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Spirituality And Spiritual Self-Care: Expanding Self-Care Deficit Nursing Theory

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**SPIRITUALITY AND SELF CARE:
EXPANDING SELF-CARE DEFICIT NURSING THEORY**

by

MARY LOUISE WHITE

DISSERTATION

Submitted to the Graduate School

of Wayne State University

Detroit, Michigan

in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

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MAJOR: NURSING

Approved by:

Advisor

Date

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DEDICATION

This dissertation is dedicated to my Husband,

Louis White

Who has been patient and supportive throughout my pursuit of education.

And my children,

Robert Jerome, Andrew Paul, and Maxwell William

Who have learned the importance of education from watching their mother.

With love to my parents,

Ruth and Jerry Bradley

For their prayers, emotional support, and
instilling the importance of education throughout my life.

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Brick walls are there for a reason: they let us prove how badly we want things."

-Randy Pausch, Last Lecture, Achieving Your Childhood Dreams

Achieving one's dreams and goals is not a solitary journey, but requires the help and support of many people. Sometimes the brick wall is difficult to scale, but friends, family, and professional associates can provide assistance in reaching the goal and attaining the dream.

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CHAPTER 1

BACKGROUND, SPECIFIC AIMS, AND SIGNIFICANCE

Introduction

Interest in the relationship between spirituality and health-related quality of life (QOL) has been a major focus of study for the last few years. Researchers in the fields of theology, sociology, psychology, and medicine have examined spirituality, with these research studies providing substantial contributions to the continuing discussions of this construct (Como, 2007). Nursing, traditionally, has been concerned with the human spirit as a focal point of the human condition across the lifespan. Nurses need to be cognizant of the relationship between spirituality and patients' ability to cope with chronic illness. Spirituality is an important element in the lives of many African Americans, who also are living with chronic illness. Spirituality and self-care for chronic illness has not been studied extensively in this population. The present research study examines the concept of spirituality within a self-care perspective that contributes to the QOL of African American men and women diagnosed with heart failure (HF).

Self-Care

Self-care is a complex and multidimensional concept that is widely researched and examined in health care. The World Health Organization (WHO; 1983) defined self-care as “the activities individuals, families, and communities undertake with the intention of enhancing health, preventing disease, limiting illness, and restoring health” (p. 181). Self-care also is defined as a “naturalistic decision making process involving the choice of behaviors that maintain physiologic stability (self-care maintenance) and the response to symptoms when they occur (self-care management)” (Riegel et al., 2004, p. 351). Self-care is situation- and culture-specific; involves the capacity to act and to make choices; is influenced by knowledge, skills,

values, motivation, locus of control and efficacy; and focuses on aspects of healthcare under individual control (Gantz, 1990).

In 1959, Orem developed concepts associated with self-care requirements (Orem, 2003c). She originally described two types of self-care requirements: (a) requirements that are universal to all human beings and (b) requirements that occur relative to health deviations (e.g., chronic illness). Self-care requirements are “an essential or desired input to an individual or the individual’s environment in order to maintain or optimize human functioning” (p. 104). For example, a self-care requirement is that a person adjusts the amount of food eaten relative to the needs and activity of the individual taking external conditions into consideration. According to Orem, meeting self-care requirements requires action on the part of the individual to achieve the goal of optimizing or maintaining health.

In a 1969 discussion of self-care, Orem (2003a) indicated that in order to determine the extent to which a person is able to accomplish self-care in a therapeutic manner, nurses must assess the individual’s physical limitations to design ways to compensate and the ability of the patient to overcome the limitations. Orem initially described four types of nursing systems: (a) wholly compensatory, (b) partially compensatory (supportive), (c) supportive educative, and (d) compensatory educative, with the degree of compensation related to the extent of the individual’s limitations. In 1978, Orem (2003b) further narrowed the four self-care nursing systems to three. She described three of these nursing systems as:

- *Wholly compensatory*: self-care agency is not interactive or is negatively interactive with self-care demand. It may be interactive with nursing agency. Nursing agency is interactive with the self-care demand in generating a system of action that meets the demand and at the same time is operative to protect and preserve the person’s self-care agency. (p. 115)
- *Partially compensatory*: Both self-care agency and nursing agency variables are interactive with self-care demand, and nursing agency will be directed to assist the person to withhold use of or further develop self-care agency. (p. 115)

- *Supportive educative system*: Nursing agency is interactive with self-care agency and self-care agency is interactive with self-care demand. (p. 115)

While Orem discussed nurses' actions in helping increase patients' self-care agency, Barofsky (1978) provided practical aspects of what activities individuals had to be able to perform to operate in this capacity. Self-care practices of individuals are influenced by a complex interaction of biological and psychosocial factors. The seminal work of Barofsky (1978) divided self-care activities into four types:

1. Regulatory self-care, which can include day-to-day activities such as eating sleeping, and bathing,
2. Preventative self-care, which can include exercise, dieting, and brushing teeth,
3. Reactive self-care, which is responding to symptoms without a physician's intervention, and
4. Restorative self-care, which can include both a behavior change and compliance with a professionally prescribed treatment regimen.

To meet the demands of self-care, Orem (2001) further delineated three requisites: (a) universal requisites, which are created by life processes and needed by all humans for the maintenance of the integrity of human structure and function, including water, air, food, social interaction, rest, and protection; (b) developmental self-care requisites, which include maturational needs adjusted to developmental stage (e.g., pregnancy, adolescence), and situational needs that stem from life events which left alone would impede human development; and (c) health-deviation self-care requisites, which are associated with genetic and constitutional defects, human structural and functional deviations, and medical treatments.

Incorporating aspects of Barofsky's (1978) self-care activities and Orem's (2001) self-care requisites, a practical definition of self-care is "*the practice of activities that individuals initiate and perform on their own behalf in maintaining health, life, and well-being*" (Orem,

2001, p. 43). The words, *health*, *life*, and *well-being*, within this definition provide a rationale for nurses to participate in and encourage the self-care process of individuals. Nurses have the knowledge and understanding to promote health through teaching the disease process and suggesting activities and behaviors that can improve outcomes, ultimately leading to a longer, healthier life and enhanced overall well-being.

Historical Perspectives on Self-Care

Self-care, as a function of society, has been practiced since ancient times. Primitive cultures developed healing rituals involving consumption of foods thought to be beneficial long before physicians began encouraging a balanced diet. Women assisted one another during childbirth and passed their knowledge to the next generation without having a written birth plan to guide the process (Feldhusen, 2000). Traditions and rituals regarding self-care have evolved over time and are still in practice in modified forms in modern societies. For example, many Jewish people living in Europe in the Middle Ages avoided the Bubonic Plague through ritualistic hand washing and preparation of food. These self-care rituals protected the culture from annihilation that swept Europe at that time (Freeman & Abrams, 1999). Self-care practices are endorsed both in popular and research literature that provide ways to improve oneself both mentally and physically. In addition, support groups (e.g., Alcoholics Anonymous and Weight WatchersTM) have been established to help individuals engage in self-care to improve their overall health.

As a phenomenon, self-care has been widely researched and examined. Medicine, psychology, health education, sociology, public health, business administration, the insurance industry, and nursing have developed uses for self-care practices. Self-care has even been described as a social movement, sparking ongoing debate about political processes (Schiller & Levin, 1983). Such debates have resulted in corporations providing workers with monetary

reimbursements for engaging in healthier life-style behaviors, such as joining a gym, or participating in an organized sports league.

Research has led to the development of theories and models of self-care behavior in psychology and nursing. Bandura published *Social Foundations of Thought and Action: A Social Cognitive Theory* in 1986. This book expresses Social Cognitive Theory (SCT), which is a model that explains the nature of behavioral change within the context of larger social structures. The nature of *human agency*, or the ability to control life events, is explained as a reciprocal relationship between behavior, interpersonal factors (cognitive, affective, biologic), and external factors (Bandura, 1986).

Pender's Health Promotion Model, originally published in 1987, is a nursing framework that serves as "a guide for exploration of the complex biopsychosocial processes that motivate individuals to engage in health behaviors, directed toward the enhancement of health" (Pender, 1996, p. 51). This nursing framework has been used in over 100 research studies to date (Pender, Murdaugh, & Parsons, 2005).

Nursing has embraced the idea of self-care since the 1950s (Denyes, Orem, & Bekel, 2001) when Orem began formulating her theory regarding nursing and self-care. Orem first used the idea of self-care in 1956 in her definition of nursing. In 1959, the concept of self-care was published as part of a guide for developing a curriculum for practical nurses. A decade's worth of work with other colleagues resulted in a formal articulation of her ideas in 1971 in a book entitled *Nursing: Concepts of Practice*. The second edition of her book, published in 1980, further refined and extended the theory of self-care. Orem's (2001) Self-Care Deficit Nursing Theory (SCDNT) is:

. . . descriptively explanatory of the *relationship* between the action capabilities of individuals and their demands for self-care or the care demands of children or adults who are their dependents. *Deficit* thus stands for the relationship between the action that individuals should take (the action demanded) and the action

capabilities of individuals for self-care or dependent-care. *Deficit* in this context should be interpreted as a *relationship*, not as a human disorder. (p. 149).

More than 400 nursing research reports that have made reference to Orem's theory have been cited in the CINAHL database to date. Many of these papers featured self-care within the perspective of a chronic illness.

Chronic Illness

Self-care in the context of chronic illness is particularly challenging given the need for lifelong commitment to undertaking activities to maintain life and improve health. More than 50% of Americans say they have one or more chronic illnesses (Easton, 2009). Commonly studied chronic illnesses include diabetes, heart disease (including HF), hypertension, chronic obstructive pulmonary disease (COPD), and end-stage renal disease (ESRD). Chronic illness is defined as “*the medical condition or health problem with symptoms or limitations that require long-term management*” (Frietas & Mendes, 2007, p. 592). Frietas and Mendes further explain that chronic illness involves permanence and a deviation from normalcy, affecting aspects of everyday life, including physical, psychological, and social abilities. Chronic illness self-care activities include but are not limited to: following up with medical care, self-monitoring (e.g., glucose checks for diabetes, blood pressure monitoring for hypertension), taking medications properly, adhering to diet and exercise regimens, and smoking cessation (Katon & Ciechanowski, 2002). Activities associated with self-care also include seeking information regarding the chronic illness either through media sources or friends, self-advocacy, and working with medical professionals or family members (Loeb, 2006).

Heart Failure

Heart failure (HF) is a widely studied chronic illnesses and is a common diagnosis for hospitalized adults 65 years and older (Schnell, Naimark, & McClement, 2006.) HF is defined as “*a progressive and debilitating clinical syndrome characterized by an inability of the heart to*

deliver enough oxygen and nutrients to meet the body's metabolic needs" (Rockwell & Riegel, 2001, p. 18). This chronic illness results in the characteristic pathophysiologic changes of vasoconstriction and fluid retention and is characterized by ventricular dysfunction, reduced exercise tolerance, diminished QOL, and shortened life expectancy (House-Fancher & Foell, 2007). Symptoms of HF commonly include shortness of breath, swelling, and fatigue (Riegel & Carlson, 2002).

Statistics regarding HF are readily available. For example, in 2005 the prevalence for HF in adults age 20 and over was 5,300,000, with about half of the incidence involving women (American Heart Association [AHA], 2008). African Americans have a higher incidence of HF, develop HF at an earlier age, and experience higher rates of mortality related to HF than Caucasians. The health disparities for African American men and women with HF are clearly demonstrated in statistics reflecting excess morbidity and mortality. In the U.S., approximately 4.2% of the African American women, compared to 1.8% of Caucasian women, are living with HF (AHA 2009a, c, d). *Total mention death rate* for heart failure (HF listed on a death certificate as either the cause of death or a contributing factor) is highest for African American men (81.9 per 100,000 deaths) followed by Caucasian men (62.1 per 100,000). The African American female death rate for HF (58.7) is 15 points higher than for Caucasian women (43.2; AHA, 2009a, c, d). The estimated financial cost of HF in the United States in 2008 was \$34.8 billion.

While the financial cost of HF is high, so is the human cost. Saunders (2009) identified social isolation, physical exhaustion, sleep deprivation, and anxiety among caregivers of HF patients. Patients experience social and psychological decline as their disease progresses (Murray, Kendall, Grant, Boyd, Barclay, & Sheikh, 2007). Between 14% and 37% of HF patients experience depression (Bekelman et al., 2007) and between 45% and 82% of HF patients

experience insomnia (Skotzko, 2009), which can lead to daytime fatigue and decreased activity. Twenty-two percent of HF caregivers also showed symptoms of depression (as measured by the Geriatric Depression Scale; Barnes et al., 2006).

In 2005, there were more than 1,000,000 hospital discharges for individuals with HF, an increase of 171% since 1979 (American Hospital Association, 2008). As more people are being discharged from hospitals with HF, an urgent need exists for the health care system and HF patients in particular, to prevent future admissions. Engaging in self-care behaviors can prevent future readmissions for HF patients as well as reducing symptoms of HF. Self-care among people with HF includes both maintenance and management activities. *Maintenance activities* refer to healthy lifestyle choices, such as exercising and smoking cessation (Moser & Watkins, 2008), and treatment adherence behaviors such as daily weighing, restricting sodium intake, and taking daily medications (Riegel, Vaughan Dickson, Goldberg, & Deatrck, 2007). *Self-care management activities* require “cognitive process[es] and actions that include recognizing symptoms of worsening HF and performing self-care strategies [when these symptoms are recognized] such as cutting down on salt intake or taking an extra diuretic” (Moser & Watkins, 2008, p. 206). A major component of the self-care process involves decision making. Riegel, Carlson, and Glaser (2000) conceptualized stages in the decision making process as (a) recognizing a change; (b) evaluating the change; (c) implementing a treatment strategy; and (d) evaluating the treatment strategy. While not necessarily linear, these stages of decision making are an integral part of performing self-care.

Depression has been widely studied in the HF population, with estimates of depression ranging from 30% to 50%. (Koenig, Vandermeer, Chambers, Burr-Crutchfield, & Johnson, 2006; Friedmann, et al, 2006; Sherwood et al., 2007). Depressive symptoms in HF individuals have been associated with physical limitations resulting from the HF, the intrusiveness of the

disease on the individual's life, maladaptive coping, and decreased HF self-efficacy (Paukert, LeMaire, & Cully, 2009).

Depression

The *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR; American Psychiatric Association [APA], 2000) conceptually defines depression as a period in which there is either depressed mood or loss of interest or pleasure and at least four other symptoms, such as problems with sleep, eating, energy, concentration, and self-image that reflect a change in functioning that lasts for two weeks or longer. Commonly, people experience depressive symptoms that can be characterized as loss of interest, feelings of worthlessness, withdrawal from social interactions, and loss of hope. Somatic symptoms, such as weight loss, insomnia, loss of energy, and decreased concentration are also experienced when depressed (Koenig, 2007). Eller and colleagues (2005) describe depressive symptoms that also include feelings of overwhelming sadness, a sense of futility, fear and worry regarding life and death, lack of motivation, confusion, and suicidal ideation.

Reports on the prevalence of depression presented in published studies indicate that depression affects approximately 18.8 million Americans each year. Analysis suggests that 15% of the population can be expected to experience functional depression at some time during their lifetime (*American Psychiatric Association, Media Relations Guide for Psychiatric Physicians*, 2008). *Major Depressive Disorder* (MDD) is the leading cause of disability in the U. S. among people from 15 to 44 years of age (WHO, 2004). MDD is the fourth leading cause of disability worldwide based on disability-adjusted life-years (DALYs; Ustun, Ayuso-Mateos, Chatterji, Mathers, & Murray, 2004). By 2020, MDD is projected to be the second leading cause of global disability based on DALYs and the foremost cause of disease burden in developed nations (Murray & Lopez, 1996). Depression often co-exists with other chronic illnesses, such as: heart

disease (including HF), stroke, cancer, HIV/AIDS, diabetes, and Parkinson's disease (National Institute of Mental Health, [NIMH] 2007.) Depression is thought to be more common among women than men, possibly resulting from biological, life cycle, hormonal, and psychosocial factors unique to women (NIMH, 2008.)

Among African Americans, lifetime MDD is observed to occur in 10.4% of the population. Over a 12-month period, persistent MDD occurs in 56.5% of the African American population as compared to 38.6% of the Caucasian population (Williams et al., 2007). African-American females are diagnosed with MDD at approximately twice the rate of their male peers. In African American women with HF, the increase in the prevalence of depression can lead to even less involvement in daily activities of self-care, and can result in additional health setbacks to an already vulnerable population.

Spirituality

People engaging in self-care activities have to be concerned with the physical body, as well as human emotional and spiritual aspects. Themes common in the spirituality literature involve relations to other people; awareness of a higher being; and recognition of the broader world. Phrases used to characterize spirituality include: accepting others, even when they do things that are wrong (McCauley, Tarpley, Haaz, & Barlett, 2008); being able to interact with people (Cooper, Brown, Vu, Ford, & Powe, 2001); and seeking forgiveness (Blumenthal et al., 2007). Acknowledgement of and relationship with a higher being, (e.g. God, Allah, Waheguru, Vishnu or Shiva) (Musgrave, Allen, & Allen, 2002) is exemplified by these types of statements: feeling God's presence (Mofidi et al., 2007); a higher power cares for me (Simoni & Ortiz, 2003); and God can heal people of their injuries and diseases (Gonnerman, Lutz, Yehieli, & Meisinger, 2008). Spirituality related to the greater world are evidenced by descriptions such as: connectedness to self, others, nature and the world (Dessio et al., 2004); touched by the beauty of

creation (McCauley, Tarpley, Haaz, & Barlett, 2008); transcendence (Craig, Weinert, Walton, & Derwinski-Robinson, 2006) and that people are part of something much larger (Daaleman, Cobb, & Frey, 2001). Based on the works of these authors, spirituality was defined in this study as *the beliefs a person holds related to their subjective sense of existential connectedness including beliefs that reflect relationships with others, acknowledge a higher power, and recognize an individual's place in the world, and lead to spiritual practices.*

Spirituality varies widely across races, genders, cultures, and among individuals. A review of literature found that through history, church facilities (regardless of denomination) have been the predominant social center of the African American community. This may be due largely to centuries of racial inequalities and discrimination (Krause, 2008; Ellison, Trinitapoli, Anderson, & Johnson, 2007). Krause (2004) stated that the African American church has kept the legacy of slavery alive and stressed the importance of ancestry through oral and written history, as well as music. According to Watlington and Murphy (2006), African Americans use the church to provide positive role models along with a sense of community. African American women are socialized into the church community at younger ages than their male counterparts. African American churches are informal hubs of social networks as well as formal groups (Ellison et al., 2007) providing varying means of support for African Americans thus keeping them linked to the church.

African American spirituality has been widely reported in the literature. Holt, Lukwago, and Kreuter (2003) observed that African Americans in their study reported relying on God to do what physicians or modern medicine cannot; working together with God for good health; and being empowered by their religion to take care of themselves. Banks-Wallace and Parks (2004) found that prayer was used commonly to communicate with God. African Americans in their study talked with God about all aspects of their lives, which allowed them to contemplate the

meaning of their lives, seek guidance, share their true emotions, experience release from the pressures of the world, receive nurturing, and effect change. In one study, African Americans reported that divine intervention and miracles occur more often than Caucasians (Johnson, Elbert-Avila, & Tulskey, 2005).

Spirituality also has a powerful influence on health beliefs, practices, and outcomes among African Americans. African Americans, in contrast to Caucasians, are more likely to engage in spiritual practices as coping mechanisms for acute and chronic illnesses, with these practices positively influencing their health and overall QOL (Newlin, Knafl, & Melkus, 2002).

Quality of Life

Quality of life is an individually defined and perceived state. For the purpose of the present study, QOL was defined using the the World Health Organization [WHO], definition “an individual’s perception of their position in life in the context of the culture and value system in which they live and in relation to their goals, expectations, standards, and concerns” (WHOQOL, 1994, p. 28). QOL is a construct that often is used in research of chronic illness. Ratings of QOL within the context of a chronic illness often depend on subjective responses to the changes produced by the disease (McMahon, 2002). QOL is a multidimensional concept that encompasses physical, emotional, and social effects on the individual’s perception of daily life.

Purpose of the Study

Quality of life is an important outcome measure for patients with HF. African American men and women with HF face life with a chronic illness. Their ability to cope with this illness may be related to their perceived spirituality, levels of depression, and ability to engage in self-care for their condition. A substruction of Orem’s theory to incorporate spirituality and spiritual self-care into the SCDNT was tested to determine the influence of spirituality on self-care that could lead to positive perceptions regarding QOL. The purpose of this study was to extend the

concept of spirituality and spiritual self-care within a self-care perspective that contributes to the QOL of African American men and women diagnosed with HF.

Hypotheses

The following hypotheses were tested:

- H₁: Levels of chronic illness self-care for heart failure will mediate the relationship between spirituality and quality of life among African American men and women who are being treated for HF.
- H₂: Levels of chronic illness self-care for heart failure will mediate the relationship between spirituality and physical and mental health among African American men and women who are being treated for HF.
- H₃: Levels of spiritual self-care will mediate the relationship between spirituality and QOL among African American men and women who are being treated for HF.
- H₄: Levels of spiritual self-care will mediate the relationship between spirituality and physical and mental health among African American men and women who are being treated for HF.
- H₅: A relationship exists between levels of spirituality, spiritual self-care, chronic illness self-care for heart failure, physical and mental health, and QOL among African American men and women who are being treated for HF.
- H₆: QOL for African American men and women being treated for HF can be predicted from demographic variables, such as age, gender, marital status, educational level, work status, previous religious background, length of time since diagnoses of heart failure, and self-reported physical and mental health statuses.

Significance of the Study

According to Orem (2001), self-care is an important component of treatment for chronic illness. Self-care embodies the whole patient, physically, mentally, and emotionally. This study expands Orem's self-care theory to include spiritual self-care as a contributing factor in QOL. Understanding patients' perceptions of the role of spiritual self-care in managing their chronic illness, specifically HF, nursing plans can be developed that incorporate spiritual self-care.

