. Questionnaires were collected by the researcher as they were completed. This data collection procedure was repeated in classrooms as necessary until an adequate sample size was obtained.

Treatment of Data

The demographic data of age and sex were summarized using descriptive statistics. Means were calculated for age and percentages were calculated for sex. The health status question was used only to omit any ill individual from the sample.

Treatment of data for the two hypotheses involved the comparison of two groups of subjects on the dependent variable of interest. In Hypothesis 1, the two groups, individuals with an actualizing definition of health and individuals with a stabilizing definition of health, were compared on the variable of health promoting behavior. In Hypothesis 2, the same two groups, those with an actualizing definition of health and those with a stabilizing definition of health, were compared on the variable of health protecting behaviors. Measurement for the dependent variable, health behavior, was considered to be on the interval scale for the treatment of data.

The analysis originally determined to be performed was the <u>t</u>-test for independent samples. According to Polit and Hungler (1983), the <u>t</u>-test is a parametric procedure for testing the differences in group means. However, markedly disproportionate groups were unexpectedly obtained. Fourteen additional subjects were recruited

after preliminary analysis of the data; however, none of these subjects fell into the smaller group. Therefore, the decision was made to examine the existing data using the Mann-Whitney \underline{U} test. According to Polit and Hungler (1983), the <u>t</u>-statistic might be inappropriate if the researcher is working with very small groups. A nonparametric test such as the Mann-Whitney \underline{U} may be more appropriate for testing the difference between two independent samples in this instance. Therefore, the sum of the ranks for the two groups was compared for each hypothesis using the \underline{U} statistic.

In Hypothesis 1, the researcher looked at the difference in the ranks of health promoting behavior scores between the actualizing group and stabilizing group by calculating the <u>U</u>-statistic. In Hypothesis 2, the researcher looked at the difference in the ranks of health protecting behavior scores between the actualizing group and the stabilizing group by calculating the <u>U</u>-statistic.

Level of significance for the study was set at \underline{p} = .05. Analysis was performed using the Texas Woman's University computer.

CHAPTER 4

ANALYSIS OF DATA

This descriptive comparative, ex post facto study was conducted to determine if there was a difference in the incidence of health behaviors in well adults between those who report an actualizing definition of health and those who report a stabilizing definition of health. The Laffrey Health Conception Scale, the Health Protection/ Promotion Behavior Index, and a Demographic Form were completed by the subjects. The questionnaire data were collected over an 8-week period. The data which met predetermined criteria for inclusion in the sample were statistically analyzed. In this chapter, the sample will be described and findings will be presented.

Description of the Sample

The sample consisted of 54 community college students, aged 20-44 years. These students were considered to be well adults by their denial of current medical treatment for an illness or disability. Seventy-seven students, obtained from four small history classes and one large biology class, volunteered to answer the questionnaires. Of the questionnaires received, 9 were discarded from the

sample because subjects were younger than the predetermined minimum age of 20 years. Thirteen questionnaires were discarded due to reported current illness or disability requiring medical treatment. One questionnaire was discarded due to incompletion. The remaining 54 subjects met sample criteria.

The Laffrey Health Conception Scale scores were analyzed to separate subjects into two groups. As predetermined, those subjects with scores below 245 would make up the stabilizing group and those subjects with scores above 245 would make up the actualizing group.

Markedly disproportionate groups were unexpectedly obtained. The actualizing group consisted of 50 subjects. The age range was 20 to 44 years, with a mean age of 25.9 years. The group consisted of 22 males (44%) and 28 females (56%). Health definition scores for the actualizing group ranged from 248 to 415, <u>mean</u> = 329.

The stabilizing group consisted of only four subjects. The age range for this group was 20 to 32 years, with a mean age of 24.5 years. The group consisted of 2 males (50%) and 2 females (50%). Health definition scores for the stabilizing group ranged from 147 to 232, <u>mean</u> = 200. Table 1 summarizes the description of the two groups.

Table 1

Description of Health Definition Groups by Sex, Age,

and Definition Scores

	Actualizing definition $(\underline{n} = 50)$	Stabilizing definition $(\underline{n} = 4)$		
Mean age	25.9	24.5		
Males	44% 50%			
Females	56%	50%		
Mean health definition score	329	200		

Findings

The Mann-Whitney <u>U</u> was used to test the hypotheses. According to Polit and Hungler (1983), a nonparametric test such as the Mann-Whitney <u>U</u> is appropriate to test the difference between the ranks of scores of two independent samples when very small groups are obtained (Group 1, <u>n</u> = 50; Group 2, <u>n</u> = 4). Findings of the study will be discussed as they relate to each of the two hypotheses.

<u>Hypothesis 1</u>

The first research hypothesis stated: Well adults who subscribe to an actualizing definition of health have more health promoting behaviors, as measured by the Health Protection/Promotion Behavior Index, than those adults who subscribe to a stabilizing definition of health. Of a possible 31 promoting behaviors, the mean health promoting behavior score for the actualizing group was 22.3. The mean health promoting behavior score for the stabilizing group was 20.5. The Mann-Whitney \underline{U} test was used to compare the two groups. The \underline{U} value for the scores was $\underline{U} = 75.5$, $\underline{p} = .42$. There was no difference in health promoting behaviors between individuals who define health as stabilizing and those who define health as actualizing. Therefore, research Hypothesis 1 was not supported.

