Spring 1991

Identification of Health Promotion Behaviors, Perceived Health Status and Perceived Health Education Needs of Older Women

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IDENTIFICATION OF HEALTH PROMOTION BEHAVIORS, PERCEIVED HEALTH STATUS AND PERCEIVED HEALTH EDUCATION NEEDS OF OLDER WOMEN

by

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A Thesis Submitted to the Faculty of Old Dominion University in Partial Fulfillment of the Requirements for the Degree of

Master of Science
Nursing

Old Dominion University
February, 1991

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ABSTRACT

Identification of Health Promotion Behaviors, Perceived Health Status, and Perceived Health Education Needs Of Older Women

Old Dominion University, 1991
Director, Christine A. Heine

The health-promoting behaviors, perceived health status, and perceived health education needs of older women were identified in this non-experimental, descriptive, correlational study. Fifty women over 60 years of age, living in three housing complexes for the elderly, disabled and handicapped in two southeastern United States cities were asked to complete The Health-Promoting Lifestyle Profile, The Perceived Health Status Questionnaire, The Health Education Needs Questionnaire, and Demographic Data Sheet. It was concluded that the women engaged in a high level of health-promoting behaviors. The participants rated their health as good and rated their health as good compared to that of other women their age. Health education topics related to medication usage and to fall and injury prevention were most frequently selected. The relationship found between health-promoting behaviors and perceived health status supported Pender's Health Promotion Model, the theoretical framework for this study.

DEDICATION

I dedicate this thesis to my mother, Phyllis Burlett Fellinger, my grandmother, Belle Wiencek Burlett, and my mother-in-law, Catherine Colburn Reynolds. These women have been and continue to be my most precious earthly sources of inspiration in my roles of wife, mother, daughter, sister, friend, nurse, and student.

ACKNOWLEDGEMENTS

My heartfelt appreciation to Christine Heine, whose knowledge, insight, and organizational skills enabled me to initiate and complete this study. My sincere thanks also to Dr. Betty Alexy and Linda Lilley for sharing their expertise with me.

To my husband, Keith, and my sons, Christopher and Drew, I extend my love and gratitude for their support, time, and understanding during this process.

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CHAPTER ONE

Introduction

The fastest growing segment of the United States' population are persons over the age of 65. In 1987, there were 29.8 million persons 65 years and older with 17.7 million women and 12.1 men (AARP, 1988). In 1980, the ratio of women over 65 years to men over 65 years was 148 to 100; for those over 85 years old it was 224 to 100. The life expectancy for an American woman is 74.9 years. The majority of older persons who live alone are women, and older women have lower median incomes than older men (AARP, 1988). According to the National Institute on Aging (1988), the annual income for women over 65 years of age in 1984 was $6,020 compared to $10,450 for men over 65 years of age.

During the second session of the 100th Congress, The Select Committee on Aging concluded that there is not enough known about the physical and psychosocial aspects in the lives of older women, that the rates of poverty, chronic illness and likelihood of living alone are greater in older women and that the public and

private agencies charged with research on aging are not obtaining sufficient information on older women specifically (Chairman, Select Committee on Aging, 1988).

Health promotion has received much attention through research and publication but there are differing opinions as to the age groups which should receive the bulk of research and funded programs related to health promotion. German (1982) stated,

> The ranks of the elderly population have been increasing so steadily that issues of their care and the training and research associated with it are highly visible whenever concerns about health care delivery are raised. It is ironic under the circumstances that the elderly get the least attention in areas that might be most positive (i.e. health education aimed at prevention and rehabilitation), while they receive a great deal of attention in tertiary care, high technology care, and, ultimately, institutional care (p. 1).

Wells (1982) stated, "The current elderly are our best guide to patterns of adjustment and to methods of

coping with the changes of age" (p. v). Dychtwald (1986) reflected, "The profound task we have before us is to transform a youth-focused culture into a healthy nation of middle-aged and older people" (p. 7).

Through use of pertinent research findings, health care professionals would be better able to present information on the lifestyles of older women and their needs. This information would be valuable in program planning and resource allocation in the public and private sectors.

Purpose

The purpose of this study was to identify the self reported health-promoting behaviors, self reported perceived health status and self reported health education needs of older women. Specifically, this study examined these concepts in community-based women age 60 or older.

Problem Statement

Numerous studies have been done on the concept of health promotion and perceived health status. Comparatively, few of these studies have specifically focused on older women. There is little empirical knowledge about older women's health-promotion

behaviors, self-rated perceived health status and perceived health education needs.

Elderly women spend 16% of their income on health expenses (ANA, 1986). However, health care professionals have limited knowledge as to what effect such monetary outlay has on these women. According to the Older Women's League (1986) "women age 65 and over have more days of restricted activity, longer average stays in the hospital, and are more likely to be transferred from the hospital to a nursing home than men 65 and over" (p. 6).

Health maintenance of women 65 years and older should receive increased attention because women are living longer than men, according to the Public Health Service (1985). The Public Health Service Task Force on Women's Health Issues (1985) cited, "reduced risk factors and improved services and information for hypertension, toxic agents, smoking, alcohol and drug misuse, nutrition, physical fitness and exercise, stress and control of violent behavior" as the important issues for the health of older women (p. 3).

In order for nurses to assist older women to attain and maintain a maximal level of wellness there

needs to be exploration of this population's health-promoting lifestyle. Identification of behaviors that maintain health, behaviors that hinder the maintenance of health, perception of one's health and perception of what one needs to know in order to attain and maintain wellness is necessary in order for nurses to provide older women with such services as health assessment, health education, counseling and support (Laffrey, 1985; Gelein, 1983).

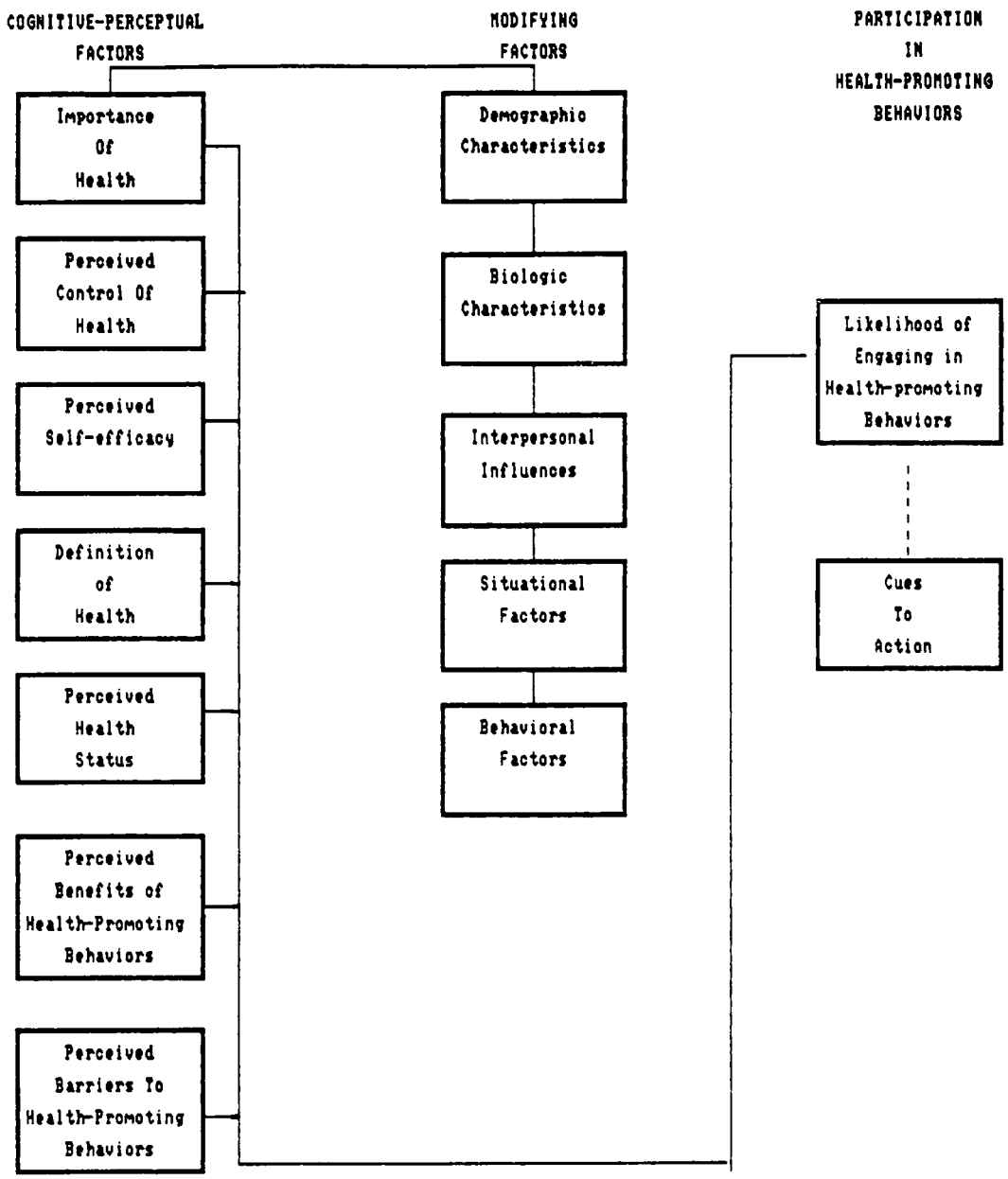
Not all effects of aging can be reversed but fastidious self-care practices assist in increasing or maintaining maximum level of wellness. Older adults have more discretionary time than younger adults to pursue a healthy life-style. Thus, they should be encouraged to use this time to their advantage and receive counseling in health promotion activities and resources (Pender, 1987). Porcino (1987) described an attitude for adoption, by health professionals and lay persons alike, with her words, "Since the beginning of this century, women have gained 35 more years of life. Let's be challenged by the gift of those extra years -- to thrive, rather than just survive" (p. 8).

Theoretical Framework

The Health Promotion Model (Pender, 1987) was chosen as the theoretical framework for this study (Figure 1). The Health Promotion Model is based on research findings on health promotion and wellness behavior (Pender, 1987). According to Pender (1987), the Health Promotion Model serves three important functions: 1) introduces order among concepts that may explain the occurrence of health-promoting behavior, 2) provides for the generation of hypotheses to be tested empirically, and 3) integrates disconnected research findings into coherent patterns.