The findings of this study will be useful in developing nursing practices that incorporate spiritual self-care for patients with chronic illness, specifically HF. The medical profession needs to recognize the role of spirituality in helping patients cope with their chronic illness. The study results also contribute to the development of nursing science by explaining concepts of spirituality and spiritual self-care within an extant nursing theory. The findings are relevant for nursing practice to provide nurses with guidance in assessing and intervening to meet the spiritual needs of patients. Nursing knowledge generated from the results of this study will be useful in self-care management by people diagnosed with HF. Exploring the relationship between spirituality, spirituality self-care, chronic illness self-care, and physical and mental health along with QOL outcomes provides new insights into holistic care for patients with HF. While the present study focuses on HF, the findings are applicable to other chronic illnesses that are becoming more prevalent.

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

This chapter contains a comprehensive review of literature related to self-care of individuals with chronic illness, focusing specifically on heart failure (HF) in African Americans. Electronic data bases were accessed to obtain research and theoretical articles on self-care, HF, spirituality, depression, and quality of life (QOL). Each of these major topics includes subsections on chronic illness and African Americans.

Self-Care

Self-care is a complex and multidimensional concept that has been widely researched in health care. The World Health Organization (WHO, 1983) defined self-care as “*the activities individuals, families, and communities undertake with the intention of enhancing health, preventing disease, limiting illness, and restoring health*” (p. 181). Self-care also has been defined as a “*naturalistic decision making process involving the choice of behaviors that maintain physiologic stability (self-care maintenance) and the response to symptoms when they occur (self-care management)*” (Riegel et al., 2004, p. 351). The self-care concept is situation- and culture-specific; involves the capacity to act and make choices; is influenced by knowledge, skills, values, motivation, locus of control, and efficacy; and focuses on aspects of healthcare under individual control (Gantz, 1990).

Self-care is defined as a social movement and not in terms of specific health-related behaviors and activities (Orem, 2001). Social movements of the 1960s (e.g., women's movement and consumerism) created a new interest in self-care. A change from the patronizing physician-dominated healthcare also took place, with American society becoming increasingly interested in the self-care movement. This interest resulted from a number of shifts in healthcare practices,

including a change in disease patterns from acute to chronic illnesses; a change in emphasis from cure to care; an increasing discontent with excessive technology and depersonalized medical care; an increase in lay knowledge; a desire for greater personal control in interactions with health care providers (HCPs); a need to control escalating health care costs; an increased level of education and knowledge among the general population; a broader dissemination of health-relevant information; a greater emphasis on consumer rights; and an increasing knowledge about the importance of lifestyles for longevity and QOL (Orem, 2001). Self-care is “. . . the practice of activities that maturing and mature persons initiate and perform, within time frames, on their own behalf in the interests of maintaining life, healthful functioning, continuing personal development, and well-being, through meeting known requisites for functional and developmental regulations” (Orem, p. 522). Self-care behavior, a key concept in health promotion, refers to decisions and actions that individuals can take to maintain overall health and well-being or to cope with health problems or improve their health. Self-care behaviors can be used by both healthy people and those with chronic or acute illnesses. Self-care is generally viewed as a complement to clinical health care for people with chronic illnesses. Self-care behavior is, however, more than just following a doctor's advice. They have to be able to apply the knowledge learned from past treatments or actions that have worked in the past to control their disease process. Examples of self-care behaviors include: seeking information; exercising; seeing health care providers on a regular basis; getting more rest; lifestyle changes; following low fat diets; monitoring vital signs; and seeking advice through lay and alternative care networks, evaluating information, and making decisions about whether to act or do nothing.

Since the 1950s, nursing has adopted the concept of self-care (Denyes, Orem, & Bekel, 2001). During this period, Orem began developing a theory of self-care. She used the concept of

self-care in 1956 in her definition of nursing. Concepts regarding self-care were published in 1959 as part of a guide for developing a curriculum for practical nurses.

Orem (2003) articulated concepts associated with self-care requirements. She initially described two types of self-care requirements: (a) requirements that are universal to all human beings and (b) requirements that occur relative to health deviations (e.g., chronic illness). Self-care requirements are “an essential or desired input to an individual or the individual’s environment in order to maintain or optimize human functioning” (p. 104). For example, a self-care requirement is changing the amount of food eaten relative to the needs and activities of an individual taking external conditions into consideration. According to Orem, meeting the self-care requirements call for actions on the part of the individual to achieve the goal of optimizing or maintaining health.

Universal self-care requisites are needed by all people and at all stages of development. These needs are basic and common to all humans, are constantly present, and must be met to achieve optimal health and well-being. Orem (2003) identified eight universal self-care requisites as:

1. The maintenance of a sufficient intake of air.
2. The maintenance of a sufficient intake of water.
3. The maintenance of a sufficient intake of food.
4. The provision of care associated with elimination processes and excrements.
5. The maintenance of a balance between activity and rest.
6. The maintenance of a balance between solitude and social interaction.
7. The prevention of hazards to human life, human functioning, and human well-being.
8. The promotion of human functioning and development within social groups in accord with human potential, known human limitations, and the human desire to be normal. Normalcy is used in the sense of that which is essentially human

and that which is in accord with the genetic and constitutional characteristics and talents of individuals. (p. 225)

Developmental self-care requisites occur at different times across the life span. As identified by Orem (2003), the developmental self-care requisites are:

1. The intrauterine stages of life and the process of birth.
2. The neonatal stage of life when an individual is (a) born at term or prematurely and (b) born with normal or low birth weight.
3. Infancy.
4. The developmental stages of childhood, including adolescence and entry into adulthood.
5. The developmental stages of adulthood.
6. Pregnancy in either childhood or adulthood. (p. 230)

Health-deviation self-care requisites are associated with genetic and constitutional defects, human structural and functional deviations, and medical treatments. Health-deviation self-care requisites occur during illness or when an individual feels the threat of an illness. Orem (2003) identified the health-deviation self-care requisites as:

1. Seeking and securing appropriate medical assistance in the event of exposure to specific physical or biologic agents or environmental conditions associated with human pathologic events and states, or when there is evidence of genetic, physiologic conditions known to produce or be associated with human pathology.
2. Being aware of and attending to the effects and results of pathologic conditions and states, including effects on development.
3. Effectively carrying out medically prescribed diagnostic, therapeutic, and rehabilitative measures directed to preventing specific types of pathology, to the pathology itself, to the regulation of human integrated functioning, to the correction of deformities and abnormalities, or to compensation for disabilities.
4. Being aware of and attending to or regulating the discomforting or deleterious effects of medical care measures performed or prescribed by the physician, including effects on development.
5. Modifying the self-concept (and self-image) in accepting oneself as being in a

particular state of health and in need of specific forms of health care.

6. Learning to live with the effects of pathologic conditions and states and the effects of medical diagnostic and treatment measures in a lifestyle that promotes continued personal development. (p. 235)

Any deviation in these requisites because of individuals' inability to maintain their normal healthy states due to a chronic illness requires a change in self-care practices in order to return that individual to their healthy state (Orem, 2001).

Self-Care and Chronic Illness

Chronic illness is defined as "*the medical condition or health problem with symptoms or limitations that require long-term management*" (Frietas & Mendes, 2007, p. 592) and implies permanence and a deviation from normalcy that affect aspects of everyday life, including physical, psychological, and social abilities. According to Finseth (2009), a chronic illness typically lasts for longer than three months.

Globally, chronic illnesses are expected to account for 17 million deaths among individuals under the age of 70 by 2015 (Strong, Mathers, Leeder, & Beaglehole, 2005). More than 80% of the burden for chronic diseases occurs in people under the age of 70 years. Cardiovascular disease accounts for 20% of the global total disability adjusted life years (DALYs) in those older than 30 years (Strong et al.). Chronic illnesses are health problems that affect individuals all over the world and place substantial liability on individuals, as well as governments that support health care costs. In the United States (U. S.), life expectancy hit a new high in 2005, as deaths from circulatory diseases and cancer continued to decline (Goetzel, 2009). Individuals are living longer, but are more likely to experience chronic illnesses including cancer (9.8 million), diabetes (20.8 million), and heart disease (71.3 million; Ayers & Kronenfeld, 2007). Most affected individuals have more than one chronic illness, with 80 million Americans expected to have multiple chronic conditions by 2020 (Wolff, Starfield, & Anderson,

2002). Treatment for these chronic illnesses accounts for 75% of the total U. S. healthcare cost (Ayers & Kronenfeld, 2007). Chronic illnesses are associated with increased sick time, fewer days worked or the inability to work at all, and higher levels of depression (Loeb, 2006).

Self-care for chronic illnesses has been defined as “those activities that persons engage to manage ongoing limitations in structural or functional integrity. Chronic illness self-care focuses on meeting health-deviation requisites in addition to universal and developmental requisites” (Frietas & Mendes, 2007, p. 592). These behaviors could include: following up with medical care, self-monitoring (e.g., glucose checks for diabetes, blood pressure readings for hypertension), taking medications properly, adhering to diet and exercise regimens, and smoking cessation (Katon & Ciechanowski, 2002). Activities also may include seeking information regarding the chronic illness either through media sources, friends, or family; and self-advocacy either with medical professionals or family members (Loeb, 2006). Some goals of self-care is to control the disease progression, avoid hospital admissions, and have an improved QOL.

Compared to Caucasian counterparts, African Americans experience chronic illness at higher rates with poorer outcomes (Gitlin et al., 2008). Generally, African Americans experience poorer physical health and greater functional disability; are at higher risk for disabling conditions; and are more likely to be diagnosed with serious health conditions (e.g., stroke, diabetes, cancer, and cardiovascular disease). African Americans also tend to have higher rates of obesity and hypertension than Caucasians. These factors can contribute to the development of HF.

Many chronic illnesses are preventable for both African Americans and Caucasians. Lifestyle modifications, such as improved diet, exercise, weight loss, and smoking cessation, can reduce the risk of several chronic illnesses, such as diabetes, cardiovascular disease, and cancers (Paez, Zhao, & Hwang, 2009). However, African Americans experience unequal access to goods

and services that could help reduce chronic illnesses. Goods including healthy foods, such as fresh fruits and vegetables, are not always available in economically-disadvantaged and racially-segregated neighborhoods because a fully-stocked grocery store may not be in close proximity. Services, including workout facilities to promote exercise, or sources of affordable healthcare are not available in many neighborhoods. As these goods and services are not readily available, African Americans may experience additional health disparities related to access issues (Becker, Gates, & Newsome, 2004.).

The increase in chronic illnesses makes health promotion a formidable task. HF is a common chronic illness that affects many people and is an important part of the public health crisis in chronic illness management in America (Jessup et al., 2009).

Heart Failure

HF is defined as “a progressive and debilitating clinical syndrome characterized by an inability of the heart to deliver enough oxygen and nutrients to meet the body’s metabolic needs” (Rockwell & Riegel, 2001, p. 18). HF is a leading cause of morbidity and mortality in the United States affecting 5 million people. An additional 550,000 individuals are diagnosed with this chronic illness each year (Rathore et al., 2003). Basic understanding of this condition is necessary to understand the chronic nature of HF and the self-care required to achieve QOL for people living with HF.

Pathophysiology

The heart is a muscle approximately the size of a person’s fist. It pumps blood to the body that carries oxygen to the body systems and deoxygenated blood back to the heart; with this cycle repeating 60 to 100 times per minute in the normal heart. In HF, the heart’s muscle is damaged due to another chronic illness or a virus. Over time, the heart muscle enlarges, becomes weaker, and is unable to pump blood adequately throughout the body. This pump failure results

in a decrease in oxygenated blood to vital organs and tissues of the body and cannot pump blood back to the heart against gravity (AHA, 2009b). HF causes fluid back-up in the circulatory system of the body, much like a sump-pump backup in a house. If the pump does not work properly, water backs up onto the floor, in the same way that fluid backs up into the lungs and results in breathing difficulty, even at rest. Common symptoms of HF include: fluid retention; swelling of the lower extremities; weight gain; generalized weakness and fatigue; shortness of breath; lack of appetite, nausea; confusion, impaired thinking; and increased heart rate (AHA, 2009b). HF is a progressive chronic illness that limits physical and cognitive functioning over time. The downward spiral of HF usually ends in death within eight years for individuals diagnosed under the age of 65 years.

Causes of Heart Failure

The causes of HF can be divided into primary and secondary types. Primary causes are directly related to the heart and can be classified as either chronic or acute. Chronic causes of HF include coronary artery disease (CAD), hypertension (HTN), rheumatic and congenital heart disease, cardiomyopathy, anemia, and valvular disorders (House-Fancher & Foell, 2007). In contrast, acute causes can include acute myocardial infarction (AMI), dysrhythmias, pulmonary emboli, hypertensive crisis, ventricular septal defect, and myocarditis. Secondary causes of HF are indirect and usually related to metabolic changes or failure in other body organs that increase the workload of the ventricles and lead to a decompensated condition that decreases myocardial function. These causes include anemia, infection, thyrotoxicosis, hypothyroidism, dysrhythmias, bacterial endocarditis, pulmonary disease, and nutritional deficiencies. HF can be manifested in left-sided HF, right-sided HF, and in the advanced disease process, failure of both sides of the heart.

Right-Sided Versus Left-Sided Heart Failure

Right-sided HF manifests with heart murmur, edema, weight gain, increased heart rate, ascites (i.e., fluid accumulation in the abdomen), anasarca (i.e., severe edema of the body), enlarged liver, fatigue, anxiety, depression, dependent edema, right upper abdominal pain, nausea, loss of appetite, and gastrointestinal bloating. Left-sided HF presents with pulses that are of variable intensity; increased heart rate; enlargement of the left ventricle; pulmonary edema; extra heart sounds; changes in mental status; restlessness; confusion; weakness; fatigue; anxiety; depression; difficulty in breathing; shallow and rapid breathing; paroxysmal nocturnal dyspnea (PND); difficulty breathing while sleeping; cough; nocturia; and frothy, pink-tinged sputum with advanced pulmonary edema. According to House-Fancher and Foell (2007), the advanced disease process may have signs and symptoms of both left-sided HF and right-sided HF. Optimal treatment of HF requires correct diagnosis, identification of potentially reversible causes, appropriate use of medication, and patient education on self-care.

Coronary artery disease (CAD) and hypertension (HTN) also are risk factors that can increase an individual's likelihood for developing HF. Other risk factors for HF include advanced age, coronary heart disease, reduced vital capacity, and cardiomegaly. Risk factors differ for men and women. For example, CAD and systolic HTN are risk factors more commonly associated with men; while left ventricular hypertrophy, diabetes, and HTN are more prevalent among women (Hussey & Hardin, 2005). Obesity and smoking are modifiable risk factors that, if controlled, may delay the onset or prevent HF from occurring.

Racial Differences in Heart Failure

Numerous research studies have been conducted among HF patients of different racial backgrounds (Bahrami et al., 2008; Hussey & Hardin, 2005; Riegel et al., 2008; Smith et al., 2005). African Americans have a higher incidence and prevalence of HF than members of other

racial groups. For example, 4.2% of African American men and 4.2% of African American women in the U. S. are diagnosed with HF (AHA, 2009c) compared to 3.1% of Caucasian American males and 1.8% of Caucasian American females (AHA, 2009d). Prevalence of HF in African Americans is three to seven times higher than in Caucasian Americans (Yancy, 2005). As the incidence of diabetes is higher in African Americans than in other racial/ethnic populations, African Americans are at higher risk for developing HF (Yancy & Strong, 2004). Hypertension, another common chronic condition in the African American community, also is a known risk factor for HF (Kamath & Yancy 2005). HF typically occurs at younger ages among African Americans when compared to Caucasian Americans. This chronic illness is associated with more advanced left ventricular dysfunction, probably related to the higher incidence of hypertension in the African American population and presents with a more severe clinical classification at the time of diagnosis (Yancy, 2003). As a result of these contributing factors, African Americans with HF experience a higher morbidity and perhaps higher mortality (East, Peterson, Shaw, Gattis, & O'Connor, 2004; Yancy & Strong, 2004) although this conclusion remains controversial (Mathew et al., 2005).

Research also has suggested that African Americans metabolize some of the standard pharmacologic treatments for HF differently than other ethnic/racial groups (Kamath & Yancy, 2005) and that pharmacologic metabolism differs between male and female African Americans (Yancy, 2002). For example, within six months of diagnosis, gender differences appear among African American HF patients in echocardiographic characteristics, such as left ventricular end diastolic diameter (LVEDD) and maladaptive cardiac remodeling after a myocardial infarction (MI; Caboral, Feng, & Mitchell, 2003). Other studies suggest that hospitalizations occur more frequently for African American HF patients than Caucasian patients (Deswal, Peterson, Urbauer, Wright, & Beyth, 2006; Lafata, Pladevall, Divine, Heinen, & Philbin, 2004). Hospital

mortality may be lower for African Americans, although disease characteristics generally are more severe for individuals of Caucasian ancestry (Kamath, Drazner, Wynne, Foonarow, & Yancy, 2008). Kamath et al. indicated that African Americans in the community have less access to primary and coordinated health care that is needed to reduce morbidity or mortality. In the hospital, diets, medications, and weights are monitored daily. Variations among individuals of different racial backgrounds including African Americans, with respect to epidemiology, clinical symptoms, genetic make-up, and physiology of endothelial function may influence the disease presentation, therapeutic responses, and outcomes (Shroff, Taylor, & Colvin-Adams, 2007). Studies suggest that when assessing HF patients and developing treatment plans, cultural differences need to be considered to maximize successful inpatient and outpatient care.

Stages of Heart Failure

Characterizing HF by stages is an aid for the health care practitioner (HCP) in explaining the severity of HF to the patient and can help the HCP target treatment plans specific to each patient. Four stages were developed by the American Heart Association in 2001, with each stage having a set of criteria to describe the severity of HF in the individual. Using information from the American College of Cardiology (ACC), the American Heart Association (AHA), and the New York Heart Association (NYHA), the four stages of HF are defined as:

Stage A – Patients have a strong family history of heart problems, high BP, diabetes, renal problems. Lifestyle factors (e.g., alcohol/drug abuse, smoking, sedentary life styles) also are contributing factors. These patients are at risk for developing HF, but have not yet shown signs or symptoms associated with the disease.

Stage B – Patients have been diagnosed with HF, usually through medical tests and patient and family histories. They are not yet experiencing signs or symptoms of HF. Patients at

this stage are usually placed on medication (e.g., ACE inhibitor to lower BP and protect the kidneys).

Stage C – The heart is not functioning properly and the patient notices some symptomology (e.g., overall fatigue, shortness of breath) associated with HF. Medication, along with lifestyle changes (e.g., low sodium, low fat, little to no alcohol, and smoking cessation) are prescribed to delay the progression of HF.

Stage D – Although patients are on medication and have participated in therapy, they continue to show signs and symptoms of HF. These patients require strict monitoring of BP, daily weight, and adherence to lifestyle factors including diet and exercise. Surgical options, such as basic pacemaker, biventricular pacemaker, heart transplant, etc., may be required to control the severity of symptoms of HF (McCormick, 2007-2008b).

Functional Capacity

In 1928, the New York Heart Association published classifications for patients with cardiac disease based on clinical severity and prognosis. These classifications have been updated several times leading toward the most recent classes published in 2007-2008 by the American Cardiology Association (ACA) and the American Heart Association (McCormick, 2007-2008a). These classifications are based on two terms: functional capacity and objective assessment. *Functional capacity* is assessed based on the patient's symptoms, on the health care practitioner's experience and ability to recognize symptoms. Functional capacity is an estimate of what the individual's heart will allow the patient to do. A recommendation for physical activity is based on the amount of effort possible without discomfort, as well as the nature and severity of the disease. *Objective assessments* are based on specific clinical tests and/or measurements, such as electrocardiograms, stress tests, x-rays, echocardiograms, and radiological images. Taken together, these classifications of HF can help HCPs understand the patient's ability to perform

adequate self-care for HF leading to QOL that includes improved health and increased life spans (American Heart Association, 1994; McCormick, 2007-2008a).

According to McCormick (2007-2008a), the National Heart, Lung, and Blood Institute developed estimates of the percentage of patients in each class. These percentages are provided along with the description of each class.

Class I: Patients have no limitations on physical activity. Ordinary physical activity does not cause fatigue, dyspnea, palpitations, or angina pain. No objective data has been found to support a diagnosis of HF although patient may have elevated BP. (35%)

Class II: Patients experience slight limitations on physical activity, especially when bending over or walking. No symptoms at rest. Ordinary physical activity results in fatigue, dyspnea, palpitations, or anginal pain. Objective tests (e.g., echocardiogram, stress test, EKG) provide evidence of minimal cardiovascular disease (CVD). Through exercise and lifestyle changes, the patient is able to control the disease. Medications, such as ACE inhibitors or Beta Blockers to control BP and reduce the work of the heart, may be used to control symptoms. (35%)

Class III: Definite limitations during physical activity can result in fatigue, dyspnea, palpitations, or angina pain. Objective data obtained from echocardiograms, stress tests, and EKGs can provide evidence of moderately severe CVD. HCP may monitor the patient's diet and exercise regimen. To reduce water retention, diuretics may be prescribed. These patients usually are comfortable at rest. (25%)

Class IV: Patients have difficulty in performing any type of physical activity without discomfort. Symptoms of cardiac insufficiency or angina may be present even at rest. Objective data of echocardiogram, stress tests, EKG, cardiocatherization provide additional evidence of

severe CVD. If any physical activity is undertaken, discomfort is increased. Surgical interventions may be considered to relieve symptoms. (15%)

Treatment of Heart Failure

Clinical practice guidelines published for the treatment of HF patients should be used when developing treatment programs (Jessup et al., 2009). The treatment of HF is based on clinical symptoms observed in patients and may not be dependent on the underlying causes of HF. Clinical symptoms include: fatigue, dyspnea, tachycardia, edema, nocturia, skin changes, behavioral changes, cognitive changes, chest pain, and weight changes. More severe complications of HF include pleural effusion, dysrhythmias, left ventricular thrombus, hepatomegaly, and renal failure. These more severe complications often require multiple hospitalizations. In the chronic HF situations, clinical care may include some or all of the following in outpatient settings: oxygen therapy, rest-activity periods, drug therapy, daily weights and/or blood pressures, and dietary restrictions, as well as monitoring HF symptoms, avoiding alcohol and tobacco, and obtaining routine vaccinations (House-Fancher & Foell, 2007). An important component of the clinical practice guidelines includes an educational intervention through both written instructions and verbal teaching prior to hospital discharge. An outpatient treatment plan should be developed that includes specific instructions regarding signs and symptoms of significant HF and should be explained to the patient and family members so they can initiate self-care as a component of their treatment (Jessup et al., 2009).

