

**HEALTH PERCEPTIONS AND HEALTH BEHAVIORS
IN THE ELDERLY AGE 65 YEARS AND OLDER**

By

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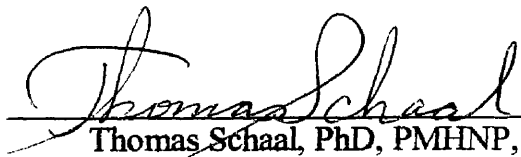
FAMILY NURSE PRACTITIONER

THE UNIVERSITY OF MICHIGAN – FLINT

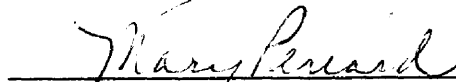
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Abstract

Introduction

Life expectancy in the United States is rising, and with it the potential for disease and disability. Programs of health promotion and disease prevention have traditionally targeted the young and middle-aged. A bias on the part of the health care community in viewing the elderly as unlikely candidates for health promotion programs is questioned. Though their numbers, comparatively speaking, represent a modest proportion of the total population of the United States, the elderly (age 65 years and older) incur almost 50% of the cost of health care dollars spent in this country annually. Of interest is the likelihood of participation, by the elderly in programs of health promotion.

Purpose

The purpose of this correlation study is to assess if a relationship exists between perception of health and health promotion behavior in the elderly age 65 years and older. Pender's Health Promotion Model (1996) provides the theoretical framework for this study. Data is based on self-reports derived from questionnaires dispersed to a convenience sample of elderly at a community senior citizen center located in the Midwest.

Findings

Statistical analysis included the Pearson's Product-moment Correlation and findings are reported as aggregate data. Though the findings did not support a statistically significant relationship between health perception and

health promotion behavior, the presence of a clinical relationship of low to moderate strength is supported by the correlation coefficients. This study has implications for nurse practitioners (NP's) in the delivery of healthcare that takes into account those factors influencing health behavior. It also assists in predicting those individuals most likely to participate in programs of health promotion, and provides insight into the design, implementation, and subsequent evaluation of such programs. Such knowledge strategically positions the NP in the role of providing quality, wholistic health care that meets the individual needs of the patient.

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CHAPTER I

Introduction

Life expectancy in the United States is rising. A report by the National Institute on Aging, or NIA (1996), details the dramatic rise in numbers of the elderly population, age 65 years and older, by eleven fold from 1900 to 1994. American men can now expect to live to 73 years of age, while their female counterparts can expect to live to age 79 (NIA, 2000). This is in sharp contrast to statistics at the turn of the twentieth century when men could expect to live to age 46 and women to age 48.

Disease states that lead to early deaths at the turn of the century have succumbed to the technological advances of vaccines and antibiotics. In their place, such chronic diseases as hypertension, diabetes, and obesity have evolved. Descriptive statistics within the NIA report (1996) reveal that heart disease remains the leading cause of death, claiming approximately 33 to 44 percent of this age group, while another 33 percent of this age group reportedly falls victim to cancer-related deaths.

Despite these chronic diseases, America is continuing to age with an explosive growth rate of the old-old, those age 85 years and older. The NIA (1996) reports an increase of 274 percent within this age group and projects their numbers to climb to seven million by the year 2020. Though the report notes a slowing in the rate of disability and disease in those 65 years and older, it is projected that with increased numbers of the old-old a proportional increase in the rate of disease and disability is likely.

Traditionally, health professionals have utilized enormous resources in the care of this age group in providing for their acute and chronic health care needs (Hodgson & Cohen, 1999; Miller 2001; Murray & Eppig,1999). Hodgson and Cohen (1999) report that those aged 65 and older represent less than 15% of the population, yet they incur approximately 41% of the cost of health care dollars spent in this country annually. Expenditures increase from \$1,946 per person for those less than 65 years of age, to \$9,301 per person age 65 years and older. This expenditure climbs to \$18,877 for those age 85 years and older. In comparison, little has been done to initiate or support programs that target this age group (age 65 years and older) as active participants in services focused on health promotion and disease prevention. This may represent a bias on the part of the health care community in viewing the elderly as unlikely candidates for health promotion programs.

Research overwhelmingly supports the evolution of acute and chronic illness that results from unhealthy lifestyle choices (Anonymous 2002; FDA 2001; Marshall 2001; Moreau, Degarmo, & Langley, 2001; Pollock, Franklin, & Balady, 2000). Conversely, evidence also supports the adoption of health promotion behaviors, through healthy lifestyle choices, that optimize health and general well being (Marshall 2001; Moreau et al., 2001; & Pollack et al., 2000). Crucial to this process is an understanding of those factors that favor adoption of health promotion behaviors.

Interestingly, several studies have identified one's perception of health as the major determinant, or motivational mechanism, to the initiation of health promotion

behaviors (Boyle & Counts, 1988; Fillenbaum 1979; Kaufman, 1996; Speake, Cowart, & Pellet, 1989; Viversais-Dressler & Richardson, 1991). Demographic factors, such as age, marital status, education, etc., have been implicated within such studies, as influencing patterns of health behavior, yet only to the extent that they act as modifying factors of one's health perception (Viverais-Dressler & Richarson, 1991).

Dr. Nola Pender, in her Health Promotion Model (1996), has identified several factors, including perception of health, which directly influence the likelihood of engaging in health promotion behaviors. These factors include:

- 1) the importance of health to the individual
- 2) one's definition of health
- 3) one's belief that he can influence the course of his own health status
- 4) one's belief that behavior can effect a change in one's health,
- 5) recognized benefits to initiating and sustaining a health promoting behavior
- 6) availability/difficulty of the behavior
- 7) influence of past failures
- 8) realization that perception of the behavior may influence one's performance
- 9) commitment to the behavior
- 10) presence of competing preferences or conflicting demands

Through her Health Promotion Model (1996) Pender provides a theoretical framework that explores two basic steps of the cognitive-perceptual process that bridge one's perception of health to the subsequent initiation of health promotion behavior. First, the

individual must regard his participation in health behaviors to be of importance to his general well being and acknowledge that the behavior will have favorable results toward that goal. Second, the individual must acknowledge his proactive role in the selection and maintenance of health care choices.

Therefore, at a time when health care expenditures represent 13.6 per cent of the gross domestic product (Levit and Braden, 1997) it is crucial to support those strategies that focus on health promotion and disease prevention. Given the disproportionate numbers that the elderly represent within the total health care expenditure picture, it seems unconscionable to exclude them from a comprehensive health care program that targets health promotion and disease prevention.

Purpose

Determining if a relationship exists between health perception and health promotion behavior has relevance to nursing and geriatric health care in providing an understanding of those factors that influence one's acceptance of responsibility for health. Such knowledge may support the current focus on health promotion and disease prevention, which is both health enhancing as well as cost effective. Study results may also provide insight into designing needed health care services, predicting those individuals who are most likely to participate in such programs, as well as providing a means to evaluate ongoing programs for their effectiveness in changing the health choices and behavior patterns of the elderly over time.

CHAPTER II

Review of Literature

The success of any health promotion behavior, albeit nutrition, exercise, stress management, etc., may have its roots in the health perceptions of the person considering the behavior. Fundamental to one's health perception is a definition of health.

