The Relationship Of Health-Promoting Behaviors To Hospital Admissions In Adults With Congestive Heart Failure

Debbie McFalls

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THE RELATIONSHIP OF HEALTH-PROMOTING BEHAVIORS TO HOSPITAL ADMISSIONS IN ADULTS WITH CONGESTIVE HEART FAILURE

by

DEBBIE McFALLS

A Thesis
Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Science in Nursing in the Division of Nursing Mississippi University for Women

COLUMBUS, MISSISSIPPI

August 1999
The Relationship of Health-Promoting Behaviors to Hospital Admissions in Adults with Congestive Heart Failure

by

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Abstract

Successful medical treatment for acute health conditions has precipitated an increase in the number of chronic health problems. One such chronic condition is congestive heart failure. Heart failure is the number one discharge diagnosis among Medicare recipients. The financial burden for the management of this chronic condition is astronomical. Health care providers are commissioned to manage this chronic illness prudently. The purpose of this correlational descriptive study was to determine if there was any relationship between health-promoting behaviors and readmission rates of adults with congestive heart failure. A convenience sample of participants was obtained from a hospital facility. Subjects were asked to fill out two research tools, the Demographic Data Sheet and the Health-Promoting Lifestyle Profile II. The theoretical framework used was the Pender Health Promotion Model. The null hypothesis was tested which stated, "There will be no relationship between health perceptions and related hospital admissions among adults with congestive heart failure."
failure." Data collected were analyzed using descriptive statistics and the Pearson product-moment correlation. Findings of the study failed to reject the null hypothesis. Correlational statistics were then used to determine whether a relationship existed between any demographic factor or one of the Health-Promoting Lifestyle II subscales and hospitalizations. Statistical significance was noted between the health responsibility subscale on the Health-Promoting Lifestyle Profile II and hospitalizations. The study has implications for nursing research, education, and practice. Recommendations for future studies include implementation of qualitative research to determine the effect of personal characteristics and health beliefs on health-promoting behaviors.
Honorarium

To my grandmother,

Raphael Maude Lawson Nichols

The memory of your love for nursing and your dedication to the nursing profession provided the inspiration I needed to succeed in this endeavor.
Dedication

To my family,

Eddie, Amos, and Katy McFalls

Thank you for your unfailing love and support during this year of challenge and change. Your faithfulness to me has motivated me to complete this project.
Acknowledgments

I would like to express my appreciation to the MUW Graduate Faculty for their undying support and encouragement. A very special thanks to Dr. Lynn Chilton, my advisor and chair of my committee, and my committee members, Dr. Bonnie Lockard and Mrs. Lois Griffin. Thank you for all your insights and contributions which made the successful completion of this research project possible.

To Linda Whitenton, your support and encouragement to complete this project will always be remembered. Thanks for giving of your valuable time, for encouraging me to progress, and for allowing me flexible scheduling during this school year. To our special librarian, Marcia Ann Glisson, thanks for your keen ability and speedy ability to procure the research material I so desperately needed.

To Jeanne, a very special thanks for being my study buddy and special friend. The many hours of juggling homes, jobs, school requirements, and clinical challenges are etched in my memory. We have faced the greatest challenge of our careers. Even though there have been
times we have cried, there have other times that we have laughed and dreamed and hoped for a bright tomorrow. Tomorrow is now today. Thanks for seeing me through it all.

To my parents, family members, and friends. Thanks you for being there, praying for me, and cheering me along the way. Your steadfast love and belief in me have been a source of encouragement and strength.

And, finally, for support and commitment beyond measure, I feel a very deep sense of gratitude to my dear husband, Eddie. Thank you for your selfless support and commitment to me. Your words of encouragement and strength have given me the stamina to complete this research endeavor. Without your support, I would not have succeeded. Thank you, Eddie, I count it all joy to know I am under your wing, protected, loved, and blessed.

To my amazing children, Amos and Katy, who exhibited the same degree of commitment to this endeavor as I have. Thank you for loving me enough to pick up the slack at home so I could complete this research study and realize my goal. I pledge to you both my help and support as you endeavor to make your dreams a reality.
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Chapter I

The Research Problem

Congestive heart failure is defined as an impairment of the heart that disallows adequate perfusion of body tissues. This impairment prohibits the heart from meeting the body's metabolic demands and is a growing major health problem among the elderly (Grauer, Clark, & Ruoff, 1998).

Congestive heart failure currently affects 2 to 3 million Americans. Approximately 400,000 new diagnoses of congestive heart failure are made yearly (Grauer et al., 1998). Congestive heart failure is presently the most common readmission diagnosis to hospitals. The incidence of congestive heart failure is expected to double over the next 40 years, making the diagnosis a major drain on health care dollars (Atitall, 1997). Because congestive heart failure is the primary reason for one million hospitalizations per year, health care costs related to congestive heart failure continue to spiral upward. The prognosis for the disease is poor as well. A 5-year mortality rate has consistently been demonstrated among
sufferers. Approximately 200,000 deaths per year are attributed to congestive heart failure in the United States alone (Grauer et al., 1998).

Statistics indicate that elders are especially affected by congestive heart failure. Three percent of patients with congestive heart failure are between the ages of 45 and 64 years, 6% are between 65 and 75 years, and 10% are greater than 75 years. There is a greater number of women in the oldest age group with congestive heart failure related to three factors. Women statistically live longer than men and there are more females by percentage. Menopause with its loss of estrogen protection contributes greatly to the rise in the number of women with congestive heart failure in this age group (Buchanan et al, 1997).

These staggering statistics warrant serious investigation of this disease process by health care professionals to provide improved management of both acute and chronic stages of congestive heart failure. Grauer et al. (1998) state it is imperative that precipitating factors and the underlying causes of congestive heart failure be treated and managed as efficiently as possible. Studies have shown that improved quality of life as well
as decreased medical costs can be realized by interdisciplinary interventions that include patient and family education, social services consultation, and intensive follow-up (Buchanan & Tan, 1997).

Establishment of the Problem

According to Sullivan and Hawthorne (1996), congestive heart failure affects one to 2% of the adult population in the United States. This percentage reflects approximately 2.5 million people. Fontana (1996) denoted a 24.5% decline in mortality rates from all heart disease from 1982 to 1992 but a doubling of the incidence of congestive heart failure during the same time frame. It was estimated that congestive heart failure accounted for 822,000 hospitalizations and 30,000 deaths per year. Approximately 10 billion health care dollars are spent on congestive heart failure annually.

Heart failure is the number one Medicare discharge diagnosis in the United States. Approximately one million patients are hospitalized yearly with a primary diagnosis of congestive heart failure. More than 2 million patients who must undergo hospital treatment display symptoms of heart failure. Statistics substantiate the fact that congestive heart failure increases as people age (Buchanan
Congestive heart failure, which predominantly affects women and crosses all socioeconomic groups, is noted as being the leading hospital discharge diagnosis for patients older than 65 years (Heaney & Antonio, 1997). Expenses for the treatment of congestive heart failure in 1997 were approximately $5,000 per hospitalization with Medicare reimbursement averaging around $4,000 (Heaney & Antonio, 1997). These statistics provide a baseline to justify the need for research regarding the factors that precipitate hospital admissions related to congestive heart failure. The data collected could be used in formulating protocols for the management of congestive heart failure.

Statisticians report that approximately one third of patients who are diagnosed with congestive heart failure are readmitted to the hospital within 3 to 6 months. Readmissions can be attributed to three major factors, disease comorbidities, the availability of medications, and nonadherence to the prescribed health care regimen. Other contributing factors which affect hospitalization are the individual's health-promoting behaviors and the support of significant others (Happ, Naylor, & Roe-Prior, 1997).
Health-promoting behaviors are derived from the individual's definition of health. Huck and Armer (1996) concluded that health is a combination of physical wellness, the ability to enjoy life, the ability to maintain good personal relationships, and the ability to care for oneself. Influential factors which affect health perception are self-control, self-efficacy, self-esteem, gender, socioeconomic level, and culture (Kaufman, 1996).

Research studies denoting the problems heart failure present to the health care profession and treatment regimens were abundant. However, there was very little research that reflected how the patient's health-promoting behaviors influenced the compliance of the patient to the health care regimen. Understanding the patient's health-promoting behaviors could greatly benefit the health care provider. This would give clinicians a basis upon which to develop an individualized multidisciplinary health care regimen that may increase compliance and decrease hospitalizations related to the exacerbation of congestive heart failure.

Implications for Nursing

Understanding the client's health-promoting behaviors is a basic building block of health care management. An
understanding about the client's definition of health is vital to the practice of the family nurse practitioner, and it may give insight into the health perceptions of the general client population. This knowledge could help the practitioner understand the viewpoint from which the client understands health. Additionally, the nurse practitioner could use the knowledge gained to develop protocols which would enhance the practitioner's ability to facilitate a more healthy lifestyle among clientele. The next decade will earmark health promotion as the major goal of the nurse practitioner.

All disciplines of nursing professionals play an integral role in the management of congestive heart failure. Understanding the patient's views about health, health promotion, and disease management could help nursing professionals design a multidisciplinary individualized health care protocol that may improve compliance to the health care regimen as well as decrease hospitalizations (Russell, Geraci, Hooper, Shull, & Gregory, 1998). Nurse practitioners have an educational background that includes assessment of patient needs, utilization of resources, coordination of care, patient teaching, and follow-up care. With the additional
knowledge of patients' health-promoting behaviors, the advanced practice nurse would be better equipped to assess and manage congestive heart failure patients holistically.

Statement of the Problem

Congestive heart failure is one of the biggest Diagnostic Related Groups (DRGs) among hospital admissions in the Southeastern United States. Patient education and follow-up care have the potential to decrease hospitalizations. A client's health-promoting behaviors may affect the manner in which patient education and follow-up care are understood, thereby affecting compliance to the health care plan as well as the number of readmissions. The research problem was to explore the health-promoting behaviors of elders with congestive heart failure and the relationship of those behaviors with hospitalizations.

Research Hypothesis

The research hypothesis generated for this study was there will be no relationship between health-promoting behaviors and the number of hospitalizations in adults with congestive heart failure.
Definition of Terms

The following terms were theoretically and operationally defined for purposes of this study:

1. **Congestive heart failure:** 
   - **Theoretical:** Congestive heart failure was the diagnosis given to those patients whose diagnostic tests revealed evidence of pulmonary congestion or symptoms of heart failure in conjunction with improvement noted in response to diuretic therapy (Rich et al., 1995).
   - **Operational:** Congestive heart failure was the condition experienced by patients whose myocardial function was affected to the degree that the patient's activities of daily living were impaired as identified by a list of patients from the selected hospital whose diagnosis included congestive heart failure.