Self-Care in Heart Failure

Self-care in HF is the primary basis of treatment. For chronically-ill HF patients, self-care can seem overwhelming and all consuming. For most patients with HF, HCPs routinely advise patients about obtaining daily weights, monitoring swelling, taking medications, eating a low-sodium diet, obtaining routine vaccinations (e.g., yearly flu vaccine), exercising daily, and seeing

their HCP regularly. However, research is needed to determine if these actions achieve the goals of improved QOL, better overall health, and reduced hospital admissions. The Heart Failure Society of America (2006) listed six specific recommendations with regard to educating and counseling in their *Comprehensive Heart Failure Practice Guideline*. The recommendations are:

1. Patients and family members receive individualized counseling and education that emphasizes self-care;
2. Patient's literacy levels, cognitive status, psychological state, culture, and access to social and financial resources be taken into account for optimal education and counseling;
3. Educational sessions begin with a thorough assessment of current knowledge of HF and issues that patients want to learn, and patients' perceived barriers to change;
4. Frequency and intensity of patient education and counseling vary according to the stage of illness;
5. Patients, during the care process, should be asked to demonstrate the self-care tasks being asked of him/her;
6. Essential education is provided during acute care hospitalization periods with the goal of assisting patients to understand the disease process and goals of treatment. These lessons are then followed by step-by-step re-education and counseling at and after discharge and reinforced every one to two weeks for three to six months after discharge, with reassessment occurring periodically.

Although not mentioned specifically in these guidelines, spirituality could be included in counseling and educational programs for patients with HF and their families.

Research into what drives self-care behaviors is relatively new, but has increased during the last decade (Riegel, 2008). In 2008, *The Journal of Cardiovascular Nursing* devoted an entire issue to this topic. In general, the success of self-care relies on a variety of personal, cultural, and societal factors that have not been studied extensively. The ability of HCPs to assess patient abilities and deficits and then prescribe a course of self-care compatible with the individual's specific characteristics can help achieve success for the patient. Moser and Watkins (2008) have proposed a life course model of patient characteristics that influence self-care. These characteristics include aging, psychosocial issues, health literacy, current symptom status, and previous experiences that can guide HCPs in evaluating patient ability for self-care in HF.

Riegel and Dickson (2008) have proposed another self-care theory called a situation specific theory of self-care in HF. This emerging theory also has been designed to aid HCPs in assessing individual patient needs and abilities for self-care in HF. Four ideas were proposed and tested as keys toward the successful management of HF self-care. These ideas are (a) symptom recognition provides awareness of the disease progression; (b) self-care is better in a patient who has more knowledge and experience; (c) confidence moderates the relationship between self-care and outcomes; and (d) confidence mediates the relationship between self-care and social support. Preliminary work suggests that this model may be useful to explain and predict HF patient behaviors. However, the present study builds on Orem's (2001) self-care theory, which is more comprehensive for the study of spiritual self-care in chronic illness, specifically HF from a nursing perspective.

According to Evangelista and Shinnick (2008), adherence to self-care for patients with HF is most problematic among those with cognitive and functional impairments and low health literacy. Additional research into these areas is needed. Furthermore, HCPs often lack training to determine the best educational intervention about HF self-care for particular patients. As the

needs of each patient differ, a one-size-fits-all approach is doomed to failure (Albert, 2008). HF patients who participated in a structured educational intervention did better in self-care adherence than those not participating in the intervention (Wright et al, 2003). Most HF patients desire additional information and enhanced communication with their health professionals about prognosis and advanced care planning (Rodriguez, Appelt, Switzer, Sonel, & Arnold, 2008). Patients with advanced HF who are approaching the end of life should be assessed differently from those who are in the early stages of the disease. Successful strategies have yet to be developed for patients with end-stage HF (Zambrowski, 2008). Research on whether self-care in HF actually improves a patient's QOL has yet to be done (Grady, 2008). The role of race/ethnicity in relation to patient success with self-care also has not been fully explored.

The cultural component of self-care adherence has been under-emphasized and under-researched (Becker, Gates, & Newsom, 2004). Race, socioeconomic status, and access to healthcare of individual patients play roles in self-care behavior. Research suggests that individuals' confidence in their ability to manage HF self-care may be related to their cultural background with socioeconomic status and clinical acuity (Blustein, Valentine, Mead, & Regenstein, 2008). A study in Canada found that self-care behaviors were significantly less frequent among native people and their overall self-care behaviors were influenced by psychological status, ethnicity, and comorbidity (Schnell-Hoehn, Naimark, & Tate, 2008). African Americans with no health insurance and limited access to health care were less likely to adhere to self-care behaviors. Although many researchers and health practitioners write about the importance of patient race, ethnicity, and culture on an individual's ability to be successful with self-care behaviors, practically no research or discussion has been done regarding patients' spirituality and its effect on self-care behavior in chronic illness.

Spirituality

American spirituality has been widely studied in the popular media, with Gallup polls asking Americans about their spirituality since 1999 (Gallup, 2003). According to the responses in a 1999 survey, 75% of the respondents indicated they thought of spirituality more as a personal and individual response than in terms of organized religion and church doctrine. In a January 2002 poll, 33% of Americans said they were “spiritual but not religious” (para. 4). Approximately 47% of the respondents in a December 2002 Gallup poll agreed with the statement “I am a person who is spiritually committed” (Gallup, 2003). In 2004, a Gallup poll found that 83% of Americans indicated that religious or spiritual beliefs were important in their lives, and 54% believed that religious beliefs or spiritual practices were having an increasing impact on people’s lives (Banks, 2007). Fifteen percent of Americans who participated in a 2008 poll believed in a higher spirit other than God (Newport, 2008). Gallup (2003) asked Americans to define spirituality in a 2002 poll and found that almost a third of respondents did not mention God or a higher authority in their definitions.

Defining Spirituality

The general public typically has a hard time defining spirituality, with confusion also existing in academia. For example, Dessio et al. (2004) defined spirituality as referring to “a person’s acknowledgement of, and relationship with, a higher being, but can also mean one’s unique sense of connectedness to the self, others, and nature” (p. 189). Burkhardt (1989) described spirituality as:

a process and sacred journey, the essence or life principle of a person, the experience of the radical truth of things, a belief that relates a person to the world, giving meaning to existence, any personal transcendence beyond the present context of reality, a personal quest to find meaning and purpose in life, and a relationship with a sense of connection (p. 70).

Musgrave, Allen, and Allen (2004) claimed that:

. . . it may mean an inner quality that facilitates connectedness with the self, other people, and nature – a relative quality that each person defines uniquely. On the other hand, the traditional definition involves one’s acknowledgement of and relationship with a Supreme Being (p. 557).

Based on this review of common themes, spirituality is defined in the current research as *the beliefs a person holds related to their subjective sense of existential connectedness including beliefs that reflect relationships with others, acknowledge a higher power, and recognize an individual’s place in the world, and lead to spiritual practices.*

The ways in which spirituality are manifested have also been the subject of discussion. In a study with 12 focus group participants, Lewis, Hankin, Reynolds, and Ogedegbe (2007) found three categories of spirituality. The first category, *love in action*, “suggested that spiritual people did not just verbalize their love for other human beings, but actually implemented love” (p. 18). For example, this type of spirituality included feeding people who did not have anyone to cook for them, or giving to others as in volunteer work or sharing one’s experiences. The second category of spirituality, *relationships and connections*, either to other people, an entity, or entities higher than a human being. The higher being most often was God, but was not directly related to structured religion. The third category, *unconditional love*, encompasses helping fellow human beings regardless of their race, ethnicity, sexual orientation, religious background, or health status.

African American Spirituality

In regards to race, spirituality has long been a focus of study in the African American population. Spirituality among African Americans can be empowering and self-motivating, as well as providing coping skills needed for everyday life (Wittink, Joo, Lewis, & Barg, 2008). Spirituality also is recognized as an individual framework that shapes the personhood of many African Americans (Taylor, Chatters, & Jackson, 2009). Spirituality is also more closely related to religion in this population. This relationship is evidenced by the support found in church

attendance that encourages a sense of belonging and provides emotional support from other attendees, thus increasing overall spirituality (Unson, Trella, Chowdhury, & Davis, 2008). A belief in God also is more closely related to spirituality in this population. Cohen, Thomas, and Williamson (2008) found that participants in their study to define spirituality and religion among older adults from three different religious or ethnic backgrounds described spirituality as having a “firmly established faith in God” (p. 291).

Spirituality also has a powerful influence on health beliefs, practices, and outcomes among African Americans. African Americans, in contrast to Caucasians, are more likely to engage in spiritual practices as coping mechanisms for acute and chronic illnesses, with these practices positively influencing their health (Newlin, Knafl, & Melkus, 2002). Polzer and Miles (2005) described spirituality as being “... deeply embedded in their rich cultural heritage. For many African Americans, spirituality is intertwined into all aspects of life, including beliefs about health and illness” (p. 230). Samuel-Hodge et al. (2000) noted that spirituality was seen as a source of emotional support, a positive influence on health, and a contributor to life satisfaction. Banks-Wallace and Parks (2004) found that spirituality allowed African American women to sustain a perspective of well-being, even in the face of health crises. Spirituality and religious spiritual practices of African Americans have been shown to have a positive influence on life satisfaction, empowerment, and health outcomes (Banks-Wallace & Parks).

Spirituality in Health Care

Spirituality, as a focus of health-related research, has received renewed interest in the last few years. Spirituality has been examined in the fields of theology, sociology, psychology, and medicine, with these fields contributing findings, conclusions, and recommendations to the ongoing discussion about spirituality (Como, 2007). Since 1939, EBSCO has used *spirituality* as a keyword in the CINHALL™ database (EBSCO, personal communication, June 26, 2009).

Medline has included *spirituality* as a keyword in its database since 1948 (Medline/PubMed™, personal communication, July 7, 2009). Beginning in the late 1960s, spirituality has been given greater attention, with the Nurses Christian Fellowship and others offering seminars and workshops on the role of nurses in providing spiritual care (Shelly & Fish, 1988).

Heated discussions have arisen, though, of the use of the term *spirituality* within healthcare. The definitions “need to be anchored within a moral view of practice to prevent the potential for co-opting spirituality to serve particular interests” (Pesut, Fowler, Taylor, Reimer-Kirkham, & Sawatzky, 2008, p. 2809). Clarke (2009) stated that:

. . . the way spirituality has been defined and described in the nursing literature over recent decades... has resulted in an approach which has been biased toward creating a unique body of knowledge for nursing to drive the professional aims of nursing, neglecting to make the best use of knowledge from other disciplines and attempting to divorce spirituality from religion. (p. 1672)

Koenig (2008) argued that “spirituality should be defined and measured in traditional terms as a unique, uncontaminated construct, or it should be eliminated from use in academic research” (p. 349). The lack of congruence in defining spirituality leads to vagueness and inconsistency in studies researching spirituality.

Spirituality in Chronic Illness

Despite arguments over definitions of spirituality, it has been widely researched among individuals with chronic illness. Baetz and Bowen (2008) found that among individuals with rheumatoid arthritis, “spiritual transcendence, or the capacity to view life from a more detached perspective” (p. 385) was associated with greater well-being. Hsiao et al., (2008) found that spiritual prayer practices and healing rituals were more frequent among cancer survivors and individuals with chronic illness than healthy individuals. In HIV-infected women, spiritual well-being increased with increased numbers of spiritual practices (Scarinci, Quinn, Grogoriu, & Fitzpatrick, 2009). A qualitative study of individuals with chronic illness found the illness

trajectory inspired a search for meaning and purpose that resulted in a sense of peace and tranquility (Narayanasamy, 2004). In a predominantly African American population with end-stage renal disease, Patel, Shah, Peterson, and Kimmel (2002) found that spiritual beliefs were associated with “decreased perception of burden of illness, decreased depressive affect, increased perception of social support, and higher satisfaction with life and perception of quality of life” (p. 1018.)

Spirituality in Heart Failure

Some recent work suggests that HF patients may have a different spiritual trajectory than those with other types of chronic illness. Whereas many seriously ill people become more spiritual, individuals diagnosed with HF in later stages of the illness process may be less inclined to use prayer and meditation than those in earlier stages (Hardin, Hussey, & Steele, 2003). This difference may be due to the patient focusing more on physiological needs (e.g., breathing or fluid retention) as their health declines. Spirituality also has been observed in individuals with HF that may be manifested as a lack of purpose and meaning, existential anxiety, and distress (Westlake, Dyo, Vollman, & Heywood, 2008).

Black, Davis, Heathcote, Mitchell, and Sanderson (2006) examined spirituality and compliance in HF individuals. Although they found that spirituality may be a coping mechanism for HF individuals, the correlation between spirituality and compliance was not significant. They suggested that nurses realize that while some patients may be more spiritual, spirituality does not necessarily lead to better compliance. Individuals who might not be spiritually inclined actually could be more compliant with recommended regimens. Murray et al. (2007) found that as HF individuals became more dependent and experienced a loss of identity, their spiritual well-being also declined. As the health of individuals with HF in the Murray study declined, some began to question divine judgment. The researchers suggested that clinicians should assess the physical,

social, psychological, and spiritual needs of individuals to provide more holistic care, especially in regard to existential issues that arise during treatment.

Spirituality in African-Americans with Heart Failure

While spirituality has been the focus of research in patients with HF, the African American population has been largely ignored when looking at this relationship. A search of both Medline™ and CINAHL™ data bases using the keyword searches with the terms African American, HF, spirituality, black, African, CHF, heart and failure, religion, religious, religiosity, spiritual, spirituality, spiritualism prayer, and faith yielded five papers going back to 2001. Of these five papers, one specifically investigated the relationship between spirituality and HF. Working with African American participants from the Heart Failure Adherence and Retention Trial (HART), Rucker-Whitaker et al. (2006) conducted five focus group sessions using semi-structured interview questions. The 25 participants included 23 (92%) African American men and women. When asked if spirituality and religion should be incorporated into the group discussions, some participants expressed a strong belief that these topics should not be discussed as they were too personal and not related to their concerns about health. However, other participants talked about their relationship to God and prayer as part of their daily lives, with some using prayer and meditation as coping mechanisms for dealing with their life and their illness. Participants even made a distinction between religion and spirituality, asserting that spirituality was “good for mental health [and that there was] more to healing than just medicine” (p. 281). The lack of research investigating the relationship between spirituality and self-care among African Americans with HF necessitates further inquiry into this topic so that a holistic approach can be developed.

Depression

The *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR; American Psychiatric Association [APA], 2000) conceptually defines depression as a period in which there is either depressed mood or loss of interest or pleasure and at least four other symptoms, such as problems with sleep, eating, energy, concentration, and self-image that reflect a change in functioning that lasts for two weeks or longer. Commonly, people experience depressive symptoms that can be characterized as loss of interest, feelings of worthlessness, withdrawal from social interactions, and loss of hope. Somatic symptoms, including weight loss, insomnia, loss of energy, and decreased concentration, are also commonly experienced when depressed (Koenig, 2007). Eller et al. (2005) found that depressive symptoms can include overwhelming sadness, a sense of futility, fear and worry regarding life and death, lack of motivation, confusion, and suicidal ideation.

Statistical analyses presented in published studies indicate that depression affects approximately 18.8 million Americans each year. About 15% of the population can be expected to experience clinical depression at some time during their lifetime (*American Psychiatric Association, Media Relations Guide for Psychiatric Physicians*, 2008). Major depressive disorder (MDD) is the leading cause of disability in the U. S. among people ages 15 to 44 years (WHO, 2004) and is the fourth leading cause of disability worldwide based on disability-adjusted life-years (DALYs; Ustun, Ayuso-Mateos, Chatterji, Mathers, & Murray, 2004). By 2020, MDD is projected to be the second leading cause of global disability based on DALYs and the foremost cause of disease burden in developed nations (Murray & Lopez, 1996). Depression often co-exists with other medical illnesses, such as: heart disease, stroke, cancer, HIV/AIDS, diabetes, and Parkinson's disease (National Institute of Mental Health [NIMH], 2007.)

Depression in Chronic Illness

The relationship between depression and chronic illness has been well-established, with approximately one-third of individuals experiencing chronic illness also exhibiting symptoms of depression (Cleveland Clinic, 2007). Individuals with dual diagnoses of depression and chronic illness tend to have more severe symptoms of both, more difficulty adapting to their medical condition, and more medical costs than nondepressed individuals (Casano & Fava, 2002).

Research has been published on depression in individuals with arthritis, hypertension, COPD, and HIV/AIDS. In women with arthritis, McIlvane, Baker, and Mingo (2008) found that perceived arthritis stress, financial worry, and everyday discrimination were related to depressive symptoms in African American women. A study of hypertensive African Americans by Artinian, Washington, Flack, Hockman, and Jen (2006) found that 21% had depression scores suggestive of clinical depression. Psychosocial factors, such as worries about food and housing, violence, powerlessness, and discrimination, were cited as contributors to depression. Women with COPD were two to four times more likely to report major depressive episodes than men (Cote & Chapman, 2009). Yi et al. (2006) found that the majority of HIV/AIDS participants (53.6%) in their study reported depressive symptoms that were related to certain socioeconomic factors such as lack of health insurance, lack of higher education, being unemployed, and having an unstable housing situation.

Depression and Heart Failure

Depression has been widely studied among people with HF, with estimates of depression ranging from 30% to 50% within this population (Koenig, Vandermeer, Chambers, Burr-Crutchfield, & Johnson, 2006; Sherwood et al., 2007; Friedmann, et al, 2006). Fulop, Strain, and Stettin (2003) analyzed HF patients after hospitalization. At 4-weeks post-discharge, 33% of patients were diagnosed as clinically depressed, and at 24-weeks post-discharge, 26% were

depressed. Depressive symptoms among individuals with HF have been associated with physical limitations resulting from the HF, intrusiveness of the disease on the individual's life, maladaptive coping, and poor HF self-efficacy (Paukert, LeMaire, & Cully, 2009). Depressed individuals with HF are less likely to adhere to prescribed medications, follow lifestyle recommendations (e.g., exercise), practice self-care (e.g., daily weights, reduced sodium intake), and follow up with recommended testing (Rumsfeld & Ho, 2005; Sherwood et al., 2007). This lack of self-care can lead to more frequent hospitalizations and greater utilization of medical services. Sullivan, Simon, Spertus and Russo (2002) suggested that up to \$5 billion of the annual cost of HF care may be associated with depression. Depression also affects mortality rates. Mortality among individuals with HF who also were depressed was 12% compared to 9% for those who were not depressed (Friedmann et al., 2006).

Depression and African Americans with Heart Failure

Research has been conducted among African Americans with HF who were also experiencing depressive symptomology. Subramanian et al. (2005) assessed the severity of HF in a sample of 156 participants as a predictor of hospitalization. Their sample included 83 (53%) African Americans; however they did not delineate the percentage of African Americans who were depressed. They found that over one-third of patients screened positively for depression. Evangelista, Ter-Galstanyan, Moughrabi, and Moser, (2009) analyzed anxiety and depression in minority HF patients. Their study sample included 18 Blacks, of which 6 (33%) were depressed. They found that Blacks were more likely to be anxious and depressed than members of other minorities in the study. Rohyans and Pressler (2009) examined depressive symptoms and HF in relation to sociodemographic variables of 100 participants. Their study population included African Americans ($n= 47, 31\%$); however no statistically significant differences were found in depressive symptoms between African Americans and Caucasians. They discovered that patients

who were classified with more advanced stage HF were more likely to experience depressive symptoms. Akomolafe et al. (2005) studied 100 African Americans with HF and cognitive impairment. While 23% of the participants also were depressed, no differences were found in depression between those who were cognitively impaired and those without impairments. Understanding the link between depressive symptomatology and heart failure among African Americans can provide information for researchers and clinicians on developing interventions to help diminish the negative affect associated with chronic illness.

Quality of Life

QOL is an individually defined and perceived state. For the purpose of the present study, QOL was defined using the World Health Organization [WHO] definition of “*an individual’s perception of their position in life in the context of the culture and value system in which they live and in relation to their goals, expectations, standards, and concerns*” (WHOQOL, 1994, p. 28). QOL is a construct that often is used in research of chronic illness. Ratings of QOL within the context of a chronic illness often depend on subjective responses to the changes produced by the disease (McMahon, 2002). QOL is a multidimensional concept that encompasses physical, emotional, and social effects on the individual’s perception of daily life.

As noted by Brink, Grankvist, Karlson and Halberg (2005), QOL can be defined in different ways and is not easily identified, quantified, or measured. Brink et al. noted that QOL is not observable, but instead should be evaluated using factors considered important by the researcher that can be used to explain, understand, and provide benefits from the study results. Personal well-being, satisfaction with life, existential view, needs fulfillment, and realization of expectations are some factors that Brink et al. use to study QOL.

QOL includes individuals’ perceptions of their well-being and should not be limited to positive associations that they make with their present functional situations, but should include

negative perceptions of well-being evaluated in terms of current and continuing existence. Collard (2006) referred to negative well-being as ill-being, beginning with the condition of the physical body. Regarding QOL, Collard referred to the work of social philosopher Jeremy Bentham stating “Indeed, the human body is central to the pleasure/pain calculus. Utility may be in the mind, but Bentham knows very well that its causes are often bodily” (p. 335). Diamond and Becker (1999) stated that QOL is a complex phenomenon that needs to be evaluated by individuals, family, and service providers across time and domains.

Quality of life has become a major topic of interest in health-related research and has become an important outcome indicator in health. Research has been completed to explain and evaluate the influence of QOL. A 2007 cross-validation study evaluating predictors of QOL in old age found adequate financial resources, good health, and positive perceptions of life directly and positively influenced QOL (Low & Molvahn, 2007). They found that some psychosocial and physiological factors can contribute to a reduction in QOL. Negative psychosocial factors can include, but are not limited to: depression, lack of social support, low socioeconomic status, and poor emotional well-being. Negative physiological factors can include, but are not limited to: disease progression, sympathetic nervous system response, and immune system response.