Pender (1987) defines health promotion as "activities directed toward increasing the level of well being and actualizing the health potential of individuals, families, communities and societies" (p. 4). Health promotion compliments disease prevention, and is a positive process in which those who engage in it are seeking to "expand positive potential for health" (Pender,1987, p. 5). "Health promoting behaviors represent man acting on his environment as he moves toward higher levels of health

Figure 1. Pender's (1987) Health Promotion Model



rather than reacting to external influences or threats posed by the environment" (Pender, 1987, p. 60). With specific regard toward older adults, there are elements within the aging process which may be delayed or limited through engaging in health-promoting behaviors. For example, exercise can assist in limiting the loss of lean body mass while proper nutrition increases resistance to infectious diseases and chronic diseases such as atherosclerosis (Pender, 1987).

The Health Promotion Model is organized into three categories of factors which affect the likelihood of a person to engage in health-promoting behavior: "1) cognitive-perceptual factors, 2) modifying factors, 3) variables affecting the likelihood of action" (Pender, 1987, p. 60). Pender (1987) identifies the cognitive-perceptual factors as "the primary motivational mechanisms for acquisition and maintenance of health-promoting behaviors with each factor exerting a direct influence on the likelihood of engaging in health-promoting actions" (p. 60). The importance of health, perceived control of health, perceived self-efficacy, definition of health, perceived health status, perceived benefits of health-promoting behavior and

perceived barriers to health-promoting behavior are the cognitive-perceptual factors within the Health Promotion Model.

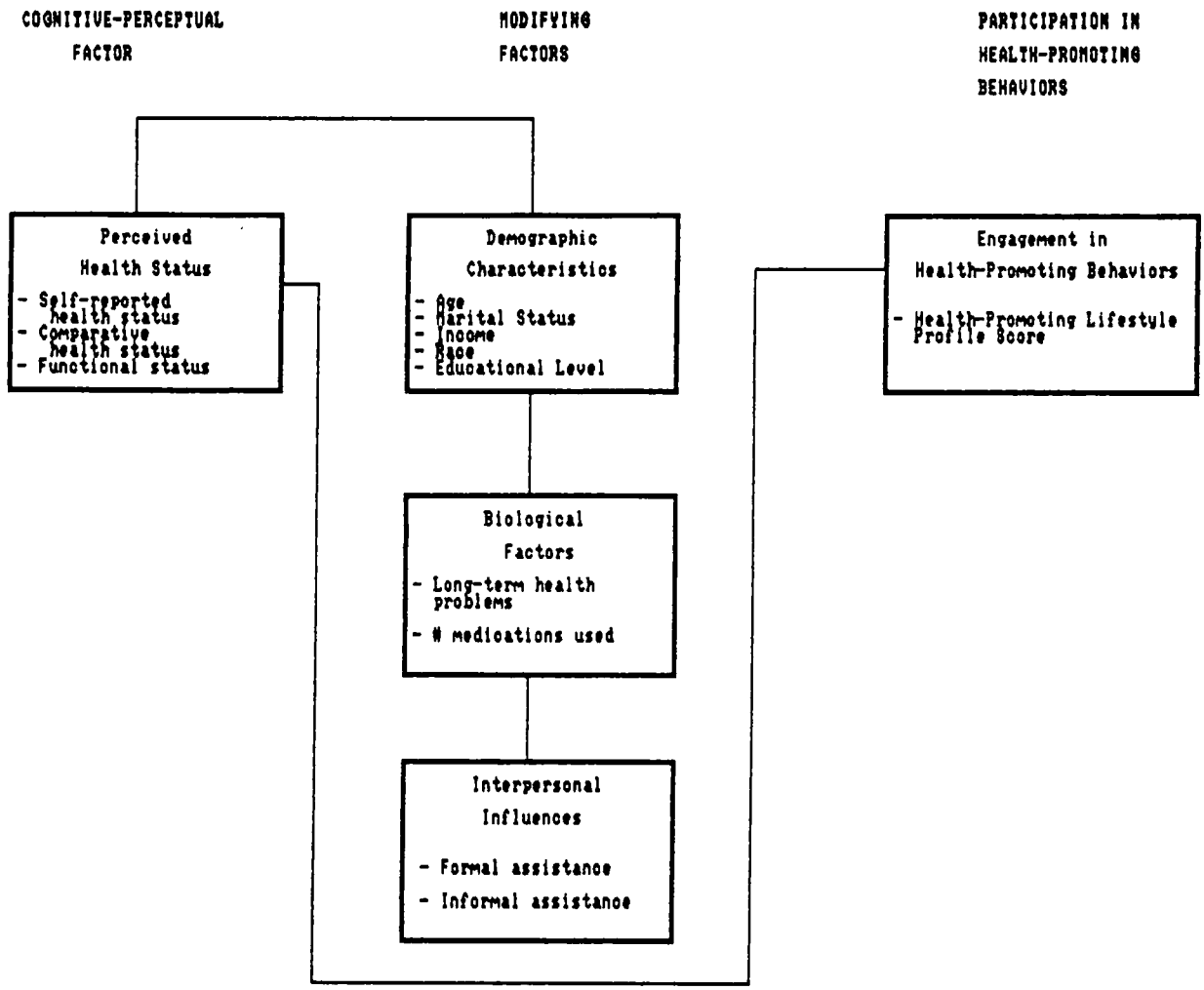
Pender (1987) proposes demographic factors, biological characteristics, interpersonal influences, situational factors and behavioral factors as constituting modifying factors in her model. Modifying factors indirectly affect health-promoting behavior through their influence on the cognitive-perceptual factors. For example, a person's level of education (demographic factor) may affect the degree of health promoting behavior as might one's interaction with a health care provider (interpersonal influence).

Cues to action also affect the degree of health-promoting behavior in a person. The cues are either internal, such as a good feeling within one's self after engaging in physical activity, or external, such as attending an educational program on stress management (Pender, 1987). Pender (1987) added, "The intensity of the cues needed to trigger action will depend on the level of readiness of the individual or group to engage in health-promoting activity" (p. 69).

Pender (1987) notes that the outcome of the nurse-client relationship is the "empowerment" of the clients so that the clients will be able to set goals and manage their lives in order to attain and maintain wellness. The relationship between client and nurse in the Health Promotion Model must be supportive so that clients regain belief in themselves, self-respect and the ability to participate in their health care. "Through review of life style, clients gain an awareness of those behaviors they perform regularly that are health-promoting. Such information can increase self-esteem and provide the momentum for further development of health-enhancing life style" (Pender, 1987, p. 145).

Figure 2 illustrates the use of Pender's model in this study.

Figure 2. Pender's (1987) Health Promotion Model as related to the proposed among health-promoting behaviors, perceived health status, demographic characteristics, biological factors, and interpersonal influences of older women.



The modifying factors in this study were demographic characteristics, biological factors, and interpersonal influences. Perceived health status was the cognitive-perceptual factor chosen for study. According to Pender (1987), modifying factors influence cognitive-perceptual factors. Cognitive-perceptual factors in turn influence a person's participation in health-promoting behaviors. For the purposes of this study, participation is determined by the Health-Promoting Lifestyle Profile scores. The higher the Health-Promoting Lifestyle Profile score, the more health-promoting behaviors the woman participated in.

This study investigated the relationship between older women's participation in health-promoting behavior, demographic characteristics and perceived health status of older women. Health education needs were also studied in order to assess what older women are interested in learning regarding their health.

This study focused on the cognitive-perceptual factor of perceived health status. The modifying factors chosen for study were selected demographic characteristics, biological factors, and interpersonal influences. The demographic characteristics consisted

of age, race, marital status, education, income and living arrangements. Biological factors included the presence of and number of long-term health problems and the number of medications used. Interpersonal influences included formal assistance and informal assistance used by the participants. The participation in health-promoting behaviors was addressed by the Health-Promoting Lifestyle Profile scores.

Definition of Terms

Health-promotion behaviors are the continuing activities that are a part of a person's lifestyle performed in order to maintain health status or attain a higher level of wellness (Pender, 1987). For the purposes of this study the Health Promoting Lifestyle Profile (HPLP) (Appendix A) was used to identify health-promoting behaviors in older women.

Perceived health status was defined for this study as the participants' perception of their health, functional status and their health in relationship to the health of others. The Perceived Health Status Questionnaire (PHSQ) (Appendix B) was used to identify the self-rated level of health for each participant, the self-perceived level of health for each participant

in comparison with other women of the same age and the self-rated functional status of each participant with regard to seven activities of daily living.

Perceived health education needs were defined for this study as the participants' first, second, third and fourth choices of ten health education program topics. This variable was measured using the Perceived Health Education Needs Questionnaire (PHENQ) (Appendix C).

Older women, for this study, were defined as women 60 years of age or older, living in one of three apartment buildings for the elderly, disabled, and handicapped within a certain geographical area.

Assumptions and Limitations

The basis of research studies consists of a series of assumptions. An assumption is "a proposition or statement whose truth is either considered self-evident or has been satisfactorily established by earlier research" (Polit & Hungler, 1987, p. 63). For the purpose of this study, the following assumptions were made:

1) The respondents were open and honest in their answers.

2) The questionnaires reflect the health-promoting behaviors, perceived health status, perceived health education needs and demographic characteristics of the respondents.

The following limitations may have effected the outcome of this study:

1) A purposive sample was utilized.

2) The comprehension level required for the HPLP may have been higher than that held by some respondents as evidenced by several respondents approaching the researcher for clarification of statements in the HPLP.

3) Those respondents requiring the one-on-one assistance of the researcher for completion of the questionnaires may have been influenced in their answers by the researcher's presence or the researcher's voice tone inflection when reading the questions/statements.

4) Due to the small sample size and lack of randomization, generalizing the findings of this study to other older women should be done with caution.

Literature Review

Of the numerous studies conducted on health promotion, few studies have focused on the elderly.

Even fewer health promotion studies have investigated the health-promoting behaviors, perceived health status and perceived health education needs of older women, specifically.

General health knowledge was investigated by Kerschner and Tiberi (1978). The study used data from a two year pre-retirement study done at the University of Southern California, Ethel Percy Andrus Gerontology Center. With this data the researchers sought to determine the amount of knowledge held by older adults concerning their own health needs and problems. This information was obtained by asking the participants to respond to the question, "How much do you know about ... 1) the physical changes in my body as I grow older, 2) the effects of exercise on older people, 3) the kinds of food older people should eat, and 4) health problems which aging people may commonly have" (Kerschner and Tiberi, 1978, p. 12).

The female participants constituted 51% of the sample with 57% at 45-59 years of age and 43%, 60-75 years of age. The majority of these participants reported that they held a range of some knowledge to being knowledgeable about all four health-related

issues. The researchers concluded that their study pointed out the need for further, more comprehensive study of older women. This recommendation for further study of older females was supported by their findings, which were differentiated by gender with females constituting the majority of the 295 participants.