2. **Health:** 
   - **Theoretical:** Health was defined as a state of physiological homeostasis derived from physical, emotional, and social factors that constitute physical well-being.
   - **Operational:** Health was the vantage point from which the patient processed the physical, emotional, and social compromises that produced a sense of physical well-being as identified on the Health-Promoting Lifestyle Profile II.
3. Health-promoting behaviors: Theoretical: Health-promoting behaviors were defined as those measures made by adults to improve health status, such as compliance to medication regimen, diet regimen, and follow-up care. Operational: Health-promoting behaviors were defined as those activities identified on the Pender’s Health-Promoting Lifestyle Profile II (HPLP II) instrument. Individuals who scored between 52 and 130 were denoted as having a more negative health-promoting lifestyle. Those individuals who scored between 131 and 208 were denoted as having a more positive health-promoting lifestyle.

4. Hospitalizations. Theoretical: the admission to an acute care facility for the treatment of an acute illness or the treatment of the exacerbation of a chronic disease process. Operational: Hospitalizations were the number of visits to an acute care facility for the treatment of congestive heart failure within a 12-month time frame as identified on the Demographic Data Sheet.

Assumptions

For the purpose of this research, the following assumptions were made:
1. Health-promoting behaviors were variables that could be measured.

2. Persons with congestive heart failure engaged in behaviors that affected their health.

3. Positive health-promoting behaviors positively influenced patients to improve compliance to the health care plan.

**Theoretical Framework**

The theoretical framework chosen for this study was Pender's (1987) Health Promotion Model. The Health Promotion Model, which evolved from the social learning theory, stressed the importance of cognitive mediating processes which regulated behavior. The model contains three basic categories which affect the likelihood of health-promoting behaviors. Those components which influence the likelihood of action are the individual's personal perceptions, modifying factors, and variables (Pender, 1987). This model had relevance to this study because it placed the ultimate responsibility for health practices upon the client to modify behaviors in such a manner as to promote health. Client's positive perceptions of health and the health care system facilitated healing and wellness.
Viewpoints which influenced the individual's perception of health included education, locus of control, definition of health, present and potential health status, benefits of health-promoting lifestyle, hindrances to health-promoting lifestyle and, finally, personal environment. Pender held the viewpoint that individuals who placed a high value on health sought health information which resulted in a healthy lifestyle (Pender, 1987).

Modifying factors that influenced health promotion were grouped into five categories called characteristics. Demographic influences was the first characteristic which included factors such as age, gender, income, education, and body weight. Biological characteristics included those heredity factors or non-modifiable factors. Interpersonal characteristics included mechanisms such as family patterns of health and expectations of significant others. Situational characteristics denoted factors such as access to health care and the ability to pay health care costs. Behavioral characteristics included personal perceptions and motivations toward a health-promoting lifestyle.

The third component of the Health Promotion Model described variables that Pender called cues to action.
These cues to action were thought to be internal or external motivational influences emanating from the environment. Examples of internal cues to action included one's personal health perceptions as well as the belief that a health-promoting lifestyle could result in a better health status. Examples of external cues to action included the influence of the mass media as well as the advice of others regarding health and the pursuit of health care (Pender, 1987).

Pender (1987) discussed cognitive perceptual factors that are modified by situational, personal, and interpersonal characteristics to result in participation in health-promoting behaviors. In 1996, Pender's revisions included influential variables that promote health, such as activity-related affects, commitment to a plan of action, and the immediate competing demand and preferences of the client. These multidimensional mechanisms identified by Pender affect the attitudes, activity, aspirations, and accomplishments experienced by the client in the effort to promote health. These health promotion behaviors are derivatives of the client's health perceptions which enlighten the researcher to specific
factors that facilitate positive health behaviors among adults.

Utilization of Pender’s Health Promotion Model challenged the family nurse practitioner to first help the patient understand the disease process along with expanded treatment options. Secondly, the nurse practitioner must help clients view themselves as an intricate member of the health care team who is capable of controlling health problems given the right education, medications, and support.

Summary

The incidence of congestive heart failure is rapidly growing. The number of people who suffer from congestive heart failure rises as the population ages. Because of advances in medical science and medical technology, the ability to treat acute cardiac disease has increased the life expectancy of mankind. However, the aftermath of acute cardiac disease is chronic cardiac disease. Even with the advances made in the development of medications and treatment protocols to combat and control congestive heart failure, the disease is not so easily managed. Therefore, it is essential that health care providers work with clients to initiate and maintain health-promoting
behaviors that will potentiate the control of congestive heart failure and decrease the long-term effects of the disease. An individual’s health-promoting behaviors may be strong influencing factors regarding the individual's utilization of the health care system and thereby impact the control or management of the disease.

This study attempted to determine whether an individual's health-promoting behaviors influenced the number of hospitalizations experienced by the individual using data collected via a demographic survey and Pender’s Health-Promoting Lifestyle Profile II questionnaire. This research study sought to reveal the complexity of the problem as it related to patients who experienced hospitalization as a result of the exacerbation of heart failure. A variety of viewpoints regarding health-promoting behaviors was discussed as it related to the way those health-promoting behaviors affected the individual's compliance to the health care plan.
Chapter II

Review of the Literature

A review of the literature revealed many studies concerning congestive heart failure and treatment regimens. Many studies were found identifying problems of congestive heart failure patients. Few studies were found, however, concerning the health-promoting behaviors of congestive heart failure patients, and no research was identified that correlated hospitalizations with health-promoting behaviors.

In one identified study, Happ, Naylor, and Roe-Prior, (1997) sought to identify and describe factors contributing both to rehospitalization and to the prevention of rehospitalization of elderly heart failure patients who received transitional care. Two research questions were tested as follows:

1. What factors contribute to rehospitalization of elderly heart failure patients following a transitional care intervention?
2. What factors contribute to the prevention of rehospitalization of elderly heart failure patients following a transitional care intervention?

Elders between the ages of 70 and 85 years were the population for the study. An evaluative design was employed to determine the effect of traditional protocol by gerontological nurse practitioner. Purposive sampling of 16 charts were selected for review. Charts contained study questionnaires, admission interviews, medical record reviews, physicians' notes, and the advanced practice nurse logs reflecting the interventions. Data on patient sociodemographics and health status were collected via structured personal interviews and medical record review. Data on rehospitalizations were collected from all patients in the study sample for 6 months after the index hospitalization. Data on rehospitalizations included dates, lengths of stay, and Diagnostic-Related Groups (DRGs). Hospital and physicians' records of the patients were used to validate information related to readmissions. Additional qualitative data, such as events precipitating rehospitalization, were obtained from the patient records.

Happ et al. (1997) found three major factors as contributing most often to hospital readmission or
potentially placing the patient at risk for rehospitalization: (a) medication supply, (b) dietary nonadherence, and (c) poor general health behaviors. Two major themes of preventive factors emerged: (a) supportive family or friends and (b) individual motivation. The researchers concluded that rehospitalized patients had a documented history of lack of adherence to the treatment regimen and that patients who require home care following an acute hospitalization were at higher risk for rehospitalization relative to the increased severity of illness, instability, complexity of care, or disability. Those patients who were not rehospitalized were found to have adhered to the instructions of the advanced practice nurse regarding symptom recognition, medication and dietary education, and modification of poor health behaviors. The patients who were not rehospitalized had fewer documented social risk factors or fewer continuing problems with treatment adherence. Happ et al. recommended long-term interventions for high-risk patients and more individualized interventions to assist older people in managing heart failure.

This study was pertinent to the current research because both studies investigated older congestive heart
failure patients and hospitalizations. While the Happ et al. (1997) study focused on various factors related to the hospitalizations, the present study concentrated on health-promoting behaviors.

In another study, Rich et al. (1995) sought to demonstrate if a multidisciplinary intervention could significantly reduce the rate of hospital readmission, improve the quality of life, and reduce the overall cost of medical care in those patients whose primary diagnosis was congestive heart failure. The researchers were concerned that behavioral factors, such as poor compliance with treatment, frequently contribute to exacerbations of heart failure. This phenomenon was of concern to the researchers as it was believed that many hospital admissions could be prevented. Patient behavior was changed. Rich et al. (1995) hypothesized that a multidisciplinary approach to treatment could significantly reduce the rate of hospital readmission for elderly patients at high risk.

Rich et al. (1995) defined four terms of exploration in this study. Congestive heart failure was defined as a diagnosis based on either diagnostic evidence of pulmonary congestion or symptomatic signs of heart failure in which
clinical improvement was seen after treatment with diuretics. The patient’s perceptions determined the definition of quality of life using the chronic Heart Failure Questionnaire. Event-free survival described those patients who survived 90 days without readmission to the hospital with congestive heart failure. Uncontrolled hypertension was described with the clinical parameters of a systolic blood pressure ≥ 200 mmHg or diastolic blood pressure ≥ 105 mmHg.

This prospective, randomized trial conducted by nurses evaluated the effects of an interdisciplinary intervention. The researchers’ intervention consisted of comprehensive education, dietary recommendations, medication review, social services involvement including early discharge planning, and intensive follow-up. The intervention also specifically looked at the rates of hospital readmissions for elders 70 years or older with congestive heart failure within a 90-day time frame. The study also looked at the cost of care and the quality of life perceived by those same patients.

Of the 1,306 prospective subjects, only 282 met the inclusion criteria. Patients 70 years of age or older were screened for congestive heart failure and were eligible to
participate in the study if they had at least one of the risk factors for early readmission. The risk factors were a prior history of heart failure, four or more hospitalizations in the preceding 5 years, or heart failure precipitated by an acute myocardial infarction (AMI) or by uncontrolled hypertension. Rich et al. (1995) excluded participants if the patient resided outside the facility's service area, the patient was to be discharged to a long-term care facility, the patient had severe dementia, the prognosis for survival was less than 3 months, and the patient or physician refused to participate. Participants were randomly assigned to a treatment or a control group.

The interventions consisted of intensive client education conducted by a nurse regarding the disease process and prescribed treatment regimen. Registered dietitians assessed participants individually; however, education was provided by the nurse. Social services facilitated discharge planning and follow-up care. The medication regimen was reviewed by a geriatric cardiologist who made specific recommendations. Follow-up care was supplemented by home visits and telephone contact with the participants. The goals of the treatment were
threefold: reinforce patient education, ensure compliance with treatment plan, and identify continued problems that could be managed in the primary care setting.