In a study of adults with chronic obstructive pulmonary disease (COPD), Delgado (2007) found that symptom severity had the potential to affect perceptions of QOL. In patients with type 2 diabetes, quality of social support versus quantity of social support was found to influence overall QOL (Tang, Brown, Funnell, & Anderson, 2008). A study of low income African Americans indicated that those who were diagnosed with more than two chronic conditions and a greater number of comorbid conditions reported poorer health-related quality of life (HRQOL; Hu, 2007). Among these populations, compared to their healthy cohorts, QOL was reduced by

illness status. QOL is a multidimensional concept that encompasses psychological, physiological, and social effects on the patient's perception of daily life.

Quality of Life and African Americans

Many studies have found health disparities for the African American population when compared to their Caucasian counterparts. When focusing specifically on African Americans, historic factors, such as racism, poverty, and poor psychological and physical health, as well as a lack of access to health care, have had negative influences on overall QOL (Utsey et al., 2007). Older African Americans are at higher risk than Caucasians for having worse overall HRQOL (Skarupski et al., 2007). A study by Hu (2007) in the United States concluded that HRQOL of low-income older African Americans (N = 83) was lower than that of the general U. S. population over 60 years of age and that having two chronic conditions and a greater number of comorbid conditions were associated with poorer HRQOL. Since QOL is essentially a subjective construct, research is needed to better understand African Americans' perceptions of factors that contribute to QOL.

Quality of Life and Chronic Illness

Quality of life issues, especially HRQOL, are affected by a complex interaction of direct and indirect effects of contextual, attitudinal, and behavioral factors (Stuifbergen, Seraphine, & Roberts, 2000). The contextual factors are associated with the severity of chronic illnesses such as multiple sclerosis, arthritis, HF, or end-stage renal disease [ESRD] that limit daily activities. Attitudinal factors include self-efficacy and perceptions of resources, barriers, and acceptance of the chronic illness. Behavioral factors, such as exercise, proper nutrition, or taking medications, reflect efforts by the individual to improve health and maintain their ability to function. Patel, Shah, Peterson, and Kimmel (2002) reported that the QOL for patients with ESRD receiving hemodialysis therapy for their chronic disease was poorer than QOL for individuals who have

had kidney transplants or those in the general population. Like patients with HF, patients with ESRD may have lower QOL associated with increased psychological and social demands resulting from their reliance on treatment for their chronic illness and their inability to maintain employment during treatment.

Health-related quality of life is people's summary of how they perceived psychological and physiological dimensions of illness (Franks, Muennig, Lubetkin, & Jia 2006.). Individuals with chronic illness typically have poorer HRQOL than individuals without chronic illness (Dominick, Ahern, Gold, & Heller, 2004). Ratings of QOL within the context of a chronic illness often depend on subjective responses to changes produced by the disease (Sharif, Mohebbi, Tabatabaee, Saberi-Firoozi, & Gholamzadeh, 2005).

Engaging in self-care behaviors can have a positive influence on QOL. Stock, Mahoney, Reece, and Cesario (2008) found that community-dwelling older adults were able to maintain their QOL despite declines in their physical functioning, especially when using an integrated approach to health care incorporating self-care activities. A study of patients with chronic obstructive pulmonary disease (COPD) found that additional visits by nurses to increase patients' self-care abilities were associated with statistically significant increases in QOL (Efrainsson, Hillervik, & Ehrenberg, 2008).

Quality of Life and Heart Failure

Quality of life in HF patients can be influenced by factors such as duration of illness and symptom severity as well as emotional and physical symptoms, like dyspnea, fatigue, edema, sleeping difficulties, and depression (Heo, Lennie, Okoli, & Moser, 2009). A study by van Jaarsveld, Sanderman, Miedema, Ranchor, and Kempen (2001) found that physical functioning in HF patients declined immediately after diagnosis and continued to deteriorate during the 12 months following diagnosis. They suggested that physical functioning in these patients after one

year is, on average, as poor as that of patients who have had rheumatoid arthritis for four years. QOL was found to be moderately impaired in a population with advanced CHF (Blinderman, Homel, Billings, Portenoy, & Tennstedt, 2008.). Blinderman's team reported the major contributing factor to poor QOL was symptom distress related to the disease process. Independent predictors of poor QOL were specific symptoms including lack of energy, feeling irritable, and feeling drowsy. Two studies (Heo, Moser, Riegel, Hall & Christman, 2005; Westlake et al., 2002) found that poor QOL was related to declining functional status and negative health perceptions. These findings were consistent across the four NYHA classification levels.

Quality of Life among African Americans with Heart Failure

Few published research studies have examined QOL for African American patients with HF. Hu (2007) found that low income African Americans with more than two chronic conditions and a greater number of comorbid conditions were more likely to report poorer HRQOL. In a comparison of outcomes of African American patients with chronic HF between two home care delivery methods (nurse telemanagement or nurse home visits), Bondmass (2007) found that QOL did not differ significantly by type of home care method, although both groups had improved QOL after initiation of the delivery methods. The U. S. Department of Health and Human Services (2000) listed the second goal of *Healthy People 2010* as "eliminate health disparities among segments of the population, including differences that occur by gender, race or ethnicity, education or income, disability, geographic location, or sexual orientation" (p. 6). Riegel et al. (2008) compared QOL in African American, Caucasian, and Hispanic patients diagnosed with HF. According to the authors, chronic illnesses, including HF, differ in regard to number of symptoms, decreased functional abilities, and lower HRQOL among people from different ethnic groups. The findings from Riegel's research indicated that HRQOL improved

more for Hispanic patients with HF than either African American or Caucasian patients after controlling for differences in demographic, clinical, and treatment groups.

Summary

Self-care has been a topic of research for many years, with Orem (1959) developing a theory of self-care that has been a mainstay in nursing research. Self-care in individuals with HF encompasses participation in various activities, with the purpose of preventing rehospitalizations and further health declines, while improving their HRQOL. Some individuals incorporate spirituality, including beliefs and practices into their self-care regimens. Such inclusion has begun receiving greater attention in both the popular and academic press. Definitions of spirituality abound, without a common definition. For this study the author defined spirituality as *the subjective sense of existential connectedness reflecting beliefs about relationships to others, acknowledges a higher power, recognizes an individual's place in the world, and leads to spiritual practices*. Although African American spirituality has been researched among different cohorts, it has not been the subject of research among African American individuals with HF. The paucity of research among African Americans also is noticeable in studies of depression, as well as QOL. A study that investigates African American spirituality and self-care among HF patients as it relates to their overall depression and QOL can provide nurses with the knowledge to treat these patients holistically, focusing on their disease process, as well as their overall QOL.

CHAPTER 3

THEORETICAL AND CONCEPTUAL FRAMEWORK

Introduction

This chapter contains a description of the theoretical and conceptual framework that was used as the basis for this study. Orem's self-care deficit nursing theory (SCDNT) is presented, with spirituality and spiritual self-care being concatenated into this theory. A mid-range theory of spirituality and spiritual self-care, developed by the author, can be used to provide nurses and researchers with a guide to build nursing knowledge. This work provides a useful framework to assess and provide interventions to meet the spiritual needs of African American patients with HF.

Spirituality and Spiritual Self-Care: Expanding Self-Care Deficit Nursing Theory

Spirituality, as a focus of health-related research, has received renewed interest in the last few years. Spirituality has been examined in the fields of theology, sociology, psychology, and medicine, with these fields contributing significantly to the ongoing dialogue about spirituality (Como, 2007). Nursing has a long tradition of concern with the human spirit as a central aspect of the human condition across the lifespan. Beginning in the late 1960s, spirituality was given greater attention, with the Nurses Christian Fellowship offering seminars and workshops on the role of the nurse in providing spiritual care (Shelly & Fish, 1988). Since 1939, EBSCO has used spirituality as a keyword in the CINAHL™ database (EBSCO, personal communication, June 26, 2009). Medline™ has included *spirituality* as a keyword in its database since 1948 (Medline/Pubmed™, personal communication, July 7, 2009).

The construct of spirituality has evolved in the nursing profession, with three diverse, but interrelated, approaches emerging: spiritual distress, spiritual needs, and spiritual well-being (Carson & Koenig, 2008). These approaches to spirituality are relevant for health promotion and

health recovery. Spirituality can give meaning to the lives of healthy people, providing comfort in good times (Fosarelli, 2008) and support that sustains a positive outlook. Spirituality can bring peacefulness, a reason for living, a sense of purpose, and a sense of harmony to individuals experiencing health crises (Katerndahl, 2008). For individuals who are ill or dying, increased spirituality and spiritual support can be important coping mechanisms (Creel & Tillman, 2008). Spirituality allows individuals with chronic pain to accept and give meaning to their lives despite their pain (Sorajjakool, Thompson, Aveling, & Earl, 2006). Nurses need to understand the different manifestations of spirituality and fully understand through research how to effectively use spiritual interventions to provide nursing support during health and illness. Viewing spirituality and spiritual practices within a self-care perspective provides nurses with a framework by which to ensure a holistic approach for meeting the health care needs of patients and families.

Orem's SCDNT provides a highly relevant framework, however, the construct of *spirituality*, which is so integral to the human experience, has not yet been fully integrated within the SCDNT. The purpose of this research was to integrate the constructs of spirituality and spiritual self-care within SCDNT as a next step in nursing theory development, with research and practice applicability. Greater theoretical clarity is needed to understand the contributions of spirituality in health care practices, specifically self-care. *Spiritual self-care*, as a specific type of self-care activity, needs to be a focus of nursing theory development and research.

Defining Spirituality

Spirituality and religiosity are distinct multidimensional constructs that are often inappropriately used synonymously. Most religious people consider themselves spiritual. However, spirituality is a broader concept that incorporates both religious and nonreligious practices (Dessio et al., 2004). *Religiosity* is defined as "a sentiment of learned behaviors and

social expressions that reflect cultural values” (Dy-Liacco, Piedmont, Murray-Swank, Rodgeron, & Sherman, 2009, p. 36). For the purpose of this study, religion encompasses the religious affiliation and religious background of the participants. Behaviors and expressions are manifested in religious behaviors such as praying, reading holy literature, and attending religious services. In contrast, *spirituality* has been described as a search for meaning and purpose in life, harmony, peace, and transcendence (Utsey et al., 2007). Dessio et al. (2004) stated that “spirituality refers to a person’s acknowledgement and relationship with a higher being but can also mean one’s unique sense of connectedness to self, others, and nature” (p. 189). Spirituality also has been defined as a “deeply intuitive, but not always consciously expressed, sense of connectedness to the world in which we live” (Eckersley, 2007, p. 1).

Although there is no single widely-accepted definition of spirituality, three themes are commonly found in the spirituality literature:(a) relationships with other people; (b) awareness of a higher being; and (c) recognition of the broader world. The theme of relationships with other people is reflected in such things as accepting others, even when they do things that are wrong (McCauley, Tarpley, Haaz, & Barlett, 2008); being able to interact with people (Cooper, Brown, Vu, Ford, & Powe, 2001); and seeking forgiveness (Blumenthal et al., 2007). Acknowledgement of and relationship with a higher being, (e.g. God, Allah, Waheguru, Vishnu, or Shiva) (Musgrave, Allen, & Allen, 2002) is exemplified by such things as feeling God’s presence (Mofidi et al., 2007); thinking that a higher power cares for oneself (Simoni & Ortiz, 2003); and believing that God can heal people of their injuries and diseases (Gonnerman, Lutz, Yehieli, & Meisinger, 2008). The idea that spirituality involves a connection to the broader world is reflected in feelings of connectedness to self, others, nature and the world (Dessio et al., 2004); being touched by the beauty of creation (McCauley, Tarpley, Haaz, & Barlett, 2008); experiencing transcendence (Craig, Weinert, Walton, & Derwinski-Robinson, 2006; Runquist &

Reed, 2007) and believing that an individual is a part of something much larger (Daaleman, Cobb, & Frey, 2001). Based on this review of common themes, spirituality was defined for this research as *the beliefs a person holds related to their subjective sense of existential connectedness including beliefs that reflect relationships with others, acknowledge a higher power, and recognize an individual's place in the world, and lead to spiritual practices.*

Spiritual Beliefs and Practices

Although spiritual beliefs and spiritual practices are frequently mentioned and used interchangeably in the literature, they are distinct concepts. Spiritual *beliefs* are primarily within cognitive (thought) and affective (feeling) domains. Spiritual beliefs include the notion that God or another higher power is the ultimate healer, and that acknowledging God's powers and abiding by divine laws can improve health. In a phenomenological study of people with life-threatening illnesses, Albaugh (2003) described spiritual beliefs as: a sense of comfort from spiritual life, trust in God, life blessings, and meaning in life. Spiritual *practices* are primarily within the psychomotor (doing) domain. Spiritual practices can be performed by an individual or by a group of individuals, alone or in concert with others. Examples of spiritual practices include prayer, worship, and meditation (Newlin, Knafl, & D'Eramo Melkus, 2002); going to church or another place of worship (Harvey, 2006); and interacting with others (Conner & Eller, 2004). Adding to the complexity of distinguishing spiritual beliefs from practices is the observation that many established spiritual practices (for example prayer or meditation) can be primarily cognitive processes where the thinking, the feeling, and the doing of the activity are difficult to disentangle. Spiritual practices can influence the way individuals "...view themselves, the meaning in their lives, and their role in the world" (Rothman, 2009, p. 178). Conversely, individuals' spiritual beliefs influence their practices in complex ways.

Spiritual practices can include public participation or personal pursuits. Public

participation can encompass activities, such as theological study, group worship (Ryder, Wolpert, Orwig, Carter-Pokras, & Black, 2008); volunteer opportunities, or group exercise or rehabilitation classes. Personal pursuits can include prayer (Campbell & Ash, 2007); yoga (Chen et al., 2008); transcendental meditation (Jayadevappa et al., 2007), relaxation techniques (Chang et al., 2005); as well as engaging in healthy behaviors, relishing nature and the beauty embodied in it, and sustaining hope and positive attitudes even in times of stress. A widely-used spiritual practice is praying, whether to God, a Supreme Being, or other deities. Praying can occur in religious settings (e.g., church, synagogue, mosque, temple, etc.), at home, in a garden, or anywhere else. Prayer can come in many forms, including asking for healing of sickness; providing strength to live on a daily basis; and guiding health-related decision making.

Meditation also is a spiritual practice that has been widely researched and reported in the literature. Meditation can “induce a sense of deep inner peace and calm...” (Park, 2007, p. 323). “Integrating spiritual resources within the context of meditation may help individuals increase pain tolerance, reduce depression and anxiety, improve spiritual health and enhance quality of life” (Wachholtz & Pargament, 2008, p. 352). Spiritual-based meditation may have more powerful effects on health than non-spiritual-based meditation (Wachholtz & Pargament, 2005). Yoga is another spiritual practice that individuals engage in either individually or in group settings. “Yoga involves working with mind to heal the body and working with body to heal the mind” (Behrman & Tebb, 2009, p. 133). Yoga involves physical stretching, relaxing, meditation, and breathing exercises. The use of spiritual practices has been found to be positively related to better health outcomes in patients with chronic illness (Fitzpatrick, 2008).

In regards to race, spirituality has been a major focus of study in the African American population. Spirituality in African Americans can be empowering and self-motivating, as well as provide coping skills needed for everyday life (Wittink, Joo, Lewis, & Barg, 2008). Spirituality

is also recognized as an individual framework that shapes the personhood of African Americans (Taylor, Chatters, & Jackson, 2009). African Americans, more than Caucasians, express the belief that divine interventions and miracles occur. (Johnson, Elbert-Avila, & Tulskey, 2005).

Through history, church facilities (regardless of denomination) have been the predominant social centers of the African American community. This presence may be due largely to centuries of racial inequalities and discrimination (Krause, 2008; Ellison, Trinitapoli, Anderson, & Johnson, 2007). Krause (2004) stated that the African American church has kept the legacy of slavery alive and stressed the importance of ancestry through oral and written history, as well as music. According to Watlington and Murphy (2006), African Americans use the church to provide positive role models along with sense of community. Holt, Lukwago, and Kreuter (2003) observed that African Americans in their study reported relying on God to do what physicians or modern medicine could not; working together with God for good health; and being empowered by their religion to take care of themselves. Cohen, Thomas, and Williamson (2008) found that African American participants in their study described spirituality as having a “firmly established faith in God” (p. 291).

Defining Self-care

Self-care is a complex multidimensional concept. The World Health Organization (WHO) defined self-care as “the activities individuals, families, and communities undertake with the intention of enhancing health, preventing disease, limiting illness, and restoring health” (WHO, 1983, p. 181). Self-care also is defined as a “naturalistic decision making process involving the choice of behaviors that maintain physiologic stability (self-care maintenance) and the response to symptoms when they occur (self-care management)” (Riegel et al., 2004, p. 351). Self-care is situation- and culture-specific; involves the capacity to act and to make choices; is influenced by knowledge, skills, values, motivation, locus of control, and efficacy; and focuses

on aspects of healthcare under individual control (Gantz, 1990). Actions and behaviors associated with self-care have been identified by Orem (2001) as types of operations to maintain human life, health, and well-being. These regulatory actions are influenced by age, stage of personal development, health state, environmental conditions, and the effects of medical care. Some examples of specific self-care behaviors are following a therapeutic diet, engaging in exercise, and taking medications as prescribed.

Incorporating aspects of Barofsky's (1978) self-care activities and Orem's (2001) self-care requisites, a practical definition of self-care is "*the practice of activities that maturing and mature persons initiate and perform, within time frames, on their own behalf in the interests of maintaining life, healthful functioning, continuing personal development, and well-being, through meeting known requisites for functional and developmental regulations*" (Orem, 2001, p. 522). The constructs of *health*, *life*, and *well-being* within this definition provide a rationale for nurses to participate in the self-care process used by people to manage their health functioning.

Self-Care Deficit Nursing Theory (SCDNT)

As health care providers, nurses work with individuals on self-care behaviors. Nursing embraced the idea of self-care beginning in the 1950s when Orem began formulating her theory regarding nursing and self-care (Denyes, Orem, & Bekel, 2001). Beginning with the 1958 expression of nursing's proper object, Orem made clear that nursing is needed when a person has an "inability to provide continuously for themselves the amount and quality of required self-care because of situations of personal health [and further that] . . . self-care is the personal care that individuals require each day to regulate their own functioning and development" (Orem, 2001, p. 20).

Orem (2001) described self-care deficit nursing theory (SCDNT) as:

. . . descriptively explanatory of the *relationship* between the action capabilities of individuals and their demands for self-care or the care demands of children or

adults who are their dependents. *Deficit* thus stands for the relationship between the action that individuals should take (the action demanded) and the action capabilities of individuals for self-care or dependent-care. *Deficit* in this context should be interpreted as a *relationship*, not as a human disorder. (p. 149).

A simplified schematic of the major constructs of SCDNT relevant to the present discussion is provided in Figure 1. Articulation of the full complexity of SCDNT is beyond the scope of this paper, but excellent sources are readily available (Orem, 2001).

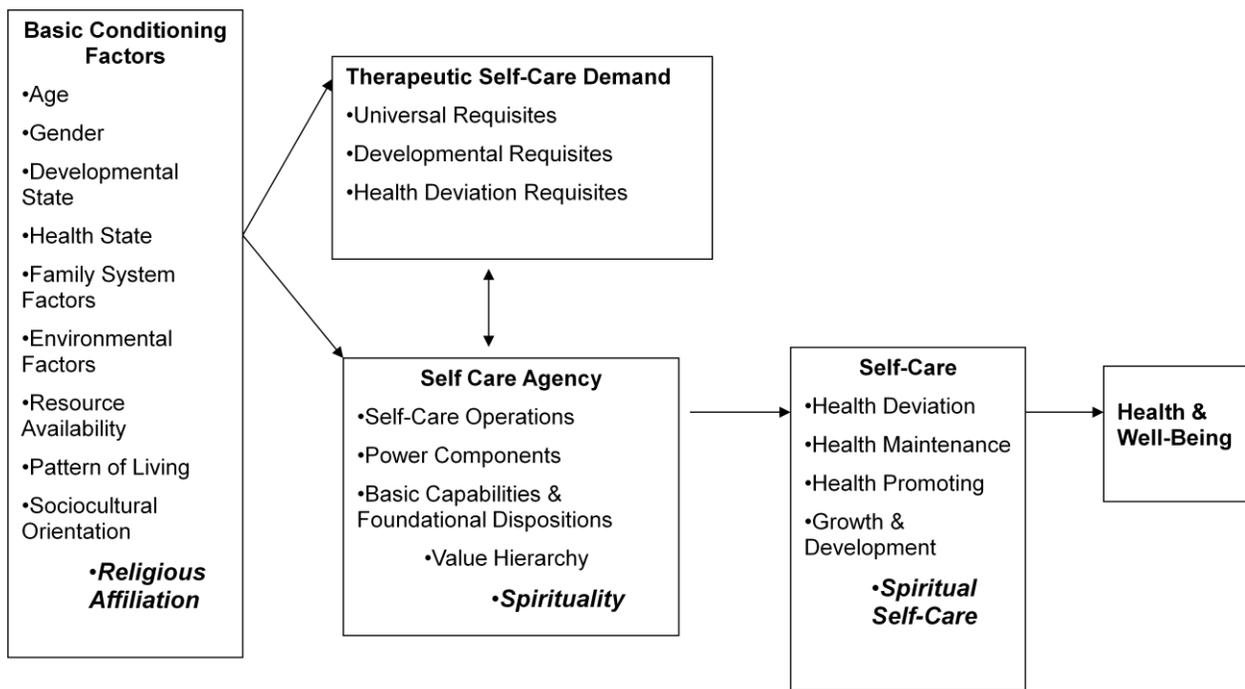


Figure 1: SCDNT with spirituality and related constructs added

Self-Care, Health, and Well-Being

Within the SCDNT, individuals need to engage in self-care behaviors to meet the requisites for healthy living. Health within the SCDNT is defined as a characteristic of living things that describes their structural and functional integrity (Orem, 2001). *Health* involves both physical and mental integrity of functioning that encompasses physical, mental, and social well-

being, and not only the absence of disease or infirmity *Well-being* is defined as “a perceived condition of personal existence including persons’ experiences of contentment, pleasure, and kinds of happiness, as well as *spiritual experiences* [emphasis added], movement to fulfill one’s self-ideal, and continuing personal development” (Orem, 2001, p. 524). Well-being is associated with health but may exist even with disease and dysfunction in health. Well-being is also associated with achievement of goals and perceptions of having sufficient resources to meet self-perceived needs.