Definitions of health are multidimensional and thus have different meanings to each person. Jylha (1994) contends that the concept of health remains elusive, though the entity of disease is detailed within medical texts relative to signs and symptoms. Research findings, in the areas of medicine, nursing, and sociology, are relevant to this study with respect to their focus on three basic concepts: definitions of health, the role that such definitions play in the development of one's perception of health, and subsequently, the relationship of perception of health to health promotion behavior.

Pender (1996) cites the 1974 World Health Organization definition of health as a state of complete physical, mental, and social well being and not merely the absence of disease and infirmity. These definitions have become the springboard from which several theorists (Duos, Parsons, Roy) have developed models of health (as cited in Pender, 1996). These models examine health relative to three dimensions, namely, the individual, the family, and the community. First, health definitions that focus on the individual view health in any of three ways:

- 1.) Health as stability

- 2.) Health as actualization
- 3.) Health as actualization and stability

Health definitions that focus on the individual as part of a family system, as developed by Loveland-Cherry, Curran, and Smilkstein (as cited in Pender, 1996), may include:

- 1.) lack of integral aspects of disease or dysfunction within the family;
ability of the family to function and develop effectively; optimal
patterns of adaptation; eudaimonistic features or the nurturing potential
within the family
- 2.) shared traits within healthy families, such as trust, support, shared
responsibility, identification with religion, family rituals/traditions,
uninterrupted family time
- 3.) cohesiveness in the face of life's challenges

Health definitions with a focus on the community, as developed by Dever, Flynn, Gorppinger, West, Hague, Archer, Kelly, and Bisch (as cited in Pender, 1996), may include:

- 1.) aspects of peace, food, shelter, and social equity
- 2.) political action or policies that identify community responsibility for
health

- 3.) dimensions of health - status (morbidity, mortality, life expectancy); structural (social indicators, racial distribution, measures of community health resources); process (functioning/problem-solving)
- 4.) openness within the community
- 5.) interaction, action, and awareness
- 6.) group health indicators such as health utilization, morbidity, mortality, birth rates, unemployment

One's definition of health becomes the cornerstone to one's perception of health. Perceptions of health, as with definitions of health, take on different attributes with each person.

Fillenbaum (1979) examines the role that group identification represents with respect to one's perceptions of health and subsequent health choices. She notes that, from a sociological perspective, one's definition of health and subsequent health choices, reflect the norms of the group with which one identifies. This, she maintains, can be based on age, gender or the community in which one lives as these factors provide a reference to expected norms for the group. Her study focused on two variables, gender and community. She found that women who rated their health as good tend to compare their objective health status with other women, and thus were found to have greater numbers of health issues for which they were subsequently treated with medication. This, she hypothesized, was likely due to society's view of women as the weaker sex and the

subsequent view that women tend to have greater numbers and severity of illness. Thus, if you are a woman who is living independently within a community and suffer relatively few health problems, quite possibly you will view your health as excellent. This is in contrast to male participants who were less concerned, as a group, with health issues and therefore, were found to have fewer health issues, as well as taking fewer medications. Thus perception of health in this instance, may be said to reflect a focus on community, through perceived health norms.

A community- based approach toward health was also recognized by Boyle and Counts (1988) who described components of health perception in their sample community based in rural Appalachia. Subjects reported good health as the ability to work and provide self care despite the limitations that come with aging. As reported, this community associated health promotion behaviors less with medical care, physicians, or hospitals, but rather with physical activity and routine tasks. This community was portrayed as least likely to participate in organized activities or sports. Rather, the availability of work, the physical health to provide for one's family, and living in harmony with one's family and neighbors were highly valued as contributing factors to health.

Also relevant to a discussion of health perceptions is the role of modifying factors such as age, gender, income, etc., that affect one's likelihood to engage in health promoting behaviors. Ferraro (1980) examined income, gender, and education in low-income elderly as factors with potential to influence perceptions of health. He reported

several findings. First, men were noted to report their health as poorer than women. Second, the better educated the elderly the more likely they were to report better health. Third, as the severity of disability increased, a concurrent decrease in one's health perception occurred. And finally, the old-old (those greater than 75 years of age) were less likely to view declining health in a negative manner, but rather remained optimistic, and rated their health as excellent (as compared to those with similar disability who were less than 75 years of age who rated their health as good). The author theorized that most old-old are female and tend to be more optimistic about their health.

Another modifying factor is the influence of the media on perception of health. Kahn (2001) studied the influence of the media on women's perceptions of health. This study reported that regardless of age, marital status, education, or employment status, women referred to the media (television, magazines, the Internet, etc.) for health information, and thus their perceptions of health were, indeed, influenced through such sources. The study also reports that women were noted to make reference to health care information obtained via the media while conferring with their primary care providers.

Speake (1989) examined perceived health status and healthy lifestyles as measured through health locus of control (internal, chance, and powerful other). Modifying factors described in this study, included age, gender, education, race, and marital status. This study reported health perceptions as predictors of healthy lifestyles. The conclusion of this study was that optimal perceptions of health were associated with younger, well-educated, married Caucasian females.

Biopsychosocial aspects of health perception were examined by Rubel, Reinsch, Tobis, and Hurnell (1994) who report that for those age 80 years and older, perception of health is less likely a predictor of well-being. They contend that continued social interaction with friends, family, and community has a protective effect, and thus a greater influence on health choices.

In part, the work of Lichtenstein and Thomas (1987) corroborate the findings of Rubel et al. Lichtenstein and Thomas (1987) compared measures of perceived health status in an elderly population and reported that such measures reflect objective physical health, and may also reflect one's emotional mood of the moment as well as their health outlook. Thus responses may represent the social context from which one references health.

Perceived health status appears to be related to health promotion behaviors. Viverais-Dresler and Richardson (1991) studied a sample community aged 65 years and older who lived and functioned independently, to examine their use of health promoting behaviors. They report that perception of health is interwoven into a bio-psycho-social concept. Based on their finding, the majority of subjects perceived their health as good to excellent, despite the presence of one or two chronic illnesses. They report that most participants were involved in some form of health promotion activity in an effort to self-manage a chronic illness. For example, they cite the use of exercise (walking, golfing, swimming, etc.) as a self-management behavior utilized by the elderly to maintain flexibility during exacerbations of arthritis. Volunteerism was also identified as a health

promoting behavior as it was found to optimize one's level of wellness in a psychosocial way.

In a study by vanMaaen (1988), social context was explored through a perspective of cultural patterns. This study was conducted with elderly subjects from America and Great Britain. The study reports that British elderly define health, and therefore base their perceptions of health, on a state of healthy functioning in the absence of disease. Americans were reported to regard health as a general state of well being, a perception which imparted less concern with health as a state of the body, but rather a state of mind.

Tissue's (1972) study of elderly Americans supports this view as he concludes their perception of health represents a state of confidence in one's health that is free of worry. He cites that one's perception of health is often enhanced by a notion that one's health is better than many of those within one's age group. He reports that elderly are prone to report their health as good, despite illness or disability, using those about them as a frame of reference.