<u>Hypothesis 2</u>

The second research hypothesis stated: The incidence of health protecting behaviors, as measured by the Health Protection/Promotion Behavior Index, is not different between well adults who subscribe to an actualizing definition of health and those who subscribe to a stabilizing definition of health. Of a possible 31 protecting behaviors, the mean health protecting behavior score for the actualizing group was 17.5 and the mean health protecting score for the stabilizing group was 17.5. The Mann-Whitney <u>U</u> was used to compare the two groups. The <u>U</u> value for the scores was <u>U</u> = 97, <u>p</u> = .92. There was no difference in health protecting behaviors between those individuals

who subscribe to an actualizing definition of health and those who subscribe to a stabilizing definition of health. Therefore, research Hypothesis 2 was supported.

Additional Findings

Due to the markedly disproportionate health definition groups obtained in this study, additional analysis was performed on the Laffrey Health Conception Scale data. To determine the internal consistency of the tool, splithalf reliability coefficients were computed for the total LHCS and for each of the four subscales. These coefficients were then subjected to the Spearman-Brown correction formula to obtain reliability for the entire LHCS and for each of the subscales in their entirety. The split-half reliability coefficient obtained for the first 14 items on the total LHCS (items 1-14) and the second 14 items (items 15-28) was .83. The estimated reliability for the entire test was .91.

Split-half reliability coefficients were also computed for each of the four subscales on the LHCS. To equalize the halves for the split-half analysis, one item was deleted from each of the 7-item subscales. This was done by deleting the fourth item on each scale in the order of its occurrence on the LHCS. The relationship

between the scores on the first three items and the last three items on each subscale was then determined.

For the clinical subscale, the split-half reliability coefficient for the first three items (4, 6, and 9) and the last three items (15, 20, and 25) was .82. The estimated reliability for the entire clinical subscale was .90.

For the role-performance subscale, the split-half reliability for the first three items (3, 5, and 10) and the last three items (21, 24, and 26) was .69. The estimated reliability for the entire role-performance subscale was .82.

For the adaptive subscale, the split-half reliability coefficient for the first three items (2, 8, and 13) and the last three items (19, 22, and 27) was .62. The estimated reliability for the entire adaptive subscale was .76.

For the eudaimonistic subscale, the split-half reliability coefficient for the first three items (1, 7, and 12) and the last three items (18, 23, and 28) was .69. The estimated reliability for the entire eudaimonistic subscale was .82. Table 2 summarizes the LHCS reliability findings.

Table 2

Reliability of the Laffrey Health Conception Scale

Total LHCS and subscales	Half 1 mean score	Half 2 mean score	Reliability coefficients	Estimated reliability for entire test
Total LHCS	154	166	.83	.91
Clinical	12	13	.82	.90
Role-performance	27	27	.69	.82
Adaptive	43	42	.62	.76
Eudaimonistic	54	56	.69	.82

Summary

The total sample in this study consisted of 54 subjects. The actualizing definition group consisted of 50 subjects. The stabilizing definition group consisted of 4 subjects. A description of the sample was quantitatively presented. The Mann-Whitney U test was used to determine the difference between the two groups on two variables--health promoting behavior for Hypothesis 1 and health protecting behavior for Hypothesis 2. Statistical analysis revealed that there is no difference in health promoting behaviors between the actualizing definition group and the stabilizing definition group; therefore, research Hypothesis 1 was not supported. Statistical analysis revealed that there was no difference in health protecting behavior between the actualizing definition group and the stabilizing definition group; therefore, research Hypothesis 2 was supported.

Split-half reliability coefficients were computed for the total LHCS and for each of the four subscales. Moderate to high correlations were obtained.
CHAPTER 5

SUMMARY OF THE STUDY

This chapter presents a summary of the study, a discussion of findings, and conclusions of the study. Implications of the study findings for nursing are presented, and recommendations for further study are made.

This study was designed to test the relationship between health behavior and health definition proposed in the health promotion model (N. Pender, 1982). The study was conducted to determine if there was a difference in health behaviors between individuals who subscribe to an actualizing definition of health and those who subscribe to a stabilizing definition of health.

Summary

Today, life style behaviors are the principal determinants of major illness or wellness. In an attempt to understand what factors influence positive health behavior, N. Pender (1982) proposed the health promotion model for nursing practice. To date, this model is relatively untested. Research findings, such as the ones from the present study, will help to determine the model's usefulness and guide nursing interventions.

The health promotion model served as the conceptual framework for this study. Based on the model's proposed relationship about health definition and health behavior, two research hypotheses were generated:

1. Well adults who subscribe to an actualizing definition of health have more health promoting behaviors than those who subscribe to a stabilizing definition of health.

2. The incidence of health protecting behaviors is not different between well adults who subscribe to an actualizing definition of health and those who subscribe to a stabilizing definition of health.