Self-Care Requisites

Within the SCDNT, attaining health and well-being requires meeting self-care requisites. Self-care requisites are the sequence of actions that are needed to help people regulate aspects of their functioning and development, as well as attain positive well-being when living in either changing or stable environments (Orem, 2001, p. 47). According to Orem, there are three types of self-care requisites: (a) universal self-care requisites, (b) developmental self-care requisites, and (c) health-deviation self-care requisites. Universal requisites are shaped by processes that are necessary for maintaining fundamentals of human life including, but not limited to, water, air, food, social interaction, rest, and protection from hazards. Universal self-care requisites are needed by all people and at all stages of development. Developmental self-care requisites are (a) conditions that promote human development, (b) engagement with self-development, and (c) life situations and conditions that could negatively affect human maturity. Developmental self-care requisites occur at different times across the life span. Health-deviation self-care requisites are associated with genetic and constitutional defects, human structural and functional deviations, and medical treatments. Health-deviation self-care requisites occur during illness or when an individual feels the threat of an illness.

Orem includes spiritual experiences as part of the definition of well-being; however the

association between spirituality and human self-care requisites is not fully described. Spirituality as defined here influences self-care requisites, particularly the developmental requisites. As individuals grow physically and mentally, they also grow spiritually within particular social, cultural, and religious communities. Just as individuals mature at various rates over their lifespan, spiritual growth and the development of complex spiritual understandings varies between individuals and within each person over time. The need to engage in self-development is particularly pertinent in the area of spirituality. Specific developmental requisites from Orem related to spiritual issues include but are not limited to: seeking to understand and form habits of introspection and reflection, engaging in goals and values clarification in situations that demand personal involvement, and understanding the value of virtues including the desire to know, variations of human love, love of beauty, joy of making and doing, mirth and laughter, religious emotions, and happiness (2001, p. 232). Requisites that arise from interferences with development also can have a strong spiritual component. Events, conditions, and problems that adversely affect human development also are associated with crises of faith or spiritual understanding and beliefs. Conversely, spiritual understanding can alter the interpretation of such events and change the meaning attached to situations.

Basic Conditioning Factors

Orem (2001) described 10 basic conditioning factors (BCFs) that affect how individuals meet their self-care requisites; foster development of new self-care requisites; and influence individuals' capabilities to care for themselves. BCFs include: age, gender, developmental state, health state, sociocultural orientation, health care system factors, family system factors, patterns of living, environmental factors, as well as resource availability and adequacy.

The BCFs are associated with variations in personal ability for self-care. While all of the BCFs may relate to spirituality, four in particular (gender, age, health state, and sociocultural

orientation) have received substantial research attention. Research findings indicate that women usually have higher scores on spirituality measurement tools than their male counterparts (Dunn & Horgas, 2000; Harvey, 2008; Yoon & Lee, 2007). Women may tend to be more spiritual because spirituality helps reduce the stress placed on them as caregivers (Stark-Wrobelwski, Edelbaum, & Bello, 2008), and may provide them with comfort and strength during difficult times (Scarinci, Quinn, Griffin, Grogoriu, & Fitzpatrick, 2009). Increasing age often results in older adults becoming more reflective on meaning in their lives. Dunn and Horgas (2000) explained that older adults, as they age, become more spiritual because they are more likely to have chronic illnesses, deteriorating health, and experience more frequent loss of friends and family. Levels of spirituality also tend to increase as health state declines (Kruse, Ruder, & Martin, 2007; Mystakidou et al., 2007; Tanyi & Werner, 2008). In one end-of-life study, 73% of patients reported that illness had strengthened their spiritual lives (Kruse et al., 2007). However, spirituality may be harmful to health and detrimental to mental health if individuals perceive illness as divine punishment (Culliford, 2009). Spirituality is influenced by sociocultural orientation that combines social and cultural factors. Connectedness among individuals is closely tied to culture, including “language, knowledge, beliefs, assumptions, and values” (Culliford, 2009, p. 1) that are passed from generation to generation. The urban African-American community is one example of a cultural group in which spirituality is an important defining construct of the culture. Many studies support the strong presence of spirituality in the African American culture, as well as benefits perceived within this culture (Banks-Wallace & Parks, 2004; Newlin, Knafel, & D’Eramo Melkus, 2002; Polzer & Miles, 2005).

For the purpose of the present discussion, *religious affiliation and religious background* has been added as one of the central sociocultural elements to be considered since religion, ethnicity, and culture are intertwined. It is noted that Orem did not include religion or religious

affiliation specifically as a sociocultural orientation in SCDNT. Closely linked, but distinct from spirituality, religion has been defined as “*a set of beliefs, values, and practices based on a spiritual leader*” (Office of Minority Health, 2001), but such definitions continue to be subject to vigorous debate. A broader and perhaps more robust approach to the construct of religious affiliation suggests a three-faceted approach considering religion as belief, religion as identity, and religion as way of life (Gunn, 2003). From a common-usage perspective, religious affiliation is considered to include various systems of spirituality, tradition, ritual, doctrine, practices, etc. (Spector, 2004).

To fully integrate the construct of spirituality within SCDNT, the BCF of sociocultural orientation also needs to include an assessment of a persons’ religious affiliation. Although spirituality is broader than religiosity, religious affiliation may strongly influence a person’s sense of spirituality. Religious affiliation encompasses a person’s current affiliation(s), past religious connections and experiences, and reflects a set of religious values based on the teachings of spiritual leaders. Since religious affiliation often reflects cultural values, it is an important component of the BCF of sociocultural orientation that influences the development spirituality. In addition, similar to other BCFs, religious affiliation may affect the ability for self-care, especially as it influences decisions regarding which course of self-care to pursue.

Self-Care Agency

The power to engage in self-care is called *self-care agency*. Within the SCDNT self-care agency (SCA) is defined as “the complex acquired ability of mature and maturing persons to know and meet their continuing requirements for deliberate, purposive action to regulate their own human functioning and development” (Orem, 2001, p. 254). SCA encompasses the capacity of individuals to engage in practices and behaviors to care for themselves. *Ability* allows individuals to acquire knowledge of appropriate courses of actions, decide what actions to take,

and act to achieve change. Self-care agency can be basically described with a three-part structure (Orem, 2001). One part of the structure consists of foundational capabilities and dispositions (FCDs). Another is the set of 10 power components enabling performance of self-care operations. The third is the operations needed for self-care. Each of these elements can be enhanced by the addition of spirituality.

Self-Care Operations

Self-care operations are capabilities that are needed for people to engage in self-care (Orem, 2001, p. 258). Estimative self-care operations involve investigation by the individual to determine conditions and factors that are necessary for self-care. This investigation includes knowledge of self and the environment; existing conditions; and factors necessary for health, life, and well-being. Transitional self-care operations involve thinking about what options are available to take care of one's health and then deciding what, if any, action to take. Spirituality influences an individual's reflections, judgments, and decisions such as those that are necessary within transitional self-care operations. Productive self-care operations involve preparing oneself to act, getting necessary materials, and manipulating the setting as needed. Spirituality also influences an individual's preparation of self, materials, or environmental settings before engaging in productive self-care operations. For example, in many spiritual traditions, such as Islam, there are prescribed cleansing activities that precede prayer (*wudu* or *ghusi*). In the Jewish tradition, men often wear a *tallit* or prayer shawl as a sign of respect and preparation for prayer. Attendance at specific holy sites (shrines, churches, cemeteries, etc.) for individual or congregational prayer is a common preparation for prayer in many spiritual traditions. The estimative, transitional, and productive self-care operations allow an individual to decide what needs to be done, evaluate the likely effects and results of the self-care and then decide whether to continue, modify, or cease the self-care activities (Orem, 2001).

Power Components

Orem (2001) asserted that certain empowering human capabilities are necessary for engaging in self-care. Ten power components address the knowledge, attitudes, and skills that enable individuals to engage in self-care. Some of the power components are influenced by spirituality as a foundational disposition (FD). Spirituality influences the meaning a person ascribes to life, health, and well-being, and affects the value placed on the human body as well as the value for self- versus dependent-care. As such, spirituality affects a person's motivation to engage in self-care. In addition, Orem (2001) stated that self-care operations need to be integrated within relevant aspects of personal, family, and community living and therefore, the self-care operations can be substantially affected by a person's spirituality. Selected power components and associated spiritual aspects of these components are shown in Table 1.

Table 1: *Orem's Power Components and Spiritual Influences*

Selected Power Components	Spirituality Influences
1. Ability to maintain attention and exercise requisite vigilance with respect to self as self-care agent and internal and external conditions and factors significant for self-care	Spiritual beliefs affects the value placed on the human body, human life, as well as the value for self- versus dependent-care
4. Ability to reason within a self-care frame of reference	Spirituality affects beliefs related to the position of self vs. collective affecting the value placed on self- vs. dependent-care
5. Motivation (i.e., goal orientations for self-care that are in accord with its characteristics and its meaning for life, health, and well-being)	Spiritual beliefs significantly influence goals sought as well as providing a lens through which a person finds meaning in life, health, and illness
6. Ability to make decisions about care of self and to operationalize these decisions	Spirituality influences beliefs regarding individual responsibility for decision making vs. group orientation and preferences for individual and/or group actions
7. Ability to acquire technical knowledge about self-care from authoritative sources, to retain it and to operationalize it	Spiritual beliefs may influence a person's decisions as to who/what is an "authoritative" source of knowledge, where to obtain health information, where to seek healthcare, as well as determine prescriptions for acceptable health-related behaviors
10. Ability to consistently perform self-care operations, integrating them with relevant aspects of personal, family, and community living.	Spirituality provides a value system that has the power to significantly influence all aspect of a persons' life, affecting how people live, with themselves, their families, and the broader community.

Note: Adapted from Orem, D. E. (2001). *Nursing: Concepts of practice* (6th ed., p. 265).

Foundational Capabilities and Dispositions

The foundational capabilities and dispositions (FCDs) are elements that are necessary for individual self-care agency. Capabilities are described as the ability to feel, think, and move in order to work with the body and to manage one's self and one's personal affairs. People need to be capable of working with their body and body parts and able to manage themselves and their personal affairs. Dispositions are described as characteristics that affect goals and self-awareness. To be able to engage in self-care activities, an individual needs to be oriented to time, health, other people, events, and objects. People also have moral, economic, aesthetic, material, and social values, particular interests and concerns, and habits of daily living which influence their abilities to engage in self-care.

Spirituality must be conceptualized as a foundational disposition (FD). A major component of spirituality is reflected in a person's relationships with other people. Spirituality is also intertwined with from personal and cultural value hierarchies. Moral, aesthetic, and social values are highly connected with spirituality and economic and material values are also likely to be related. A person's spirituality may be reflected in their interests, concerns, and personal habits and in their abilities and willingness to work with their own bodies. For example, spiritual beliefs and religious traditions often dictate how the human body is regarded, examined, covered or exposed, and/or manipulated. Lastly, individuals' ability and willingness to manage their health care and personal affairs are often influenced by their experiences of religious and/or spiritual affiliation. For example, members of religious orders often relinquish independent decision making in favor of obedience to group goals. Because spirituality intersects the foundational capabilities and dispositions in such important ways, it should be added to SCDNT as a separate and equally important foundational disposition. This addition is consistent with Orem's suggestion that the FCDs listed in the SCDNT should be subject to further development

and refinement (Orem, 2001, p. 264). Spirituality can provide guidance for an individual in the journey of knowing and understanding what is, what can be, and what could be brought about with respect to self-care.

Spiritual Self-Care

Spirituality is a foundational disposition that allows individuals to engage in specific spiritual self-care. Spiritual self-care is defined as *the set of spirituality-based practices in which people engage to promote continued personal development and well-being in times of health and illness*. Spiritual self-care focuses on meeting developmental requisites. Spiritual self-care is based on an individual's mind/spirit/body connection, upbringing, moral and religious background, and life experiences that originate from faith, feelings, and emotions. Examples of spiritual self-care can include building social networks or volunteering (Liu et al., 2008); listening to inspirational music (Stake-Nilsson, Soderlund, Hultcrantz, & Unge, 2009); meditation (Delaney, 2005); and developing a sense of inner peace and quiet (Kreitzer, Gross, Waleekhachonloet, Reilly-Spong, & Byrd, 2009). Other examples of spiritual self-care include practicing yoga or Tai Chi, attending religious services, reading sacred or inspirational texts, prayer or meditation, hiking, walking or otherwise enjoying nature, and developing or mending personal relationships. Whatever the spiritual self-care activity, the goal is the enhancement of spiritual well-being and overall health and well-being.

Theory Building Strategy

Spirituality is a concept that is thought to be related to self-care, which can influence overall QOL. This relationship is presented in the form of a mid-range theory. Mid-range theory consists of two or more concepts and a specified relationship between the concepts. The function of mid-range theory is to develop a knowledge base that supports clinical decision making. This knowledge can provide a basis for predicting outcomes of nursing practice decisions (Blegen &

Tripp-Reimer, 1997). To be practical across a wide array of nursing situations, a mid-range theory must be applicable in multiple settings, with patients who have differing health issues. The theory described in this chapter and tested in this research, White's theory of spirituality and spiritual self-care (WTSSSC), is based on the theory-building context of discovery as described by Walker and Avant (2005). Discovery involves constructing a theory initially without knowing its usefulness or accuracy. Once the theory has been constructed, it can then be evaluated.

Mid-Range Theory Building

Using Orem's (2001) SCDNT as a foundation, a mid-range theory entitled White's Theory of Spirituality and Spiritual Self-Care (WTSSSC) was developed. Once validated, this theory could be used in health promotion and disease mitigation to incorporate spirituality and spirituality self-care practices as they relate to an individual's overall QOL. To test this mid-range theory, a population of African Americans with HF was recruited to gain knowledge about their spirituality and spiritual self-care practices.

Theoretical Substruction

White's Theory of Spirituality and Spiritual Self-Care was constructed to examine the relationship between spirituality and spiritual self-care using Orem's SCDNT as a guide for theory construction. At the conceptual level, five concepts in the SCDNT (Orem, 2001) were substructured to generate a mid-range theoretical level: (a) basic conditioning factors (BCFs); (b) self-care agency/foundational dispositions (SCA); (c) self-care behavior (SC); (d) health; and (e) well-being.

From the family system BCF one theoretical concept, support system, was substructured. A support system includes people who are supportive and trustworthy, and with whom the patient feels comfortable. Supportive people are reliable and consistent within the patient's life. Religious affiliation/spiritual background is substructured from the BCF of sociocultural

orientation and is defined as the summation of religion, denomination, learned beliefs, traditions, rituals, moral upbringing, and values that have played key roles in the patient's development. Patients' perspectives of their health states are substructured from the third BCF of health. This perspective is the personal interpretation of an individual regarding the degree to which their health state is changing their behavior patterns and their activities of daily living.

From the construct of SCA, the theoretical concept substructured is spirituality. Spirituality is the primary focus of interest for this mid-range theory. Spirituality is defined as *the subjective sense of existential connectedness reflecting beliefs about relationships to others, acknowledges a higher power, recognizes an individual's place in the world, and leads to spiritual practices.*

From the construct of self-care, two theoretical concepts were substructured: spiritual self-care as well as health and chronic illness self-care. Spiritual self-care is comprised of actions that people undertake to maintain their spiritual well-being and give meaning to life. Spiritual self-care is based on an individual's mind/spirit/body connection, upbringing, moral and religious background and affiliation, and life experiences that contribute to an individual's faith, feelings, and emotions. Examples of spiritual self-care can include, but are not limited to building a social network or volunteering (Liu et al., 2008); listening to inspirational music (Stake-Nilsson, Soderlund, Hultcrantz, & Unge, 2009); meditation (Delaney, 2005); and/or developing a sense of inner peace and quiet (Kreitzer, Gross, Waleekhachonloet, Reilly-Spong, & Byrd, 2009). Health and chronic illness self-care activities include, but are not limited to: following up with medical care, self-monitoring (e.g., glucose checks for diabetes, blood pressure for hypertension), taking medications properly, adhering to diet and exercise regimens, and smoking cessation (Katon & Ciechanowski, 2002). Activities associated with self-care also include seeking information regarding their health state, learning about chronic illness either through media sources or

friends, becoming a self-advocate, and working with medical professionals or family members to maintain or improve health. (Loeb, 2006).

From the construct of health, two theoretical concepts were substructured. The first was general health. General health includes physical functioning, engagement in social activities, and bodily pain, as recognized by the individual. The second concept was psychological health, which is the sense of emotional and mental wholeness that allows for meaningful existence within the world.

From the construct of well-being, the theoretical concept of QOL is substructured. QOL includes a broad variety of concepts, such as life conditions, behavior, happiness, lifestyle, symptoms, etc. (Moons, Budts, & De Geest, 2006), as well as social usefulness and achievement of personal goals (DeVon & Ferrans, 2003). In WTSSSC, QOL is a multidimensional concept that encompasses physical, emotional, and social components based on the patient's perception of daily life.

Philosophical Assumptions

Ontology

Ontology is concerned with nature of reality and “the characteristics, properties, and principles of the real” (Taylor, Geden, Isaramalia, & Wongvutuny, 2000, p. 105). The philosophical assumptions that underlie the present theoretical perspective are based on Orem's SCDNT. Orem's SCDNT reflected the philosophy of moderate realism that supported the view that “there is a world that exists independent of thought, a world that is the way it is, regardless of what people think about it” (Orem, 2001, p. xiii). Additionally, Orem described a holistic view of unitary beings, active agents capable of taking deliberate action to maintain self-care. From a philosophical view, human beings are defined as “*unitary beings who exist in their environments, influencing the world as well as being influenced by the world. Unitary humans are beings in*

process, striving to achieve their human potential and self-ideal through developmental processes” (Orem, 2001, p. xiii).

Epistemology

Epistemology, as a branch of philosophy, deals with knowing. Epistemology is defined as “*the study of the nature, origins, objects, and limitations of knowledge*” (Boyd, Gasper, & Trout, 1991, p. 77). The nature of knowledge is that things can actually be known and reality exists, which is the theory of moderate realism. The origin of nursing knowledge evolves from quantitative and qualitative research. The object of nursing knowledge is to develop better practices to improve health. SCDNT posited that to know human beings, nurses have to recognize them as “agents, as symbolizers, organisms, and objects subject to physical force” (Orem, 2001, p. xv). Understanding this concept can help nurses design nursing care relevant to their patients’ space-time localizations.

Worldview

Orem’s (2001) SCDNT reflected the worldview of reciprocal interaction (Fawcett, 2005). This worldview sees human beings as holistic, with emphasis on individuals as unitary beings. In this respect, the biopsychosocial person interacts within the context of the world as it is known to that person. The person ultimately makes decisions based on previous experience. The person is an active agent who is capable of taking action to maintain self-care and to seek health care when faced with a need. This action comes from recognition of a change in the perceived health state.

Conceptual and Theoretical Assumptions

The theory of spirituality and spiritual self-care theory (WTSSSC) is derived from selected aspects of Orem’s (2001) SCDNT. Important to the mid-range theory construction are: person, health, and nursing. Orem’s assumptions are briefly reviewed and then the author’s assumptions for the mid-range theory are discussed.

Conceptual Assumptions

Person. People are unitary beings, embodied in biological and psychobiological features. Their unity can be viewed symbolically and socially. Human agency, the power to act deliberately, is exercised in the form of care of self and others in identifying needs for and in making needed inputs (Orem, 2001). “Self-care is understood as a learned activity, learned through interpersonal relations and communications” (Orem, 2001, p. 45).

Health. Health is an individual’s perception of both the physical and mental integrity of their functioning, as well as the person’s appraisal of his/her health that incorporates physical, mental, and social well-being (Orem, 2001). Adult people have the right and responsibility to care for themselves to maintain their own rational life and health. Inclusive in health is the maintenance of normal life processes, development of human potential, preventing injury and pathologic states, and promotion of general well-being.

Nursing. Nursing is a form of help or assistance provided to people who need care by nurses (Orem, 2001). Nursing facilitates regulation of a patient’s functioning through meeting their self-care requisites, as well as enabling patients to assume responsibilities for self-care. Nursing practice has both technological and moral aspects because nursing decisions affect lives, health, and welfare of human beings.

Theoretical Assumptions

Person. Psychobiological characteristics of each individual are expressed through symbolic meanings. People’s symbolic representations influence their abilities to involve themselves in certain activities. People need support systems that are defined uniquely by each person.

Health. Health is the person’s interpretation of their level of physical, mental, and social functioning. Health is possible for individuals even in the context of chronic illness.

Understanding patients' perception of their health states often is based on their deeply-held beliefs about spirituality.

Nursing. Nursing provides assistance to individuals so that they can engage in self-care behaviors. Such behaviors include spiritual self-care and chronic illness self-care that promote health and well-being, influencing QOL.

Conceptual and Theoretical Propositions

Conceptual Propositions

- Higher levels of BCFs generally are associated with greater SCA.
- Greater SCA generally is associated with higher SC.
- Higher SC is associated with health and well-being.
- There is a direct relationship between health and well-being.

Theoretical Propositions

- Internalized personal convictions have an influence on spirituality.
- A relationship exists between spirituality, self-care, spiritual self-care and QOL.
- A direct relationship exists between spirituality and the enactment of spiritual self-care practices.
- A direct relationship exists between a patient's support system and spirituality.
- Spirituality has an indirect relationship with QOL.
- A strong sense of spirituality supports a patient's ability to enact positive health behaviors, as demonstrated by engaging in self-care practices.
- Spirituality influences a person's health.
- Spirituality influences chronic illness self-care.
- Spirituality influences health promotion self-care behaviors.

- Spirituality influences spiritual self-care and chronic illness self-care, which has a positive relationship with health and QOL.

Theory Testing

For many African Americans, spirituality is integrated through all aspects of their life, including health practices that influence their health beliefs and health outcomes that can then influence their self-care practices (Newlin et al., 2002; Polzer & Miles, 2005). African Americans are consistently underrepresented in clinical trials in health research (Jackson, A. P. 2006, Jackson, E. M. 1993). This underrepresentation has been affirmed in recent literature that focused on breast cancer (Consedine, Magain, Spiller, Neugut, & Conway, 2004; Reifenshtein, 2007) and living with HIV/AIDS (Beuseh & Stevens, 2006; Plach, Stevens, & Heidrich, 2006; Shambley-Ebron & Boyle, 2006), which are both examples of chronic illnesses that affect many African Americans.