Maddox and Douglass (1973), in their longitudinal study of health perceptions of the elderly, support the view that health may be distorted, to some degree, by the elderly. Their study produced three interesting findings. First, they report that good health, as viewed by the elderly, may be defined as the absence of disability, not necessarily the absence of disease. Secondly, the data revealed the tendency for most elderly to overrate, rather than underrate, their health. Finally, the study revealed that the elderly have

learned, over time, to assume the sick role as a means of attracting attention.

However, a study by Kaufman (1996) provides the bridge linking one's definition of health to one's perception of health, and the subsequent use of health promotion behaviors. She maintains that one's perception of health is based on one's personal definition of health. Her study organized statements of health into descriptive themes:

- 1.) activity – ability to get up, go out, be active
- 2.) attitude – health as a state of mind; relative health compared to others; relative health given one's age
- 3.) functional state – ability to perform ADL's
- 4.) absence of illness
- 5.) medication use – disease state that is controlled through use of medication

A motivating factor toward health – seeking behavior is the individual's perception that his health is vulnerable to, or compromised by, disease. Kaufman (1996) maintains that this perception of vulnerability will compel the individual to participate in health promotion behaviors so long as they provide a reasonable outcome undertaken with minimal difficulty. Factors affecting the adoption of health promotion behaviors are examined in other studies, as well.

Calnan (1989) describes health-related behaviors as a product of social structure. He cites two examples, within his study, of the effect of socioeconomic status on health-seeking behavior. First, one's socioeconomic status may inhibit attempts at health

promotion behaviors by the elderly who are often on fixed incomes, thus making some programs cost prohibitive. Second, it should be remembered that most current-day elderly were raised in an era where the effects of the Great Depression and World War II interrupted one's pursuit of higher education. He states that advanced levels of education are positively associated with independent decision-making skills, and are highly correlated with increase use of health promotion behaviors.

Resnick (2000) reports that the elderly are less likely to engage in health promotion behaviors due to the prohibitive costs of testing. This study contends that primary care providers are often lax in both informing and educating the elderly patient as to the need for testing. However, the report also provides insight into the level of motivation of a proportion of the elderly who refuse to follow-up with care when presented with abnormal findings on examination. The report suggests that the role of the primary care provider, in such cases, is in evaluating each case individually and presenting plans of care for health promotion/disease prevention so as to optimize the patient's autonomy in the decision-making process.

Tuhog (1991) makes a case regarding the desire for healthcare responsibility within his study of community-dwelling seniors. Those elderly who possessed a strong desire for health responsibility were more likely to participate in such behaviors as stress management techniques, exercise, and nutritional behavior modification. Those who had a 'less strong' desire were more likely to remain sedentary, consume unhealthy diets, and reduce stress through smoking and alcohol consumption.

Walker, Volkan, Sechrist, and Pender (1988) compared health promotion lifestyles of the elderly to young and middle-aged adults and noted two aspects, which favor adoption of health promotion behaviors by the elderly. First, one seemingly becomes more health conscious with age. Second, those with healthy lifestyles appear to be living longer, therefore providing evidence of “survival of the fittest.”

A subsequent study by Whetstone (1991) addressed barriers to health promotion behaviors by the elderly, of a rural community, in the treatment of hypertension. Reported barriers included the patient’s perception that being in a state of perceived wellness (ie. not experiencing pain or active disease) negated the need for compliance with a plan of care that included taking prescribed medications and regular follow-up visits with the primary care provider. This study highlights the need for health care professionals to closely examine the strategies with which they propose health promotion behaviors to the elderly. When developing a plan of care geared to the health care needs of the elderly, one size does not fit all. Strategies must be tailored to the unique needs of each individual person.

Resnick (2001) examined the effects that location played as a strategy to optimize a program of health promotion and disease prevention within a retirement community, where on site flu and pneumonia injections, group exercise programs, and nutrition counselling were provided. This longitudinal study reported an increase over a four year period in the type and frequency of utilization of all health promotion programs offered.

Kiser, Boario, and Histon (1995) examined the role that programs targeting health promotion behavior can potentially play in educating individuals and communities. This study reports the findings from an examination of a hospital-based training project that detailed the role of health promoters as educators. The efforts of these educators were reported to have successfully empowered the elderly to take personal responsibility for their health.

To optimize strategies toward health promotion behaviors, Haber (1996) suggests the following. First, provide information that is both clear and current; the elderly are less likely to be aware of current health information and trends, and welcome counseling from which they will benefit. Second, assess for social supports; the degree of support enhances efforts to maintain health promotion behaviors, by providing a welcome source of emotional support as well as providing a forum for sharing concerns. Third, set forth reasonable, measurable goals and provide for periodic evaluation of outcomes. Fourth, be aware that a single, defining defeat may provide a barrier to further attempts at health promotion behavior. Finally, don't hesitate to utilize community resources (churches, senior centers, schools) as referrals for the elderly. Such programs are known to provide reputable assistance at minimal to no cost, and are available sources of social support.

Various definitions of health have been examined. Such definitions represent the cornerstone to the complex perceptions of health they engender. It is theorized for the purpose of this study that one's perception of health may represent a determinant to the initiation of health promotion behaviors.

Pender's Health Promotion Model (1996) has been selected as the theoretical framework for this proposed study as it presents the cognitive-perceptual process that bridges one's perception of health to the subsequent initiation of health promotion behavior. The model takes into account those characteristics and past experiences of the individual that may impede his progress through the cognitive-perceptual process toward adoption of health promotion behaviors. Likewise, the model also takes into account the indirect role that modifying factors (such as age, gender, socioeconomic status, family patterns of healthcare, etc.) play in the adoption of health promotion behaviors.

The Health Promotion Model (1996) facilitates a step-wise, cognitive-perceptual process of behavior change from perception of health to the adoption of a health behavior. First, the model recognizes the need for the individual to regard his participation in health behavior to be of importance to his general well being, and likewise to acknowledge that the behavior will have favorable results toward that goal. Second, the model acknowledges the individual's proactive role in the selection and maintenance of health care choices. Having successfully progressed through the cognitive-perceptual process of this model, it is theorized by Pender (1996) that one becomes committed to a plan of action and, therefore, initiates a health promoting behavior.

In summary, a review of the literature suggests that several studies have focused on the individual steps toward the adoption of health promotion behaviors (ie. defining health, developing one's perception of health, and the subsequent commitment and

utilization of a behavior), yet few studies have examined the existence of a relationship between perception of health and health promotion behaviors. Though few in number, the studies that do exist examine the relationship in terms of young and middle-aged subjects (Pender et al., 1996; Viversais-Dressler & Richardson, 1991).

Therefore, a study that investigates the relationship between health perception and health promotion behavior has merit in progressing the elderly from a place of defining health to acceptance of making responsible choices regarding health behavior. Such knowledge could support a comprehensive program of health promotion and disease prevention that is both health enhancing as well as cost effective. To investigate these ideas the following research question is posed: Is there a relationship between perception of health and health promotion behavior in the elderly age 65 years and older?

CHAPTER III

Methods

The methods section of this research study will identify the means by which the research variables were measured. This process required that variables be clearly defined. It also required selection of a technique of data collection.