Melanson and Downe-Wamboldt (1987) studied the perceived health status and feelings about the future in Canadian adults (N=889), ages 50-85 years, who lived in urban senior citizen apartment buildings. The majority of the participants were widowed (59%) with a mean age of 70 years. A perceived health status of good was reported by 50% of the participants. At least 72% reported independence in walking outdoors, walking indoors, shopping, preparing meals, doing housework, dressing, eating, bathing and ambulating out of bed. When asked to whom they turn for assistance with a problem, families was cited by 59% of the participants. Perceived health status was found to be the main contributor to variance in participants' scores on their perceptions about the future. The researchers found that those with a perceived health status of

excellent or good had positive perceptions about their future.

The 1984 National Health Interview Survey reported that the majority of persons over 65 in the United States assessed themselves as being in good health. Income was the demographic variable in this study. A yearly income range of under $10,000 to over $35,000 was reported by the majority of the participants who used the self-descriptor of good health.

Branch and Jette (1984) conducted a five year longitudinal study exploring the relationship between mortality rates and personal health practices among men and women 65 years or older. The researchers focused on the five personal health practices of physical activity, sleep, smoking, alcohol consumption and eating behavior. The majority of the 766 female participants reported that they slowed down in general as they aged, slept 7-8 hours per night, had never smoked, consumed less than five alcoholic drinks at a sitting, and ate three regular meals each day.

No significant increased risk of mortality during the five years was found for those who practiced unfavorable behaviors. Those who never smoked did have

a significantly lower mortality rate. Among the women in this study age, health status, and income did have significant relationships with five year mortality rates.

Horgan (1987) used the same five health practices researched by Branch and Jette (1984), along with two additional health practices, to study the relationship between subjective health status and common health practices among a group of elders. The sample of 80 women and men ($\bar{x}$ age = 72.9 years) reported the following magnitude of health practices: 46% slept 7-8 hours/night, 21% did not eat between meals, 90% ate breakfast often, 46% had a weight within 5% of their ideal weight, 81% exercised often, 73% did not consume alcohol and 60% never smoked (Horgan, 1987).

The reported results of the study were not differentiated by gender. The majority of the participants (53%) reported themselves to be in good health as opposed to poor, fair, or excellent. Slightly significant correlations were found between self perceived health status and selected physical activities. Swimming, long walks, and working in the garden were the most frequently selected physical

activities (Horgan, 1987). Horgan suggested that future studies include a question regarding elders comparing their present health status to that of others their age.

The results of Brown and McCreedy's (1986) study described the health behavior of the elderly, and identified its determining factors and consequences. The presumed determining factors were age, socio-economic status, gender and marital status. The relationship between health behavior and health status of the elderly was also investigated. The sample of 386 participants consisted of 138 men and 248 women, 55 years of age or older. Women presented slightly more significant health-promoting behaviors than men. The women also scored higher on preventative measures, and avoidance of environmental hazards and harmful substances. The majority of the women (47.6%) scored in the moderate range on the Health Status Index, an instrument designed to measure a person's health status. The perceived health status of the women was self-reported as good (55.5%) as opposed to excellent, fair or poor. For the entire sample, gender was most predictive of health behavior. For the female

participants, socioeconomic status was most predictive of women's health behavior. Health-promoting behaviors positively correlated with perceived health status. The researchers suggest that health-promoting behaviors may lead to an increased feeling of well-being and contribute to longevity.

Brown and McCreedy (1986) suggested further research on the relationships between health behavior and socioeconomic status and marital status. The researchers also recommended that other factors such as social support, stress and coping patterns and environmental factors be studied in relation to health behavior and health status.

Raukhorst (1987) identified the health locus of control, self-rating of health and number of health problems in elderly widows. The researcher also identified demographic variables as predictors of the practice of seven health habits: "1) never smoked cigarettes, 2) moderate or no use of alcohol, 3) getting seven to eight hours sleep per day, 4) eating breakfast almost every day, 5) eating snacks between meals less often than every day, 6) engaging in regular

physical activity, 7) maintaining desirable weight" (Raukhorst, 1987, p. 19).

Eighty-four widows with an average age of 73 years were studied. A rating of fair to poor health was reported by 71% of the sample. The participants practiced an average of 4.5 of the seven health habits with 98% reporting moderate to no use of alcohol, 79% reporting they ate breakfast regularly, 78% engaged in regular exercise and 50% reporting they do not smoke daily or have never smoked. Internal locus of control, the feeling of self-control over events and the environment, had the highest positive correlation with the practice of health habits. Health self-rating, number of health problems and years of education also correlated significantly with the practice of health habits. Raukhorst's (1987) work focused on widows of black racial origin (71% of the sample). Socioeconomic status was not a variable in this work nor was the participants' level of functioning.

Hogstel and Kashka (1989) studied major health care practices of active, healthy older persons by asking persons age 85 and older about "longevity patterns in their families, their life-long health

practices and their major health care problems and needs" (p. 16). A convenience sample of 302 was drawn from nursing homes, retirement centers, hospitals, senior centers and private homes. The researchers studied the variables of nutrition, exercise, health assessment, rest and relaxation, support systems and limited use of chemical substances. A researcher designed interview tool, Lifelong Health Practices Scale, was used to assess health practices. The demographic data collected consisted of how many siblings lived to at least 85 years of age; how many children, grandchildren, great-grandchildren they had and ages at death of both biological parents and both sets of biological grandparents. The researchers also asked the participants to identify major past and present health problems, current health care needs, perceived health status and several main reasons for their own longevity.

The majority of the participants were Caucasian, widowed females who lived in their own homes or apartments in an metropolitan area. The average age of the participants was 89 years.

None of the seven health practices correlated with age. The researchers concluded that the health practices scale was not a predictor of longevity. The female participants had higher scores on chemical substances avoidance and support systems. Arthritis, cataracts, healed fractures, decreased hearing and hypertension were the past or present health problems listed. The majority of the participants reported no major health care needs. It was reported that men and women differed significantly on the health status descriptor, however, the researchers did not present the ratings given by each gender. Longevity was attributed to activity, belief in God, positive attitude toward self and others, good nutrition, avoiding chemical substances, good support systems, life-long health practices and use of health care resources.

Walker, Pender and Volkan (1987) studied the relationship between selected cognitive/perceptual factors and demographic characteristics, and the cognitive/perceptual factor of self-motivation with older adult's health promoting lifestyle, particularly, exercise. At the time of the research, self-motivation

was under evaluation for its pertinence to Pender's Health Promotion Model (1987). The researchers concluded that the variance in the older adults' health-promoting lifestyle was explained by their definition of health, chance health locus of control, self-motivation and employment status. Variance in the specific health-promoting behavior of exercise was explained by the perceived benefits of exercise, the perceived barriers to exercise, and employment status (Walker, Pender, and Volkan, 1987). The results were not differentiated by gender, however.

Walker, Volkan, Sechrist, and Pender (1988) utilized the Health Promotion Lifestyle Profile (Walker, Sechrist, and Pender, 1987) to study the health-promoting lifestyles of older adults (N=97) as compared with the health-promoting lifestyles of young (N=167) and middle-aged adults (N=188). The older adults (ages 55-88 years) had higher scores in the Profile's subscales of health responsibility, nutrition and stress management. These scores were significantly different from the scores of the other two age groups ($p<.01$). The researchers found that the oldest subgroup of the older adults had a more health-

promoting lifestyle than the other two groups.

Walker, Volkan, Sechrist and Pender (1988) suggested that health promotion may reduce the rate of premature death and improve the quality of life for all people. The researchers hold the nursing profession as the profession most likely to influence health promoting behaviors in their clients. "The knowledge base for such practice will come from research that seeks to understand what people do to protect and promote their own health; why some people adopt and follow healthy lifestyles, while others engage in health-damaging patterns of behavior; and which individual and environmental factors as well as professional interventions may facilitate or impede effective health-related life styles" (Walker, Volkan, Sechrist, and Pender, 1988, p. 89).

In Schafer's (1989) study of 244 community based older adults, a structured interview utilizing an 18 item questionnaire revealed that 76% of the participants rated their health as excellent or good. At least 57% of the participants listed participation in health-promoting behaviors of weekly physical activity, walking daily for at least 20 minutes, eating

breakfast, eating three meals a day, feeling rested upon awakening, spending time relaxed, refraining from smoking and having regular visits with a physician (Schafer, 1989). Again, the results were not differentiated by gender.

Schafer (1989) noted that none of the participants listed a nurse as a resource for assisting in changing behaviors. The research challenged nurses to foster health promotion practices, especially with older adults, in order to assist clients in changing behaviors and then in maintaining the changed behaviors.

Daly and Futrell (1989) identified relationships between characteristics of pre-retired and retired women and men, retirement attitudes and health and identified the predictors of health by retirement status and sex. The majority of the participants (N=431) were married males. The researchers used Parkerson's 63 item Duke-UNC Health Profile as the research instrument. This Profile assesses symptom status, physical, emotional and social health status. Men reported a higher level of physical functioning than women. The men and women did not differ with

regard to symptoms, emotional or social health. The researchers suggested further study of functional status since the tool measures one's perception of capacity to do a task rather than measuring actual task performance.

The relationship between reported health status and social support of non-institutionalized elderly women was studied by Schank and Lough (1989). One hundred women, 65 years of age or older, participated in this study which resulted in those with self reported good health also reporting a greater degree of social support. Those participants living in private housing reported an excellent or good health status and greater degrees of social support more frequently than those living in public housing. Also, those with greater financial means and a higher level of education reported better health.

Kolanowski and Gunter (1985) studied the responses of 25 women regarding their life events and health practices. The participants were asked to respond to the question: "What self practices or approaches to health helped you to preserve your physical and mental well being throughout life?" (Kolanowski and Gunter,

1985, p. 20). The average age of the participants was 71.6 years. Good or excellent health was reported by 73% of the sample. Dixon and Dixon's Evolutionary-Based Model of Viability and Health was used as the theoretical framework. Evolutionary viability was defined as "the extent to which a person contributes to the evolutionary survival of the group in which he or she lives" (Kolanowski and Gunter, 1985, p. 27). Activity was the highest rated self care practice at 76.9% followed by evolutionary viability at 73%, flexibility, 58.3%; transcendence, 50% and integrity, 34.6%. Flexibility is "the shifting of personal life patterns, as necessary, to adapt to external contingencies" (Kolanowski and Gunter, 1985, p. 28). Transcendence is the "sense that life is oriented toward purposes greater than oneself" (Kolanowski and Gunter, 1985, p. 28) Integrity is defined as the "ability to relate to inner subjective experiences while accepting pragmatic contingencies of the external world" (Kolanowski and Gunter, 1985, p. 29).