Chronic illness is understood as “the medical condition or health problem with symptoms or limitations that require long-term management” (Frietas & Mendes, 2007, p. 592). It involves permanence and a deviation from normalcy, affecting aspects of everyday life, including physical, psychological, and social abilities. Some chronic illnesses can be controlled through diet, exercise, and certain medications. Studies have shown that people with chronic illnesses are more likely to engage in spiritual practices to help cope with their situation (Polzer, 2007; Samuel-Hodge et al., 2000).

One chronic illness overlooked in research on African Americans is heart failure [HF]. A recent search on the Cumulative Index to Nursing & Allied Health Literature (CINAHL™) yielded no published papers on the role of spirituality and self-care practices among African-Americans with HF. To further nursing science and practice concerning this topic, the intent of this research was to better understand how African-American men and women with a diagnosis

of HF use spirituality to participate in spiritual self-care practices that influence their QOL. The hypotheses [H_n] that were tested in this study were:

- H₁: Levels of chronic illness self-care for heart failure will mediate the relationship between spirituality and quality of life among African American men and women who are being treated for HF.
- H₂: Levels of chronic illness self-care for heart failure will mediate the relationship between spirituality and physical and mental health among African American men and women who are being treated for HF.
- H₃: Levels of spiritual self-care will mediate the relationship between spirituality and quality of life among African American men and women who are being treated for HF.
- H₄: Levels of spiritual self-care will mediate the relationship between spirituality and physical and mental health among African American men and women who are being treated for HF.
- H₅: A relationship exists between levels of spirituality, spiritual self-care, chronic illness self-care for heart failure, physical and mental health, and quality of life among African American men and women who are being treated for HF.
- H₆: Quality of life for African American men and women being treated for HF can be predicted from demographic variables, such as age, gender, education; support system factors of marital status, living arrangement, support people; religious factors of current religious affiliation and religious background; and self-reported health state of physical and mental health.

Significance to Nursing

Nursing has a long tradition of concern with the human spirit as a central component of

comprehensive holistic care with origins in the religious roots of the discipline (Barnum, 2003; O'Brien, 2008). Highlighting the concept of *spirituality*, defined as the subjective sense of existential connectedness, reflects beliefs about relationships to others, acknowledges a higher power, recognizes an individual's place in the world, and leads to spiritual practices, as a specific foundational disposition within the SCDNT is essential to the comprehensive consideration of factors that contribute to the ability to engage in self-care actions. Specification of spiritual *self-care* as a set of specific actions or behaviors also is essential. Previous nursing research has not examined the relationships between spirituality and spiritual self-care for health and well-being as components of Orem's SCDNT. Following empirical validation, findings can be incorporated into nursing practice to evaluate spirituality and spiritual self-care activities. Evaluations can be used by nurses to enhance relationships with individuals and communities, foster health promotion, reduce risk, and encourage behaviors that lead to improved health and QOL.

The theoretical development underlying this research suggests greater precision regarding discussions of spirituality by disentangling spiritual beliefs (spirituality) from spiritual practices (spiritual self-care). Building on Orem's well-accepted theories, it offers a nursing conceptual frame of reference by which nurses can examine the role of spirituality in health and illness. This theoretical work contributes to nursing science by extending an extant nursing theory to accommodate new concepts of interest to practicing nurses and nurse educators.

Articulation of the mid-range theory of spirituality and spiritual self-care provides nurse researchers with a guide for the next empirical steps to build nursing knowledge. Once tested, this theory can provide practicing nurses with a useful framework to assess and develop interventions to meet the spiritual needs of African American patients with HF. The substruction concept map for WTSSSCP is detailed in Figure 2. Figure 3 presents a model that represents this mid-range theory.

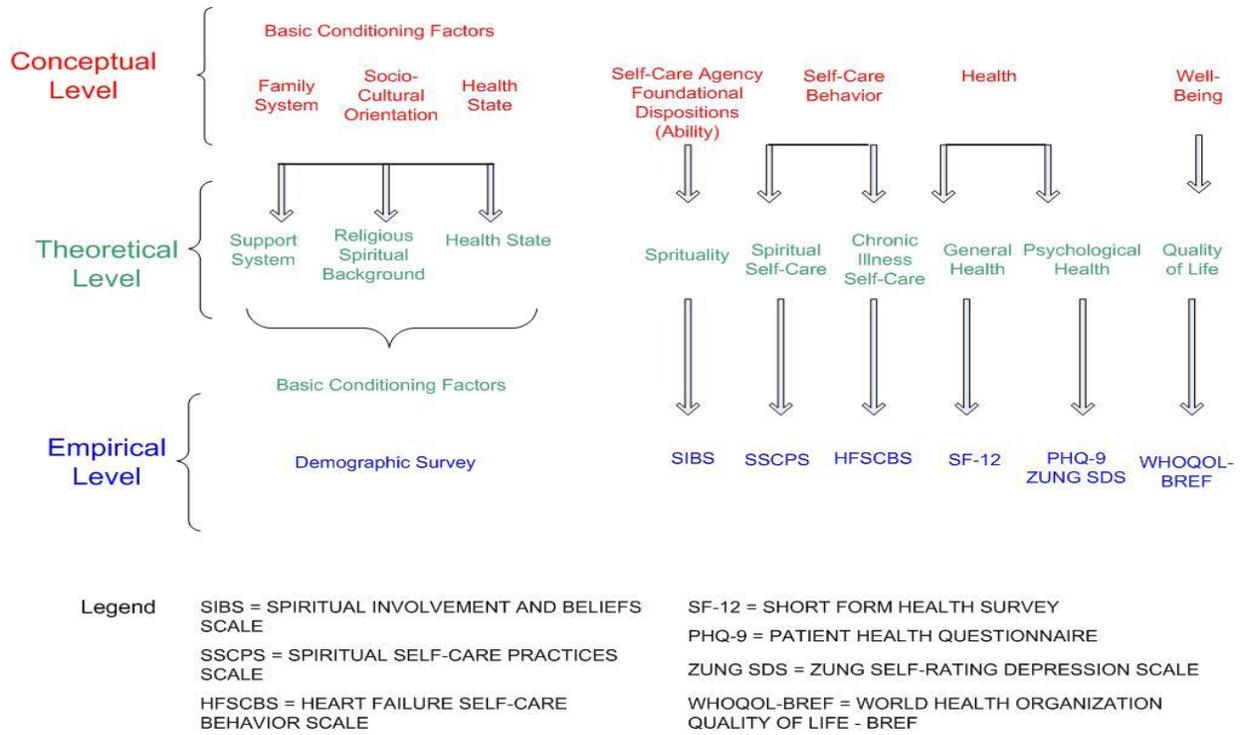


Figure 2: Concept Map

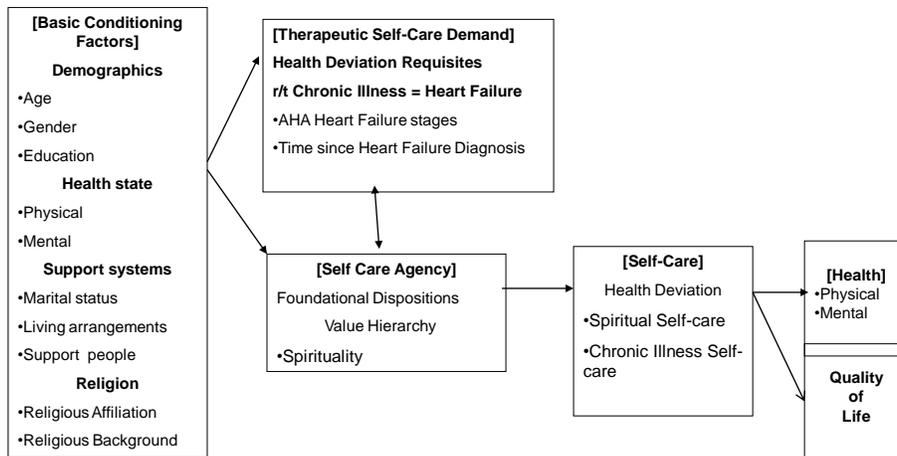


Figure 3: White's Theory of Spirituality and Spiritual Self-Care

CHAPTER 4

METHODOLOGY

Introduction

The methods used to collect and analyze the data for this study are presented in this chapter. Topics in this chapter include: restatement of the problem, research design, setting for the study, participants, instruments, data collection methods, and data analysis methods.

Purpose of the Study

Quality of life (QOL) is an outcome measure for patients with heart failure (HF). African American men and women with HF face life with a chronic illness. Their ability to cope with this illness may be related to their spirituality, levels of depression, and ability to engage in self-care for their condition. A substruction of Orem's theory to incorporate spirituality into the SCDNT needs to be tested to determine the influence of spirituality on self-care that can lead to positive perceptions regarding QOL. The purpose of this study was to extend and test the concepts of spirituality and spiritual self-care within a self-care perspective that contributes to the QOL of African American men and women diagnosed with HF.

Research Design

A nonexperimental, correlational research design was used in this study. This type of research design is appropriate as the independent variable was not manipulated and no treatment or interventions were provided. The participants were asked to complete survey instruments that measure personal characteristics, levels of spirituality, spiritual self-care, chronic illness self-care, mental and physical health, and QOL. The correlational research design allowed examination of the relationships among the variables to determine how spiritual self-care was used by African American patients with HF.

Participants

Sample

The population defined for this study was urban African American men and women who had been diagnosed with HF by health care providers. A purposive convenience sample was used in this study. The participants met the following inclusion criteria established for the study:

- African Americans who self-identify as members of this race
- Diagnosed with HF by health care providers
- Live in a large metropolitan area located in the southeastern section of Michigan
- Have attained the age of 18 years

Although HF is a chronic illness generally associated with people over 50 years of age, all individuals who meet the criteria for inclusion in the study and who were over 18 years of age were included. Using a broad cross-section of all adults, regardless of age, provides a more comprehensive sample from which to study the effects of spirituality and spiritual self-care practices on HF. Patients who were diagnosed by their physicians or nurse practitioners as having dementia or confusion were excluded from the study because of their lack of ability to understand and respond appropriately to the survey items.

A total of 142 participants who meet the inclusion criteria was included in this study. Using G-Power 3.1.0 (Faul, Erdfelder, Lang, & Buckner, 2007), a power analysis was completed to determine the appropriate sample size. With an alpha level of 0.05 and a moderate effect size of 0.15, a sample of 114, and a two-tailed test would provide a power of 0.95 for a multiple linear regression analysis with nine independent variables (age, gender, marital status, educational level, work status, previous religious background, length of time since diagnoses of heart failure, self-reported physical health, and self-reported mental health) and the dependent variable, quality of life. Using a sample of 142 participants increases the power of the analysis to

.95, increasing the accuracy of the statistical analysis and likelihood of making correct decisions on the null hypotheses.

Instruments

Eight instruments were used in this study. Table 2 presents the scales that were used, their relationship to the mid-range theory, and the number of items included on each scale.

Table 2

Theoretical Association to Instruments Used in Study

Constructs in Orem's Self-Care Deficit Nursing Theory	Concepts in White's Theory of Spirituality and Spiritual Self-Care	Instrument	Number of Items
Basic Conditioning Factors	Support System/Religious Spiritual Background/Health State	Original demographic survey	22
Self-care agency (ability)	Spirituality	Spiritual Involvement and Belief's Scale – Revised (SIBS-R, Hatch, Burg, Naberhaus, & Heilmich, 1998)	22
Self-care (Behavior)	Spiritual Self-care	Spiritual Self-Care Practice Scale (SSCPS)	36
Self-care (Behavior)	Chronic Illness Self-care Practices Specific for HF Patients	Revised Heart Failure Self-Care Behavior Scale (RHFSCBS; Artinian, Magnan, Sloan, & Lange, 2002)	29
Health	Physical Health (General Health) Mental Health (Psychological Health)	Short Form (SF-12) Health Survey (Ware, Kosinski, & Keller, 1996a)	12
Health	Psychological Health (Depression/Mental Health)	Zung Self-Rating Depression Scale (SDS; Zung, 1965)	19
Health	Psychological Health (Depression/Mental Health)	Patient Health Questionnaire (Löwe, Unützer, Callahan, Perkins, & Kroenke (2004)	8
Well-being	Quality of Life	World Health Organization QOL (WHOQOL) – Bref (1996),	26

Each of these instruments is discussed in detail, with information about the psychometrics presented.

Demographic Survey.

A demographic survey was developed by the researcher for use in this study. The items on the survey asked for information on basic conditioning factors, personal characteristics, HF, and spiritual/religious/traditional backgrounds. The basic conditioning factors that were measured specifically by this survey included: support systems (marital status, living arrangements and sources of support), religious/spiritual background (religious affiliation as a child, whether the participant attended religious services as a child, present religious affiliation, attendance at religious services as an adult), and health status (self-reported physical and emotional/mental health). To determine if items on the demographic survey were acceptable, two older African American women (ages 64 and 87 years) were asked to review the demographic survey. They both voiced concerns regarding an item that asked about income. They considered this item offensive and indicated that most African Americans would not want to participate if they thought that disclosing their income was required. Consequently, this item was removed from the survey prior to distribution to the participants. The personal characteristics included: age, gender, educational level, and work status. Seven items asked for information on HF, including year diagnosed, self-reported HF stage, and questions related to the stages of HF. The items on this tool were answered using a combination of forced-choice and fill-in-the-blanks to obtain consistent responses.

Spiritual Involvement and Belief's Scale – Revised (SIBS – R; Hatch, Burg, Naberhaus, & Heilmich, 1998; 2006).

The SIBS was developed to provide a comprehensive, widely acceptable instrument to assess spiritual status, irrespective of religion. This scale provides an objective measurement of

spirituality in medical care that can be used to integrate spiritual evaluation with traditional medicine (Hatch et al., 1998). The authors developed a list of underlying principles of spirituality that reflected multiple approaches. They asked people from different perspectives, including Christianity, Judaism, Islam, Hinduism, and nonreligious organizations (e.g., 12-step programs such as Alcoholics Anonymous.) to provide input into the principles. Hatch and Naberhaus wrote multiple items for each of the principles, which were then reviewed informally by people who were knowledgeable about spirituality. The instrument was reduced to 26 items which were tested for reliability and validity.

The SIBS was tested for face validity by having experts on spirituality review the instrument and make comments on readability, understandability, and clarity of each item. (Hatch et al., 1998). In addition, they were asked if the item captures the essence of the concept as the author intended. Based on the responses, the items were rewritten and combined to create the version of the instrument that was used for psychometric testing.

The original 26 items on the scale were used in factor analysis with 33 family medical practitioners and 50 elderly patients from a rural family practice (N = 83). While six factors emerged on the original factor analysis, one item each loaded on factors 5 and 6. These items (4 and 18) were removed and the factor analysis was rerun, with the factor structure limited to four factors. The four factors that emerged had eigenvalues ranging from 9.52 to 3.98, indicating that each of the factors was accounting for a significant amount of variance in the latent variable, spirituality. While the results of the item analysis found that most items were highly correlated with the total scale scores (≥ 0.60), eight items had low correlations (< 0.30).

In a personal correspondence, Hatch (October 7, 2009) indicated that in trying to improve the scale, the best items from the 24 item scale were retained with additional items added for a total of 39 items. This revised scale had good reliability and validity. However, the participants

in the elderly group indicated that the scale was too long, with general agreement among these individuals that two of the six factors that emerged from the factor analysis were problematic. As a result of these data analyses, 22 items were retained, with selected items having consistent factor loadings among different groups (medical practitioners and elderly patients). The factor analysis was repeated using the 22 retained items. Four factors, core spirituality, spiritual perspective/existential, personal application/ humility, and acceptance/insight, emerged with eigenvalues ranging from 15.0 to 1.2. These eigenvalues indicated that each factor was accounting for a statistically significant amount of variance in spiritual involvement and beliefs. Table 3 presents the items included on each of the subscales.

Table 3

Factor Structure of the SIBS-R

Factor	Items on Scale	Eigenvalue
Core Spirituality (Connection, meaning, faith, involvement, and experience)	1, 2, 3*, 5, 6*, 8, 9, 12, 13, 14, 15, 16, 18, 19, 20*, 22`	15.0
Spiritual perspective/existential	2, 7*, 11*, 18, 21	4.1
Personal application/humility	10, 17	1.7
Acceptance/insight (i.e., insight into futility of focusing attention on things which cannot be changed)	4	1.2

*Reverse score

Note: Items 2 and 18 appear on both the core spirituality and spiritual perspective/existential subscales.

Convergent validity was assessed by correlating the total score for the SIBS with the Spiritual Well-Being Scale (SWBS; Hatch et al., 1998). The obtained correlation coefficient of .80 provided support that the two instruments were measuring similar constructs. The SIBS was correlated with scores on the Zung Self-Descriptive Scale (SDS) for depression to determine divergent validity. The negative correlation of -.36 was statistically significant indicating that people with higher levels of spirituality generally had lower levels of depression (Doolittle &

Farrell, 2004). Purpose in life ($r = .30$) and general sense of well-being ($r = .26$) were positively related to the total scores on the SIBS (Litwinczuk & Groh, 2007).

In a 2006 update on the revision and validation of SIBS scale, the correlation between the 22 items on the SIBS-R and five religiosity items from the Duke Religiosity Scale (DUREL) ranged from .66 to .80. This finding indicated that the scale measures religiosity, but also measures substantially distinct constructs. The test-retest reliability for the SIBS-R among 17 participants was .93. The participants provided feedback indicating the SIBS-R items were clear, the instrument was easy to complete, and the item wording was not objectionable.

Hatch et al. (1998) tested the SIBS for internal consistency using Cronbach alpha procedures. The resulting alpha coefficients for Factors 1, 2, 3, 4 were .98, .74, .70, and .51 respectively. According to the authors, the decreasing alpha coefficients were related to the extent to which each of the factors were “capturing a homogeneous facet of overall spirituality” (p. 481). A study by Mystakidou et al. (2008) reported Cronbach alpha coefficients for the total scale as .90, with the alpha coefficients of .92 for external/ritual, .78 for internal/fluid, .80 for existential/meditative, and .58 for humility personal application subscale. The test-retest reliability reported by Hatch et al. (1998) for the four factors was .91, .88, .88, and .64 respectively. Hatch et al. reported an overall alpha coefficient of .92 for the four factors. Based on these findings, the SIBS-R has adequate reliability for use in the present study.

The internal consistency on the SIBS-R for the participants in the present study ($N=142$) was calculated using Cronbach alpha. The coefficients of .61, .90, .90, and .68 for the four subscales, core spirituality, spiritual perspective/existential, personal application/humility, and acceptance/insight were similar to the coefficients from previous research. The Cronbach alpha coefficient for the total scale was .90, indicating the instrument had good internal consistency for the present sample.

Spiritual Self-Care Practice Scale (SSCPS; White & Schim, 2010).

The SSCPS is a researcher-developed 36 item questionnaire that measures the extent to which participants practice spiritual self-care actions. The 36 items were derived from a comprehensive review of literature on spiritual practices.

Factor Analysis. Ratings on the 36 items on the SSCPS obtained from the 142 participants in the present study were used in a principal components factor analysis using a varimax rotation. Four factors emerged in the analysis: personal spiritual practices, spiritual practices, physical spiritual practices, and interpersonal spiritual practices. To be retained on a factor, the item had to have a factor loading greater than or equal to .35 and not load highly on more than one factor. The four factors that emerged from the analysis explained 47.24% of the variance in spiritual self-care practices. The eigenvalues for each of the four factors were greater than 1.00, indicating that each factor was explaining a statistically significant amount of variance in the latent variable. Item 31 (Singing or listening to music) did not load on any of the factors and was eliminated from further analyses. The results of the factor analysis are presented in Table 4.

To determine the reliability of the SSCPS, internal consistency coefficients were obtained using Cronbach alpha procedures. The results of these analyses indicated adequate to good internal consistency for each of the four subscales: personal self-care practices (.89), spiritual practices (.85), physical spiritual practices (.69), and interpersonal spiritual practices (.66). The alpha coefficient for the total scale was .91 indicating the scale had good internal consistency reliability.

Table 4

Factor Analysis – Spiritual Self-Care Practices Scale

Item	Factor 1	Factor 2	Factor 3	Factor 4
<u>Personal spiritual self-care practices</u>				
Making time for self	.71			
Eating healthy foods	.67			
Feeling at peace and/or in harmony	.66			
Resting to regain health and energy	.65			
Giving love to others	.58			
Following medical orders	.57			
Maintaining a sense of hope for the future	.57			
Laughing	.56			
Forgiving yourself	.56			
Finding meaning in both good or bad situations	.51			
Maintaining positive relationships	.50			
Asking questions about medical orders	.50			
Forgiving others	.43			
Helping others	.43			
<u>Spiritual practices</u>				
Attending religious services		.75		
Contributing to a religious group		.70		
Praying		.68		
Consulting a spiritual advisor		.66		
Living a moral life		.59		
Meditating, contemplating, or reflecting		.55		
Reading for inspiration		.54		
Mending broken relationships		.40		
Resolving conflicts		.38		
<u>Physical spiritual practices</u>				
Engaging in physical activity			.77	
Giving alms to the poor or doing other acts of charity			.55	
Volunteering			.54	
Hiking or walking			.50	
Practicing yoga or tai-chi			.36	
<u>Interpersonal spiritual practices</u>				
Following a special diet (e.g., Kosher, Halal, vegetarian, etc.)				.66
Maintaining friendships				.56
Being with family				.52
Having a meaningful conversation with others				.47
Receiving love from others				.46
Being with friends				.46
Wearing special clothing or jewelry (etc. yarmulke, birka, cross, Star of David, etc.)				.44
Percent of Explained Variance	30.23	6.90	5.35	4.77
Eigenvalues	6.00	4.47	3.76	2.77
Cronbach alpha coefficients	.89	.85	.69	.66

Scoring. Participants were asked to rate the frequency with which they practice each of the spiritual behaviors using a 5-point Likert-type scale ranging from 1 for *not at all* to 5 for *all of the time*. The numeric ratings for items on each subscale were summed, with the total scores for each subscale divided by the number of items on the subscale to obtain mean scores. The use of mean scores allowed data to be reported in the original unit of measurement and also provided a means of comparing the subscales directly.