Definition of Terms

For the purpose of this study the following terms are defined:

Perception of health – is defined by the scores obtained from the Health Perceptions Questionnaire II (HPQ II) in testing of eight health perception subscales including prior health, current health, health outlook, resistance/susceptibility to illness, health worry/concern, sickness orientation, rejection of sick role, and attitude toward provider/provider office visits

Health promotion behavior – is defined by scores obtained from the Health Promoting Lifestyle Profile II (HPLP II) in testing of six theorized dimensions of health-promoting lifestyle with subscales that include spiritual growth, interpersonal relations, nutrition, physical activity, health responsibility, and stress management.

Design

A correlation research design was selected for this study. The use of this design provided the means to examine if a relationship exists between the study variables,

health perceptions and health promotion behaviors.

Sample and Setting

Data were collected from a convenience sample of 23 volunteers, who were recruited from a Midwestern community senior citizen center during the months of August and September, 2001. Selection criteria included those who were 65 years and older, living independently in their own homes or apartments/senior citizen complexes, who were able to speak and understand English, and who had the ability to complete the self-reports (Appendixes A, B, C, and D). Packets containing an information sheet (Appendix A), as well as two questionnaires - Health Perceptions Questionnaire II (Appendix C) and the Health Promoting Lifestyle Profile II (Appendix D) were distributed to 30 potential subjects. Of the 24 packets returned, one packet was excluded as the participant did not meet the age requirement of the study. Of those who met inclusion criteria (n=23), three were male and 20 were female.

Instrument

Subjects were requested to complete a demographic data sheet including age, race, gender, educational level, marital status, income, employment status, health insurance, number of grandchildren, means of transportation utilized most often, and distance traveled to receive health care (see Appendix B). In addition to the data sheet, two questionnaires (Appendixes C & D) were completed by research subjects. Study instruments were utilized after prior approval from their respective authors (Appendixes E and F). These questionnaires included the Health

Perceptions Questionnaire II and the Health Promoting Lifestyle Profile II.

The Health Perceptions Questionnaire II, (HPQ II) is a 32 item standardized survey instrument designed for self-administration in testing of eight health perception sub-scales (maximum scores listed):

- 1.) Prior health (15)
- 2.) Current health (45)
- 3.) Health outlook (20)
- 4.) Resistance/susceptibility to illness (20)
- 5.) Health worry/concern (20)
- 6.) Sickness orientation (10)
- 7.) Rejection of sick role (20)
- 8.) Attitude toward physician/provider office visits (10)

Responses are rated on a scale from one (definitely false) to five (definitely true). A total score of 160 is possible. Six of the eight subscales (current health, prior health, resistance/susceptibility, health outlook, health worry/concern, and attitude toward provider visits) were balanced, ie. they contain both favorably and unfavorably worded items. Two of the subscales (sickness orientation and rejection of the sick role) contain items that are favorably worded, ie. wording is in the same direction.

The second questionnaire, the Health Promoting Lifestyle Profile II (Pender,

Sechrist, and Walker, 1995), (or HPLPII), is a 52-item survey composed of a total scale, and six subscales, designed to measure behaviors in theorized dimensions of health promoting lifestyles (maximum scores listed):

- 1.) Spiritual growth (score 36)
- 2.) Interpersonal relations (score 36)
- 3.) Nutrition (score 36)
- 4.) Physical activity (score 32)
- 5.) Health responsibility (score 36)
- 6.) Stress management (score 32)

Responses were rated as Never (N) = 1, Sometimes (S) = 2, Often (O) = 3, and Routinely = 4. A total score of 208 is possible. The direction of scoring positively correlates higher scores to optimal patterns of health promoting behavior.

Reliability testing, through use of Cronbach's alpha, was reported for each of the test instruments (HPQII, HPLP II) utilized in this study. The Health Perceptions Questionnaire II, which has one conceptual definition for perception of health, scored an alpha coefficient for reliability ranging from .70 to .92 for the total score of 32 items tested.

Likewise, Cronbach's alpha was performed on the HPLP II, which conceptualizes a multidimensional pattern of self-initiated health promotion behavior. An alpha coefficient for reliability ranging from .79 to .94 was reported with regard to the total score of 52 items tested. Thus the data suggests a high reliability, or internal consistency,

for the concepts of health perception and health behavior within this study.

Procedure

Permission to conduct the study was granted by the University of Michigan – Flint Review Committee on the Use of Human Subjects in Research (Appendix G), as well as the Director of the senior citizen activity center.

Subjects were invited to participate in the study by means of a poster presentation displayed at a local senior center. The director of the center informed subjects of the study and its purpose. The director made brief, scripted announcements prior to senior center events during the months of August and September, 2001. The director gave interested participants a packet that included the letter of invitation, an information sheet, and the two questionnaires. The packet was contained in a large envelope, which was stamped and pre-addressed to the nursing program of the University of Michigan – Flint. The director then informed subjects that the questionnaires could take up to an hour to complete, and extended the option to complete the forms at the senior center or at home.

The letter of invitation stated the purpose of the research study and the time required to complete the self-report. It was also made clear within the letter that participation/continuation in the research project was voluntary, that participation could be withdrawn at any time without penalty, that responses would be kept confidential, and that subjects would not be identified in any reports based on this study. Subjects were informed that consent to participate in the study was indicated by completion and return

of the questionnaires. Subjects were also given the option to request a copy of the study abstract.

Data Analysis

The direction of six of eight subscales within the HPQ II were balanced. Therefore, it was necessary to recode those items that were unfavorably worded so that all items were coded in the same direction prior to statistical analysis.

Next, statistical treatment of the data was done by means of the Pearson's Product – moment Correlation coefficient (Pearson's r). Pearson's r was used to measure the strength of the relationship between the study variables, namely, perceptions of health and health promotion behaviors. Perception of health was identified as the independent variable of the study. Health promotion behavior was identified as the dependent variable of the study. Data was analyzed using the Statistical Packages for the Social Sciences (SPSS) Version 10.1 software (SPSS, 2000). Measures of correlation for the study variables were computed. The correlation coefficients (Pearson's r) were calculated on the total score for all subjects ($n=23$). All p values are reported at the .05 significance level.

Finally, data were analyzed using frequencies, ranges, and measures of central tendency. Subsequent results were calculated from the total score, for all subjects, with respect to health perception and health behavior.

CHAPTER IV

Results

This chapter will focus on responses made to a survey of 23 senior citizens in a Midwestern senior citizen center. Based on this survey, with a 77% response rate, the report will include descriptive data derived from the demographic information provided by the study participants. Also, the correlation coefficients derived through statistical treatment by Pearson's r , are reported for the relationship of perception of health and health promotion behavior as presented for the total sample.

Demographic Data

A total of 24 sets of questionnaires were returned, and of these, 23 sets met inclusion criteria. Analysis of the demographic data reveals that twenty of the participants (87%) were female, while three of the participants (13%) were male (see Figure 1). Respondents ranged in age from 65 to 83 years with a mean age of 72.8 years.

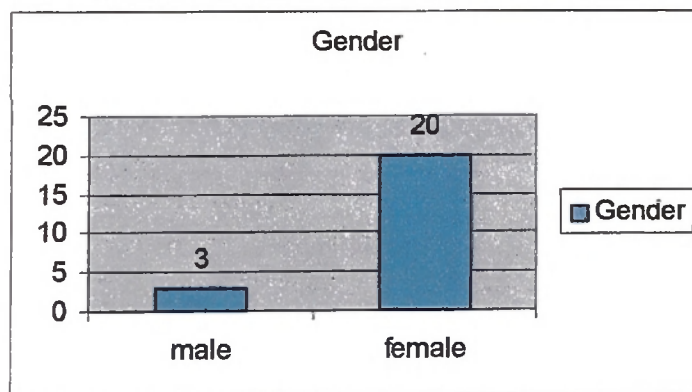


Figure 1.