In the study, 50% of the respondents cited good nutrition as a contributor to their well-being while 31% listed alcohol and tobacco abuse as contributors to

poor health. These findings led the researchers to suggest that a fifth lifestyle determiner, patterns of self care, be added to the Evolutionary-Based Model of Viability and be viewed as a "component of wellness, rather than as a health outcome" (Kolanowski and Gunter, 1985, p. 29).

Gunter and Kolanowski (1986) studied the relationship between life events and perceived health status in 50 retired career women ($\bar{x}$ age= 69.9 years). A Demographic Data Sheet, the Philadelphia Geriatric Center Morale Scale and a narrative response to seven researcher-designed questions were the tools for the study. The researcher-designed questions asked about the effects of major events, management of their lives throughout their life span, their health and exercise activities along with their greatest accomplishments and their advice to young women of today for successful aging.

In the 50-69 year age group (N=19) 26% of the women rated their health as good or excellent while 44% of the 70-89 age group participants (N=31) rated their health as good or excellent. An inverse correlation between health and age was found since 12% of the

younger age group reported fair health status while 18% of the older age group reported fair health status. Good or excellent health was described by 38% of the married women, 28% of those who lived alone, 4% of those who lived with family and by none of those who lived with people other than family. No relationship was found between health status and the number of children of the participants. There was no significant difference whether or not the participants were retired nor did the retirement of the participants' husbands relate to health status of the participants. Also, no significant difference in the rating of health was found in relation to whether or not the participants had grandchildren, had experienced a death in the family, or had experienced natural or personal disasters.

The study focused on the impact of retirement on women but acknowledged the need to study the relationship between health practices and aging in order to add to the body of knowledge about health promotion. The study was limited by a small sample size of a non-randomized nature and the use of a self-

administered questionnaire without the benefit of the researchers' presence for clarification.

The number of studies on health-promoting behaviors and perceived health status in older persons has increased over the past twelve years. The studies are diverse in their focus and methods, however. Even though population trends reveal that women over 60 years of age are steadily increasing in number (AARP,1988), the studies reported on health-promoting behaviors and perceived health status in older persons do not all differentiate between each gender regarding the variables investigated.

At least four health-promoting behaviors were practiced by the majority of participants in several studies (Branch and Jette, 1984; Kolanowski and Gunter, 1985; Brown and McCreedy, 1986; Horgan, 1987; Raukhorst, 1987; Hogstel and Kashka, 1989; Walker, Volkan, Sechrist and Pender, 1988; Schafer, 1989). Findings were not gender specific in several of the studies reported (Horgan, 1987; Walker, Volkan, Sechrist and Pender, 1988; Schafer, 1989).

A number of studies consistently found specific health-promoting behaviors were practiced by older

adults. In addition, respondents in a majority of the studies rated their health status as good (Melanson and Downe-Wamboldt, 1987; National Health Interview Survey, 1984; Kolanowski and Gunter, 1985; Horgan, 1987; Schafer, 1989; Schank and Lough, 1989; Gunter and Kolanowski, 1989). The few studies that explored older women's perception of health generally found that older women rated their health as fair (Brown and McCreedy, 1986 and Raukhorst, 1987).

No studies explored older women's perception of health education needs. Only Kerschner and Tiberi (1978) reported the investigation of older persons' knowledge about health related issues. The majority of the female participants reported having at least some knowledge about four general areas. The four areas were physical changes of aging, effects of exercise, nutrition and common health problems in aged persons. The participants' desire for health information on any or all of the four areas was not assessed, however.

Nurses must have an adequate amount of knowledge concerning their clients if they are to carry out the roles of caregiver and educator. The studies reviewed did not address the relationship between perceived

health status, health-promoting behaviors and demographic variables. Also, none of the studies reviewed investigated the perceived health education needs of older women and the relationship of these perceived health education needs to health-promoting behaviors, health status and demographic variables. Appropriate health care planning and evaluation can not be done if such needs and relationships are not assessed. As older women in the 1990's face the likelihood of a life span of at least 70 years, those women can be assisted by the nursing profession in making the near future as satisfying as possible. Armed with empirical data about the health-promoting behaviors, health status , perceived health education needs and demographic characteristics of older women, nurses will be better able to collaborate with older female clients in planning, executing and evaluating their health care.

This study focused on assessing the present health-promoting behaviors and perceived health status of women 60 years or older. The results of this study add to the present body of knowledge concerning older women's health-promoting behaviors and perceived health

status. The health education needs found through this study lay the foundation for further assessment of the specific health information desired by older women. Population trends reveal that women over 60 years of age are steadily increasing in number. Findings from this study, may provide nurses additional information to use for planning, implementing and evaluating care for community-based older women.

Research Questions

The research questions for this study were:

1) What are the identified perceived health-promotion behaviors, perceived health status, and perceived health education needs of older women?

2) Is there a significant relationship between selected demographic characteristics of older women, their perceived health-promoting behaviors, and their perceived health status?

The methodology of the study is presented in Chapter two. Chapter 2 includes an explanation of the research design utilized and identification of the sample and setting. The instruments are described including reliability and validity of the instruments. A description of the pilot test using the study

questionnaires with a representative group of women age 60 or older is presented. This chapter also explains the procedures used for data collection for this study.

CHAPTER 2

Methodology

Research Design

For the purpose of this study, a non-experimental, descriptive, correlational design was used. Non-experimental research involves data collection without introduction of treatments or changes. Descriptive studies serve to depict characteristics of persons, situations or groups along with the frequency of occurrence of certain events. Correlational research studies the relationships between selected variables without any manipulation by the researcher (Polit and Hungler, 1987). A descriptive, correlational design was utilized for this study in order to assess the health-promoting behaviors, perceived health status and perceived health education needs of older women. The relationships between health-promoting behaviors and health status and selected demographic characteristics were studied in order to provide nurses with a better understanding of the health perceptions and needs of older women. With such information nurses are better able to assist older women in attaining or maintaining their maximum level of wellness.

Sample

The target population for this study was all community-based females 60 years of age and older. The accessible population was those older females residing in three government subsidized apartment buildings for the elderly, disabled, and handicapped in two large metropolitan cities (N=250). The non-probability sample was those women living in these dwellings who were willing to participate in this study.

Setting

The setting was three government subsidized apartment buildings for the elderly, disabled and handicapped in a two large metropolitan cities on the southeastern coast of the United States.

Tools

Four self-administered questionnaires comprised the tools utilized in this study. The tools identified health-promoting behaviors, health status, health education needs, and demographic data.

The Health-Promoting Lifestyle Profile (HPLP) (Appendix A) (Walker, Sechrist and Pender, 1987) is a 48 item instrument designed to measure the degree to which individuals engage in health-promoting behaviors.

According to its developers, the health-promoting behaviors then constitute a health-promoting lifestyle which is a multi-faceted pattern of self-initiated acts and viewpoints that maintain or supplement an individual's state of wellness, self-actualization and fulfillment (Walker, Sechrist and Pender, 1987).

Included within the 48 items are six subscales: self-actualization, health responsibility, exercise, nutrition, interpersonal support and stress management. Each item is scored using a Likert-type scale (1=never, 2=sometimes, 3=often, 4=routinely). The respondents were asked to circle the number most closely related to the frequency with which they engage in the behavior described in each statement.

Reliability is defined as the degree to which an instrument consistently measures the concepts or data it was designed to measure (Polit and Hungler, 1987). Previous testing on adults by the instrument's developers yielded an alpha coefficient of .92 as a measure of internal consistency (Walker, Sechrist, and Pender, 1987). According to Polit and Hungler (1987), reliability coefficients above .70 are acceptable. The sets of items assigned to each of the six factors:

self-actualization, health responsibility, exercise, nutrition, interpersonal support and stress management had alpha coefficients ranging from .70 to .90 in the previous testing by the developers.

Stability is defined as the degree to which the same results are obtained upon successive administration (Polit and Hungler, 1987). Stability for the HPLP was tested by its developers through the test-retest method. The Pearson r, a measure of correlation, for the total instrument was .93 while the range of correlation for the six subscales was .81-.91. Polit and Hungler (1987) state that an r of .70 is an acceptable degree of correlation.

Content validity involves the degree to which the instrument contains a sufficient amount of the content area being measured (Polit and Hungler, 1987). Content validity for the HPLP was obtained through evaluation of the instrument by nursing faculty familiar with health promotion literature.

The Perceived Health Status Questionnaire (PHSQ) (Appendix B), developed by the investigator, consisted of two forced choice questions with four responses. The participants were asked to rate their own health

and to rate their own health in relationship to the health of other women their own age. The participants were also asked to rate their ability to do seven activities of daily living with regard to whether they could do the activity alone, with assistance or they could not perform the activity at all. Content validity for this instrument was established through evaluation by three nursing faculty members with either adult or gerontological nursing expertise.

The Perceived Health Education Needs Questionnaire (PHENQ) (Appendix C), developed by the investigator, consisted of ten health education program titles. The participants were asked to give their first four choices of programs by placing the appropriate numeral (1,2,3,4) in the space preceding the selected program title. Content validity was established by evaluation of the program titles by three nursing faculty with expertise in adult or gerontological nursing.

The Demographic Data Sheet (DDS) (Appendix D), investigator-developed, included eleven questions with either multiple-choice, forced choice or fill-in-the blank responses. Information on age, marital status, race, educational background, socioeconomic status,

formal and informal assistance, the presence of long-term health problems and if present, the number of such problems; the number of prescription and over-the-counter medications taken daily, and health care services utilized were solicited through this questionnaire.

Pilot Study

A pilot study was conducted prior to implementation of the actual study. A pilot study is a small-scale version of the major study done for the purpose of improving the total project or examining its feasibility (Polit and Hungler, 1987). A pilot study may show that various aspects of the proposed study require revision or refinement. The access to a population, cost of the study or the adequacy of the data collection methods are examples of areas assessed through a pilot study.

According to Polit and Hungler (1987), the pilot study should be carried out as carefully as one would the major study. The subjects for the pilot study should come from the same population as that chosen for the major study. Upon analysis of the pilot study's procedure and the data collected, the investigator has

the opportunity to refine or revise procedures and/or instruments in order to eliminate any difficulties encountered during the pilot study.

The pilot study sample consisted of ten community-based women age 60 or older. The pilot study sample and the actual study sample possessed similar characteristics.