Content Validity. The preliminary instrument was sent to four diverse religious leaders to evaluate the content validity of the items. The validators were asked to review the items and rate their relevance to *spiritual* practices using a 4-point scale ranging from 1 for *not spiritual* to 4 for *spiritual*. They also were asked to provide suggestions regarding the removal, addition, or rewording of items. The researcher reviewed the comments and responses on the surveys and made changes when a consensus was reached on removing an item or changing the wording to make it reflective of spiritual practices.

Pilot test. Thirty-five patients in a general medical practice completed the Spiritual Self-care Practice Scale (SSCPS; White & Schim, 2010) and the Spirituality and Spiritual Care Rating Scale (SSCRS; McSherry, Draper, & Kendrick, 2002) to determine criterion validity. The SSCRS is a valid, reliable instrument that measures spirituality beliefs and practices. However, for the purpose of the present study, no tool was found that measured only spiritual practices. The SSCRS had been tested for validity and reliability previously (McSherry et al., 2002). The SSCPS was found to have good internal consistency reliability on the pilot test with a Cronbach alpha coefficient of .92.

The patients included 30 (85.7%) females and 5 (14.3%) males. The racial distribution of the pilot sample was Caucasian ($n = 23$, 65.7%), African American ($n = 3$, 8.6%), Asian/Pacific Islander ($n = 7$, 20%), and Hispanic ($n = 2$, 5.7%). The mean age of the participants in the pilot

test was 46.37 ($SD = 8.70$) years, with a median age of 43.00 years. The participants ranged in age from 32 to 66 years. Responses on the two scales were correlated to determine the extent to which the instruments were measuring the same construct. The result of the correlation between the two scales was statistically significant, $r = .37$, $p = .027$, indicating adequate criterion validity for the new SSCPS instrument.

Revised Heart Failure Self-Care Behavior Scale (RHFSCBS; Artinian, Magnan, Sloan, & Lange, 2002).

Artinian et al. (2002) developed the RHFSCBS to measure the frequency with which HF patients performed 29 self-care behaviors. These behaviors are used to manage their chronic condition. The patients indicated the frequency of each behavior using a 6-point Likert-type scale ranging from 0 for *none of the time* to 5 for *all of the time*. Patients can complete the instrument in approximately 10 minutes. Responses on the 29 items are summed to obtain a total score ranging from 0 to 145, with higher scores indicating greater use of self-care behaviors to manage their HF. The HFSCBS was tested for content validity by having a panel of experts that included two nurse practitioners and two self-care experts review the scale. The instrument was tested for internal consistency using Cronbach alpha coefficients. The resultant alpha coefficient of .81 for the 29 items indicated the instrument as adequate internal consistency. Artinian et al. (2002), evaluated the internal consistency and obtained an alpha coefficient of .84.

To assess whether the HFSCBS was reliable in the present study, Cronbach alpha coefficients were used to determine the internal consistency for the current sample of African American patients diagnosed with HF ($N = 142$). The resultant alpha coefficient of .86 was similar to that obtained in a previous study (Artinian et al., 2002), indicating adequate reliability.

Short Form (SF-12) Health Survey (Ware, Kosinski, & Keller, 1996a).

The SF-36 Health Survey was developed by Ware and Sherbourne (1992) to measure eight dimensions of health: physical functioning, social functioning, role limitations due to physical problems, role limitations due to emotional problems, mental health, energy/vitality, pain, and general health perceptions. Two summary scores were developed from the instrument: physical component summary scale score (PCS) and mental component summary scale score (MCS). The intent of the development of the two summary scores was to reduce the SF-36 from an eight-scale profile to two summary measures (PCS and MCS), with good reliability and validity. A short form of the SF-36 was developed using 12 items from the original survey (Ware, Kosinski, & Keller, 1995; Ware, Kosinski, & Keller, 1996a, b). According to Jenkinson et al. (1997), the SF-12 is the instrument of choice when the two generic measures of health, PCS and MCS, are needed.

Several response formats are used with the SF-12 Health Survey (Ware et al., 1995). Categorical questions using dichotomous answers are used to evaluate role functioning limitations resulting from physical or mental/emotional health. A 3-point scale using 1 for *limited a lot*, 2 for *limited a little*, and 3 for *not limited at all* is used to determine the extent of limitations in physical activity and physical role functioning. A 5-point scale ranging from 1 for *poor* to 5 for *excellent* is used to assess general health, with a different 5-point scale (i.e., 1 for *extremely* to 5 for *not at all*) used to evaluate pain. Mental health, vitality, and social functioning are assessed using a 6-point scale ranging from *all of the time* to *none of the time*. The SF-12 can be scored either by hand or with a software program. Two summary scores are obtained from the SF-12: mental health (MCS12) and physical health (PCS12). In addition to the two summary scores, eight subscale scores can be developed: role physical, role emotional, physical function, social function, mental health, vitality, pain, and general health. The scoring procedures

recommend transforming the subscale scores to standard scores (T scores) ranging from 0 to 100, with higher scores indicating better health outcomes and less functional impairment.

Construct validity was assessed by correlating the scores on the SF-12 with the SF-36. The resulting validity coefficient of .94 indicated that the SF-12 was measuring the same constructs as the SF-36, which has been used extensively in health research (Quinn Griffin et al., 2007). Another test for construct validity reported by Ware et al. (as cited in Larson, 2002) used known or extreme groups, one of which had the characteristic or trait being tested. The group with the characteristic or trait should score significantly higher on the SF-12 than the group without the trait. The results of the multivariate analysis of variance (MANOVA) used to determine if participants with specific health conditions would score lower than participants without the health condition. The results of the MANOVA were statistically significant indicating that participants who reported more symptoms had lower mental or physical health functioning than those with fewer symptoms.

Convergent validity was assessed by correlating the scores with other indicators of the same construct. The rationale behind this type of validity is that scales measuring similar constructs should have higher correlations than scales measuring dissimilar constructs. The convergent validity of the SF-12 was assessed by correlating each of the corresponding subscales with the two summary measures, the PCS and MCS. Statistically significant correlations were obtained between the subscales and the summary measures, indicating the survey has good convergent validity (Larson, 2002).

Ware et al. (1996b) tested the internal consistency using Cronbach alpha procedures. The obtained coefficients for the PCS-12 was .89 and for the MCS-12 was .76. Larson, Schlundt, Patel, Beard, and Hargreaves (2008) tested the internal consistency with a sample of African American adults ($n = 1,721$). The alpha coefficients for the PSC-12 was .80 and for the MCS-12

alpha was .78. Ware et al. (1996b) reported the stability of the SF-12 using test-retest reliability coefficients ranging from .64 to .89.

The T-scores for the present study were used to evaluate internal consistency with African American patients diagnosed with HF. The Cronbach alpha coefficients for PCS-12 and MCS-12 were .75 and .77 respectively. The alpha coefficient for the total score was .87. These coefficients indicate the instrument has adequate internal consistency reliability in this sample that is similar to previous studies.

Patient Health Questionnaire -9 (PHQ-9; Löwe, Unützer, Callahan, Perkins, & Kroenke (2004).

The PHQ-9 was derived from the parent instrument, the “Patient Health Questionnaire,” a 58-item self-report measure of depression, somatoform disorder, panic disorder, anxiety, eating disorder, and alcohol misuse (Kroenke, Spitzer, Williams (2001). The authors extracted the depression items and named it the PHQ-9. This allowed the depression module to be used as a stand-alone measure. For the purpose of the present study, one item (“thoughts that you would be better off dead or of hurting yourself in some way” [p. 607]) was eliminated from the PHQ-9. This item was removed because the purpose of the scale was not to diagnose depression, but was to determine the number and severity of depressive symptoms being experienced by the participants. Because the survey was anonymous and no individual could be identified, respondents who reported suicidal ideation could not be referred for treatment.

Participants rated each item on the PHQ-9 using a 4-point scale ranging from 0 for *not at all* to 3 for *nearly every day*. The numeric ratings for the items are summed to obtain a score that ranged from 0 to 27 (Kroenke et al., 2001). The scores are divided into five groups based on increasing severity: 0 – 4 (absence of depression), 5 – 9 (either no depression or subthreshold), 10 – 14 (mild depression), 15 – 19, and 20 or over (major depression). While clinicians could review results of the PHQ-9 in less than one minute, the authors suggested that a structured

interview by a mental health professional (MHP) is needed to diagnose depression appropriately. The purpose of the present study is not to diagnose depression among the participants; the PHQ-9 is being used to assess for the existence of depressive symptomatology among African American men and women diagnosed with HF.

Kroenke et al. (2001) indicated that construct validity of the PHQ-9 was determined by correlating scores on PHQ-9 with functional status (based on six SF-20 scales), disability days, symptom-related difficulty, and health care use (clinic visits). The results of these analyses indicated the existence of a strong association in a negative direction, with higher scores on the PHQ-9 associated with lower health functioning, especially in regard to mental health, social, overall, and role functioning (Kroenke et al., 2001). Criterion validity was determined by calculating the sensitivity, specificity, and likelihood ratios for the different PHQ-9 cut points. Sensitivity ranged from 95% for scores less than 9 to 68% for scores greater than 15. Specificity outcomes ranged from 84% for scores less than 9 to 95% for scores greater than 15. The likelihood ratios also increased from 6.0 for scores less than 9 to 13.6 for scores greater than 15. A study of the discriminative validity of the PHQ-9 by de Lima Osório, Mendes, Crippa, and Loureiro (2009) found that the PHQ-9 was able to correctly confirm a diagnosis of depression in 100% of 60 participants (summed scores > 10) who were previously diagnosed with depression. The instrument was correct in 98% of the 115 participants (summed scores < 10) who had not been diagnosed with depression. Huang, Chung, Kroenke, Delucchi, and Spitzer (2006) studied the convergent validity of the PHQ-9 by comparing scoring outcomes of four large racial/ethnic groups (African American, Chinese American, Latino, and non-Hispanic White). No statistically significant differences were found among the four groups indicating that the PHQ-9 is usable to measure depression among different ethnic groups.

Cronbach alpha coefficients were obtained to determine PHQ-9 reliability when used with a sample of 142 African American patients diagnosed with HF in the current study. The alpha coefficient of .86 indicated that the eight items from PHQ-9 had adequate internal consistency.

Zung Self-Rating Depression Scale (SDS; Zung, 1965).

The Zung SDS uses 20 items to measure three facets of depression: (a) pervasive affect, (b) physiological concomitants, and (c) psychological concomitants. Ten items on the SDS are worded positively, with the remaining 10 items worded in a negative manner. Cognitive, affective, psychomotor, somatic, and social-interpersonal items are used to measure the three facets of depression. The participants rated each item on the scale on how they feel at the time they are completing the survey. They use a 4-point Likert-type scale ranging from 1 for *some or a little of the time* to 4 for *most or all of the time*. The numeric responses are summed to obtain a total score that ranges from 20 to 80. Zung (1965) suggested the following cut-scores to estimate the extent of depression: mild depression (50 to 59), moderate to severe (60 to 69) and severe (70 and over). To determine if the SDS was usable with African Americans, Zung, MacDonald, and Zung (1988) conducted a study comparing SDS scores for African American ($n = 764$) and Caucasian ($n = 773$) patients in family practice settings. Using a t-test for independent samples, the researchers found no statistically significant differences between the two groups. When tested on the levels of severity for the African Americans and Caucasians, the differences also were nonsignificant. For the purpose of this study, item 19 (reflecting suicidal ideation) was eliminated from the instrument. This item was removed because the purpose of the scale was not to diagnose depression, but was to determine the number and severity of depressive symptoms being experienced by the participants. Because the survey was anonymous and no individual

could be identified, respondents who reported suicidal ideation could not be referred for treatment.

According to Zung (1965), the SDS has good divergent validity in distinguishing between depressed and nondepressed samples. The instrument has also been shown to have concurrent validity in correlating with other depression measures including the Beck Depression Inventory (BDI) and the Hamilton Rating Scale for Depression (HRSD). Doolittle and Farrell (2004) reported that the SDS had a sensitivity of 97% and a specificity of 63%. A positive predictive value of 77% and the negative predictive value 95% were also reported. Doolittle and Farrell also correlated the SDS with the SIBS. The resultant statistically significant Pearson product moment correlation of $r = .36$ indicated that high levels of spirituality were associated with lower levels of depression.

The internal consistency of the SDS was determined using split-half reliability. The coefficient of .73 provided evidence of adequate reliability.

To determine SDS reliability when used with a sample of 142 African American patients diagnosed with HF in the current study, the 19 items included for the present study were tested to determine the Cronbach alpha coefficient. The obtained alpha coefficient of .80 provided evidence of the internal consistency of the instrument when used with the present sample.

World Health Organization QOL (WHOQOL – Bref; 1996).

The WHOQOL-100 is a valid, reliable measure of individual facets relating to QOL. However, the instrument with the original 100 items often is too long for use in research studies with other instruments. The WHO developed the WHOQOL-BREF as a short form of the WHOQOL-100. The WHOQOL-BREF includes 26 questions, with one item from each of the 24 facets comprising the WHOQOL-100. Two items from the Overall QOL and General Health

facets are included on the survey. Table 5 is a summary of the four domains and the facets included in each domain.

Table 5

WHOQOL-BREF Domains

Domain	Facets included within domains
1. Physical health	Activities of daily living Dependence on medicinal substances and medical aids Energy and fatigue Mobility Pain and discomfort Sleep and rest Work capacity
2. Psychological	Bodily image and appearance Negative feelings Positive feelings Self-esteem Spirituality/Religion/Personal beliefs Thinking, learning, memory, and concentration
3. Social relationships	Personal relationships Social support Sexual activity
4. Environment	Financial resources Freedom, physical activity, and security Health and social care: accessibility and quality Home environment Opportunities for acquiring new information and skills Participation in and opportunities for recreation/leisure activities Physical environment (pollution/noise/traffic/climate) Transport

Note: Adapted from WHOQOL-BREF: Introduction, Administration, Scoring, and Generic Version of the Instrument, Field Trial Version, December 1996. All rights reserved by the World Health Organization (WHO), Geneva, Switzerland.

The items on the WHOQOL-BREF are rated using a 5-point scale, with the ratings varying on the items. For example, the first two questions ask about life in the past two weeks. Participants are asked to rate these items using a 5-point scale ranging from 1 for *not at all* to 5 for *completely*. The next two items are rated using a scale that ranges from 1 for *very poor* to 5 for *very good* and 1 for *very dissatisfied* to 5 for *very satisfied*. The remaining items are rated in the same way. The changes in scaling are explained before each section.

Computing scores requires the researcher to recode specific items and then create mean scores for each domain. The use of mean scores allows comparisons across the domains that would not be possible if summed scores were used. The scoring protocol for the four subscales on WHOQOL-BREF that were used in the present study is shown in Table 6.

Table 6

Scoring Protocol for WHOQOL-BREF

Domain	Items Included on Domain
1. Physical health	3*, 4*, 10, 15, 16, 17, 18
2. Psychological	5, 6, 7, 11, 19, 26*
3. Social relationships	20, 21, 22
4. Environment	8, 9, 12, 13, 14, 23, 24, 25

* Reverse coded items

According to the WHOQOL-BREF manual, the mean scores on each domain are multiplied by 4 to obtain a score comparable to the WHOQOL-100. These scores can be transformed to scales that range from 4 to 20 or 0 to 100.

Miller, Chan, Ferrin, Lin, and Chan (2008) reported on the validity of the WHOQOL-BREF. Construct validity of the WHOQOL-BREF was determined through the use of exploratory and confirmatory factor analysis. The 26 items on the WHOQOL-BREF were found to measure four domains: physical health, psychological, social relationships, and environment. The correlations between domains on the WHOQOL-BREF and the WHOQOL-100 (the parent instrument) ranged from .89 for social relationships to .95 for physical health. This result provided assurances that the WHOQOL-BREF had good convergent validity. The WHOQOL-BREF also demonstrated good discriminative validity by being able to distinguish QOL between healthy and ill patients. The researchers also used multiple linear regression analysis to test the

contribution of the four domain scores to QOL scores. Physical health was the strongest predictor of QOL, with social relationships the weakest predictor.

Miller et al. (2008) reported on the reliability of the WHOQOL-BREF. Cronbach alpha coefficients ranged from .68 for social relationships to .82 for physical health. Yao and Wu (2005) tested the internal consistency with the obtained coefficients with a Taiwanese sample ranging from .70 to .77 for the four domains. The range of test-retest reliability coefficients at 2- to 4-week intervals was from .41 to .79 at the individual item level and .76 to .80 for the four domains. Yao and Wu asserted that the WHOQOL-BREF had good psychometric properties for use with a Taiwanese population and could be used with other cultures.

Internal consistency on the four subscales and total score for the WHOQOL-BREF were obtained for the 142 African American participants in the present study. The alpha coefficients for physical health (.80), psychological (.86), social relationships (.73), and environment (.84) provided evidence of adequate internal consistency. The alpha coefficient for the total score was .94 indicating the total score had good internal consistency reliability. These outcomes were similar or better than those indicated in previous research.

Variables

Each of the instruments is being used to measure a specific variable. The instruments and variables that they were used to measure are shown in Table 7.

Table 7

Variables in the Study

Variable	Instruments and Subscales
Basic Conditioning Factors	Demographic Survey Age Gender Marital status Educational level Work status Previous religious/spiritual background Length of time since diagnosis of heart failure Self-reported physical health Self-reported mental health
Spirituality	SIBS-R Core spirituality Spiritual perspective/Existential Personal application/Humility Acceptance/Insight
Spiritual self-care	Spiritual Self-Care Practice Scale Personal self-care practices Spiritual practices Physical spiritual practices Interpersonal spiritual practices
Heart failure self-care	Heart Failure Self-Care Behavior Scale
Health	SF-12
Physical	Physical health Physical functioning Role physical Bodily pain General health
Mental	Mental health Vitality Social functioning Role emotional Mental health
Health	PHQ-9
Mental	Zung SDS
Quality of Life	WHOQOL-BREF Physical health Psychological health Social relationships Environment

Data Collection Procedures

Following approval from the Human Investigation Committee (HIC), the researcher contacted cardiologists at three medical offices who agreed to participate in the study to

determine the dates of data collection. The researcher created survey packets that included an information sheet and copies of each of the instruments. The surveys included in the survey packets were counterbalanced to avoid order effect. The information sheet provided the same information as an informed consent form, but did not have to be signed or returned by the participant. Instead, the return of the completed survey packet provided evidence of the participant's willingness to be included in the study. The purpose of using an information sheet instead of a signed informed consent form was to further protect anonymity by not collecting any participant names

Three urban outpatient heart failure clinics were used in this study to collect data from African American patients diagnosed with HF. The researcher contacted the administrators or physicians at each of these sites to obtain permission to distribute survey packets to their patients with HF. Where necessary, the researcher applied for additional internal review board (IRB) approvals to complete the study at these sites. After obtaining permission to use the site, the researcher met with the administrator, nurse practitioner, nursing staff, and/or physician to review the protocol for distributing the survey packets.

African American patients previously diagnosed with HF were identified by the staff as possible participants in the study. When these patients arrived for a visit at the cardiologist's clinic, the nurse practitioner indicated whether they qualified for participation in the study. If they met the inclusion criteria, the researcher gave them a survey packet to complete while waiting to see the health care provider. Patients reviewed the research information sheet and were encouraged to ask the researcher questions regarding their participation in the study. Telephone numbers were provided on the research information sheet to contact both the researcher and the chairperson of the HIC if participants had questions regarding their participation. Because of age-related and health-related issues, the researcher read the survey

items to approximately 100 participants. The remaining 42 participants were able to complete the surveys on their own. After the patients completed the instruments in the survey packet, they placed them in the original envelope and sealed the envelope. They then returned the envelope to the researcher. The patient was then given \$20.00 cash for participating in the study.

All surveys were completed on-site at the clinics. The data collection was completed over a five-month period from February to June 2010. Data collection continued until 146 survey packets had been returned. Of the 146 surveys, 4 were unusable due to missing pages or incomplete information. The remaining 142 surveys were used in the current study.

Data Analysis

Data from the surveys were entered by an experienced data entry clerk into a computer file for analysis using SPSS – Windows, version 18. The data analyses were divided into three sections. The data were checked for accuracy by the researcher. She verified the instruments had been entered in the same order and that the input was accurate. The first section used frequency distributions and measures of central tendency and dispersion to provide a profile of the participants. The second section used descriptive statistics to provide baseline data on the scaled variables. Inferential statistical analyses were used in the third section to address the research hypotheses developed for the study. All decisions on the statistical significance of the findings were made using a criterion alpha level of .05. Figure 4 contains the statistical analyses used to address each research hypotheses.

Figure 4

Statistical Analysis

Research Hypothesis	Variables	Statistical Analysis
H ₁ : Levels of chronic self-care will mediate the relationship between spirituality and QOL in African American men and women who are being treated for HF.	<u>Independent Variable</u> Spirituality <u>Dependent Variable</u> Quality of Life <u>Mediating Variable</u> Heart Failure Self-Care Behavior	Linear regression equations were used. The effect of spirituality on QOL, the effect of HF self-care behavior on QOL, and the effect of spirituality on QOL, adjusting for HF self-care behavior were considered.
H ₂ : Levels of chronic self-care will mediate the relationship between spirituality and physical and mental health in African American men and women who are being treated for HF.	<u>Independent Variable</u> Spirituality Dependent Variable Physical health Mental health <u>Mediating Variable</u> Heart Failure Self-Care Behavior	Linear regression equations were used. The effect of spirituality on physical and mental health, the effect of HF self-care behavior on physical and mental health, and the effect of spirituality on physical and mental health, adjusting for HF self-care behavior were considered.
H ₃ : Levels of spiritual self-care will mediate the relationship between spirituality and QOL in African American men and women who are being treated for HF.	<u>Independent Variable</u> Spirituality <u>Dependent Variable</u> Quality of Life <u>Mediating Variable</u> Spiritual self-care	Linear regression equations were used. The effect of spirituality on QOL, the effect of spiritual self-care on QOL, and the effect of spirituality on QOL, adjusting for spiritual self-care were considered.
H ₄ : Levels of spiritual self-care will mediate the relationship between spirituality and physical and mental health in African American men and women who are being treated for HF.	<u>Independent Variable</u> Spirituality <u>Dependent Variable</u> Physical health Mental health <u>Mediating Variable</u> Spiritual self-care practices	Linear regression equations were used. The effect of spirituality on physical and mental health, the effect of spiritual self-care practices on physical and mental health, and the effect of spirituality on physical and mental health, adjusting for spiritual self-care practices were considered.
H ₅ : A relationship exists between levels of spirituality, physical and mental health, and QOL among African American men and women who are being treated for HF.	Spirituality Physical health Mental health Quality of life	As parametric assumptions are met, Pearson product moment correlation coefficients were utilized to determine the relationships between spirituality, physical health, mental health, and QOL.