The researchers collected demographic and medical data in the study. Next, when subjects were rehospitalized, data were collected regarding the cause of the readmission, the factors that contributed to the readmission, and information related to the course of the hospital stay. Rich et al. used the chronic Heart Failure Questionnaire to assess the quality of life as perceived by the patient when the study was initiated and after 90 days. The instrument consisted of 20 questions that utilized a Likert scale. Variables were analyzed using the Student's t test, the chi-square test, and the Wilcoxon rank-sum test. The researchers compared the control group with the intervention group who completed the study. Readmission rates were 54.3% in the control group and 66.9% in the treatment group. A confidence interval was demonstrated at 95% difference, 1.1 to 24.1% (p = .04).

The researchers primarily measured the participants' ability to survive without hospital readmission. This goal was achieved in 65% of participants in the treatment group vs. 54% of the participants in the control group. The
percentages demonstrated that the treatment group's readmission rates were decreased by 56.2% while the readmission rates of the control group were only decreased by 28.5%.

Rich et al. (1995) concluded that a nurse-directed multidisciplinary intervention program could improve quality of life, decrease hospitalizations, and reduce health care costs for elderly patients with congestive heart failure. Because the interventions were so multifaceted, the researchers were unclear about which elements were most effective in reducing readmission rates and improving the quality of life for these groups. They recommended that the study be continued for up to a year in order to evaluate cost, quality-of-life perceptions, and compliance to the treatment regimen.

The Rich et al. (1995) study was applicable to this current researcher's study as the focus of interest was the same, namely, investigation of rehospitalizations of congestive heart failure patients. However, while the current study explored the relationship between health-promoting behaviors and hospitalizations, the Rich et al. (1995) research attempted to determine the effect of a multidisciplinary intervention upon hospitalization.
Another study by Russell, Geraci, Hooper, Shull, and Gregory (1998) was conducted to provide a framework for understanding the perceptions of persons with heart failure and chronic obstructive pulmonary disease (chronic obstructive pulmonary disease) called explanatory models. Explanatory models were defined as the viewpoint of patients built upon personal experiences regarding the disease process. Insights gained from the explanatory models were to be used to make appropriate health care decisions for these patients. The problem stated by the researchers referenced the limited knowledge that health care providers have about patient perceptions that contribute to the mismanagement of the disease process and eventually result in hospitalization. The purpose of the Russell et al. study was to help health care providers understand the individual pertaining to illness and the behaviors those beliefs produce when experiencing the exacerbation of a disease process.

The descriptive study was conducted by the researchers which focused on the explanatory models of patients with heart failure and chronic obstructive pulmonary disease who experienced exacerbations. Sixty patients met the criteria for participation in the study.
These 60 participants were divided into two equal groups of heart failure and chronic obstructive pulmonary disease patients. An echocardiogram was used to evaluate the severity of disease for heart failure patients. Most of the participants were determined to have a moderate level of ventricular dysfunction. Russell et al. rated the patient's perception of disease severity with the New York Heart Association classification system Likert scale. Participants’ responses were congruent with the echocardiogram's findings. Chronic obstructive pulmonary disease patients' severity was diagnosed using forced expiratory volume in one second. The majority of these patients were given a severe obstruction rating. The patient's viewpoint agreed with the diagnostic testing.

Rich et al. (1995) analyzed data in three stages examining the participants' experiences and perspectives, identifying common themes, interpretation of the data, and, finally applying the data to a descriptive framework. This descriptive framework was said to be the participant’s explanatory model. The researchers followed this protocol for both the heart failure and the chronic obstructive pulmonary disease participants.
Extrinsic stimuli, such as improper intake of foods or fluids, cigarette smoke, exposure to viruses, or stress, were identified as a challenge to the participant's body functions which resulted in hospitalization. These extrinsic factors were viewed by participants as controllable factors. However, intrinsic factors, such as organ failure or fluid buildup, were considered to be outside the person's sphere of immediate and current influence. "Compared to COPD participants, almost twice as many persons with heart failure identified an intrinsic cause as being responsible for their admission" (Russell et al., 1998, p. 172). When participants were asked to describe the effect of their illness on their quality of life, the researchers reported concerns expressed about increased dependence upon family and friends, increased financial burdens, and emotional stressors. Participants expressed a need for a specific consistent definitive treatment regimen.

Russell et al. (1998) discovered that participants were not quick to seek help when symptoms of compromise occurred. They generally waited until the symptoms were unbearable and hospitalization was a necessity. The researchers postulated that seeking health care earlier in
their disease might have prevented hospital admissions. Participants were knowledgeable regarding their role in the prevention of disease exacerbation and hospital admission. Convincing participants of the need to be proactive in seeking definitive treatment might very well break the hospitalization cycle.

Russell et al. (1998) concluded that knowledge about explanatory models for different disease processes would be a valuable tool which could be used to facilitate the patient's ability to be proactive in the prevention of disease exacerbation. This knowledge, coupled with an intensive consistent definitive treatment regimen, could benefit patients by elevating their perceived quality of life and their ability to cope with chronic illness.

This study by Russell et al. (1998) was applicable to the researcher's endeavor because the study identified factors that affect the patient's ability to comply with a prescribed medical regimen. Perceptions about disease processes, knowledge about symptoms to report, and at what stage to report those symptoms effect on health-promoting behaviors could impact the number of hospitalizations which was the focus of the current study.
In another study by Kaufman (1996), the researcher proposed to present personal definitions of health held by elders in a given population. The study sought to explore the many facets of health as defined by elders and to link those definitions to health promotion.

Kaufman (1996) used a descriptive qualitative design that utilized content analysis. The researcher looked at 78 statements made by eight focus groups who responded to the question, "What does healthy mean to you?" (Kaufman, 1996, pg. 58). The researcher hypothesized that there was a strong link between health-promoting behaviors and individual definitions of health. Kaufman reasoned that a thorough understanding of the client's perspective would help the health care provider meet the subjective needs of elders.

Kaufman (1996) used the Health Belief Model as the conceptual framework for the study. The Health Belief Model focuses on preventive health behaviors and states that individuals are not likely to see a health care provider unless they think their health status is threatened. The individual must also believe that health care interventions will work and that cure will not be difficult.
A focus group design using qualitative data techniques for analysis was used for this study. There were 67 participants in eight focus groups. Participants were urban dwellers with middle to low incomes. Eligibility requirements for participation in the study were as follows: at least 65 years, either African American or Caucasian and English-speaking. Subjects had to either have needed help with at least one activity of daily living in the past 12 months or have received at least one community-based service. Respondents ranged from 67 to 91 years who had similar backgrounds but different definitions of health. These participants were found to be most likely to have definitions of health based on one's physical ability or attitude. African Americans had a greater tendency to discuss attitude definitions than white participants (Kaufman, 1996).

Qualitative data techniques were used in this study for analysis. Participants were screened and recruited over the phone to ensure eligibility. There were eight focus groups: four groups consisting of only women and four groups consisting of only men. Seventy-five percent of the groups consisted of only white participants. These groups were facilitated by a white Hispanic
English-speaking woman. The remaining five groups included only African-American participants and were facilitated by an African American. Focus group sessions lasted approximately 2 hours. The participants spoke easily and eagerly shared their personal views. A research team taped the sessions and observed through a one-way mirror. Notations were made of their observations. The method of gathering information through this forum involved gathering information that was guided by the researcher's agenda but used the ideas and words of the participants. Facilitators used open-ended questions that acted as a springboard for the discussion. The role of the facilitator was to keep the discussion focused, and the participants led the discussions.

The participants' statements pertaining to health definitions were the data gathered for Kaufman’s (1996) study. Descriptive summaries were written by the observers and validated by transcripts of the sessions. The statements were then analyzed for content. These statements were organized by themes into five different categories.

Seventy-eight statements were grouped into five general categories of definitions. These five categories
were activity, attitude, basic functions, absence from medical attention, and medicines. The first category described the level of physical activity which indicated healthy perceptions consisted of concepts such as going or getting up and getting out, regular exercise, the ability to volunteer, and the ability to be actively independent. The second category described the attitudes of the participants regarding health-promoting behaviors and included concepts such as having a positive attitude, comparing oneself to others, depending upon one’s age, and an attitude of a balanced lifestyle. The third concept described the participants’ control regarding basic life functions, such as the ability to sleep, breathe, or eat without difficulty. The fourth concept related to the participants’ lack of need for medical attention. Finally, the fifth concept that affected one’s perception of health was whether the participants had to be confined to a prescribed medication regimen (Kaufman, 1996).

Little racial difference were noted in the statements made by the participants except in the category of attitude. Twenty-three African-American participants described health as an attitude while only one white participant described health in that manner. Even those
attitude health statements differed within the African-American respondents. African-American women connected positive thinking with positive health. African-American men had a more philosophical approach which involved reflective lifestyle changes.

Kaufman (1996) concluded that the definition of health was a relative term dependent upon individual perceptions. The researchers also stated that the meaning of health changed as people aged and experienced changes. It was found that similar backgrounds do not necessarily result in similar personal definitions of health. The researchers stated that the findings from this study should not be generalized to the broader elderly population in terms of the categories of health definitions used.

Kaufman (1996) concluded that health promotion programs will be more effective if they relate to an individual’s personal definition regarding health. Individualizing health care to this specialized view should increase the likelihood that clients will observe health-promoting guidelines and be motivated to change his or her health behaviors. Health-promoting programs initiated in this way will be more effective because the
participants involved will then find the information and practices relevant and meaningful.

The Kaufman (1996) study was relevant to the current research study because it focused on the health beliefs of adult clients and related how those health beliefs affected the individual's health-promoting behaviors. Although both studies targeted an adult population, the Kaufman research was different from the study under investigation in that Kaufman interviewed African-American or Caucasian elders with a variety of health problems. The current study surveyed only adults with congestive heart failure as a diagnosis.

Fowler, in 1997, conducted a research study that proposed to examine the relationship between hope and a health-promoting lifestyle in adults with Parkinson's disease. Parkinson's disease is an incurable illness that affects the neurological system of elders. Goals of treatment have been basically symptom management. Fowler wanted to study the effects of a health-promoting lifestyle and the feeling of hope upon the ability of patients with Parkinson's to cope with the disease process. The problem statement for this research project asked, does hope make a difference in the health-promoting
behaviors in those patient’s with Parkinson's disease? Three research questions for the study were investigated:

1. How much hope do persons with Parkinson's disease have?

2. What are the health-promoting behaviors embraced by adults with Parkinson's disease?

3. Does the stage of Parkinson's disease make a difference in hope or health-promoting behaviors?

A descriptive, correlational study was employed by Fowler (1997) based on theory that proclaimed a significant relationship between hope and action. The term action was conceptualized for the study as a health-promoting lifestyle. A correlation was made between hope and the health-promoting behaviors which emphasized the importance of spiritual growth as well as internal support dimensions. The target population consisted of adults with Parkinson’s disease who agreed to participate in the study by attending informational and emotional support programs. Convenience sampling was used for the study. The sample consisted of 42 adults who suffered from Parkinson’s disease. Criteria for participation in the study included a diagnosis of Parkinson’s disease, the ability to read
and understand English, and the ability to travel to the test site.