Data were collected from 77 junior college students utilizing the Health Protection/Promotion Behavior Index, the Laffrey Health Conception Scale, and a Demographic Form. The data were collected over an 8-week period. Fifty-four subjects met criteria for inclusion in the sample.

Analysis of responses to the Laffrey Health Conception Scale revealed markedly disproportionate health definition groups. Group 1, the actualizing group, consisted of 50 subjects. Group 2, the stabilizing group, consisted of 4 subjects. The Mann-Whitney <u>U</u> test was applied.

For Hypothesis 1, data analysis showed no significant difference between those individuals who defined health as actualizing and those individuals who defined health as stabilizing on the variable health promoting behavior, $\underline{U} = 75.5$, $\underline{p} = .42$; therefore, research Hypothesis 1 was not supported. Individuals who subscribe to a stabilizing definition of health, or one that is more illness and performance oriented, are just as likely to have health promoting behaviors as those individuals who subscribe to an actualizing definition of health, or one that is more adaptive and growth oriented.

For Hypothesis 2, data analysis showed no significant difference between those individuals who defined health as actualizing and those individuals who defined health as stabilizing on the variable health protecting behavior, $\underline{U} = 97$, $\underline{p} = .92$; therefore, research Hypothesis 2 was supported. Individuals who subscribe to an actualizing definition of health, or one that is more adaptive and growth oriented, are just as likely to have health protecting behaviors as those who subscribe to a stabilizing definition of health, or one that is more illness and performance oriented.

Additional findings demonstrated moderate to high correlations on split halves of the Laffrey Health

Conception Scale and on each of the four subscales. Furthermore, high correlations were obtained for the entire LHCS and for each of the four subscales in their entirety.

Discussion of Findings

The health promotion model proposed that defining health as actualization would predispose an individual toward health promoting behavior, whereas defining health as stability would predispose an individual toward health protecting behavior. Findings of the present study suggested that individuals who define health as stabilizing are just as likely to take health promoting action as those who define health as actualizing. Furthermore, individuals who define health as actualizing are just as likely to take health protecting action as those who define health as stabilizing. While an actualizing definition of health may predict health promoting action, it does not appear to be a stronger predictor than a stabilizing definition of health in the population studied. Furthermore, while a stabilizing definition of health may predict health protecting behavior, it does not appear to be a stronger predictor than an actualizing definition of health in the population studied. While findings do not appear to support the health promotion

model, interpretation is limited by the fact that health definition was the only variable studied. Health definition was not explored in combination with any of the other factors proposed to interact with health definition to influence health promoting behavior.

The findings in the present study supported the findings of Christiansen (1981), that an individual's personal definition of health is not a significant predictor of total health behavior. Christiansen's findings revealed that health definition was not found to contribute to any of the five types of health behaviors factored out in the study. These behavior factors included protecting and promoting categories.

Findings of the present study and of Christiansen's (1981) study at first appear to conflict with the results of Laffrey (1982). Laffrey found that in an adult population, health conception and health behavior choice were correlated. Subjects with a more complex definition of health selected more promotive behavior choices than did subjects with a less complex definition of health. Laffrey's instrumentation and methodology differ, however, from those used in the present study and in Christiansen's study. Laffrey administered the Health Conception Measure (HCM) by a card sort, in which subjects sorted out 16

statements in stacks, according to how strongly the statements reflected their view of health. This method forced subjects to discriminate among statements and reduced the possibility of all statements being seen as consistent with health for any subject. The revised HCM, the LHCS, was administered in the present study in the form of a Likert scale which allowed for less discrimination. Subjects could agree or disagree with all statements. The findings of the present study make one question whether Laffrey's revision of the card sort technique used for the HCM to the present LHCS, in the Likert format, altered health definition measurement.

The instrument used to measure health behavior in the Laffrey (1982) study, the Health Behavior Choice Scale (HBCS), differed from the tool used to measure behavior in the present study and in Christiansen's study. The HBCS measured the reason individuals take health action and not the actual performance of the health behavior. Subjects could project their reason for a behavior even if they did not carry out the behavior.

The current investigator further noted that there are two possible interpretations of the subject's directions to the Laffrey Health Conception Scale used in

the present study. Subjects may interpret their agreement or disagreement with a statement to mean that they exclusively hold this view, or they may interpret their response to mean that the statement is a component of their total view. For example, an individual who holds an eudaimonistic health definition may or may not indicate agreement with an absence of disease statement, depending on how the directions are interpreted. It appears that Laffrey's intentions were for a subject, in this instance, to agree with the clinical view as a component of the more expansive eudaimonistic view. This investigator noted, however, that some subjects who strongly agreed with eudaimonistic items disagreed with clinical items.

The conflicting findings of studies to date on the relationship between health definition and health behavior demonstrate the need for further investigation. Studies which explore health definition as a predictor of health behavior and studies demonstrating reliability and validity of instrumentation are needed.