During review of the pilot study findings it was determined that the Health Education Needs Questionnaire did not fully encompass areas pertinent to health promotion in older women. The questionnaire was then expanded from six to ten program topics, and directing the respondents to choose their first four topic preferences.

Based on the findings of the pilot study, refinements were made on The Demographic Data Sheet. The choice of responses to the questions associated with formal and informal assistance utilized, health care services utilized, and the participants' ability to conduct selected activities of daily living were expanded.

The reliability for the HPLP in the pilot study was .98. The PHSQ responses resulted in a .82 alpha

reliability coefficient. The reliability coefficients of these two instruments, measuring health-promoting behaviors and perceived health status, were sufficient for the further testing planned using these instruments.

Procedure

Subsequent to conducting the actual study a copy of the research instruments and an explanation of the procedure was submitted to the Human Subject's Committee of the School of Nursing at Old Dominion University. After receiving approval, access to the sample was initiated. A letter explaining the purpose of and procedures for the actual study was sent to the housing operations manager for the housing sites. A copy of the research instruments and a copy of the letter of explanation for the participants were included. The letters were followed up with a telephone call to confirm receipt of the materials and to arrange a meeting to confirm the access, sample selection and procedure for the study.

At two of the housing sites two, four hour sessions were held during which the investigator offered blood pressure screening to all the residents.

A flier was sent to each resident prior to the sessions explaining the blood pressure screenings and the research study. Each woman presenting for blood pressure screening was asked if she would like to participate in the research study. A letter (Appendix E) prefaced the actual packet of instruments. This letter addressed to the participant ("Dear Resident") provided an explanation of the purpose of the study, information about the protection of human subjects, an estimate of the time required for completion of the instruments and the means for returning the packet of questionnaires. Each woman also received the opportunity to review the instruments prior to initiating her responses to the instruments' questions. For those women who expressed a desire to participate but upon review of the instruments said they needed assistance in completing the instruments, the investigator provided one on one assistance. This assistance was in the form of explaining the directions, explaining actual questions and/or reading the questions and response choices and recording the participants' answers.

The participants were guaranteed anonymity with results to be published in aggregate form. Completion of the instruments was voluntary and posed no potential risks to the respondents. Anonymity and consent to participate were explained in writing to potential participants (Appendix E).

The procedure for accessing participants at the third housing site was similar to that used at the other two housing sites. The exception being that no introductory fliers were sent out to the residents and no health screenings were offered. The investigator presented an introduction of herself and the research study at a formal organization group meeting at the housing site. The investigator was then available after the meeting to receive those women willing to participate in the study.

At both sites, an envelope was provided with the questionnaire packet for the return of the packet into a sealed box at a designated, supervised location. The investigator then collected the returned packets from this sealed box. At two of the housing sites the packets were collected at the termination of each blood pressure screening session. The packets were collected

from the third housing site nine days after the participants had received the packets.

Chapter 3 presents the descriptive data on the health-promoting behaviors, perceived health status and perceived health education needs of older women with the statistical analysis of the data. The relationship between selective demographic characteristics of older women and health-promoting behaviors, perceived health status and perceived health education needs will also be presented.

CHAPTER 3

Results

The purpose of this descriptive, correlational study was to identify the perceived health-promoting behaviors, perceived health status and self-reported health education needs of older women. Also, this study investigated the relationship between selected demographic characteristics and health-promoting behaviors and perceived health status.

Analysis

According to Wilson (1989), "descriptive statistics are summary statistics and visual displays that describe the characteristics of the sample. Descriptive statistics include measures of central tendency and dispersion" (p.511). Averages, percentages, ranges and standard deviations are examples of descriptive statistics. Frequency distributions, measures of central tendency and measures of dispersion were used to analyze the first research question and obtain the appropriate statistics.

Correlational statistics were used to analyze the data for the second research question concerning the

relationships between selected demographic characteristics of older women, their perceived health-promoting behaviors, their perceived health status and their perceived health education needs. "A correlation addresses the question of the extent to which two variables are related" (Wilson, 1989, p. 526). Research questions are answered by calculating a statistic that describes the degree of a relationship (Wilson, 1989). The Pearson Product Moment was the statistical test chosen for analysis of the relationship between the selected variables. The Pearson Product Moment is the most usual statistical method for calculating a relationship between two variables. This test can be used with ordinal or interval level data (Munro, Visintainer and Page, 1986). A Pearson Product Moment result (r) of 0.26 - 0.49 describes a low correlation while an r of 0.50 - 0.69 describes a moderate correlation (Munro, Visintainer and Page, 1986).

Levels of measurement serve as a guideline for selection of the appropriate statistical tests when planning quantitative data analysis (Wilson, 1989). This study yielded nominal and ordinal level data. The

nominal scale is the lowest scale in the hierarchy of levels of measurement. It is a method of grouping together subjects which are similar in a particular characteristic (Munro, Visintainer, and Page, 1986). The demographic data, health status data and health education needs in this study are presented as nominal level data. According to Munro, Visintainer, and Page (1986), an ordinal scale is "one in which members of a set are ordered from the most to least with respect to some characteristic" (p. 5). There is not necessarily equal distance between the rankings. The Health-Promoting Lifestyle Profile scores constituted ordinal level data in this study.

Instrument Performance

Four questionnaires were used in this study in order to obtain information on 1) participation in health-promoting behaviors, 2) the participants' self-rated health status and the participants' self-rated health when compared to the health status of other women of the same age, 3) participants' self-reported health education needs from a given set of topics and 4) demographic data. The Health-Promoting Lifestyle Profile (HPLP) was devised by Walker, Sechrist and

Pender (1987). The Perceived Health Status Questionnaire (PHSQ), the Perceived Health Education Needs Questionnaire (PHENQ), and the Demographic Data Sheet (DDS) are researcher-designed instruments previously tested only in the pilot study of this work.

According to Wilson (1989), "internal consistency reliability is a measure of how well all of the items in the instrument relate to each other and to the total instrument" (p. 358). Cronbach's alpha is the statistical test most extensively used measure of internal consistency. This measure indicates the relationship between a subject's performance on one item on the instrument in relation to all other items (Wilson, 1989). The normal range of internal consistency is between 0.0 and 1.00 with higher values indicating a higher degree of internal consistency (Polit and Hungler, 1987). The reliability coefficient for the total HPLP instrument was .91. The reliability coefficients for each the subscales in the HPLP are found in Table 1.

Table 1

Reliability Coefficients for Health-Promoting Lifestyle Profile Sub-scales

Sub-scale	Reliability
Self-Actualization	.83
Health Responsibility	.73
Exercise	.73
Nutrition	.66
Interpersonal Support	.79
Stress Management	.41

The reliability coefficients for the Self-Actualization, Health Responsibility, Exercise, Nutrition, and Interpersonal Support sub-scales of the HPLP are comparable to those obtained by Walker, Sechrist, and Pender (1987). The least reliable sub-scale was the Stress Management sub-scale (alpha .4). Walker, Sechrist, and Pender (1987) also reported the Stress Management sub-scale as having the lowest reliability coefficient of the six sub-scales (alpha = .70). Walker, Sechrist, and Pender (1987) did not

discuss the possible reasons for their finding. In this study the low reliability coefficient for the Stress Management sub-scale may be due to the small variance for the sub-scale (variance = 11.9) and the low inter-item correlation (x=.09).

The reliability coefficient for the portion of the PHSQ related to health status was .82. The reliability coefficient for the items on the PHSQ dealing with the functional ability of the participants was .86.

Findings

Description of the Sample

Questionnaires were given to 54 female residents of three apartment buildings for the elderly, disabled and handicapped in two large metropolitan cities. Fifty-four (54) questionnaires were returned. Four questionnaires were incomplete or found to be not usable. This resulted in a final sample size of 50 for a response rate of 100%. A typical participant was a widow (66%), of the Black race (56%), living alone (84%), having some high school level education (24%), and a yearly income between $ 0 - 4,999 (44%). The mean age of the participants was 73.4 years (sd 8.5).

Table 2 provides selected demographic information about the participants.

Table 2

Selected Demographic Characteristics of Older Women

(N=50)

Characteristic	Frequency	Percent
Age range (in years)		
60 - 64	9	18
65 - 75	20	40
76 - 85	16	32
86 - 98	4	8
Missing	1	2
Total	50	100
Marital Status		
Single	4	8
Separated	2	4
Divorced	6	12
Married	5	10
Widowed	33	66
Total	50	100
Educational level		
<Eighth grade	11	22
Eighth grade	10	20
Some high school	12	24
High school graduate	11	22
Some college	5	10
College graduate	1	2
Total	50	100

The majority of the participants (76%) reported that they had long-term health problems. Hypertension was reported as a long-term health problem by 19 respondents. Fifteen participants listed arthritis in this category. Diabetes was cited by nine participants and unspecified cardiac conditions were reported by eight women.

The participants reported taking an average of three prescription/non-prescription medications each day. Fifteen women reported that they did not know the names of their medications. Seven participants listed Furosemide (or brand name Lasix) as a medication currently being taken. Five participants cited "a fluid pill" as a prescribed medication. Six participants listed Zantac as a drug they were currently being prescribed. Various non-steroidal anti-inflammatory agents, gastrointestinal agents, anti-hypertensive agents, diabetic agents, cardiac and anti-anxiety agents were also listed by the participants.

A physician was cited most often by the participants (54%) as the major source of formal assistance. Only four of the participants reported

using professional nursing services. These services were from either a nurse practitioner, a visiting nurse, or a clinic nurse. In 12% of the responses, none of the formal assistance sources listed were marked by the participants.

When asked about informal assistance, sons and/or daughters were listed as those most frequently turned to for assistance or guidance. A Higher Being, ministers and fellow church members were also listed as sources of assistance and guidance.

The first research question in this study investigated the health-promoting behaviors, perceived health status and perceived health education needs of older women. The three questionnaires used to address this research question were the Health-Promoting Lifestyle Profile (HPLP) (Walker, Sechrist and Pender, 1987), the Perceived Health Status Questionnaire (PHSQ), and the Perceived Health Education Needs Questionnaire (PHENQ).

The health-promoting behavior scores as measured by the HPLP ranged from 97 - 192 points (possible range 48 - 192), ($\bar{x}$ = 136.6, sd = 20.3). Walker, Sechrist and Pender (1987) identified a health-promoting

lifestyle as "a multi-dimensional pattern of self-initiated actions and perceptions that serve to maintain or enhance the level of wellness, self-actualization, and fulfillment of the individual" (p. 77). According to Walker, Sechrist and Pender (1987), a higher score on the HPLP indicated a more health-promoting level of behavior. Table 3 provides a description of the scores on each of the six sub-scales of the HPLP.