Fowler (1997) used the Herth Hope Index which was designed to measure hope. The tool used a self-report scale consisting of 12 items which were measured on a 4-point Likert scale. The scores ranged from 12 to 48. Higher scores correlated with higher levels of hope.

The second tool used in the research study was the Health-Promoting Lifestyle Profile II which was used to measure health-promoting actions. The tool consisted of a 52-item, 4-point scale which assessed how often tested individuals reported participating in activities which promoted well-being, self-actualization, and fulfillment. There were six areas of health-promoting lifestyle that were identified using the principal axis factor analysis. These areas were spiritual growth, health responsibility, physical activity, nutrition, interpersonal relations, and stress management. A mean total score was obtained along with a score for each subscale. Both scales’ scores ranged from 1 to 4. Higher scores were indicative of more health-promoting behaviors in both the overall tool as well as the subscales. Fowler stated the internal consistency reliability for the Health-Promoting Lifestyle Profile II
and subscales was .94 and .80 -.92 for the six subscales. Demographic information was assessed using the demographic tool.

Fowler (1997) used an educational symposium to distribute 89 questions and 53 packets of study material. These tools were sent to 10 Parkinson's disease support groups. The research packets were privately completed by the participants and returned by mail. Forty-two packets were returned to the researcher giving a 30% participation rate for the study. The returned questionnaires implied consent to participate in the study.

The majority of subjects were male, married, had a mean age of 71 years, and had completed high school. Participants' yearly income levels ranged from under $20,000 to more than $50,000. Participants reported living with Parkinson's disease an average of 8 years. The majority of participants graded their disease as a Grade 1 which indicated a unilateral disease manifested in a change in handwriting with mild or occasional at-rest tremors, although many participants cited specific symptoms from more than one stage of disease progression. Participants in Fowler's (1997) study acknowledged a high level of hope as well as moderately high level of
health-promoting behaviors. The mean score of 2.85 (SD = .45) and a range of 1.93 to 3.65 were obtained from the analysis of data.

A series of one-way analysis of variance (ANOVAs) and t-tests were employed by Fowler (1997) to determine differences in scores on the Herth Hope Index and Health-Promoting Lifestyle Profile II including its six subscales as the scores relate to age, gender, marital status, level of education or income, the length of time the participant suffered with symptomatic Parkinson’s disease as well as stage of disease were also analyzed. The only Health-Promoting Lifestyle Profile II subscale demonstrating a significant difference in scores was physical activity. Females reported significantly higher mean scores in physical activity than males (t = 2.28, p = .03). Fowler (1997) noted a moderate, positive relationship between hope and a health-promoting lifestyle, r = .40, p = .008. There was a significant relationship found between spiritual growth, r = .74, p = .00, and interpersonal relationship, r = .39, p = .01, subscales.

Fowler's major findings in the study provided support that multiple nursing interventions, such as facilitating supportive relationships, participation in spiritual
activities, recommendation of a well-balanced diet, and promoting physical activity individualized to patients with Parkinson’s disease and impaired mobility, helped to inspire hope among Parkinson’s disease sufferers. Hope may foster self-actualization and interpersonal relations in individuals who suffer from both curable and noncurable conditions and can be enhanced by social support and spirituality.

In conclusion, the research findings of Fowler’s (1997) study demonstrated that adults with Parkinson’s disease frequently use interpersonal support to promote health. Because of the correlation between the ability to deal with the effects of Parkinson’s disease and social support, nurses must facilitate supportive relationships for these individuals.

Fowler’s (1997) recommended that further study be done to identify other factors that may facilitate the investment in hope and health-promoting behaviors in a larger sample size of individuals who suffer from chronic disease states. Another recommendation made by Fowler (1997) was to focus research on outcomes of hope and health-promoting behaviors such as well-being.
Fowler's (1997) study was germane to this researcher's study because it utilized the same research tool, the Health-Promoting Lifestyle Profile II, that was used in the current study. However, Fowler gave examples as to how the results of the data could be applied to Parkinson's patients and described the effects of hope upon the ability of patients to cope with chronic and incurable diseases. The current study focused on the relationship between health-promoting behaviors of congestive heart failure patients and hospitalizations.

Parchman and Culler (1994) conducted a research study to determine whether a relationship existed between the availability of primary care physicians and the number of avoidable hospitalizations. These researchers asked the question, "Does the number of primary care physicians available in a specific area have an effect on the number of avoidable hospital admissions?" (Parchman & Culler, 1994, p. 123). The researchers stated a positive hypothesis by stating there was an association between the number of primary care physicians available in a given area and the number of avoidable hospital conditions.

Terms defined in the study by Parchman and Culler were health services accessibility, avoidable hospital
conditions, and health service areas. Health services accessibility was the term used to identify the patient’s ability to have timely access health care services. Avoidable hospital conditions was defined as the hospital admission rate for conditions not usually admitted to an acute care facility in areas where primary care is available. Health service areas were defined as a region in which routine hospital care was provided.

Sampling and sampling design included only those conditions related to financial or insurance status in previous studies. The adult conditions chosen for the study were angina, congestive heart failure, hypertension, pneumonia, asthma, and diabetes. Diabetes and pneumonia were the two pediatric diagnoses chosen. Pennsylvania hospital diagnostic discharge data were obtained from the Pennsylvania Health Care Cost Containment Council for the study. Diagnoses were coded according to Diagnostic Related Groups (DRGs). Parchman and Culler (1994) used statistical technique to determine the standardized avoidable hospital conditions for each diagnosis and health service area, the expected number of admissions per diagnosis for each age and sex category, the number of physicians per 10,000 population for each health service
area, as well as the mean per capita income in each county.

Parchman and Culler (1994) used descriptive analysis to determine the variation in avoidable hospital condition rates and the number of physicians in each hospital service area. Pearson product-moment correlation coefficients determined the relationship between avoidable hospital conditions and the number of primary care physicians by the per capita income and number of people in each hospital service area. Parchman and Culler's study determined that the rate of avoidable hospital conditions varied across health service areas from 8.93 to 28.63 per 100,000. Individual condition rates varied by a factor of 2.4 for congestive heart failure to 10.2 for adult asthma or bronchitis. Twenty percent of practicing physicians were made up of family and general practice physicians and varied by a factor of less than 2.5 across hospital service areas.

Parchman and Culler (1994) used correlational analysis which implied that the number of family (general) practice physicians was significantly associated with the rate of admission avoidable hospital conditions, $r = -.53$, $p = .005$, or pediatric avoidable hospital conditions,
\( r = .41, \ p = .03 \). The relationship was inverse as well. When the number of family (general) practice physicians in a hospital service area increased, the avoidable hospital condition rates decreased. Mean per capita income was found to be significantly related in both adult, \( r = -.68, \ p < .001 \), and pediatric, \( r = -.39, \ p = .05 \), avoidable hospital condition rates. A reverse relationship was noted in this category as well. Higher income levels in hospital service area yielded lower avoidable hospital condition rates.

Parchman and Culler (1994) used a regression equation to determine whether avoidable hospital condition rates remained significant after controlling for income. The coefficient on the family practice physician revealed that an increase of one family practice physician per 10,000 population in an hospital service area resulted in a reduction of 2.75 (95% confidence interval) (CI = -4.79 to -0.69) avoidable hospital condition admissions per 100,000 population. The study by Parchman and Culler (1994) revealed that access to family and general practice physicians lowered rates of certain diagnosis hospitalizations. The evidence revealed that as the number
of family practice physicians increased, the hospitalization rates decreased.

Conclusions of the study by Parchman and Culler (1994) indicated a positive relationship between the number of primary care providers available in an area and health care outcomes. Parchman and Culler identified a group of diagnoses which rely on timely and effective ambulatory care to improve health-promoting behaviors and thereby avoid hospitalization. It must be noted that there are many factors that affect avoidable hospital conditions, such as the quality of care the patient received, the availability of other members of the health care team, such as nurse practitioners, nurses, social workers, dietitians, and physical therapists, and the prevalence of the diagnosis.

Parchman and Culler (1994) recommended that the study's results be tested in another area of the country. Careful consideration was also recommended regarding the cost of providing additional family practice physicians to an underserved area versus the cost of avoidable hospital conditions.

The study conducted by Parchman and Cullar (1994) was pertinent to this researcher's study because it
investigated the number of hospital admissions related to the availability of primary care providers, while the current study investigated the relationship between hospitalizations and health-promoting behaviors. The population of the studies differed in that subjects in the Parchman and Cullar study were of all ages, including pediatrics, and had a variety of chronic conditions, while the current study surveyed only adults with congestive heart failure.

In a study by Roudebush (1996), the researcher proposed to study the effect of intensive primary care after hospitalization upon the utilization of acute care facility resources while increasing quality of life as well as overall satisfaction with care. Many times chronically ill patients experience frequent and costly readmissions to acute care facilities and account for one half of all hospitalizations (60% of hospital costs).

Readmissions are thought to reflect poor quality of life for patients with chronic illnesses. The challenge of the health care forum is to provide better services for less cost. Roudebush's (1996) study identified those patients who were at increased risk for hospital readmission and provided them with intensive primary care.
The researcher used the statistical data to determine the effect of increased primary care upon the rate of hospitalizations. The research question was to determine whether intensive primary care follow-up would affect readmission rates.

A multi-centered, randomized, controlled trial was utilized at nine Veterans Affairs Medical Centers. Veterans (N = 1,396) hospitalized with diabetes, chronic obstructive pulmonary disease, or congestive heart failure were chosen for the study. Potential participants were considered by Roudebush for the study if they had a documented diagnosis of diabetes mellitus, chronic obstructive pulmonary disease, or congestive heart failure. Potential participants were excluded from the study if they were established in a primary care clinic, received dialysis, chemotherapy, or radiation therapy, were nursing home patients, were outpatients, were committed to another active study, had a terminal condition, English was not their primary language, had a low mental status score and had no caregiver, did not give informed consent, or had no telephone. Potential participant's eligibility was determined by a study nurse. The nurse also obtained informed consent and collected
baseline data. Participants were then randomly assigned to a control group or an intervention group. Assignment to the two groups was stratified according to entitlement status and index disease.