Several explanations may account for the clustering of subjects in the actualizing health definition group in the present study. Christiansen (1981) reported that subjects who chose the most complex definition of health had the highest mean education, while those

choosing a functional (more narrow) definition of health had the lowest mean education. It would appear that more educated individuals will choose more complex definitions of health. It may be that individuals who seek more education are growth oriented individuals and will, therefore, choose a more growth oriented definition of health. Another explanation of the disproportionate health definition groups may be that educational systems instill personal growth oriented ideas in students. Furthermore, students may be conditioned to give the response they feel is expected from them. Students may realize that the eudaimonistic and adaptive items are more complex choices than the performance and clinical items.

Responses clustered toward the growth oriented definition of health may also reflect societal trends toward peak fitness and holistic health. The idea of holistic health includes mental well-being, and the eudaimonistic items in the LHCS focus on positive mental health. The "band-wagon" phenomenon may account for subject's alignment with this view of health as "the best one can be." If future studies continue to show subjects clustering toward the eudaimonistic definition, it may suggest that health definition has more historical

and societal implications than it has clinical implications.

A final explanation of disproportionate health definition groups may be the health definition instrumentation. Only beginning validity and reliability has been determined for the LHCS. For this reason, and because of the large number of actualizers obtained in the sample, the researcher explored the reliability of the LHCS. There was some question as to whether the subjects were persuaded by reading the items on the scale, and thus began scoring higher (more eudaimonistic) as they progressed through the items. Findings revealed, however, that subjects were consistent with their views throughout the tool. The estimated reliabilities obtained in this study (clinical, \underline{r} = .90; role-performance, \underline{r} = .82; adaptive, \underline{r} = .76; eudaimonistic, \underline{r} = .82) are consistent with Laffrey's reliability findings (clinical, \underline{r} = .88; role-performance, \underline{r} = .69; adaptive, \underline{r} = .62; eudaimonistic, \underline{r} = .69) (Laffrey, 1984). Demonstration of the reliability of the Laffrey Health Conception Scale in the present study strengthens the interpretation of the findings.

Findings from the present study must be interpreted with caution due to the college sample used, the small

number of individuals obtained who defined health as stabilizing in nature, and the limited use of the tools which measured health definition and health behavior.

Conclusions and Implications

The following conclusions were drawn from the findings of the present study:

1. Individuals who defined health as stabilizing in nature were just as likely to perform health promoting behaviors as individuals who defined health as actualizing in nature. Therefore, it is concluded that an individual's personal definition of health may not influence the individual's performance of health promoting behavior.

2. Individuals who defined health as actualizing in nature were just as likely to perform health protecting behaviors as individuals who defined health as stabilizing in nature. Therefore, it is concluded that an individual's personal definition of health may not influence the individual's performance of health protecting behaviors.

3. Ninety-two percent of the sample studied defined health as actualizing in nature. Therefore, it is concluded that well adults with some college education may be more likely to subscribe to a more complex, growth oriented definition of health than to a more narrow,

definition of health which excludes growth oriented ideas.

4. The Laffrey Health Conception Scale showed internal consistency, evidenced by the high correlations obtained.

The following implications were derived from the conclusions:

1. Nurses attempting to increase health promoting behavior in their clients may not need to invest time in encouraging the client to perceive health as actualizing in nature, since an individual's personal definition of health may not result in more health promoting behaviors.

2. If individuals with some formal education tend to have an actualizing definition of health, then health educators may assume that these individuals would be responsive to strategies aimed at growth and potential attainment, since they already view health in this way.

3. The study findings contribute to the testing of a new model for nursing practice. Conclusions of this study do not support the relationship between health definition and health behavior proposed in the health promotion model, thereby emphasizing the need for further

testing of this model before it is relied upon for client intervention.

Recommendations for Further Study Recommendations for further research include the following:

1. Studies of the relationship between health definition and health behavior in populations that are more heterogeneous in regard to educational levels.

2. Investigation of health definition in combination with other variables proposed in the health promotion model as a predictor of health behavior.

3. A phenomenological approach to studying health promoting behavior in which case studies of individuals who exhibit high levels of health behavior are performed.

4. Further determination of the reliability and validity of the Laffrey Health Conception Scale.

5. Given the multidimensional nature of health behavior, more extensive exploration of the preventive and promotive dimensions of health.

6. The establishment of reliability and validity of the Health Protection/Promotion Behavior Index.

7. Further development of measurable criteria of health.

APPENDIX A



<u>Note</u>. From <u>Health promotion in nursing practice</u> (p. 66) by N. J. Pender, 1982, Norwalk, CT: Appleton-Century-Crofts. Copyright 1982 by Appleton-Century-Crofts. Reprinted by permission.

Rebecca C. Bender, R.N. 4008 Old Orchard Plano, Texas 75023 October 23, 1984

Appleton-Century-Crofts 25 Van Zant Street East Norwalk, Connecticut

Dear Staff:

I am writing to request authorization from Appleton-Century-Crofts to reproduce a page from the text, <u>Health Promotion in Nursing</u> <u>Practice</u> by Nola J. Pender (1982).

Granted permission, I will reproduce the Proposed Health Promotion Model on page 66 to include in an appendix in my master's thesis.

Thank you for your prompt attention to my request.

Sincerely, Sincerely,

Rebecca C. Bender, R.N.