Female participants were reported as predominantly widowed (n= 14, or 61%), whereas all male respondents (n=3) were reported as married. One respondent reported herself as divorced, while four other participants reported themselves as married. Interestingly, one respondent reported that she was widowed, divorced, and now single; she was recorded as divorced for purposes of this study (see Figure 2).

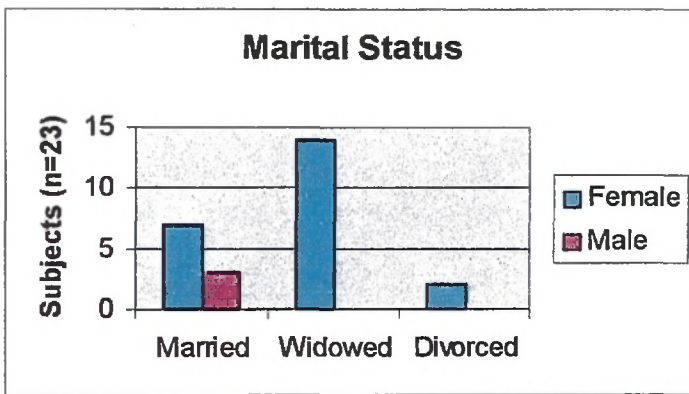


Figure 2.

Educational level (see Figure 3) for all participants ranged from eleventh grade to completion of graduate education with the majority of respondents (n= 13, or 57%) having completed their education at the high school level. Two respondents reported completion of an additional year of education after high school graduation and some respondents (n=3) reported completion of their education at the Associates Degree level.

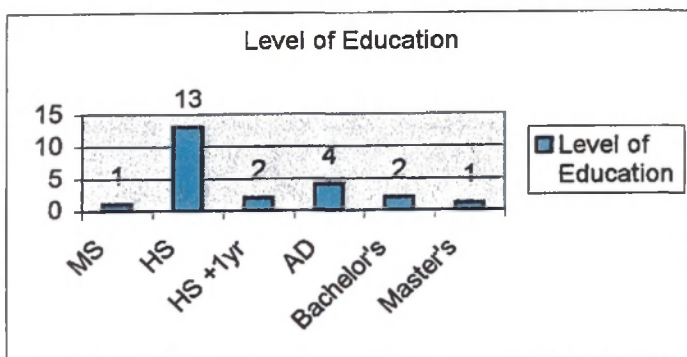


Figure 3.

Respondent's reported variety in their employment status (see Table 1). Most subjects (n=17, or 74%) considered themselves retired. A few respondents (n=3) reported working outside their homes. Interestingly, one respondent who reported working outside the home, was 79 years of age. Of twenty-three respondents, two (9%) reported participation in volunteer work. These respondents reported their ages as 72 and 80 years old. Only one respondent reported being a homemaker. At 83 years of age, this subject was also reported to be the eldest respondent within the study group.

Table 1
Employment Status (n=23)

Employment	n	%
Retired	17	74
Volunteer	2	9
Homemaker	1	4
Working	3	13

Family income for participants also varied (see table 2). Of the twenty- three respondents, one participant reported a family income less than \$10,000 and one participant reported an income of more than \$50,000 per year. Seven respondents (31%) reported their yearly family income in the \$10,000 to \$19,000 range, while another seven (31%) reported their income in the \$20,000 to \$29,000 range. One respondent reported an annual income at \$40,000 to \$49,000. Thus the majority of respondents (approximately 65%) were reported to have an annual family income of \$10,000 to \$29,000.

Table 2
Annual Family Income (n=23)

Income	n	%
< \$10,000	1	4
\$10,000 - \$19,000	7	31
\$20,000 - \$29,000	7	31
\$30,000 - \$39,000	6	26
\$40,000 - \$49,000	1	4
>\$50,000	1	4

All respondents identified themselves as Caucasian. They also reported owning their own cars and traveling a mean distance 7.63 miles to receive healthcare.

All respondents reported having some form of health care insurance (see Figure 4). All subjects reported having Medicare. For some respondents (n=5, or 22%) Medicare represented their sole means of health care coverage. The remaining respondents (n=18) reported having dual health care coverage.

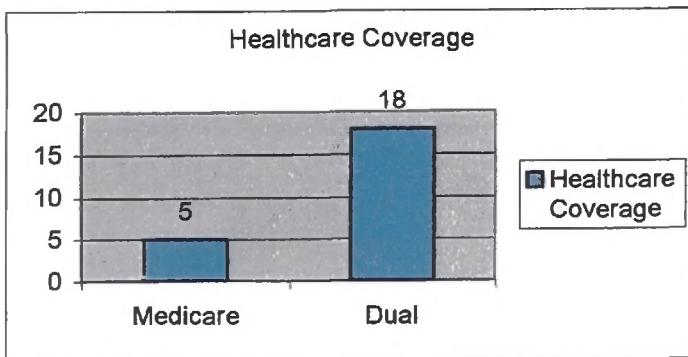


Figure 4.

All respondents were asked how long it had been since their last physical examination (see Table 3). Some respondents (n=5, or 22%) were seen on average less than every six months (generally every two to three months) by their providers. Other respondents (n=16, or 69%) reported provider visits scheduled every six to twelve months. A smaller number of respondents (n=2, or 9%) reported visits to providers at intervals exceeding twelve months.

Table 3
Frequency of Physical Examination (n = 23)

<u>Frequency of Examination (months)</u>	<u>n</u>	<u>%</u>
< 6 months	5	22
6 – 12	16	69
13 – 24	2	9

Finally, most respondents (n=20, or 87%) reported having grandchildren. Numbers of grandchildren ranged from two to 25 per respondent with a mean of 11.3 grandchildren.

Correlation Coefficients

Parametric analysis, through use of Pearson’s r, was used to measure the strength of the relationship between perception of health and health promotion behavior. Analysis revealed a correlation coefficient, or r-value, for all subjects (n=23) as .35. Thus, results did not provide a robust correlation within the data analyzed.

Statistical significance resulting from the analysis by means of Pearson's r , was also reported with regard to all subjects. The level of significance, or p value, was reported as .095 for all subjects. No statistical significance was shown regarding a correlation for gender specific influence on the relationship of health perception to health promotion behavior within this study.

Distribution

Analysis of the data describing perceptions of health revealed that scores for this variable ranged from 109 to 182. The mean (142.5), median (142.5) and mode (129.0) reported for this variable suggest a high average score. The standard deviation for the score of perception of health was reported as $SD = 19.73$. Thus, measures of central tendency reported for perceptions of health suggest low variability within the distribution of scores.

Data analyzed describing health behaviors revealed that scores for this variable ranged from 37 to 150. The mean (115.2), median (115.5), and mode (98.0) reported for this variable suggested a high average score. The standard deviation for the score of health behavior was reported as $SD = 23.9$. Thus, measures of central tendency reported for health behaviors suggest low variability within the distribution of scores.