The participants randomly received usual post-discharge care or an intensive primary care intervention. The intervention group received care by a team of nurses and primary care physicians. The intervention had two protocols followed during the study. Roudebush's first intervention began after selection while the patient was still hospitalized, and the second was an outpatient intervention which began after discharge. If patients in the control group were readmitted, the inpatient protocol was followed. The control group was neither required nor prohibited any post-discharge care. The responsibility for follow-up care was entirely upon the patient. All participants were followed for 180 days. Research assistants contacted patients by phone 30 and 180 days after randomization. The research assistants assessed the participants' quality of life, satisfaction with care, and utilization of health care services. One half of the participants with congestive heart failure were classed as stage III or IV; 30% with diabetes mellitus had end-organ
damage, and 25% of those with chronic obstructive pulmonary disease required home oxygen and had poor quality of life scores.

Data were abstracted from the patient records regarding use of primary care and hospital services during the study. Computations were made to determine the total number of days or rehospitalization and rates of readmission per patient. Roudebush (1996) collected other data regarding the time after initiation of the study to the first readmission, the percentage of patients who were readmitted, the number of visits to emergency departments, and the number of outpatient visits within the 6-month period.

Quality of life was measured using a Veteran-approved questionnaire which scored physical functions, physical role functions, emotional role functions, social functions, bodily pain, mental health, vitality, and general health perceptions. These measurements were calculated from the responses on a scale from 0 to 100. Zero represented the poorest score, and 100 represented the best score.

Patient satisfaction was also measured using a questionnaire relative to Veterans. Items on the
questionnaire included items which pertained to
satisfaction along the continuum of care. The satisfaction
questionnaire was scored on a scale of 1 (least
satisfaction) to 5 (most satisfaction).

Readmissions were classified by whether the admission
was preventable and was classified as either elective or
non-elective. Each component of intervention, in the test
group, was rated according to compliance to the standard
protocol. Compliance was scored for all components of the
protocol to calculate scores. Additional indicators for
intensive primary care delivery included the time elapsed
from the index hospitalization to the first primary care
visit, the number of primary care visits, and the number
and duration of telephone calls during the study period.

A two-sided significance level of $p = .05$ and 85% power was assumed. The calculations revealed that 700
patients were necessary in each group to detect reductions
in both primary outcomes (readmission rates and days of
rehospitalization). Variables were tested using a chi-
square test for categorical variables. A student's $t$ test
was used for continuous variables and the Wilcoxon rank-
sum test was used for non-normally distributed variables.
Readmission rates, days of rehospitalization, emergency
visits, and outpatient visits were analyzed by the Wilcoxon rank-sum test. The chi-square test was used to analyze the percentage of patients readmitted. And, finally, the Kaplan-Meier was used to estimate time to readmission rates. The quality of life and patient satisfactions were multidimensional in nature; therefore, these components were studied using multivariate analysis. Roudebush (1996) analyzed covariance for primary and secondary outcomes which included the stratification variables as well as the number of hospital days during the 180 days before randomization.

Roudebush's (1996) statistical findings stated that patients in the intervention group were more likely to visit a primary care clinic during the study period (93% vs. 77%, p < .001) over 6 months. Additionally, the intervention group made 68 more primary care clinic visits (M = 3.7 vs. 2.2; p < .001) and 5% less visits to subspecialty clinics (2.1 vs. 2.2, p = .010). The use of outpatient services was similar in the two groups (1.9 vs. 1.7, p = .12). Primary care nurses conversed with patients in the intervention group by phone a mean of 7.5 times with an average of 5.7 minutes per call. The intervention group had a higher readmission rate than the control group
(0.19 vs. 0.14 readmit, \( p = .005 \)) and more days of rehospitalization (10.2 vs. 8.8, \( p = .041 \)).

Roudebush (1996) stated that the study lacked adequate power to permit subgroup analysis according to disease. There was greater hospital use among the intervention group in all three diseases studied. Even though there was no significant difference in the number of days of rehospitalization between the two groups (10.5 vs. 9.2, \( p = .23 \)), there was a significant difference between the groups in monthly readmission rates (0.21 vs. 0.15, \( p < .001 \)). Quality-of-life scores were low for both groups throughout the study. However, participants in intervention group were significantly more satisfied (\( p < .001 \)) with care. The intervention perceived a better continuity of care (33%).

Roudebush (1996) stated the major finding of the study in the following format. The patients in the study were severely ill. Even with intensive primary care, patients in the intervention group experienced higher rates of readmission (0.19 vs. 0.14 per month, \( p = .005 \)) and longer length of stay (10.2 vs. 8.8, \( p = .04 \)); however, patients in the intervention group were better
satisfied with care (p < .001). There was no difference in quality-of-life scores (p < .53).

Roudebush's (1996) intervention was designed to improve access to primary care, coordinate outpatient services, and provide comprehensive health care. The intensity of primary care did not decrease the incidence of hospitalizations, but conversely increased the use of acute care facilities. The study noted that the intervention did not affect the quality of life of those participants; however, the participants were more satisfied with the care they received than the control group.

Increased financial resources were needed to provide health care for this vulnerable group of patients. Roudebush stated that the critical information gained in this study would help provide a basis for the changes that need to be made in the health care system. Roudebush further stated that health care providers need to optimize the care of patients with chronic disease and succeed in providing better care at less cost.

The study by Roudebush (1996) was applicable to the present research study because it looked at hospitalization rates among patients with chronic
illnesses. The study also gave basic information regarding criteria for study that might be applicable to the present research which studied the relationship of hospitalizations to health-promoting behaviors of adults with congestive heart failure.

Summary

In summary, a review of the literature was conducted to reveal whether previous research had been conducted which evaluated the impact of health-promoting behaviors on hospitalizations among adults with congestive heart failure. Numerous studies were found in the literature review that dealt with health-promoting behaviors, chronic illnesses, hospitalizations, or elder care, but no studies were found which dealt specifically with the relationship of health-promoting behaviors and hospitalizations among adults specifically with congestive heart failure.

The studies conducted by Happ, Naylor, and Roe-Prior (1997) and Rich et al. (1995) dealt with causative factors of hospitalizations of elders with congestive heart failure. Both studies gave insight to the impact of intensive structured follow up care by primary care providers. Fowler's study (1997) evaluated the Health-Promotion Lifestyle Profile II questionnaire which was the
research tool utilized in the present study. Fowler's (1997) study, however, dealt with Parkinson's disease rather than congestive heart failure.

Parchman and Culler (1994) and Roudebusch (1996) conducted studies that dealt with hospitalization rates among patients with a variety of illnesses across the life span. The focus of the study by Russell et al. (1998) was on factors that affected the patient's ability to follow the prescribed medical regimen. Finally, Kaufman (1996) conducted research which dealt with health beliefs across racial groups and how those beliefs were affected by culture.

All of the studies reviewed recommended further research on patients with chronic illnesses such as congestive heart failure. Further, since no research was identified that investigated the relationship between health-promoting behaviors and the number of hospitalization in elders who have congestive heart failure, this was deemed an appropriate focus for the current study.
Chapter III

The Method

The researcher sought to determine the impact of health-promoting behaviors on the number of hospitalizations experienced by patients in the current investigation. The population for this study included individuals with diagnosis of congestive heart failure. The instrument utilized was a mailed survey which explored an individual's health-promoting behaviors. In Chapter III, a complete discussion of this methodology is presented.

Design of the Study

The purpose of this study was to determine whether a relationship existed between health-promoting behaviors and the number of hospitalizations among patients with a diagnosis of congestive heart failure. A descriptive correlational design was employed to gain knowledge about the participant's health-promoting behaviors. Tools for the study were the researcher-developed Demographic Data
Sheet and Pender's Health-Promoting Lifestyle Profile II.

Variables

The variables of interest were the participants' knowledge and health-promoting behaviors and hospitalizations. Controlled variables included age and diagnosis. Intervening variables may have included the participant's health status including mental, physical, socioeconomic, and family status.

Setting, Population, and Sample

This study took place in Northeast Mississippi which is comprised of six counties with a population of 34,000. There is one hospital located in the center of the six-county area which serves this population. Over 1,000 hospital admissions occurred during the last 12 months in which the primary diagnosis was congestive heart failure. The target population consisted of elders in this region for whom hospitalization had been necessary according to the stated criteria. Convenience sampling was utilized by selecting participants among the admission records of the health care facility who met the selection criteria.
Procedures

Permission to conduct this study was obtained from Mississippi University for Women’s Committee on Use of Human Subjects in Experimentation (see Appendix A). A written agreement was signed prior to the study by the executive council of the health care facility from which the participants were chosen (see Appendix B). Once the prospective participants were selected, those participants were mailed a numbered research packet which consisted of a cover letter explaining the research project and included implied permission to participate in the study (see Appendix C). Instructions, the Demographic Data Sheet (see Appendix D), the Health-Promoting Lifestyle Profile II (see Appendix E), and a self-addressed stamped envelope were sent. Approximately 20 minutes were required to complete the Demographic Data Sheet and questionnaire. The participants were requested to return the study packet by mail. Twenty-three of the 96 research packets were returned. The returned research packets were logged and filed. After one month's time, the data gathered from the returned research tools were taken to a statistician and analyzed.
Instrumentation

Approval was obtained to use the Health-Promoting Lifestyle Profile II (see Appendix F). The Demographic Data Sheet was reviewed by an expert panel to establish validity of the tool. Collection of the data came from those two sources.

The researcher-developed Demographic Data Sheet was used to collect pertinent data related to the characteristics of the participants. This tool was designed to reveal the following information: (a) race, (b) age, (c) gender, (d) marital status, (e) educational level, (f) household status, (g) history of congestive heart failure, (h) number of hospitalizations in the past 12 months related to congestive heart failure, and (i) usual health care provider. Although established reliability had not been established for the Demographic Data Sheet, face validity was established by a panel of experts.

The Health-Promoting Lifestyle Profile II measured four levels of health-promoting behaviors graded on a Likert scale. This tool used mean scores and was designed to calculate an overall health-promoting lifestyle as well as evaluate six subscales. The subscales evaluated by this
tool were as follows: (a) health responsibility, (b) physical activity, (c) nutrition, (d) spiritual growth, (e) interpersonal relations, and (6) stress management. The lowest score possible was 52, and the highest score was 208. Scores which ranged from 52 to 130 were determined to denote a more negative health-promoting lifestyle. Those within the ranges of 131 to 208 were indicative of a more positive health-promoting lifestyle score.