APPENDIX B

TEXAS WOMAN'S UNIVERSITY COLLEGE OF NURSING

PROSPECTUS FOR THESIS/DISSERTATION/PROFESSIONAL PAPER
This prospectus proposed by: <u>Rebecca C. Bender, R.N., B.S.N.</u>
and entitled:
Health Definition and Health Behavior of Well Adults
Has been read and approved by the member of (choos/hers)
Research Committee.
This research is (check one): '
<u>xx</u> Is exempt from Human Subjects Review Committee
review because classified as Category I research
Requires Human Subjects Review Committee review
hecause
Research Committee:
Chairperson, Buth Orlanghun-Weder
Member, <u>Susan</u> Goad
Member, <u>Rose Theorisatory</u>
Date:Oct. 3, 1984

Dallas Campus <u>xx</u> Denton Campus <u>Houston Campus</u>

APPENDIX C

TWÛ! Texas Woman's University P.O. Box 22479, Denton, Texas 76204 (817) 383-2302, Metro 434-1757. Tex-An 834-2133

THE GRADUATE SCHOOL

January 16, 1985

Ms. Rebecca Bender 4008 Old Orchard Plano, TX 75023

Dear Ms. Bender:

I have received and approved the Prospectus for your research project. Best wishes to you in the research and writing of your project.

Sincerely yours,

Leslie M. Thompson Provost

tb

cc Dr. Beth Vaughan-Wrobel Dr. Anne Gudmundsen

APPENDIX D

TEXAS WOMAN'S UNIVERSITY COLLEGE OF NURSING

AGENCY PERMISSION FOR CONDUCTING STUDY*

THE _____ Brookhaven Community College

GRANTS TO <u>Rebecca C. Bender, R.N., B.S.N.</u> a student enrolled in a program of nursing leading to a Master's Degree at Texas Woman's University, the privilege of its facilities in order to study the following problem.

Health Definition and Health Behavior of Well Adults

The conditions mutually agreed upon are as follows:

- The agency (may) (may not) be identified in the final report.
- The names of consultative or administrative personnel in the agency (may) (may not) be identified in the final report.
- The agency (wants) (does not want) a conference with the student when the report is completed.
- The agency is <u>willing</u> (unwilling) to allow the completed report to be circulated through interlibrary loan.
- 5. Other

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12	534	Pal.) 2	111
Date		Signature	of Agency	Personnel
$\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{$	and Linger	bith CU	lunhan a	Judel RW. E.J. D.
Signa	ature of Student	Signature	o∉ Facult	y Advisor

*Fill out & sign 3 copies to be distributed: Originalstudent; 1st copy-Agency; 2nd copy-TWU School of Nursing

APPENDIX E

Verbal Explanation to Students Prior

to Volunteering for Study

Hello, my name is Becki Bender. I am a registered nurse and currently a graduate student at Texas Woman's University College of Nursing. My major area of study is health promotion and illness prevention in well adults. I would appreciate your assistance with some research in this area by answering a questionnaire.

The purpose of this study is to investigate your personal ideas about health and your health practices. Your responses will promote an understanding of factors that contribute to health practices. This information will be useful in planning adult health education.

I am requesting volunteer students to answer a questionnaire. Answers are anonymous, and not even I, the researcher, will know the identity of the respondents. The study will present group data instead of individual data.

Participation in the study is on a volunteer basis. As volunteers, you will have the right to withdraw from the study by electing not to complete the questionnaire. Participation will not influence your grades in this class. Answering the questionnaire will take approximately 15 minutes of your time. Completion and return

of the questionnaire will be construed as informed consent to participate in the study.

Participants may receive a copy of the study findings by writing your name and mailing address on one of the index cards on the table as you leave.

If you wish to participate, please remain seated at this time, and I will distribute the questionnaires. If you do not wish to participate, you have your instructor's permission to leave.

Thank you for your attention.

APPENDIX F

COMPLETION AND RETURN OF THIS INSTRUMENT WILL BE CONSTRUED AS YOUR INFORMED CONSENT TO ACT AS A SUBJECT IN THIS STUDY

LAFFREY HEALTH CONCEPTION SCALE

Below are 28 statements to describe the meaning that "health" or "being healthy" has for different people. Depending on your personal definition of health, you may either agree or disagree with the statements. Beside each statement is a scale which ranges from <u>strongly disagree</u> (1) to <u>strongly agree</u> (6). For each item, we would like you to circle the number which best represents the extent to which you disagree or agree with the statement. The more strongly you disagree with a statement, the lower will be the number you circle. The more strongly you agree with a statement, then the higher will be the number you circle. Please make sure that you answer every item and that you circle only one number per item. This is a measure of how you define health; there are no right or wrong answers.

Please answer according to the following key: 1--Strongly Disagree 2--Moderately Disagree 3--Slightly Disagree 4--Slightly Agree 5--Moderately Agree 6--Strongly Agree

"Health" or "being healthy" means: Feeling great--on top of the world. 1 2 3 4 5 6 2. Being able to adjust to changes 1 2 3 4 5 6 in my surroundings. 3. Fulfilling my daily 1 2 3 4 5 6 responsibilities. 4. Being free from symptoms of 3 4 5 6 1 2 disease. 5. Being able to do those things 1 2 3 4 5 6 I have to do.