CHAPTER V Discussion

Introduction

The discussion section of this research study interprets the findings of a study which examined a sample of Midwestern, community-dwelling senior citizens, age 65 years and older, to determine if a relationship exists between perception of health and health promotion behaviors. The Health Promotion Model (Pender, 1996) is utilized here as the theoretical framework exploring the relationship of health perception to health behavior in this study sample. Pender's model facilitates a discussion detailing the movement of subjects through a cognitive-perceptual process from perception of benefits, barriers, and self-efficacy of health choices to the adoption of health promotion behaviors. Also presented for discussion are limitations and alternative explanations of the study, as well as implications to Nurse Practitioner (NP) practice, and recommendations for future research.

Interpretation

The study posed the question: Is there a relationship between perception of health and health promotion behaviors in the elderly age 65 years and older. The data suggests that a relationship appears to exist between health perception and health promotion behaviors, yet does not meet a level of statistical significance ($p = .095$, total score all subjects). The presence of a relationship of low to moderate strength is supported by the

correlation coefficient ($r = .35$, total score all subjects). Though this finding does not support a robust relationship between health perceptions and health promotion behavior, Polit and Hungler (1999) indicate that findings of .10 to .40 are common to studies of a psychosocial nature. Also, the results of the study would support Kaufman's work (1996), which links one's perception of health to the use of health promotion behaviors.

Theoretical Framework

The study findings seem to support a possible clinical relationship between health perception and health promotion behavior. Findings suggest that respondents accurately self-assess their health, and subsequently respond with behaviors that reflect the state of vulnerability in which they view themselves within a continuum from wellness to disease.

Pender's Health Promotion Model, or HPM (1996), provides insight into the cognitive-perceptual process influencing health decisions made by study respondents that favors adoption of health promotion behaviors. Respondents ($n = 21$, or 91%) seemed to place a high value on health as evidenced by the frequency of follow-up visits to primary care providers, which were reported as every two to twelve months. In part, this factor may be influenced by the enrollment of the majority of respondents in Health Maintenance Organizations, or HMOs, which favor routine health maintenance visits. Age may also pose a factor in the number of follow-up visits to primary care providers in that it is associated with the onset of acute and chronic illness, which requires frequent follow-up care for health supervision and monitorization of prescribed treatment plans.

Likewise, the HPM identifies the importance of one's perception that he commands unilateral control of health, and thus, has the unique ability to change it through health choices. Frequency of visits to providers seems to indicate the willingness, on the part of study respondents, to take an active role in their health. Involvement in community-based activities, such as volunteer work and employment, also indicate a willingness to remain active, and thus to take control of health issues.

The importance of self-efficacy, or the belief that one's behavior can achieve an intended goal, is also identified within the HPM as a factor toward the adoption of health choices. Involvement by these seniors in activities such as dances, card games, and planned, group excursions offered by the senior center obviates their desire to remain both physically and socially active. The role of such activities has previously been cited to optimize the respondent's self-management of chronic health conditions, such as arthritis and cardiovascular disease.

Identification of one's definition of health along a continuum from health to disease is also recognized within the HPM as influencing decisions as to which health choices are considered. It is known that some seniors refuse health maintenance visits to providers, preferring episodic care in response to acute and chronic health problems. Definitions of health should be suspect. Respondents in this study may well define their health relative to those with whom they socialize. As the majority of respondents reported routine visits to health care providers, their definitions of health may likely coincide with those in their particular social circle. The senior center from which

respondents were recruited may also serve as a secondary source of health information, through word-of-mouth or presentations provided to attendees, which assist seniors in defining health by providing current data on health care trends. Interaction with other attendees at the senior center may also serve as a support system favoring endeavors toward health. Education may also play a role in health-defining behaviors. Those with limited education may be less likely to avail themselves of routine preventive health care.

Finally, the HPM addresses perceptions of health and the role that real or potential barriers pose to a commitment toward the adoption of health behaviors. The model accounts for the indirect role of modifying factors (such as age and socioeconomic status), as well as the role of competing demands, strength of commitment, and associated perceptions of performance that could influence the adoption of health promotion behaviors. Respondents in this study reported some circumstances that posed potential barriers to the commitment of a health behavior. Among these factors were loss of one's life mate through death, fixed incomes averaging \$20,000 to \$29,000 per year, sole health care coverage through Medicare, advancing age, and an education completed at the high school graduate level. However, these potential barriers were seemingly overcome by respondents as evidenced with such reports as frequent visits to providers, involvement with grandchildren, owning one's home, and having access to a mode of transportation. Thus, respondents seemingly maintained social interactions, financial independence, and chose to remain active in choices of health behavior.

In conclusion, the data suggests that a clinical relationship appears to exist

between health perceptions and health promotion behaviors in the elderly age 65 years and older. The presence of this relationship, as interpreted through Pender's Health Promotion Model (1996), is theorized to progress through a step-wise, cognitive-perceptual process from perception of health to the adoption of a health behavior. Knowledge of this process toward acceptance of health responsibility has importance in the design of comprehensive programs targeting the elderly for health promotion and disease prevention.

Limitations/Recommendations

Limitations to the study included the small sample size (n=23), likely compounded by the disproportionate numbers of male (n = 3) to female (n = 20) respondents. Consideration in a follow-up study might include a more evenly distributed sample of male and female subjects. A larger sample size might also improve the generalizability of the findings to the population.

Racial homogeneity was also a limitation of this study as all subjects were found to be upper middle class Caucasians. It is recommended that subject selection be done utilizing a racially and/or ethnically diverse sample.

Convenience sampling was also a limitation to this study since the possibility exists that only those elderly who perceived their health status as good to excellent volunteered to participate. Just as likely is the attendance by well elderly (to the exclusion of the infirm) of events at the senior citizen center where invitations of participation in the study was extended.

It was also noted that some subjects did not answer all of the questions on the questionnaires, leaving suspect their reasons for doing so (ie. was the print too small, were subjects avoiding the question for a particular reason, did subjects forget to answer a question). Consideration could be given to using larger, easily read print to facilitate those with visual impairment, as well as utilizing colored paper to reduce glare.

The study should also be done with the knowledge that the elderly may often migrate to warmer climates for extended periods of time throughout the year. Thus, plans for gathering data should consider the pattern of arrivals and departures from the community.

Finally, the effects of September 11, 2001 may represent a limitation to this study as well. The general health and well being of individuals may have been negatively impacted by the events of that day, and the days that followed.

Implications of the Study To Nursing

As the numbers of elderly are projected to reach seven million by the year 2020, the NP will play a strategic role in the provision of quality, holistic healthcare that is comprehensive as well as cost effective, and which provides for the educational needs of the patient. Thus, the findings of this study have relevance to NP practice in a number of ways. First, this study examined factors that influence health promotion behaviors of the elderly. Second, the findings may provide insight in identifying patterns or trends (such as level of education, health care coverage, number of provider visits) consistent with those individuals most likely to participate in programs that target the elderly as

candidates for health promotion. Thirdly, the findings may provide insight into the design and implementation of future health care services or programs that focus on the elderly. Such knowledge may support the current focus on health promotion and disease prevention, which is both health enhancing as well as cost effective. Fourth, the findings of this study may provide a means of evaluating programs for effectiveness in changing health choices and behavior patterns of the elderly over time.