Data Analysis

Analysis of the collected data was performed by using the Pearson product-moment correlation. This method was appropriate to the study in order to determine the relationship between health-promoting behaviors and number of hospitalizations. Data were analyzed after the responses were returned by mail and evaluated. The Demographic Data Sheet was analyzed to lend supporting data to the findings using descriptive statistical methods. The number of hospitalizations indicated on the Demographic Data Sheet was used to correlate this data with health-promoting behaviors.
This chapter sought to describe the methods used to assess patients with congestive heart failure regarding health-promoting behaviors as well as health-promoting behaviors. Demographic data included the number of hospitalizations experienced by the participant within a period of 12 months. Setting, population, sample, instrumentation and data analysis were also discussed.
Chapter IV

The Findings

The purpose of this descriptive correlational study was to investigate the relationship of health-promoting behaviors to hospitalizations in persons with congestive heart failure. The goal of the study was to determine if health-promoting behaviors impacted the number of hospitalizations related to the diagnosis of congestive heart failure. Demographic information collected included race, age, gender, marital status, educational level, household members, length of time diagnosed with congestive heart failure, and where health care was sought. The demographic data helped verify individuals meeting criteria for the study. Data were analyzed using descriptive and correlational statistics. The Health-Promoting Lifestyle Profile II was designed to measure overall health-promoting behaviors as well as six subscales which included (a) health responsibility, (b) physical activity, (c) nutrition, (d) spiritual growth, (e) interpersonal relations, and (f) stress management. In
this chapter, the sample of the research will be described along with the results of the data analysis and additional findings noted by statistical analysis.

Description of the Sample

Hospital admission statistics in a rural county in Mississippi served as the setting for the descriptive correlational study. The sample included individuals with a diagnosis of congestive heart failure who had been hospitalized within the last 12 months. Ninety-three surveys were mailed, of which 23 were returned within the allotted time period. The final sample consisted of subjects (N = 23) who volunteered to participate in the study. The subjects ranged in age from 45 to 96 years. The mean age of the sample was 72.90 years with a standard deviation of 13.42 years. Age distribution of the sample can be found in Table 1.
Table 1

Age Distribution of the Sample by Frequency and Percentage

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 to 54</td>
<td>2</td>
<td>9.0</td>
</tr>
<tr>
<td>55 to 69</td>
<td>6</td>
<td>29.0</td>
</tr>
<tr>
<td>70 to 84</td>
<td>11</td>
<td>53.0</td>
</tr>
<tr>
<td>85 to 99</td>
<td>2</td>
<td>9.0</td>
</tr>
</tbody>
</table>

Note: N = 21.

The majority (91%) of participants were Caucasian, and the remaining participants were Native American or African American. Additionally, gender, marital status, educational status, and status of household were assessed using the Demographic Data Sheet. Of those persons responding to the survey, 17 were female and 6 were male. Twelve individuals indicated they were currently married; the other individuals indicated they were widowed or divorced. Formal education revealed that 12 of the participants indicated they had more than a sixth-grade but less than a high school education, 5 of the participants indicated they graduated from high school, and only 4 participants indicated they had some college or
technical skill. The majority (48%) indicated they lived with their spouse, while 7 participants indicated they lived alone, and 5 participants indicated they lived with children, with other relatives, or with a friend. Specific distribution of these variables is included in Table 2.

Table 2

Demographics by Ethnicity, Gender, Marital Status, Educational Status, and Household Status by Frequency and Percentage

<table>
<thead>
<tr>
<th>Variable</th>
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<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>21</td>
<td>92</td>
</tr>
<tr>
<td>African American</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Native American</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>17</td>
<td>74</td>
</tr>
<tr>
<td>Male</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single, never married</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Now married</td>
<td>12</td>
<td>52</td>
</tr>
<tr>
<td>Separated</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Divorced</td>
<td>2</td>
<td>39</td>
</tr>
<tr>
<td>Widowed</td>
<td>8</td>
<td>9</td>
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</table>

(table continues)
Table 2 (continued)

<table>
<thead>
<tr>
<th>Variable</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Educational Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than sixth grade</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>More than sixth grade, but less than high school</td>
<td>12</td>
<td>52</td>
</tr>
<tr>
<td>Graduated high school</td>
<td>5</td>
<td>22</td>
</tr>
<tr>
<td>Some college or technical school</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>College graduate</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Household Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Live alone</td>
<td>7</td>
<td>31</td>
</tr>
<tr>
<td>Live with spouse</td>
<td>11</td>
<td>48</td>
</tr>
<tr>
<td>Live with children</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>Live with other relative</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Live with friend</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

**Note.** N = 23.

Finally, items 7, 8, and 9 of the Demographic Data Sheet gathered data regarding length of time with congestive heart failure, the number of hospitalizations encountered in the last 12 months for the diagnosis of congestive heart failure, and the participant's primary care provider. Of the 23 respondents, 9 stated having a diagnosis of congestive heart failure for 3 to 4 years. Twenty of the respondents listed hospitalizations in the last 12 months. Seventeen respondents indicated the
emergency room as the primary care provider. Specific responses to these variables are presented in Table 3.

Table 3

<table>
<thead>
<tr>
<th>Variable</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>History of congestive heart failure status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 6 months</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>More than 6 months, but less than 1 year</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>Between 1 and 2 years</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>Between 2 and 3 years</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Between 3 and 4 years</td>
<td>5</td>
<td>22</td>
</tr>
<tr>
<td>Between 4 and 5 years</td>
<td>9</td>
<td>40</td>
</tr>
<tr>
<td>Longer than 4 years</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hospitalization status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None in past 12 months</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>Once in past 12 months</td>
<td>5</td>
<td>22</td>
</tr>
<tr>
<td>Twice in past 12 months</td>
<td>7</td>
<td>31</td>
</tr>
<tr>
<td>Three to 5 times in past 12 months</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>More than 5 times in past 12 months</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>Primary health care provider</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency room</td>
<td>17</td>
<td>74</td>
</tr>
<tr>
<td>Private physician</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>Nurse practitioner</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: N = 23.
Results of Data Analysis

Using the Demographic Data Sheet and the Health-Promoting Lifestyle Profile II, data were collected to test the research hypotheses. Behavioral scores were analyzed using inferential statistical methods. A Pearson product-moment correlation was conducted to determine if there was a relationship between hospitalizations and health-promoting behaviors.

The research hypothesis for the study was stated as follows: There will be no relationship between health-promoting behaviors and the number of hospitalizations in persons who have congestive heart failure. Using the Pearson correlation, \( r = .223, p = .166 \), the researcher failed to reject the null hypothesis which stated there was no relationship found between overall health-promoting behaviors and the number of hospitalizations in persons with congestive heart failure. The overall raw scores on the Health-Promoting Lifestyle Profile II ranged from 48 to 171, while the overall average score was 118. According to the operational definition of health-promoting behavior, a score between 52 and 130 was denoted as having a more negative health-promoting lifestyle. Scores between 131 and 208 were denoted as having a more positive health-
promoting lifestyle. Sixty-five percent of the respondents scored between 52 and 130 on the Health-Promoting Lifestyle Profile II denoting a more negative health-promoting lifestyle. Eight, or 35%, of the respondents scored between 131 and 208 on the Health-Promoting Lifestyle Profile II which denoted a more positive health-promoting lifestyle.

Additional Findings

Because the null hypothesis failed to be rejected, the researcher used correlational statistics to determine whether there was a relationship with any demographic factor and hospitalizations for adult patients with congestive heart failure. Correlational statistics were performed on age, gender, and the six Health-Promoting Lifestyle Profile II subscales. Pearson correlational statistics were used to determine whether a relationship existed between age and the number of hospitalizations for adults with congestive heart failure. Contrary to the expectations of the researcher, no significant relationship was found between age and the number of hospitalizations, $r = -.017$, $p = .471$, $N = 21$. Pearson product-moment correlation was also used to determine whether a significant relationship existed between gender
and the number of hospitalizations. The correlation indicated that females were more likely to seek medical attention than males. However, despite the fact that a positive correlation was noted, the notation did not reach statistical significance, $r = .255$, $p = .120$, $N = 23$.

Finally, using the Pearson $r$, calculations were made for the Health-Promoting Lifestyle Profile II six subscales. No significant relationship was found for five of the subscales. However, a significant relationship was found between the health responsibility subscale on the Health-Promoting Lifestyle Profile II with the number of hospitalizations, $r = .39$, $p = .041$, $N = 21$. Data for the Health-Promoting Lifestyle Profile II subscales are noted on Table 4.

Table 4

<table>
<thead>
<tr>
<th>Variable</th>
<th>$r$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Responsibility</td>
<td>.388*</td>
<td>.041</td>
</tr>
<tr>
<td>Nutrition</td>
<td>.028</td>
<td>.452</td>
</tr>
<tr>
<td>Spiritual growth</td>
<td>.166</td>
<td>.236</td>
</tr>
</tbody>
</table>

(table continues)
Table 4 (continued)

<table>
<thead>
<tr>
<th>Variable</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpersonal relationships</td>
<td>.251</td>
<td>.136</td>
</tr>
<tr>
<td>Stress management</td>
<td>.170</td>
<td>.231</td>
</tr>
<tr>
<td>Physical activity</td>
<td>-.004</td>
<td>.494</td>
</tr>
</tbody>
</table>

Note: N = 21, p ≤ .05.

Summary

This chapter sought to describe the sample of respondents in the current study and to present the results of data analysis using descriptive statistics and the Pearson r. Results of the data collection were described in narrative and table form for discussion enhancement. The research hypothesis, there will be no relationship between the health-promoting lifestyle behaviors and the number of hospitalizations for adult patients with congestive heart failure, was validated by the data; therefore, the hypothesis failed to be rejected.
Chapter V

The Outcomes

Congestive heart failure is a serious personal health problem as well as a growing public health issue. Management of the disease in a cost-effective manner has become paramount in its importance to the individual as well as to health care providers. To prevent exacerbations of the disease, individuals must maintain efficient disease control through diet, exercise, lifestyle changes, and medication regimens. Preventing the progress of the disease through classification measurements is the goal of health care planning. It is, therefore, pivotal for health care providers to understand influential factors which motivate individuals to participate in health promotion and disease control measures. A descriptive, correlational study was conducted to determine whether a relationship exists between health-promoting behaviors and the number of hospitalizations experienced by adults diagnosed with congestive heart failure. Pender’s Health-Promotion Model guided the study. This model identifies variables which
influence the individual's likelihood to engage in health-promoting behaviors. The researcher sought to test the following null hypothesis: There will be no relationship between health-promoting behaviors and the number of hospitalizations of adults with congestive heart failure.