COMI CONS	LETION AND RETURN OF THIS INSTRUMENT N STRUED AS YOUR INFORMED CONSENT TO ACT	AS	L BI	E SUBJ	JECI	r	
IN THIS STUDY							
Plea	ase answer according to the following 1Strongly Disagree 2Moderately Disagree 3Slightly Disagree 4Slightly Agree 5Moderately Agree 6Strongly Agree	key	:				
6.	Not requiring a doctor's services.	1	2	3	4	5	6
7.	Creatively living life to the fullest.	1	2	3	4	5	6
8.	Adjusting to life's changes.	1	2	3	4	5	6
9.	Not requiring pills for illness or disease.	1	2	3	4	5	6
10.	Being able to function as expected.	1	2	3	4	5	6
11.	Not being under a doctor's care for illness.	1	2	3	4	5	6
12.	Facing each day with zest and enthusiasm.	1	2	3	4	5	6
13.	Being able to cope with stressful events.	1	2	3	4	5	6
14.	Being able to change and adjust to demands made by the environ- ment.	1	2	3	4	5	6
15.	Not being sick.	1	2	3	4	5	6
16.	Actualizing my highest and best aspirations.	1	2	3	4	5	6
17.	Adequately carrying out my daily responsibilities.	1	2	3	4	5	6

COMPLETION AND RETURN OF THIS INSTRUMENT WILL BE							
CONS TN 7	STRUED AS YOUR INFORMED CONSENT TO ACT	AS	<u>A</u>	SUB	JEC	<u>r</u>	
Plea	ase answer according to the following 1Strongly Disagree 2Moderately Disagree 3Slightly Disagree 4Slightly Agree 5Moderately Agree 6Strongly Agree	key	:				
18.	Living at top level.	1	2	3	4	5	6
19.	Adapting to things as they really are, not as I'd like them to be.	1	2	3	4	5	6
20.	I do not require medications.	1	2	3	4	5	6
21.	Carrying on the normal functions of daily living.	1	2	3	4	5	6
22.	Coping with changes in my surroundings.	1	2	3	4	5	6
23.	Realizing my full potential.	1	2	3	4	5	6
24.	Fulfilling my responsibilities as a husband/wife/son/daughter/ friend, worker, etc.	1	2	3	4	5	6
25.	Having no physical or mental incapacities.	1	2	3	4	5	6
26.	Performing at the expected level.	1	2	3	4	5	6
27.	Not collapsing under ordinary stress.	1	2	3	4	5	6
28.	My mind and body function at their highest level.	1	2	3	4	5	6

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APPENDIX G

COMPLETION AND RETURN OF THIS INSTRUMENT WILL BE CONSTRUED AS YOUR INFORMED CONSENT TO ACT AS A SUBJECT IN THIS STUDY

Health Protection/Promotion Behavior Index

<u>DIRECTIONS</u>: Below is a list of health behaviors. Please place an "X" in the "yes" column if the statement is true regarding your <u>present</u> way of life or personal habits (that is, what you generally <u>do</u>). Please place an "X" in the "no" column (that is, you do <u>not</u> generally do this).

۱.	Systematically relax voluntary muscles before sleep.	
2.	Enjoy my neighbors.	
3.	Question my physician or seek a second opinion when I do not agree with the recommended treatment.	
4.	Have identified short-term and long-term goals in life.	
5.	Eat more poultry and fish than red meat.	
6.	Practice relaxation or meditation for 15-20 minutes daily.	
7.	Drink only small amounts (no more than 3 cups/day) of caffeinated beverages (coffees, teas, or colas).	
8.	Communicate easily with others.	
9.	Find each day interesting and challenging.	
10.	Discuss health care concerns or problems with the health professional most qualified to provide meaningful assistance.	
11.	Understand the relationship between stress and illness.	
12.	Avoid between meal snacks.	
13.	Aware of personal strengths and weaknesses.	
14.	Like myself and enjoy occasional solitude.	
15.	Maintain adequate vitamin C intake when experiencing high stress.	
16.	Frequently use unprocessed foods or foods without preservatives or other additives.	
17.	Do not permit smoking in my car.	
18.	Take 12-15 deep breaths at least 3 times daily.	

YES NO

		YES	NO
19.	Regularly engage in recreational sports (swimming, soccer, bicycling).		
20.	Do not take laxative medications.		
21.	Read articles or books about promoting health.		
22.	Do not consume alcoholic beverages or do so in very limited amounts.		
23.	Am proud of my body and my personality.		
24.	Often elevate my legs when sitting.		
25.	Use a soft toothbrush.		
26.	Observe my body monthly for cancer danger signs.		
27.	Know about the "basic four" food groups.		
28.	Maintain an enthusiastic and optimistic outlook on life.		
29.	Maintain a safe living area free from fire or accident hazards.		
30.	Frequently laugh out loud with others.		
31.	Keep weight within recommended limits for my height.		
32.	Protect my skin from excessive sun exposure.		
33.	Enjoy meeting new people and getting to know them.		
34.	Do not smoke.		
35.	Have a physical exam at intervals recommended by my nurse or physician.		
36.	Drink 6-8 glasses of water each day in addition to other liquids.		
37.	Know my body contours and physical sensations well.		
38.	Recognize accomplishments and praise other people easily.		
39.	Maintain adequate roughage (fiber) in diet (whole grains,		
	raw fruits, raw vegetables).		
40.	Limit intake of refined sugars (junk foods, desserts).		
41.	Know what my blood pressure and pulse readings should be.		
42.	Avoid purchasing aerosol sprays.		