Table 3

HPLP Sub-scale Scores

Sub-scale	Range	(Possible range)	x	sd
Self-Actualization	21-52	(13-52)	39.9	7.6
Health Responsibility	13-36	(9-36)	25.1	5.6
Exercise	4-20	(4-20)	9.2	3.9
Nutrition	10-24	(6-24)	18.1	3.8
Interpersonal Support	13-28	(7-28)	22.8	4.2
Stress Management	11-28	(7-28)	19.8	3.8

Perceived health status was defined as the participants' perception of their health, functional status and their health in relationship to the health of other women of the same age. The majority of the participants (58%) reported good or excellent health. The majority of the participants (72%) also evaluated their health status as good or excellent in comparison to other women their age. The older participants reported good to excellent health status more frequently than the younger members of the sample. Most of the participants were able to do selected functional tasks independently. Eighty-six percent (86%) of the participants reported being able to cook without assistance. Dusting and laundering were done independently by 82% of the participants. Sweeping was described as an independent activity by 78% of the women. Independence in bathing (96%), walking (78%) and going outdoors (78%) was reported by the participants. Table 4 addresses the self-reported health status of the participants along with the participants' comparison between their health status and the health status of other women their age.

Table 4

Perceived and Comparative Health Status Of Older Women

(N=50)

Self-reported Health Status	Frequency	Percent
Excellent	7	14
Good	22	44
Fair	14	28
Poor	5	10
Missing	2	4
Total	50	100
Comparative Health Status	**Frequency**	**Percent**
Excellent	10	20
Good	26	52
Fair	11	22
Poor	1	2
Missing	2	4
Total	50	100

Perceived health education needs were defined as the participants' first, second, third and fourth choices of ten health educational program topics listed on the Perceived Health Education Needs Questionnaire.

Understanding and Using Medications Wisely was the first choice of educational topics by 21 (42%) of the participants. **Tips To Prevent Falls and Injuries** was the first choice of 10 participants (20%). Six participants (12%) reported a first choice of **Starting A Walking Program for Exercise and Stress Reduction** while eight (16%) reported this topic as their second choice. The two topics that were not ranked as first or second choices by most of the participants were **Recognizing the Signs and Symptoms of Glaucoma** and **Sexuality in the Older Years.**

The second research question in this study asked if there were significant relationships between selected demographic characteristics of older women, their perceived health-promoting behaviors, and perceived health status.

The relationships between demographic characteristics and health-promoting behaviors, and perceived health status were investigated through the Demographic Data Sheet, the Health-Promoting Lifestyle Profile, and the Perceived Health Status Questionnaire. Significant correlations between several of the selected demographic characteristics and participants'

perceived health status were found. A significant relationship between the HPLP total scores and marital status was found. Marital status positively correlated with the participants' perception of health status when compared to other women of the same age group. The demographic variable of race held a significant positive relationship with self-reported and comparative health status. A significant but less strong relationship existed between the presence of long-term health problems and self-reported and comparative health status. Age and self-reported and comparative health status were significantly related while the number of prescription/non-prescription medications used was inversely related to the self-reported health status of the participants (Table 5).

Table 5

Correlations Between Demographic Characteristics, HPLP Scores, and Perceived Health Status

Demographic Characteristic	HPLP Score	Perceived Health Status	Comparative Health Status
Marital Status	.37**	.19	.27****
Race	-.02	.51*	.53*
Living Arrangements	-.08	-.10	-.12
Income	-.37	.22	.15
Education	-.07	-.06	.67
Informal Assist.	-.09	.08	-.07
Formal Assist.	-.17	.14	.09
Long-term health problems	.23	.35***	.27****
# Medications	-.14	-.26****	-.22
Age	-.21	.39**	.47*

* p .000
** p <.005
*** p <.01
**** p <.05

Significant, but less strong, negative correlations were found between several other of the selected demographic variables and the HPLP sub-scales. The variable of types of formal assistance used by the participants negatively correlated with the Self-actualization sub-scale ($r = -.26$, p .032). Those women with high scores on the Self-actualization sub-scale utilized only the services of a physician.

The number of prescription/non-prescription medications used negatively correlated with the Exercise sub-scale ($r = -.36$, p .005). This demographic variable also had an inverse relationship with the Interpersonal Support sub-scale ($r= -.34$, p .008). As the number of medications used increased, the scores on these two sub-scales were lower.

The relationship between health-promoting behaviors and health status was investigated through responses to the Health-Promoting Lifestyle Profile and the Perceived Health Status Questionnaire. There were significant correlations found between the participants' total HPLP scores and their health status perceptions. HPLP total scores and the participants' self-reported health status were positively correlated

(r = .59, p.000) as were the total HPLP scores and comparative health status (r = .40, p.018). Those participants with high HPLP scores reported excellent to good health status for themselves alone and in comparison to other women their age. The six HPLP subscales correlated correspondingly with the two health status categories.

In summary, fifty women over the age of 60 years, living in community-based housing in two metropolitan cities on the southeastern seaboard of the United States, served as the sample for this study. Demographic characteristics revealed that the majority of the participants were of Black racial origin, widowed, between the ages of 65 and 85 years, living alone, and had a yearly income less than $5,000.

A high level of health-promoting behaviors was reported by most of the participants. Behaviors related to nutrition and interpersonal support were reported most frequently while behaviors concerning exercise and self-actualization were reported least.

The majority of the participants rated themselves in good to excellent health and reported the same status when comparing their health to that of other

women their age. The participants were generally independent in selected functional activities. The presence of long-term health problems was reported by a majority of the women with hypertension, arthritis and diabetes the most frequently listed medical conditions. The participants also reported using an average of three prescription/non-prescription drugs each day. The physician was most frequently cited as a means of formal assistance while children were most frequently listed as the source of informal assistance or guidance.

The participants were most interested in health education topics concerning using and understanding medications and fall prevention. The participants were least interested in the topics regarding sexuality and the signs and symptoms of glaucoma.

There were numerous correlations between selected demographic characteristics and health-promoting behaviors, and perceived health status. The most significant correlation found was between health-promoting behavior scores and self-reported health status. Those women reporting a high level of health-promoting behaviors also rated themselves in good to

excellent health and independent in selected functional activities.

It was significant that as the number of prescription/non-prescription medications used increased, the reported perception of health status was less positive and more health problems were reported. Also, those with high medication utilization reported a lower level of exercise and interpersonal support behaviors.

Long-term health problems were found to effect the perception of health status. Those participants with long-term health problems less frequently used the good to excellent rating as their descriptor of health status.

Chapter 4 presents a discussion of these finding as related to the theoretical framework selected for this study and the current research findings reviewed for this study. The implications of these findings for clinical nursing practice and nursing education are discussed. Recommendations for further research are suggested.

CHAPTER 4

Discussion

The focus of this study was the identification of health-promoting behaviors, perceived health status, and perceived health education needs of women 60 years or older. The relationship between selected demographic variables, health-promoting behaviors, and perceived health status needs of older women was also investigated.

Conclusions

The typical participant in this study was a 73 year old widow, of the Black race who had some high school level education and a yearly income less than $5,000. The majority of the women reported having long-term health problems using an average of three prescription/non-prescription medications on a daily basis. Physicians were listed most frequently as a means of formal assistance and children were cited most often by the participants as their source of informal assistance.

Based on the data collected in this study, the participants reported a high level of health-promoting behaviors as measured by the Health-Promoting Lifestyle Profile (Walker, Sechrist, and Pender, 1987). A higher number of health-promoting behaviors was reported in the areas of Nutrition, Interpersonal Support and Stress Management than in Self-actualization, Health Responsibility, and Exercise.

Good to excellent health was reported by a majority of the participants. The same descriptors were used when women were asked to rate their health status as compared to that of other women in their age group. Most of the participants reported independent ability with regard to the selected functional tasks of dusting, sweeping, cooking, bathing, walking, laundering, and going outdoors.

Three of the ten health education topics listed for selection by the participants were reported of high interest to the participants. These topics were 1) **Understanding and Using Medications Wisely**, 2) **Tips To Prevent Falls and Injuries**, and 3) **Starting A Walking Program For Exercise and Stress Reduction.**

Marital status was the only demographic variable that held a significant relationship with health-promoting behaviors. Marital status and age were correlated with the self-reported health status of the participants. Race and the presence of long-term health problems correlated with the self-reported and comparative health status of the participants.

The number of medications used by the participants was inversely related to the self-reported health status of the women in this study. Medication usage also negatively correlated with exercise and interpersonal support health-promoting behaviors.

Significant relationships were found between the participants' total HPLP scores and their health status perceptions as those with higher HPLP scores used the descriptors of excellent or good health most frequently and generally reported independence in the seven selected functional activities.

Relationship to Literature

The participatns in this study engaged in a low level of exercise behaviors as evidenced by their exercise sub-scale scores. This is in contrast to the documented reports of frequent exercise behaviors in

older adults (Branch and Jette, 1984; Horgan, 1987; Raukhorst, 1987; Hogstel and Kashka, 1989; Walker, Volkan, Sechrist, and Pender, 1988; Schafer, 1989; Brown and McCreedy, 1986, and Kolanowski and Gunter, 1985). The eating and sleep behaviors reported by Branch and Jette (1984), Horgan (1987), and Raukhorst (1987) are comparable to the findings in this study as evidenced by the Nutrition and Health Responsibility sub-scale scores on the HPLP. The majority of participants in Branch and Jette's (1984) study reported that they ate three regular meals daily. Horgan (1987) reported that 90% of the respondents ate breakfast often and 21% did not eat between meals. Raukhorst (1987) found that 79% of the participants ate breakfast regularly. In this study, the scores of the HPLP sub-scale of Nutrition ranged from 10-24 with a possible range of 6-24; the mean score was 18.1 (sd 3.8) indicating that the participants frequently engaged in behaviors related to nutrition, such as eating breakfast and avoiding preservatives.

Brown and McCreedy's (1986) female participants practiced more health-promoting behaviors than the male participants and scored higher on the measure of

preventative behaviors and avoidance of environmental hazards and harmful substances. These findings also compare with the Health Responsibility sub-scale scores of this study in which the partivipants reported engaging in many of the behaviors related to health responsibility, such as reading food labels, seeking information, and reading books about health.