A group of individuals diagnosed with congestive heart failure was surveyed using Pender's Health-Promoting Lifestyle Profile II and the researcher-designed Demographic Data Sheet. Data were analyzed using descriptive statistics and the Pearson product-moment correlation.

Summary of Significant Findings

The majority of the sample (N = 23) were Caucasian participants (91%) between the ages of 45 and 96 years, with a mean age of 72.90. Most participants were female (74%) and currently married (52%) and lived with their spouse (48%). Thirty-nine percent of the participants had been diagnosed with congestive heart failure between 3 and 5 years. The majority of the participants (61%) had less than a high school education. Most the participants (30%) had been hospitalized twice in the last 12 months, and 74% of participants utilized the emergency room as the primary health care provider.
The null hypothesis tested was there will be no relationship between health-promoting behaviors and the number of hospitalizations for adults with congestive heart failure. Pearson product-moment correlation statistics were used to correlate the data. No statistical significance emerged in the data ($r = .233$, $p = .166$); therefore, the null hypothesis failed to be rejected. Additional findings emerged when the data were correlated with other data, such as age, gender, and the six Health-Promoting Lifestyle Profile II subscales. Pearson product-moment correlation was used to determine statistical significance. No significance emerged with age ($r = .071$, $p = .471$) or gender ($r = .255$, $p = .120$). A positive statistical significance did emerge between the number of hospitalizations and the Health-Promoting Lifestyle Profile II subscale for health responsibility ($r = .388$, $p = .041$).

Discussion

Statistical findings denoted a positive but insignificant trend ($r = .233$, $p = .166$) in the correlation of the Health-Promoting Lifestyle Profile II and the number of hospitalizations in adults with congestive heart failure. Therefore, the findings
supported the null hypothesis of the research study; there will be no statistical significance between the health-promoting behaviors and the number of hospitalizations in adults with congestive heart failure.

Review of the literature revealed that two studies supported the findings of the current research. In 1996, Roudebush conducted research to determine whether intensive health care interventions would decrease the number of hospitalizations. The findings of the study were similar to the findings of the current research study. Roudebush (1996) revealed that increased health care interventions did not decrease hospitalizations in patients with congestive heart failure, rather increased them. Secondly, the results of the study conducted by Fowler (1997) were also similar to the findings of the current research study in that the findings revealed that individualized multiple nursing interventions, such as facilitating supportive relationships, participation in spiritual activities, recommendation of well-balanced diet, and promoting physical activity, did not significantly contribute to the decreased number of hospitalizations for elderly patients.
Conversely, there were five research studies which refuted the current research findings. Firstly, Happ et al. (1997) found there were three major contributing factors to hospital readmission for patients with chronic diseases: (a) medication supply, (b) dietary non-adherence, and (c) poor general health behaviors. Two themes of preventive factors emerged in two themes which were the individual’s internal motivation as well as support from significant others. Secondly, the study conducted by Rich et al. (1995) found that a nurse-directed multi-disciplinary intervention could improve the quality of life for patients with chronic disease as well as decrease hospitalizations and reduce health care costs. Thirdly, in the study conducted by Russell et al. (1998) patients did not seek help immediately when they got into trouble. The study found that patients usually waited until symptoms of disease exacerbation were unbearable, making hospitalization a necessity.

Fourthly, the research study conducted by Kaufman (1996) denoted the definition of health. Participants defined health as a relative term dependent upon individual perceptions. The study stated that health promotion programs might be more effective if the programs
were individualized to personal definitions of health. Finally, Parchman and Culler (1994) noted the direct relationship between more primary care and better outcomes.

Pender's Health-Promoting Lifestyle Profile II was used to survey the participant's level of health-promoting behaviors. Using a Likert scale from 1 to 4, the mean score for the participants on the Health-Promoting Lifestyle Profile II was 2.388 with a standard deviation of .5085 which denoted a more negative health-promoting lifestyle among the respondents. Factors which might have impacted the results of the current research study include age of the respondents, educational level of the respondents, poor response rate from potential participants (25%), and confusion related to another research study being conducted simultaneously with the current research.

The first factor noted which may have influenced results was age. The average age of the respondents in the study was 72.90. Because the majority of the respondents were elderly, they might have been diagnosed with multiple health problems. This health status might have prohibited participation in health-promoting behaviors. The elders
might have required more intensive intervention by health care providers including extensive health education and long-term follow-up to prevent or control chronic health problems. Health education might have been difficult related to the amount and complexity of information conveyed which might have resulted in lower health-promoting behavior scores.

The region surveyed for the research study was a rural area in Northeast Mississippi. Using computer programming, the researcher assessed the reading difficulty of the Health-Promoting Lifestyle Profile II at the 12th-grade reading level. The majority of the respondents (52%) had less than a high school education. The results might have been affected because the respondents had difficulty understanding the questionnaire and failed to respond correctly to the questions.

Actual participation in the study was not optimal. Of the 93 surveys distributed, only 23% or 25% were returned for data analysis. Failure to participate in the study might have been attributed to misplacement of the survey or the inability of potential participants to respond within the time constraints set for data collection.
Confusion about the study might have been yet another factor which attributed to results of the study. Concurrent to this research study, data were being collected at the area hospital for another research study in which participating patients with congestive heart failure were being brought to the hospital twice weekly for an outpatient intravenous infusion. Participants for the current research study might have confused this intermittent outpatient service with hospitalization, thereby increasing the number of hospitalizations listed on the Demographic Data Sheet. Confusion about the content might have been abated if data collectors had been utilized to help participants understand the intent of survey questions.

A positive statistical significance was noted between the number of hospitalizations and the health-promoting behavior denoted as health responsibility on the Health-Promoting Lifestyle Profile II. Health responsibility is defined as the patient’s sense of accountability and active participation in one’s health-promoting lifestyle, thereby promoting a better quality of life. Health responsibility might be attributed to the patient’s age,
disease complexity or severity, or increased awareness of disease exacerbation and need for treatment.

The positive statistical finding might have been attributed to several factors. The participants may have been knowledgeable about the disease process of congestive heart failure. As a result of that knowledge, those participants might have recognized the signs and symptoms denoting exacerbation and, therefore, sought appropriate medical attention. Another factor which could have attributed to the significant findings was the education the participant had received from the health care provider. The participant may have correctly noted a significant weight gain or increase of shortness of breath which sent the participant in search of the appropriate medical care.

Limitations

There were several limitations noted in this study. The first limitation noted was the small sample size (N = 23) which diminished the power or sensitivity of the test and thereby limited the generalization of the findings. Of the 93 surveys mailed to prospective participants, only 23 surveys were returned for data analysis. The second limitation noted was the time allotted for data
collection. Surveys continued to be received by the researcher for one month longer than the allotted time for data to be collected. Another limitation noted was the lack of ethnic diversity of the sample as 91% of the participants were Caucasian. Conducting research via mailed survey was noted to be a limitation for the study. Even though general written instructions accompanied each research packet, no data collectors were available to answer questions or assist participants in filling out the survey; therefore, potential participants might have declined to participate in the study. The possibility exists that other potential participants may have lost interest in the survey because of the length of time required to complete the forms. The kinds of questions asked may have been offensive and caused some individuals to decline to participate. The final limitation noted the current study measuring congestive heart failure patient’s perceptions about health-promoting behaviors. Due to time constraints, no identified inappropriate health behaviors were addressed, and no follow-up study was conducted to determine whether appropriate health-promoting behaviors were being developed.
Conclusions

In spite of the limitations noted, this research study contributed important information regarding health-promoting behaviors among patients with congestive heart failure. Although no relationship was found between health-promoting behaviors and the number of hospitalizations adults had with congestive heart failure, the researcher determined that health-promoting behaviors are affected by variables such as the age of the patient, co-morbidities experienced by the patient, education received by the patient, and the ability of the patient to comprehend and incorporate needed lifestyle changes into the activities of daily living.

Only 25% of the surveys mailed were returned for data analysis. Because the average age of the participants was 72.90 years, the researcher surmised that other prospective participants might have failed to return the survey because needed help was not available to answer the survey questions. A data collector would have been able read and explain the survey questions to participants and help them appropriately answer the survey questions. Therefore, the researcher determined that a mailed survey was not the best way to conduct the research study.
Pender's Health Promotion Model was determined to be an appropriate theoretical format to conduct this type of research study. Pender's model provides a solid framework for advanced practice nurses to facilitate healthy lifestyle behaviors. Pender's model focuses upon health behaviors that when utilized would facilitate a better quality of life for patients with chronic diseases.

**Implications for Nursing Practice**

The advanced practice nurse needs a good understanding of the basic building blocks for health care management. A good understanding of the patient's own definition of health gives the advanced practice nurse insight to health perceptions and the ability to positively affect health for the patient with chronic disease holistically. Development of protocols provides the advanced practice nurse with the basis for assessing, planning, implementing, and evaluating patients with congestive heart failure as well as strengthening the overall health management plan for those patients with chronic disease. This study has implications for nursing in four areas: research, education, theory, and practice.

Identified nursing research implications include conduction of research to determine the most effective
patient teaching methods and development of protocols for the treatment of congestive heart failure. The investigator used the current research study to provide a broader knowledge base of behavior patterns among individuals with congestive heart failure. This study could be utilized as a foundation for further research in the area of chronic diseases and specifically for congestive heart failure.

The study's implications for nursing education reside in the incorporation of the Health Promotion Model into nursing education curriculums. The inclusion of this knowledge might help to equip nursing students in both basic and advanced programs to positively affect the quality of life for patients with chronic disease. Research studies have implications for nursing theory by testing the principles of recognized nursing theories such as Pender's Health Promotion Model, which was the theoretical framework used for the current research study.

Finally, implications noted in the current research study for nursing practice emerge as a perpetual challenge for primary health care providers to face. Advanced practice nurses must face the challenge to facilitate knowledge, independence, and a sense of well-being among
individuals with congestive heart failure. The results of this study indicate that an individual’s perceived health responsibility motivates that person to seek medical attention when needed.

Recommendations

The following recommendations were made for future research and nursing based on results of the current study and the limitations identified:

1. Replication of this study with a larger, more culturally diverse, sample.

2. Conduction of a similar study utilizing implementation and evaluation of a behavior modification intervention to improve patient compliance to the health-promoting lifestyles related to congestive heart failure.

3. Conduction of more research using Pender’s Health Promotion Model to examine health behaviors in congestive heart failure populations.