		YES	NO
43	. Attend educational classes on personal health care provided within the community.		
44	. Report any unusual signs or symptoms to a physician.		
45	. Can laugh at myself.		
46	. Chew foods thoroughly and eat slowly.		
47	. Read labels for nutrients in packaged food.		
48	Consider it acceptable to cry, feel sad, angry, or afraid.		
49	Am a member of one or more community groups.		
50	. Get 7 hours of sleep per night (not 1 1/2 hours less or more).	_	
51	. Perform stretching exercises at least four times per week to increase flexibility.		
52	When possible prevent overwhelming changes in my environment.		
53	Perceive myself as being well accepted by others.		
54	Seldom listen to loud rock music.		
55	Continue to grow and change in positive directions.		
56	. Add little or no salt to my food when cooking or during eating.		
57	. Know the seven danger signs of cancer.		
58	. Find constructive ways to express my feelings.		
59	. Dental floss regularly.		
60	. Seldom sit with legs crossed at knees.		
61	. Sleep soundly.		
62	. Plan or select meals to meet nutritional needs.		

HEALTH PROTECTION/PROMOTION BEHAVIOR INDEX

KEY

Health Protection Behavior Subindex:

Items 3, 5, 7, 10, 11, 15, 16, 17, 18, 20, 22, 24, 25, 26, 29, 32, 34, 35, 36, 39, 40, 41, 42, 44, 46, 52, 54, 56, 57, 59, 60.

Health Promotion Behavior Subindex

Items 1, 2, 4, 6, 8, 9, 12, 13, 14, 19, 21, 23, 27, 28, 30, 31, 33, 37, 38, 43, 45, 47, 48, 49, 50, 51, 53, 55, 58, 61, 62.

APPENDIX H

Dear Panel Member:

Thank you for your consent to serve on a panel of experts to develop the Health Protection/Promotion Behavior Index. The purpose of the index will be to measure an individual's health protecting behaviors and health promoting behaviors as conceptually distinct behaviors.

This tool will be used for my master's thesis to investigate the relationship between an individual's personal health definition and the individual's health behaviors. Pender's health promotion model will serve as the conceptual framework.

It is the task of the panel to designate each of the behaviors on the enclosed list to one of two categories: health protecting behavior or health promoting behavior. Some behaviors may have conceptual significance to both categories of behavior. Therefore, designation of a behavior to a category will indicate that you perceive the behavior as more protecting or more promoting in nature.

The Health Protection/Promotion Behavior Index will be compiled by this researcher based on your responses. The tool will be useful for studies which explore the influence of variables on specific types of health behaviors. You will receive an abstract of my study and a copy of the final tool.

Please take a few minutes now to complete the enclosed form and return it to me in the stamped envelope provided. I sincerely appreciate your time and willingness to share your expertise. I look forward to your response.

Sincerely,

Rehecca C. Bender RN

Rebecca C. Bender, R.N.

Preface and Directions

Attached is a list of 96 health behaviors which are included in Pender's Lifestyle and Health Habits Assessment. This assessment is a compilation of health protecting and health promoting behaviors (Pender, 1982, pp. 113-118). It has been proposed that health protecting behaviors and health promoting behaviors are conceptually distinct and can be defined as follows:

<u>Health protecting behavior</u>: activity which is directed toward decreasing the probability of encountering illness by active protection of the body against unnecessary stress or detecting illness at an early stage.

<u>Health promoting behavior</u>: activity which is directed toward sustaining or increasing the level of well-being, self-actualization, and fulfillment of a given individual.

Reference: Pender, N.J. (1982). <u>Health promotion in</u> <u>nursing practice</u>, Norwalk, CT: Appleton-Century-Crofts.