The participation in behaviors related to interpersonal support reported in this study is supported by Hogstel and Kashka's (1989) findings in which older women had more and stronger interpersonal relationships than men. Additional support is given through Schank and Lough's (1989) results which found that the participants who reported good health also reported a greater amount of interpersonal support. The average HPLP score in this study was on the high side of the tool's mean score. This finding is supported by Walker et al.'s (1988) findings that older adults reported more health-promoting behaviors than young or middle-aged persons. The low level of exercise behaviors reported by the participants of this study is supported also by Walker et al.'s (1988) work

in which exercise was the behavior least engaged in by any of the three age groups studied.

The descriptions of excellent to good health status given by the majority of the participants in this study support the findings of several other studies (National Health Survey, 1984; Kolanowski and Gunter, 1985; Melanson and Downe-Wamboldt, 1987; Horgan, 1987, Schank and Lough, 1989, Schafer, 1989; and Gunter and Kolanowski, 1989). Melanson and Downe-Wamboldt (1987) reported that good health was described by the participants. The average participant in that study was a 70 year old widow. The National Health Interview Survey (1984), Horgan (1987), and Schafer (1989) also described its participants' health as good, but did not differentiate findings by gender. Brown and McCreedy's (1986) gender differentiated study described the older women participants as being in good health. Schank and Lough (1989) and Kolanowski and Gunter (1985) reported the majority of non-institutionalized female participants as being in good to excellent health.

The health status descriptor findings of this study do not support the findings of Raukhorst (1987),

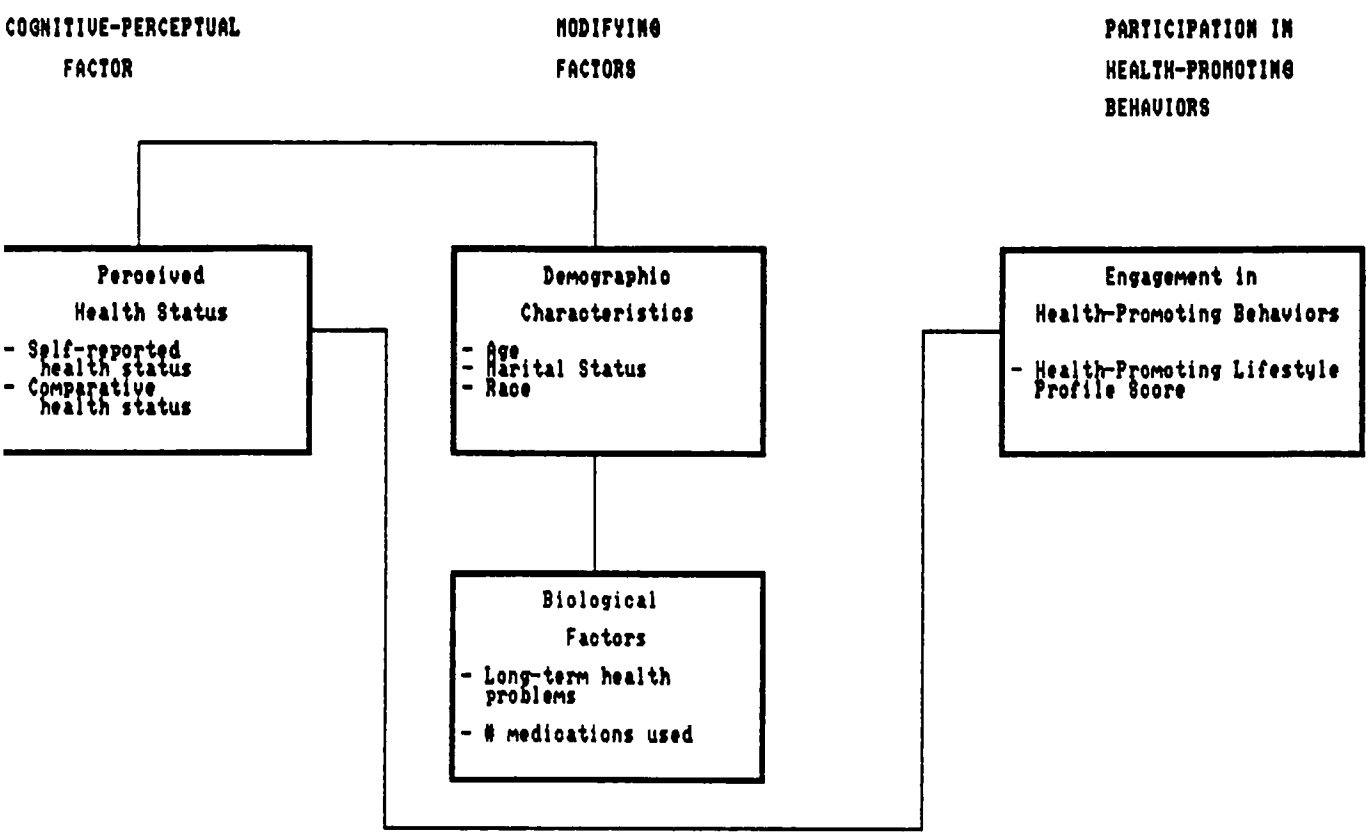
in which the participants generally rated their health as fair. Raukhorst's (1987) sample was comparable to the sample in this study with regard to age, race, marital status, educational level and long-term health problems. The majority of the participants in Raukhorst's study reported a moderate level of health-promoting behaviors as opposed to the high level reported by the participants in this study. This difference in health-promoting behaviors performance may account for the difference in health status description between the Raukhorst findings and that of this study. The perception of health status may differ also because of a difference in the functional ability of the participants. Independence in the selected activities listed on the Perceived Health Status Questionnaire was the descriptor most frequently reported by the participants. Raukhorst (1987) did not investigate functional abilities, however. Another explanation for the difference in health status perception may be due to the type of long-term health problems reported. Participants in both studies frequently reported hypertension and arthritis as long-term health problems. The participants in Raukhorst's

(1987) study also frequently listed vision problems as a long-term health problem. Vision problems were not among the most frequently cited long-term health problems in this study, however. Perhaps those women with a such a sensory problem do not perceive themselves as in overall good to excellent health.

Relationship to Theoretical Framework

The results of this study give support to Pender's Health Promotion Model (1987). Pender (1987) proposed that there were modifying factors which impacted on cognitive-perceptual factors and that participation in health-promoting behaviors was influenced by cognitive-perceptual factors. The results of this study support Pender's model through the relationships found between selected modifying factors (selected demographic characteristics, biological characteristics, and interpersonal influences), cognitive-perceptual factors (perceived health status), and participation in health-promoting behaviors (HPLP scores) (Figure 3).

Figure 3. Pender's Health Promotion Model as related to the findings of the relationships among health-promoting behaviors, perceived health status, demographic characteristics, biological factors, and interpersonal influences of older women.



The demographic characteristics of age and race were found to be significantly related to the perceived health status and health-promoting behaviors of the participants. Widows reported more favorable health status when comparing themselves to other women of the same age group. Widows also reported a higher level of health-promoting behaviors. Black women reported a more favorable health status in general and in comparison to other women of the same age group. These findings may be an effect of the sample's majority being widows of the Black race. The older women in the study reported good to excellent health status more frequently than the younger women in the sample, thus there was a positive correlation between age and perceived health status and comparative health status.

The biological characteristic of long-term health problems was related to health status in that even though 76% of the sample reported having long-term health problems they still perceived themselves to be in good to excellent health. This perception may be due to the type of long-term health problems reported and the degree of debility experienced by the participants. Hypertension, arthritis, and diabetes

were the three most frequently reported long-term health problems. However, the majority of the participants were ambulatory and reported the ability to perform most activities of daily living independently. The ability to care for oneself and to maintain an apartment may be perceived indicators of good to excellent health for these women whereas the impact of experiencing visual problems may have resulted in the perception of fair health for the participants in Raukhorst's (1987) study.

An additional biological characteristic of number of medications used correlated with perceived health status in that those with a high number of medications used did not rate themselves as being in good to excellent health.

The relationships found between health-promoting behaviors and health status were the strongest correlations in the study. There was a positive correlation between HPLP total scores and the participants' perceived health status along with a positive, but less strong, correlation between the HPLP scores and health status as compared to other women of the same age range as the participants'.

These findings support Pender's Health Promotion Model in which Pender proposed that the cognitive-perceptual factor of perceived health status is related to the likelihood of engaging in health-promoting behaviors, the descriptor of participation in health-promoting behaviors. Perceived health status was the cognitive-perceptual variable in this study and the HPLP scores of the participants was used to describe the participation in health-promoting behaviors.

The relationships found in this study between modifying factors, a cognitive-perceptual factor, and participation in health-promoting behaviors support Pender's Health Promotion Model. Age, marital status, race, long-term health problems, and number of medications used were related to perceived health status, and perceived health status was related to HPLP scores.

Generalization of Findings

Caution must be used in generalizing the findings of this study to other groups of older women. The presence of the researcher during the administration of the tools to one of the groups of participants may have had an effect on the responses received. The fact that

a significant (42%) percentage of the participants requested that the researcher read the questions and possible answers and record their responses may have influenced the findings. This influence may have been due to the researcher's presence alone, the voice tone and inflection used when the researcher read the questions and possible responses, or the participants' memory of the possible answers. For those participants who completed the questionnaires without assistance, the comprehension level required for interpretation of the tools' directions, questions, and possible responses may have also affected the finding as the majority of the participants reported having less than a high school graduate level of education.

The total HPLP scores must be interpreted with caution. Although the participants' mean HPLP score was 136.6 with a range of 97-192 (possible range 48-192), there are no norms for comparison.

The small sample size and non-random selection method may also have affected the outcome of this study. In this sample, the high number of widows, the frequent reporting of income less than $10,000 a year, and the absence of women of racial origin other than

Black or Caucasian also limits the generalizability of the findings.

Recommendations

The findings of this study have implications for clinical practice, nursing education, and future nursing research. The results add to the present body of knowledge regarding older women's health-promoting behaviors and perceived health status. In clinical practice, the information from this study may assist in the assessment of older women's perceptions of their health and their participation in health-promoting behaviors. Within the realm of patient education, the results of the inquiry into health education needs of older women may assist in the development and presentation of pertinent health promotion information to older women in the community.

Nursing education may also profit from this information on older women. Nursing educators may use the information on health-promoting behaviors, health status and health education needs to develop and provide up-to-date gerontological nursing content within their curriculum. Additionally, curriculum pertaining to women's health may be enhanced with

descriptive information on older women's health status and health-promoting behavior. These findings may also aid in the selection of clinical experiences for nursing students whereby such community-based group housing would lend itself well to providing health assessment and health education experiences for the students.