4. Implementation of qualitative research to study personal characteristics and health beliefs in relation to health-promoting behaviors.

5. Conduction of a qualitative study with the use of interviews with congestive heart failure patients to get
information from patients who may not fill out surveys due to physical or educational barriers.
REFERENCES
References


Catholic nuns: Issues in family and community health. *Family and Community Health,*(4)18, 81-91.


APPENDIX A

APPROVAL OF COMMITTEE ON USE OF HUMAN SUBJECTS IN EXPERIMENTATION OF MISSISSIPPI UNIVERSITY FOR WOMEN

87
March 22, 1999

Ms. Debbie McFalls  
c/o Graduate Program in Nursing  
Campus

Dear Ms. McFalls:

I am pleased to inform you that the members of the Committee on Human Subjects in Experimentation have approved your proposed research as submitted provided you change paragraph two to reflect that participation in this study is voluntary and that failure to participate does not affect the standard of care.

I wish you much success in your research.

Sincerely,

Susan Kupisch, Ph.D.  
Vice President for Academic Affairs

SK:wr

cc: Mr. Jim Davidson  
Dr. Mary Pat Curtis  
Dr. Lynn Chilton
APPENDIX B

PERMISSION TO CONDUCT STUDY
April 20, 1999

XXXXXX XXXXXXX
XXXXX XXXX XXXX
XXXXXX Regional Health Center
XXXX XXXX XXXX
XXXXX MS XXXX

Dear Mrs. XXXXX:

I am currently enrolled in the graduate nursing program at the Mississippi University for Women. I am presently investigating health perceptions in adults with congestive heart failure. I have been involved in the development of an outpatient program here at XXXXX Regional Health Center for patients with congestive heart failure designed to increase the quality of life for those patients as well as decrease the financial burden for the patient as well as the health care facility.

I would like to further my research in this area and ask the permission of the Executive Council to distribute by mail the Health Perceptions Questionnaire to patients who have been hospitalized at XXXXX Regional Health Center during the last 12 months with congestive heart failure. The information gathered by this tool may help determine factors that would help further develop our congestive heart failure outpatient protocol. My goal is to benefit the patients we serve by helping them manage this disease process more effectively, increase their quality of life, and continue to decrease the financial burden of the patient and the hospital.

There is no risk involved in completing these questionnaires. Confidentiality for the participants is guaranteed. Neither your facility nor the participants will be identified in the study.
April 20, 1999

Enclosed are copies of the questionnaire and a consent form for the participants. If you have any questions or concerns regarding the study, please feel free to contact me at your convenience.

I would appreciate your cooperation with this research project. Your immediate attention to my request will be greatly appreciated.

Sincerely,

Debbie McFalls, RN

Enclosures
Consent for Participation in a Research Study

Title of Study:

The Relationship of Health-Promoting Behaviors to Hospital Admissions in Adults with Congestive Heart Failure

The nature and purpose of this research study have been explained. I understand that persons who have been admitted to this facility in the last 12 months with the diagnosis of congestive heart failure will be asked to participate in this study by completing demographic data and the Health-Promoting Lifestyle Profile II questionnaire. Participation is voluntary and information obtained is confidential. Information obtained will be used in a master's thesis by Debbie McFalls at the Mississippi University for Women.

With the above explanation of the research study, I agree to allow Debbie McFalls to collect data from consenting participants who have been patients at this facility.

XXXXXXX Regional Health Center

By: ____________________________ Date: ____________________

__________________________________ Date: ____________________

Researcher's Signature
Dear Prospective Participant,

My name is Debbie McFalls. I am a registered nurse. I am currently a graduate student at Mississippi University for Women. I am conducting a research study about patients who have been diagnosed with congestive heart failure. I want to know more about what patients with congestive heart failure think about their health status. I am also interested in learning how health perceptions affect the number of hospitalizations these patients experience.

I am asking for your participation in this study. Participation will include filling out two questionnaires, the Demographic Data Sheet and the Health-Promoting Lifestyle Profile II. Participation will take approximately 15 minutes of your time. The questionnaires will be anonymous, and your name will not be used in the study. All answers will remain confidential and will be reported as a group. The answers will be used for the study only. The choice to participate is yours. Your choice to participate in the study will not affect care you receive.

The information collected will be used to assist health care workers in developing health care protocols, teaching plans, and educational materials for patients with congestive heart failure. Because you have experienced congestive heart failure firsthand, the information you possess is invaluable.

Return of the completed questionnaires in the provided self-addressed, stamped envelope indicates your consent to participate in the study. A self-addressed, stamped envelope is enclosed for your convenience.

I would appreciate your help in this matter.

Sincerely,

Debbie McFalls, RN
Demographic Data Sheet

Please do not put your name on this worksheet. Answer each question by placing a check (✓) by the letter that best describes you.

1. Race
   ___ White
   ___ Black
   ___ Native American
   ___ Other (Please specify): __________________________

2. Age: __________

3. Gender
   ___ Male
   ___ Female

4. Marital status
   ___ Single, never married
   ___ Now married
   ___ Separated
   ___ Divorced
   ___ Widowed

5. Last year of school completed
   ___ Less than sixth grade
   ___ More than sixth grade, but less than high school
   ___ Graduated from high school
   ___ Some college or technical school
   ___ College graduate
   ___ Postgraduate

6. Household status
   ___ Live alone
   ___ Live with spouse
   ___ Live with children
   ___ Live with other relative
   ___ Live with friend
7. How long have you been diagnosed with congestive heart failure?
   ___ Less than 6 months
   ___ More than 6 months, but less than 1 year
   ___ Between 1 and 2 years
   ___ Between 2 and 3 years
   ___ Between 3 and 4 years
   ___ Longer than 4 years

8. How many times have you been in the hospital in the past 12 months for problems related to congestive heart failure?
   ___ I have not been hospitalized for congestive heart failure in the past 12 months.
   ___ I have been hospitalized once for congestive heart failure in the past 12 months.
   ___ I have been hospitalized twice for congestive heart failure in the past 12 months.
   ___ I have been hospitalized three to five times for congestive heart failure in the past 12 months.
   ___ I have been hospitalized more than five times for congestive heart failure in the last 12 months.

9. When I get sick, I usually go to
   ___ Emergency room
   ___ Private physician
   ___ Nurse practitioner
APPENDIX E

HEALTH-PROMOTING LIFESTYLE
PROFILE II
LIFESTYLE PROFILE II

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

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

<table>
<thead>
<tr>
<th></th>
<th>NEVER</th>
<th>SOMETIMES</th>
<th>OFTEN</th>
<th>ROUTINELY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Discuss my problems and concerns with people close to me.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>2. Choose a diet low in fat, saturated fat, and cholesterol.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>3. Report any unusual signs or symptoms to a physician or other health professional.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>4. Follow a planned exercise program.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>5. Get enough sleep.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>6. Feel I am growing and changing in positive ways.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>7. Praise other people easily for their achievements.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>8. Limit use of sugars and food containing sugar (sweets).</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>9. Read or watch TV programs about improving health.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>10. Exercise vigorously for 20 or more minutes at least three times a week (such as brisk walking, bicycling, aerobic dancing, using a stair climber).</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>11. Take some time for relaxation each day.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>12. Believe that my life has purpose.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>13. Maintain meaningful and fulfilling relationships with others.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>14. Eat 6-11 servings of bread, cereal, rice and pasta each day.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>15. Question health professionals in order to understand their instructions.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>16. Take part in light to moderate physical activity (such as sustained walking 30-40 minutes 5 or more times a week).</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>17. Accept those things in my life which I can not change.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>18. Look forward to the future.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>19. Spend time with close friends.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>20. Eat 2-4 servings of fruit each day.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>22. Take part in leisure-time (recreational) physical activities (such as swimming, dancing, bicycling).</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>23. Concentrate on pleasant thoughts at bedtime.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>24. Feel content and at peace with myself.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>25. Find it easy to show concern, love and warmth to others.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td>26. Eat 3-5 servings of vegetables each day.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NEVER</td>
<td>SOMETIMES</td>
<td>OFTEN</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>-------</td>
<td>----------</td>
<td>-------</td>
</tr>
<tr>
<td>27.</td>
<td>Discuss my health concerns with health professionals.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>28.</td>
<td>Do stretching exercises at least 3 times per week.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>29.</td>
<td>Use specific methods to control my stress.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>31.</td>
<td>Touch and am touched by people I care about.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>32.</td>
<td>Eat 2-3 servings of milk, yogurt or cheese each day.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>33.</td>
<td>Inspect my body at least monthly for physical changes/danger signs.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>34.</td>
<td>Get exercise during usual daily activities (such as walking during lunch, using stairs instead of elevators, parking car away from destination and walking).</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>35.</td>
<td>Balance time between work and play.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>36.</td>
<td>Find each day interesting and challenging.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>37.</td>
<td>Find ways to meet my needs for intimacy.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>38.</td>
<td>Eat only 2-3 servings from the meat, poultry, fish, dried beans, eggs, and nuts group each day.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>39.</td>
<td>Ask for information from health professionals about how to take good care of myself.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>40.</td>
<td>Check my pulse rate when exercising.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>41.</td>
<td>Practice relaxation or meditation for 15-20 minutes daily.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>42.</td>
<td>Am aware of what is important to me in life.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>43.</td>
<td>Get support from a network of caring people.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>44.</td>
<td>Read labels to identify nutrients, fats, and sodium content in packaged food.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>45.</td>
<td>Attend educational programs on personal health care.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>46.</td>
<td>Reach my target heart rate when exercising.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>47.</td>
<td>Pace myself to prevent tiredness.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>48.</td>
<td>Feel connected with some force greater than myself.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>49.</td>
<td>Settle conflicts with others through discussion and compromise.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>50.</td>
<td>Eat breakfast.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>51.</td>
<td>Seek guidance or counseling when necessary.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>52.</td>
<td>Expose myself to new experiences and challenges.</td>
<td>N</td>
<td>S</td>
<td>O</td>
</tr>
</tbody>
</table>
APPENDIX F

PERMISSION TO USE THE HEALTH-PROMOTING LIFESTYLE PROFILE II
Dear Colleague:

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

We thank you for your interest in the Health-Promoting Lifestyle Profile II and wish you much success with your efforts.

Sincerely,

Susan Noble Walker, EdD, RN, FAAN
Professor and Chair,
Department of Gerontological, Psychosocial and Community Health Nursing

Encl.: Health-Promoting Lifestyle Profile II
Scoring instructions
List of publications reporting use of the original Lifestyle Profile