DIRECTIONS: Please indicate the designation of each behavior to ONE of TWO categories: protecting behavior OR promoting behavior. Record your response by placing an "X" in the space provided at the end of each statement. While some conceptual overlap may exist, your response will indicate that the behavior is <u>more</u> protecting or <u>more</u> promoting in nature. Please made certain that you have recorded a response for each behavior. Thank you very much.
	PROTECTING BEHAVIOR	PROMOTING BEHAVIOR
Take 12-15 deep breaths at least three times daily		
Drink 6-8 glasses of water each day in addition to other liquids		
Do not smoke		·
Read articles or books about promoting health		
Know my body contours and physical sensations well		
Do not take laxative medications		
Know what my blood pressure and pulse readings should be		
Protect my skin from excessive sun exposure		
Know the seven danger signs of cancer		-
Cbserve my body monthly for cancer danger signs		
Use soft toothbrush		
Dental floss regularly		
Know about the "basic four" food groups		
Plan or select meals to meet nutritional needs		
Eat breakfast daily		
Eat three meals a day		
Avoid between meal snacks		
Drink only small amounts (no more than 3 cups/day) of caffeinated beverages (coffees, teas, or colas)		
Do not consume alcoholic beverages or do so in very limited amounts		
Limit intake of refined sugars (junk foods, dessert	s)	
Frequently use unprocessed foods or foods without preservatives or other additives		
Maintain adequate roughage (fiber) in diet (whole grains, raw fruits, raw vegetables)		

	PROTECTING BEHAVIOR	PROMOTING BEHAVIOR
Read labels for nutrients in packaged food		
Eat more poultry and fish than red meat		
Chew foods thoroughly and eat slowly		
Add little or no salt to my food when cooking or during eating		
Keep weight within recommended limits for my height		
Avoid frequent consumption of charcoaled foods		
Walk up stairs rather than riding the elevator		
Exercise vigorously for 30-40 minutes at least four times per week		
Regularly engage in recreational sports (swimming, soccer, bicycling)		
Perform stretching exercises at least four times per week to increase flexibility		
Participate in individual sports for the pleasure of movement and physical fitness		
Engage in competitive sports primarily for enjoyment rather than competition		
Maintain good posture when sitting or standing		
Often elevate my legs when sitting		
Seldon sit with legs crossed at knees	-	
Get 7 hours of sleep per night (not l½ hours less or more)		
wake up feeling fresh and relaxed		·
Take some time for relaxation each day		
Fall asleep easily at night		
Sleep soundly		

	PROTECTING BEHAVIOE	PROMOTING
Systematically relax voluntary muscles before sleep		
Sleep on a firm matress		
Use a small pillow for sleep that maintains head and neck in a natural position		
Allow the thoughts and worries of the day to leave my mind, concentrating on passive but pleasant thoughts at bedtime		
Can laugh at myself		
Frequently laugh out loud with others		
Maintain adequate vitamin C intake when experiencing high stress		
Practice relaxation or meditation for 15-20 minutes daily		
Understand the relationship between stress and illness		
Create relaxed atmosphere at meal time		
Forget my problems and enjoy myself when immediate solutions are not possible		
Enjoy spending time in unstructured activities		
Consider it acceptable to cry, feel sad, angry, or afraid		
Find constructive ways to express my feelings		
Have attended training classes or biofeedback sessions to gain relaxation skills		• 12
Maintain an enthusiastic and optimistic outlook on life		
Enjoy expressing myself in hobbies, the arts, exercise, or play		
Like myself and enjoy occasional solitude		
Continue to grow and change in positive directions		
Am happy most of the time		

	PROTECTING BEHAVIOR	PROMOTING BEHAVIOR
Am a member of one or more community groups	. <u></u>	
Feel fulfilled in my work		
Aware of personal strengths and weaknesses		
Am proud of my body and my personality		
Respect my own accomplishments		
Find each day interesting and challenging		e nse as a state of the state
Look forward to the future		
Aware of what is important to me in life		
Have identified short-term and long-term goals		
Am realistic about the goals that I set		
Believe that my life has purpose		
Have persons close to me with whom I can discuss personal problems and concerns		
Perceive myself as being well accepted by others		
Maintain meaningful and fulfilling interpersonal relationships		
Communicate easily with others		
Recognize accomplishments and praise other people easily		
Enjoy my neighbors		
Have a number of close friends		
Thoughtfully consider constructive criticism rather than reacting defensively		
Enjoy being touched and touching people close to m	e	
Find it easy to express concern, love, and warmth to others		
Enjoy meeting new people and getting to know them		

· · · · ·	PROTECTING BEHAVIOR	PROMOTING BEHAVIOR
When possible prevent overwhelming changes in my environment		
Avoid purchasing aerosol sprays		
Seldom listen to loud rock music		
Do not permit smoking in my car		
Provide resources to meet my own personal needs		
Maintain safe living area free from fire or accident hazards		
Report any unusual signs or symptoms to a physician	1 <u> </u>	
Question my physician or seek a second opinion when I do not agree with the recommended treatment	ı 	
Expect prompt, helpful, and courteous personalized service from health care personnel		
Discuss health care concerns or problems with the health professional most qualified to provide meaningful assistance		
Have a physical exam at intervals recommended by my nurse or physician		
Attend educational classes on personal health care provided within the community		

APPENDIX I

COMPLETION AND RETURN OF THIS INSTRUMENT WILL BE CONSTRUED AS YOUR INFORMED CONSENT TO ACT AS A SUBJECT IN THIS STUDY

Demographic Data Form

- 1. Age: _____
- 2. Sex: ____Male ____Female
- 3. Are you currently under medical treatment or supervision for an illness or disability?

____Yes ____No

PLEASE take a moment to make certain you have given a response for each item on each page.

THANK YOU VERY MUCH for your participation.

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