Summary

As life expectancy continues to rise and technological advances are increasing the numbers of elderly at an explosive rate, the elderly continue to be viewed as unlikely candidates for health promotion programs. At a time when approximately fifteen per cent of the gross domestic product supports strategies that focus on health promotion and disease prevention, the disproportionate numbers that the elderly represent within the total health care expenditure picture underscores the need to include them in a comprehensive health care program.

To gain insight toward designing needed health care services and predicting those individuals most likely to participate in such programs, the study aimed to determine if a relationship existed between health perception and health promotion behavior in a sample of Midwestern elderly age 65 years and older. Though the findings did not support a statistically significant relationship, the data suggests a possible clinical relationship between health perceptions and health promotion behavior. Nurse Practitioners should consider the role that health perceptions play in the implementation of health promotion behaviors by the elderly.

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APPENDIX A

Poster of Invitation

Invitation to Participate in Research Project

A study on health perceptions and health behaviors of those 65 years of age and older is being conducted by a student in the Masters of Science in Nursing program at the University of Michigan-Flint. The study will investigate perceptions of health and health promoting behaviors. If you agree to participate, you will complete a brief information sheet and two questionnaires taking a total of 60 minutes. They will be returned in the stamped, self-addressed envelope provided. Upon completion and return of the information sheet and questionnaires, you will be paid five dollars.

Your participation in this project is strictly voluntary, and you may choose to discontinue your participation at any time before returning the information sheet and questionnaires. Your confidentiality will be maintained. Neither your name or any other identifying information will appear on any of the materials used in the research report. Your completion of the information form and the questionnaires will serve as your consent to participate in the study. If you would like to receive a report of the findings, please indicate by checking “yes” to number 16 on the information sheet.

If interested in participating in the study, please contact Ms. K. at xxx- xxxx (a Midwestern Senior Citizens Activity Center).

APPENDIX B

Information Sheet

Information Sheet

1. Name:
2. Address:
3. Phone/e-mail number:
4. How old are you? _____ Years
5. Gender: ___ Male ___ Female
6. How many years of school have you completed? (Please circle one)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 more
7. What is your present marital status? (Please check one)
 married single
 widowed never married
 divorced separated
8. What is your present employment status? (Please check all that apply)
 employed outside the home
 retired
 self-employed
 homemaker
 volunteer
 other
9. What was your family income last year? (Please check one)
 less than \$10,000
 \$10,000-19,000
 \$20,000-29,000
 \$30,000-39,000
 \$40,000-49,000
 more than \$50,000

10. What is your racial background? (Please check one)

- Caucasian/white Hispanic African American
 Asian American Indian other: _____

11. Health insurance:

12. Do you have grandchildren? (Please circle one) yes no if so, how many ___

13. How far do you travel to receive your health care? _____ miles

14. What means of transportation do you use the majority of the time (Please check one)?

- own car
 public transportation (such as YOUR RIDE)
 family
 friend

15. When was your last physical exam? (Please check one)

- within the past 6 months
 within the past year
 within the past two years
 within the past five years

16. I would like to receive a copy of the study findings. (Please check one)

- yes
 no

APPENDIX C

Health Perceptions Questionnaire (HPQ II)

Date _____

Health Perceptions Questionnaire (Ware, 1976)

Please read each of the following statements and then circle one of the numbers on each line to indicate whether the statement is true or false for you. There are no right or wrong answers.

If a statement is definitely true for you, circle 5
 If it is mostly true for you, circle 4.
 If you don't know whether it is true or false, circle 3.
 If it is mostly false for you, circle 2.
 If it is definitely false for you, circle 1.

Some of the statements may look or seem like others. But each statement is different, and should be rated by itself.

	Definitely True	Mostly true	Don't Know	Mostly False	Definitely False
A. According to the doctors I've seen, my health is now excellent	5	4	3	2	1
B. I try to avoid letting illness interfere with my life	5	4	3	2	1
C. I seem to get sick a little easier than other people	5	4	3	2	1
D. I feel better now than I ever have before	5	4	3	2	1
E. I will probably be sick a lot in the future	5	4	3	2	1
F. I never worry about my health	5	4	3	2	1
G. Most people get sick a little easier than I do	5	4	3	2	1
H. I don't like to go to the doctor	5	4	3	2	1
I. I am somewhat ill	5	4	3	2	1

Health Perceptions Questionnaire (HPQ), Page2

	Definitely True	Mostly true	Don't Know	Mostly False	Definitely False
J. In the future, I expect to have better health than other people I know	5	4	3	2	1
K. I was so sick once I thought I might die	5	4	3	2	1

L. I'm not as healthy now as I used to be	5	4	3	2	1
M. I worry about my health more than other people worry about their health	5	4	3	2	1
N. When I'm sick. I try to just keep going as usual.	5	4	3	2	1
O. My body seems to resist illness very well	5	4	3	2	1
P. Getting sick once in a while is a part of my life	5	4	3	2	1
Q. I'm as healthy as anybody I know	5	4	3	2	1
R. I think my health will be worse in the future than it is now	5	4	3	2	1
S. I've never had an illness that lasted a long period of time	5	4	3	2	1
T. Others seem more concerned about their health than I am about mine	5	4	3	2	1
U. When I'm sick, I try to keep it to myself	5	4	3	2	1
V. My health is excellent	5	4	3	2	1
W. I expect to have a very healthy life	5	4	3	2	1
X. My health is a concern In my life	5	4	3	2	1
Y. I accept that sometimes I'm just going to be sick	5	4	3	2	1
Z. I have been feeling bad lately	5	4	3	2	1
AA. It doesn't bother me to go to a doctor	5	4	3	2	1
BB. I have never been seriously ill	5	4	3	2	1
CC. When there is something going around, I usually catch it	5	4	3	2	1

Health Perceptions Questionnaire (HPQ), Page3

	Definitely True	Mostly true	Don't Know	Mostly False	Definitely False
DD. Doctors say that I am now in poor health	5	4	3	2	1
EE. When I think I am getting sick, I fight it	5	4	3	2	1

FF. I feel about as good now as I ever have	5	4	3	2	1
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APPENDIX D

Lifestyle Profile II (HPLP II)

Health Promoting Lifestyle Profile II

Directions: This questionnaire contains statements about your *present* way of life or personal habits. Please respond to each item as accurately as possible, and try not to skip any item. Indicate the frequency with which you engage in each behavior by circling:

N for never, S for sometimes, O for often, or R for routinely

1. Discuss my problems and concerns with people close to me.	N	S	O	R
2. Choose a diet low in fat, saturated fat and cholesterol.	N	S	O	R
3. Report any unusual signs or symptoms to a physician or other health professional.	N	S	O	R
4. Follow a planned exercise program.	N	S	O	R
5. Get enough sleep.	N	S	O	R
6. Feel I am growing and changing in positive ways.	N	S	O	R
7. Praise other people easily for their achievements.	N	S	O	R
8. Limit use of sugars and food containing sugar (sweets).	N	S	O	R
9. Read or watch TV programs about improving health.	N	S	O	R
10. Exercise vigorously for 20 or more minutes at least three times a week (such as brisk walking, bicycling, aerobic dancing, using a stair climber).	N	S	O	R
11. Take some time for relaxation each day.	N	S	O	R
12. Believe that my life has purpose.	N	S	O	R
13. Maintain meaningful and fulfilling relationships with others.	N	S	O	R
14. Eat 6-11 servings of bread, cereal, rice and pasta each day.	N	S	O	R
15. Question health professionals in order to understand their instructions.	N	S	O	R
16. Take part in light to moderate physical activity (such as sustained walking 30-40 minutes 5 or more times a week).	N	S	O	R