Further research is needed to test the reliability and validity of the researcher-designed tools, Perceived Health Status Questionnaire, Perceived Health Education Needs Questionnaire, and Demographic Data Sheet. Addition of other functional activities, such as driving an automobile or grocery shopping, to the Perceived Health Status Questionnaire may assist in more accurately describing the population of older women. This may also assist in investigating such issues as social isolation in community-based older women.

The Perceived Health Education Needs Questionnaire asked the participants to choose four of ten listed topics. This was a forced-choice situation in which the participants were asked to give their preferences from the topics available for selection. A more valid

method of eliciting health education needs may have been to have had an open-ended question requesting the participants' ideas on what information may lead them to perform more health-promoting behaviors or to perform health-promoting behaviors more frequently. Another method may have asked the participants to rate selected topics according to the likelihood of attendance at each such health education program offering.

It may have been beneficial to further investigate the low level of exercise behavior reported by the participants. In order to better understand the exercise behaviors of older women, perhaps the cognitive-perceptual factors of perceived barriers and benefits to the health-promoting behavior of exercise from Pender's (1987) model should specifically be investigated.

In this study, the demographic characteristic of marital status correlated with HPLP scores and comparative health status. Further study is needed to compare the level of health-promoting behaviors and perception of good to excellent health in the widowed participants versus other women of the same age.

Further analysis of the correlations between age, health status, and race may help to identify whether or not the relationships found were simply a function of the numbers of women in this study who were between 65 and 85 years old and of the Black race.

This study was conducted to add to the already present, but limited, body of knowledge about older women's health-promoting behaviors, perceived health status and perceived health education needs. The results of this study show that the participants had high levels of health-promoting behaviors overall and perceived themselves to be in good to excellent health. Exercise and health responsibility behaviors received less participation than the areas of interpersonal support, self-actualization, nutrition and stress management. It is difficult to make comparisons and draw conclusions about the degree of health promoting behavior activity since there are no norms available for such use. Continued research of health-promoting behaviors using this instrument should occur in order to further validate the instrument and initiate definition of the health-promoting behaviors within populations.

Since there is very little in the literature about the perceived health education needs of older women, the researcher anticipated adding information in this area through the results of this study. The results of this study provide additional insight into the health education topics of interest to a selected group of older women. The specific health education needs, the motivators for pursuing health education, and the likelihood of seeking this information should be studied in the future in order to validate the present body of knowledge about the health education needs of older women.

As the population of older women continues to increase, the nursing profession needs adequate knowledge about health-promoting behaviors, health status and health education needs of older women. This knowledge is necessary in order to assist older women to attain and/or maintain their optimal level of wellness. Further research in these areas will enhance the quality and quantity of and services offered to older women. In turn, pertinent and accessible nursing services for older women can impact on the quality of life for the present and future generations.

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APPENDICES

APPENDIX A

Appendix A

LIFESTYLE PROFILE

DIRECTIONS: This questionnaire contains statements regarding 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 regularity with which you engage in each behavior by circling:
N for never, S for sometimes, O for often, or R for routinely.

	NEVER	SOMETIMES	OFTEN	ROUTINELY
1. Eat breakfast.	N	S	O	R
2. Report any unusual signs or symptoms to a physician.	N	S	O	R
3. Like myself.	N	S	O	R
4. Perform stretching exercises at least 3 times per week.	N	S	O	R
5. Choose foods without preservatives or other additives.	N	S	O	R
6. Take some time for relaxation each day	N	S	O	R
7. Have my cholesterol level checked and know the result.	N	S	O	R
8. Am enthusiastic and optimistic about life.	N	S	O	R
9. Feel I am growing and changing personally in positive directions.	N	S	O	R
10. Discuss personal problems and concerns with persons close to me.	N	S	O	R
11. Am aware of the sources of stress in my life.	N	S	O	R
12. Feel happy and content.	N	S	O	R
13. Exercise vigorously for 20-30 minutes at least 3 times per week.	N	S	O	R
14. Eat 3 regular meals a day	N	S	O	R
15. Read articles or books about promoting health.	N	S	O	R
16. Am aware of my personal strengths and weaknesses	N	S	O	R
17. Work toward long-term goals in my life.	N	S	O	R
18 Praise other people easily for their accomplishments	N	S	O	R
19. Read labels to identify the nutrients in packaged food.	N	S	O	R
20. Question my physician or seek a second opinion when I do not agree with recommendations.	N	S	O	R
21 Look forward to the future.	N	S	O	R
22 Participate in supervised exercise programs or activities.	N	S	O	R
23. Am aware of what is important to me in life.	N	S	O	R

	NEVER	SOMETIMES	OFTEN	ROUTINELY
24. Enjoy touching and being touched by people close to me.	N	S	O	R
25. Maintain meaningful and fulfilling interpersonal relationships.	N	S	O	R
26. Include roughage/fiber (whole grains, raw fruits, raw vegetables) in my diet.	N	S	O	R
27. Practice relaxation or meditation for 15-20 minutes daily.	N	S	O	R
28. Discuss my health care concerns with qualified professionals.	N	S	O	R
29. Respect my own accomplishments.	N	S	O	R
30. Check my pulse rate when exercising.	N	S	O	R
31. Spend time with close friends.	N	S	O	R
32. Have my blood pressure checked and know what it is.	N	S	O	R
33. Attend educational programs on improving the environment in which we live.	N	S	O	R
34. Find each day interesting and challenging.	N	S	O	R
35. Plan or select meals to include the "basic four" food groups each day.	N	S	O	R
36. Consciously relax muscles before sleep.	N	S	O	R
37. Find my living environment pleasant and satisfying.	N	S	O	R
38. Engage in recreational physical activities (such as walking, swimming, soccer, bicycling).	N	S	O	R
39. Find it easy to express concern, love and warmth to others.	N	S	O	R
40. Concentrate on pleasant thoughts at bedtime.	N	S	O	R
41. Find constructive ways to express my feelings.	N	S	O	R
42. Seek information from health professionals about how to take good care of myself.	N	S	O	R
43. Observe my body at least monthly for physical changes/danger signs.	N	S	O	R
44. Am realistic about the goals that I set.	N	S	O	R
45. Use specific methods to control my stress.	N	S	O	R
46. Attend educational programs on personal health care.	N	S	O	R
47. Touch and am touched by people I care about.	N	S	O	R
48. Believe that my life has purpose.	N	S	O	R

APPENDIX B

Appendix B

PERCEIVED HEALTH STATUS QUESTIONNAIRE

Please answer the following questions by circling one of the four choices given.

1. How would you rate your health?

   Excellent Good Fair Poor

2. How would you rate your health as compared to other women you know that are near the same age as you?

   Excellent Good Fair Poor

Please place a checkmark in the column best describing your ability to do each of the following activities.

	By myself	With assistance	Can not do at all
Dusting			
Sweeping			
Laundry			
Cooking			
Walking			
Bathing			
Going outdoors			

APPENDIX C

Appendix C

PERCEIVED HEALTH EDUCATION NEEDS QUESTIONNAIRE

Below is a list of ten (10) health education program titles. Give your first four choices of programs by using the numbers 1,2,3,4 to indicate your first, second, third, and fourth choices from the programs listed.

___Understanding and using medications wisely

___Starting a walking program for exercise and stress reduction

___How to cope with the emotional changes of growing older

___Tips to prevent falls and injuries

___Recognizing the signs and symptoms of glaucoma

___Sexuality in the older years

___Self-breast examination techniques

___Preventing loneliness

___How to prevent becoming a victim of crime

___Choosing and preparing healthy foods

APPENDIX D

Appendix D

DEMOGRAPHIC DATA SHEET

Please circle your answers to the following questions. All information will be held in the strictest confidence.

1. What is your marital status?

   Single Separated Divorced

   Married Widowed

2. What is your race/ethnic background>

   Black Caucasian Asian

   Hispanic Native American Indian

   Other (Please List) _____

3. What is your present living arrangement?

   Alone With husband

   With family With friends

4. What is your income level?

   $0 - 4,999 per year

   $5,000 - 9,999 per year

   $10,000 - 14,999 per year

   $15,000 - 19,999 per year

   over $20,000 per year

QUESTIONNAIRE CONTINUES ON NEXT PAGE

5. What is your highest level of education?

Eighth grade

Some high school

High school/Vocational school graduate

Some college

College Graduate

6. Who do you turn to for assistance or guidance when needed? (Circle all that apply)

Husband

Son or daughter

Sister or brother

Other family

Friend

Other (Please List)_____

QUESTIONNAIRE CONTINUES ON NEXT PAGE

7. What type(s) of health care services and/or social services are you currently receiving?

(Circle all that apply)

Physician

Nurse Practitioner

Visiting Nurse

Senior Companion

Home health aide

Meals On Wheels

Other (Please list) _____

QUESTIONNAIRE CONTINUES ON NEXT PAGE

Please fill in the answers to the next three questions on the spaces provided.

8. Do you have any long-term health problems?

___Yes ___No

If yes, what type of long-term health problem(s) do you have? (Please list)

_____

_____

_____

9. How many different prescription and non-prescription medications do you take each day? _____

10. List the names of all the medications that you take.

_____

_____

_____

_____

_____

_____

QUESTIONNAIRE CONTINUES ON NEXT PAGE

11. What was your age on your last birthday?

_____

This is the end of the questionnaires. Thank you for your time. Please place the questionnaires in the envelope provided with the questionnaires. Place the envelope in the sealed box located on the table near the doorway.

APPENDIX E

Appendix E

PARTICIPANT INFORMATION LETTER

Dear Resident,

I am a graduate nursing student at Old Dominion University in Norfolk, Virginia. I am interested in learning more about older women's health, their health habits, and their health education needs. I am asking your assistance by completing four questionnaires about your perception of your health, your health habits, your health education needs and some information about your background. Completing the questionnaires will take no more than 30 minutes of your time.

Your participation in completing the questionnaires is strictly your choice. A completed and returned set of questionnaires will be proof of your consent to participate in this study. you will remain anonymous, and your answers will be kept confidential. No one, except me, will see your completed questionnaires. Only your time and effort in completing the questionnaires are required.

Please do not put your name on any of the questionnaires. If you need assistance in understanding

the questions or in completing the questionnaires, please ask me and I will help you. Do not separate the questionnaires. When you have finished answering all the questions, please put the questionnaires in the envelope given to you with the questionnaires. Place this envelope in the sealed box located on the table at the doorway.

A copy of the results of the research study will be sent to the building manager for posting. You may benefit from this information about the health status, health habits, and health education needs of a group of women, one of which is you.

Thank you for taking part in this research study.

Sincerely,

Susan Reynolds RN,C.
Graduate Nursing Student
School of Nursing
Old Dominion University