Please circle: **N** for never, **S** for sometimes, **O** for often, or **R** for routinely

17. Accept those things in my life which I cannot change.	N	S	O	R
18. Look forward to the future.	N	S	O	R
19. Spend time with close friends.	N	S	O	R
20. Eat 2-4 servings of fruit each day.	N	S	O	R
21. Get a second opinion when I question my health care provider's advice.	N	S	O	R
22. Take part in leisure-time (recreational) physical activities (such as swimming, dancing, bicycling).	N	S	O	R
23. Concentrate on pleasant thoughts at bedtime.	N	S	O	R
24. Feel content and at peace with myself.	N	S	O	R
25. Find it easy to show concern, love and warmth to others.	N	S	O	R
26. Eat 3-5 servings of vegetables each day.	N	S	O	R
27. Discuss my health concerns with health professionals.	N	S	O	R
28. Do stretching exercises at least 3 times per week.	N	S	O	R
29. Use specific methods to control my stress.	N	S	O	R
30. Work toward long-term goals in my life.	N	S	O	R
31. Touch and am touched by people I care about.	N	S	O	R
32. Eat 2-3 servings of milk, yogurt or cheese each day.	N	S	O	R
33. Inspect my body at least monthly for physical changes/danger signs.	N	S	O	R
34. Get exercise during usual daily activities (such as walking during lunch, using stairs instead of elevators, parking car away from destination and walking.)	N	S	O	R
35. Balance time between work and play.	N	S	O	R
36. Find each day interesting and challenging.	N	S	O	R

Please circle: **N** for never, **S** for sometimes, **O** for often, or **R** for routinely

37. Find ways to meet my needs for intimacy.	N	S	O	R
38. Eat only 2-3 servings from the meat, poultry, fish, dried beans, eggs, and nuts group each day.	N	S	O	R
39. Ask for information from health professionals about how to take good care of myself.	N	S	O	R
40. Check my pulse rate when exercising.	N	S	O	R
41. Practice relaxation or meditation for 15-20 minutes daily.	N	S	O	R
42. Am aware of what is important to me in life.	N	S	O	R
43. Get support from a network of caring people.	N	S	O	R
44. Read labels to identify nutrients, fats, and sodium content in packaged food.	N	S	O	R
45. Attend educational programs on personal health care.	N	S	O	R
46. Reach my target heart rate when exercising.	N	S	O	R
47. Pace myself to prevent tiredness.	N	S	O	R
48. Feel connected with some force greater than myself.	N	S	O	R
49. Settle conflicts with others through discussion and compromise.	N	S	O	R
50. Eat breakfast.	N	S	O	R
51. Seek guidance or counseling when necessary.	N	S	O	R
52. Expose myself to new experiences and challenges.	N	S	O	R

APPENDIX E

Letter of Permission (HPQ II)

Subj: RE: Health Perceptions Questionnaire (Form II)
Date: 07/24/2001 10:33:44 AM Eastern Daylight Time
From: jware@qmetric.com (John Ware)
To: [REDACTED]
CC: lrichardson@qmetric.com (Lisa Richardson)

Dear Ms. Fenner:

I am happy to grant you permission to use the Health Perceptions Questionnaire (HPQ-II) in your study.

I am sending you a chapter from one of our Rand Corporation reports that documents the HPQ items and scoring algorithms.

You may be interested to know that the General Health(GH) subscale of the widely-used SF-36 Health Survey (www.sf-36.com) is a five-item version of the HPQ scored to estimate the HPQ total score.

Good luck with your study!

John E. Ware, Jr., PhD
Chief Science Officer, CEO and Chairman, QualityMetric, Inc.
Executive Director, Health Assessment Lab (HAL)
Research Professor, Tufts University School of Medicine
Adjunct Professor, Harvard University School of Public Health

—Original Message—

From: [REDACTED]
Sent: Monday, July 23, 2001 11:24 PM
To: John Ware
Subject: Health Perceptions Questionnaire (Form II)

Hello Dr. Ware,
My name is Deborah Fenner. I am a nurse practitioner student at the University of Michigan-Flint. I am interested in utilizing the HPQ II as one of two tools needed for a study I am conducting in relationship to the elderly, their health perceptions, and their subsequent use of health promotion behaviors.
Could you please tell me how I could receive permission to use the HPQ II tool in my study? I can be reached at this e-mail address and also at my home address:

[REDACTED]
[REDACTED]
[REDACTED]

Thank you,
Deborah K. Fenner

----- Headers -----

APPENDIX F

Letter of Permission (HPLP II)

PERMISSION FORM

I plan to use the *Health-Promoting Lifestyle Profile II* in a research or evaluation project entitled:

Is there a correlation between health perception & health promotion behaviors in the elderly?


I am enclosing a check for ten dollars ^{no fee} (~~\$10.00~~) payable to the **University of Nebraska Medical Center College of Nursing**.

Deborah K. Fenner
Print Name

Deborah K. Fenner
Signature

FNPP-Student,
Position University of Michigan - Flint, Mi.


Area Code Telephone #

Mailing Address


Permission is granted to the above investigator to copy and use the *Health-Promoting Lifestyle Profile II* for non-commercial data collection purposes such as research or evaluation projects provided that content is not altered in any way and the copyright/permission statement at the end is retained. The instrument may be reproduced in the appendix of a thesis, dissertation or research grant proposal without further permission. Reproduction for any other purpose, including the publication of study results, is prohibited without specific permission.

Susnoble Walker
Susan Noble Walker

3/23/00
Date

Please send two signed copies of this page to:

Susan Noble Walker, Ed.D., R.N., F.A.A.N.
University of Nebraska Medical Center
College of Nursing
600 South 42nd Street
Omaha, Nebraska 68198-5330

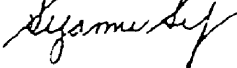
APPENDIX G

Letter of Permission (Human Subjects Committee)

THE UNIVERSITY OF MICHIGAN - FLINT

July 30, 2001

To: Tom Schaal, Nursing

From: Suzanne Selig, Human Subjects Committee 

Re: Is there a relationship between perception of health and health promotion behaviors in the elderly? (Approval #86/00)

This is to inform you that your proposal "Is there a relationship between perception of health and health promotion behaviors in the elderly?" has been approved by the Human Subjects Committee. Should you decide to make any changes in the use of human subjects which differ from the approved proposal, please advise this committee prior to making these changes.

Should you observe any negative change in the health or behavior of a human subject attributable to this research, you are required to suspend your project. If this happens, please inform the committee as soon as possible for our further review and decision as to the continuation/termination of your project.

This approval for your project is valid for a period of twelve months. If your project extends beyond this period (twelve months), please re-submit your proposal for reconsideration.