Research Hypothesis	Variables	Statistical Analysis
<p>H₆: Quality of life for African American men and women being treated for HF can be predicted from demographic variables, such as age, gender, education; support system factors of marital status, living arrangement, support people; religious factors of current religious affiliation and religious background; and self-reported health state of physical and mental health.</p>	<p><u>Dependent Variable</u> Quality of life</p> <p><u>Independent Variables</u></p> <ul style="list-style-type: none"> • Age, • Gender, • Marital status, • Educational level, • Work status, • Previous religious background, • Length of time since diagnoses of heart failure • Self-reported physical health • Self-reported mental health 	<p>Multiple regression equations were utilized to evaluate the potential impact demographic variables on QOL. Crude (unadjusted) regression coefficients were estimated as well as adjusted regression coefficients based on multivariate modeling of multiple factors. Residual analyses were conducted to identify sources of model misspecification, outliers, and possibly influential observations. Sensitivity analyses was performed to discern the impact of influential cases on the results. Higher order effects for the continuous factors and interaction effects among factors were considered. In predicting QOL step-type (backward, forward, and stepwise) regression analysis were used to obtain the optimal model.</p>

Spirituality is important to nursing and to the African American community health and managing chronic illness self-care. Research has not yet focused on this traditionally-underrepresented and underserved population, although some articles have been published on self-care and chronic illness in the general population. Research on spiritual self-care among African Americans was not found in an extensive review of the literature. The present study examined these issues to test a mid-range theory of spirituality and spiritual self-care as an extension of Orem's self-care theory.

CHAPTER 5

RESULTS OF DATA ANALYSIS

This chapter contains the results of the statistical analyses that were used to describe the sample and test the hypotheses for the study. The chapter is divided into three sections. The first section is a description of the sample. The second section contains descriptive statistics to provide baseline information for the scaled variables. Results of the inferential statistical analyses used to test each of the hypotheses is presented in the third section. The purpose of the study was to extend the concept of spirituality and spiritual self-care within a self-care perspective that contributes to the quality of life (QOL) of African American men and women diagnosed with HF.

Prior to beginning the data analysis, the Explore procedure in PASW Ver. 18.0 was used to examine the data and determine if the data met the assumptions for use in parametric statistical analyses that would be used to address the hypotheses. The results of these analyses provided support that the scaled variables (spirituality, spiritual self-care practices, heart failure self-care practices, physical and mental health, depressive symptomology, and quality of life) met the assumptions. These variables were normally distributed, with no evidence of outliers that could have negatively affected the outcomes of the statistical analyses.

Description of the Sample

A total of 142 African American patients diagnosed with heart failure participated in the study. These participants were seeking medical services in three clinics located in the metropolitan area of a large city in the Midwest. The participants provided their age on the survey along with the length of time since diagnosis of heart failure. Table 8 is a summary of the responses.

Table 8

Descriptive Statistics – Age and Length of Time since Diagnosis of Heart Failure

	Number	Mean	SD	Median	Range	
					Minimum	Maximum
Age	142	56.82	14.41	56	18	91
Years since Diagnosis of Heart Failure	138	4.75	7.89	2	<1	55

The mean age of the participants was 56.82 ($SD = 14.41$), with a median age of 56 years. The patients ranged from 18 to 91 years of age. The number of years since diagnosis of heart failure ranged from 0 (newly diagnosed) to 55 years (diagnosed as a birth defect), with a median of 2 years. The mean number of years since diagnosis was 4.75 ($SD = 7.89$) years.

Other demographic characteristics of the sample (gender, educational level, work status, living arrangements) were summarized using frequency distributions. The results of these analyses are presented in Table 9.

Table 9

Frequency Distributions – Demographic Characteristics of the Sample (N = 142)

Demographic Characteristics	Number	Percent
Gender		
Male	71	50.0
Female	71	50.0
Marital Status		
Single, never married	61	43.3
Married	36	25.5
Widowed	18	12.8
Divorced	24	17.0
Living with partner	2	1.4
Educational Level		
Less than high school	30	21.6
High school graduate/GED	56	40.3
Some college/Technical school	30	21.6
Associate degree	12	8.6
Bachelor's degree	7	5.0
Graduate degree	4	2.9
Work Status		
Working full-time	23	16.5
Working part-time	5	3.6
Retired	39	28.1
Retired, volunteering	2	1.4
Disabled	44	31.7
Other	26	18.7
Living Arrangements		
Spouse	40	28.8
Children	25	18.0
Alone (independently)	43	30.9
Assisted living facility	2	1.4
Senior residence	1	0.7
Other family/friends	28	20.1

Although no effort was made to stratify by gender, the sample was split equally between male ($n = 71$, 50.0%) and female ($n = 71$, 50.0%) participants. The largest group of participants ($n = 61$, 43.3%) reported their marital status as *single, never married*, with 36 (25.5%) indicating they were married. The educational level of the largest group of participants ($n = 56$, 40.3%) was high school graduate/GED with 30 (21.6%) participants reporting their educational level was some college/technical school. Four (2.9%) of the participants indicated they had completed a graduate degree. The largest group of participants ($n = 44$, 31.7%) indicated that their work

status was disabled, with 39 (28.1%) reporting they were retired. Twenty-three (16.5%) of the participants were working full-time and 5 (3.6%) were working part-time. The 26 (18.7%) participants who indicated “other” as their work status were unemployed at the time of the study. Forty (28.8%) participants reported living with their spouse, while 25 (18.0%) were living with their children. Forty-three (30.9%) indicated they were living alone (independently) and 28 (20.1%) were living with other family/friends.

The participants addressed a series of questions regarding their heart failure characteristics. Their responses were summarized using frequency distributions. Table 10 shows results of this analysis.

Table 10

Frequency Distributions – Heart Failure Characteristics

Heart Failure Characteristics	Number	Percent
Heart failure stage		
Stage A	10	7.0
Stage B	15	10.6
Stage C	50	35.2
Stage D	67	47.2
Physical activities limited because of heart failure		
Not limited	22	15.5
Somewhat limited	62	43.7
Limited	33	23.2
Very limited	25	17.6
Taking medications for heart failure		
Yes	141	99.3
No	1	0.7
Noticing symptoms related to heart failure		
Yes	106	74.6
No	36	25.4
Weigh self daily		
Yes	42	29.6
No	100	70.4
Have surgery to help with symptoms		
Yes	76	53.5
No	66	46.5

The four stages of heart failure were assessed using the American Heart Association guidelines (McDermott, 2007-2008a, b). A full description of the stages of heart failure can be found in Chapter 2. The largest group of participants ($n = 67$, 47.2%) were in Stage D as their heart failure stage, with 50 (35.2%) were in Stage C. Ten (7.0%) of the patients were in Stage A and 15 (10.5%) were in Stage B heart failure. When asked if their physical activities were limited because of heart failure, 62 (43.7%) reported somewhat limited, and 33 (23.2%) indicated their physical activities were limited. Twenty-five (17.6%) participants reported their physical activities were very limited and 22 (15.5%) did not feel their physical activities were limited. All but 1 (0.7%) of the patients were taking medications for heart failure and 106 (74.6%) noticed symptoms related to their heart failure diagnosis. Forty-two participants were weighing

themselves daily, and 76 (53.5%) reported prior surgery (e.g., implanted cardiac pacemaker/defibrillators, cardiac Gsculpturing, valve replacement, etc.), to relieve HF symptoms.

Participants were asked to self-rate their physical and emotional/mental health using four point scales with response sets ranging from *poor* to *excellent*. Their responses were summarized using frequency distributions for presentation in Table 11.

Table 11

Frequency Distributions – Self-Reported Physical and Emotional/Mental Health (N = 142)

Self-reported Physical and Emotional/Mental Health	Number	Percent
Self-reported physical health		
Excellent	8	5.8
Good	51	35.9
Fair	64	45.1
Poor	19	13.4
Self-reported emotional/mental health		
Excellent	18	12.7
Good	64	45.1
Fair	55	38.7
Poor	5	3.5

The largest group of participants ($n = 64$, 45.1%) reported their physical health as *fair*, with 51 (35.9%) indicating their physical health as *good*. Nineteen (13.4%) indicated their physical health was *poor*. Sixty-four (45.1%) participants self-reported their emotional/mental health as *good* and 55 (38.7%) African American patients diagnosed with HF indicating their emotional/mental health as *fair*. Five (3.5%) participants self-reported their emotional/mental health as *poor*.

The participants were asked to indicate the religion in which they were raised and their present religion. Their responses to these questions were summarized using frequency distributions. Table 12 presents results of this analysis.

Table 12

Frequency Distributions – Religion as a Child and Religion at Time of the Study (N = 142)

Religion	Number	Percent
Religion in which participant was raised as a child (Religious Background)		
Baptist	92	64.9
Catholic	12	8.5
Christian	8	5.6
None	7	4.9
Methodist	7	4.9
Protestant	3	2.1
Nondenominational	2	1.4
Church of God in Christ	2	1.4
Pentecostal	2	1.4
Lutheran	2	1.4
Seventh Day Adventist	1	0.7
Episcopal	1	0.7
Presbyterian	1	0.7
Jehovah Witness	1	0.7
Religion at time of the study (Religious Affiliation)		
Baptist	79	55.6
Christian	13	9.3
Nondenominational	10	7.0
None	10	7.0
Catholic	7	4.9
Pentecostal	5	3.5
Church of God in Christ	3	2.1
Protestant	3	2.1
Methodist	3	2.1
Lutheran	3	2.1
Jehovah Witness	3	2.1
Seventh Day Adventist	2	1.4
Gnostic	1	0.8

The majority of participants ($n = 92$, 64.9%) reported their childhood religion as *Baptist*, followed by 12 (8.5%) participants indicating they were raised in the Catholic Church. Eight (5.6%) participants were Christian, while 7 (4.9%) participants reported no religion as a child and 7 (4.9%) attended the Methodist church as children. The remaining participants reported a variety of religions. The majority of participants ($n = 79$, 55.6%) reported Baptist as their present religion, with 13 (9.3%) indicating their religion at the time of the study is Christian. Ten (7.0%) each reported either nondenominational or none as their religion at the time of the study, with 7

(4.9%) indicating their present religion as Catholic. One (0.8%) participant indicated religion at the time of the study was Gnostics.

The participants were asked if they attended religious services as a child and at the time of their participation in the study. Their responses were summarized using frequency distribution. Table 13 presents results of this analysis.

Table 13

Frequency Distribution – Attendance at Religious Services as a Child and at Time of the Study (N = 142)

Attendance at Religious Services	Number	Percent
As a child		
Yes	128	90.8
No	19	9.2
At time of the study		
Yes	105	75.0
No	36	25.0
Practice specific traditions related to spiritual beliefs as an adult		
Yes	122	86.5
No	19	13.5

The majority of participants ($n = 128, 90.8\%$) reported they attended religious services as children. One participant did not provide a response to this question. A lower percentage of participants ($n = 105, 75.0\%$) indicated that they attended religious services at the time of the study. When asked if they practiced specific traditions related to spiritual beliefs as an adults, most of the participants ($n = 122, 86.5\%$) indicated yes.

The participants were asked to indicate to whom they could turn in times of need. They were given a list of eight possible types of people and “other” as possible responses. The participants were asked to indicate all that applied so the total number of responses exceeded the number of participants. Table 14 presents results of the frequency distributions used to summarize these data.

Table 14

Frequency Distributions – People to whom Patients Diagnosed with Heart Failure Turn in Times of Need (N = 142)

People to whom patients diagnosed with heart failure turn in times of need	Number	Percent
God	128	90.1
Children	37	26.1
Spouse	36	25.4
Other family member	35	24.6
Friend	32	22.5
Parent	31	21.8
Sibling	30	21.1
Clergy/religious advisor	30	21.1
Other	10	7.0

The majority of respondents ($n = 128, 90.1\%$) indicated that they turned to God in times of need, while 37 (26.1%) were likely to turn to their children. Thirty-six (25.4%) participants reported that they turned to their spouse and 35 (24.6%) were likely to turn to other family members. Parents ($n = 31, 21.8\%$), siblings ($n = 30, 21.1\%$), and clergy/religious advisors ($n = 30, 21.1\%$) were reported as possible people to whom the participants could turn in times of needs. Ten (7.0%) participants indicated “other” as a person to whom they could turn in times of need. Two participants identified grandchildren, and one each identified a sponsor for addiction, neighbor, or supreme being as those to whom they could turn in time of need. Three people who indicated “other” as their response to this survey item did not provide any further explanation.

Scaled Variables

The surveys were scored using the protocols provided by the scale developers to obtain descriptive information. The results of these analyses were summarized using descriptive statistics for presentation in Table 15.

Table 15

Description of the Scaled Variables (N = 142)

Scale	Mean	SD	Median	<u>Actual Range</u>		<u>Possible Range</u>	
				Minimum	Maximum	Minimum	Maximum
<u>Spiritual Involvement and Beliefs Scale – Revised - Total</u>	5.79	.93	5.95	1.14	7.00	1.00	7.00
Core spirituality	5.99	1.03	6.31	1.56	7.00	1.00	7.00
Spiritual perspectives/existential	5.83	1.06	6.00	1.00	7.00	1.00	7.00
Personal application/humility	6.14	1.18	6.50	1.00	7.00	1.00	7.00
Acceptance/Insight	5.21	1.75	6.00	1.00	7.00	1.00	7.00
<u>Spiritual Self-Care Practices</u>	3.79	.59	3.89	2.31	4.83	1.00	5.00
Personal self-care practices	4.32	.58	4.57	2.29	5.00	1.00	5.00
Spiritual practices	3.71	.85	3.89	1.44	5.00	1.00	5.00
Physical spiritual practices	2.91	.92	2.80	1.00	5.00	1.00	5.00
Interpersonal spiritual practices	4.22	.66	4.43	1.29	5.00	1.00	5.00
Revised Heart Failure Self-Care Behavior Scale	3.63	.75	3.77	1.41	4.93	0.00	5.00
<u>SF-12 (T Scores)</u>							
Physical composite	38.01	11.29	37.95	17.24	60.88	0.00	100.00
Mental composite	42.71	11.15	43.74	13.37	60.59	0.00	100.00
Zung Self-rating Depression Scale	33.97	9.32	31.00	21.00	66.00	19.00	76.00
Patient Health Questionnaire – 9 Depression	5.40	5.36	3.00	0.00	22.00	0.00	24.00
<u>WHO QOL – Total</u>	3.82	.70	3.96	1.72	4.89	1.00	5.00
Physical health	3.34	.85	3.43	1.00	5.00	1.00	5.00
Psychological health	4.15	.77	4.33	1.67	5.00	1.00	5.00
Social relationships	3.89	.86	4.00	1.33	5.00	1.00	5.00
Environment	3.92	.72	4.11	2.00	5.00	1.00	5.00

Spiritual Involvement and Beliefs Scale – Revised (SIBS-R). The mean score for the SIBS-R total scale was 5.79 ($SD = .93$), with a median score of 5.95. The range of actual scores was from 1.14 to 7.00. Possible scores on this scale were from 1.00 to 7.00, with higher scores indicating greater spiritual involvement and beliefs.

Four subscales, core spirituality, spiritual perspectives/existential, personal application/humility, and acceptance/insight, were measured on this scale. The mean score for core spirituality was 5.99 ($SD = 1.03$), with a median score of 6.31. Actual scores on this subscale ranged from 1.56 to 7.00. The subscale, spiritual perspectives/existential had a mean score of 5.83 ($SD = 1.08$), with a median of 6.00. The range of actual scores on this subscale was from 1.00 to 7.00. The mean score for the subscale personal application/humility was 6.14 ($SD = 1.18$), with a median score of 6.50. The range of actual scores was from 1.00 to 7.00. Actual scores on the subscale measuring acceptance/insight ranged from 1.00 to 7.00, with a median score of 6.00. The mean score on this subscale was 5.21 ($SD = 1.75$). The range of possible scores on these subscales was from 1.00 to 7.00 with higher scores indicating greater involvement and beliefs associated with each of the subscales.

Spiritual self-care practices scale (SSCPS). The mean total score for spiritual self-care practices was 3.79 ($sd = .59$), with a median score of 3.89. Actual mean scores ranged from 2.31 to 4.85, with possible scores ranging from 1.00 to 5.00. Higher scores on this scale indicated participants were more involved with spiritual self-care practices.

Descriptive statistics were obtained for the four subscales on the Spiritual Self-Care Practices Survey. The subscale measuring personal self-care practices had a mean score of 4.32 ($SD = .58$), with a median score of 4.57. The range of actual scores was from 2.29 to 5.00, while possible scores could range from 1.00 to 5.00. For the items measuring spiritual practices, the mean score was 3.71 ($SD = .85$), with a median score of 3.89. Actual scores ranged from 1.44 to 5.00, while possible scores could range from 1.00 to 5.00. The mean score for the subscale measuring physical spiritual practices was 2.91 ($SD = .92$), with a median score of 2.80. The range of actual scores was from 1.00 to 5.00, with possible scores ranging from 1.00 to 5.00. The range of actual scores for the subscale measuring interpersonal spiritual practices was from 1.29

to 5.00, with a median of 4.43. The mean score on this subscale was 4.22 ($SD = .66$). Possible scores could range from 1.00 to 5.00. For each of the subscales, higher scores indicated that African American patients diagnosed with heart failure were more likely to participate in the spiritual practices.

Revised Heart Failure Self-Care Behavior Scale. The mean score for this scale was 3.63 ($SD = .75$), with a median mean score of 3.77. The range of actual scores was from 1.41 to 4.93, with possible scores ranging from 0.00 to 5.00. Higher scores indicated that participants diagnosed with heart failure practiced the HF self-care behaviors more often than participants with lower scores.

SF-12. Two sets of scores were obtained on the SF-12, physical composite and mental composite. Using the scoring protocols from Ware, Kosinski, Turner-Bowker, and Gandek (2009), T-scores were obtained for each composite. The mean T-score for the physical composite scale was 38.01 ($SD = 11.29$), with a median T-score of 37.95. The range of actual mean T-scores was from 17.24 to 60.88, with possible mean T-scores ranging from 0.00 to 100.00. Actual mean T-scores for the mental composite scale was from 13.37 to 60.59, with possible mean T-scores ranging from 0.00 to 100.00. The mean T-score for the mental composite scale was 42.71 ($SD = 11.15$), with a median T-score of 43.74. Higher scores on these scales indicated more positive perceptions of the participants' physical and mental health.

Zung Self-rating Depression Scale (SDS). Actual scores on the Zung SDS were from 21.00 to 68.00, with possible scores ranging from 19 to 76. The mean score on this scale was 33.97 ($SD = 9.32$), with a median score of 31.00. Lower scores on this scale are reflective of lower levels of depressive symptomatology. The cut scores used to determine severity of depressive symptoms indicated that 124 (92.0%) participants reported no or minimal depressive symptoms, with 9 (6.5%) of the patients diagnosed with HF having scores representative of mild

depressive symptoms. Two (2.2%) participants obtained scores between 60 and 69 indicating moderate depressive symptoms. None of the participants had scores greater than 70, providing evidence that none of the participants had severe depressive symptoms.

Patient Health Questionnaire – Version 9 (PHQ-9). The mean score for the 8 items on the PHQ-9 was 5.40 ($SD = 5.36$), with a median score of 3.00. The range of actual scores was from 0 to 22.00, with possible scores ranging from 0.00 to 24.00. Lower scores on this scale indicated lower levels of depressive symptomatology. Cut scores have been developed to determine the severity of depressive symptoms. The majority of the sample ($n = 109, 79.5\%$) had scores ranging from 0 to 9, indicating no depression, with 16 (11.7%) having scores ranging from 10 to 14, indicating mild depression. Scores ranging from 15 to 19 were obtained by 9 (6.6%) of the participants, indicating moderate levels of depressive symptoms. Scores greater than 20 were obtained by 3 (2.2%) participants, indicating they were exhibiting severe depression symptoms.

World Health Organization QOL - Bref (WHOQOL-Bref). The mean score for the total WHOQOL scale was 3.82 ($SD = .70$), with a median score of 3.96. The range of actual scores was from 1.72 to 4.89, with possible scores ranging from 1.00 to 5.00. Higher scores indicate better QOL.

Four subscales were measured by the WHOQOL-Bref, physical health, psychological health, social relationships, and environment. The mean score for physical health was 3.34 ($SD = .85$), with a median of 3.43. Actual mean scores ranged from 1.00 to 5.00. The range of actual scores for psychological health was 1.00 to 5.00, with a median of 4.33. The mean score was 4.15 ($SD = .77$). The mean score for social relationships was 3.89 ($SD = .86$), with a median score of 4.00. The range of actual scores was from 1.33 to 5.00. The subscale, environment, had a mean score of 3.92 ($SD = .72$), with a median score of 4.11. The range of actual scores was

from 2.00 to 5.00. Actual scores for each of these subscales was from 1.00 to 5.00, with higher scores reflecting higher levels of QOL.

An intercorrelation matrix was created to examine the relationships among all variables. A copy of this matrix is included in Appendix D. Colinearity was not identified in variables used in analysis of the study hypotheses.

Research Hypotheses

Six hypotheses were tested in this study. Each hypothesis was tested using inferential statistical analyses. All decisions on the statistical significance of the findings were made using an a priori criterion alpha level of .05.

Hypothesis One

Levels of chronic illness self-care for heart failure will mediate the relationship between spirituality and quality of life among African American men and women who are being treated for HF.

A mediation analysis following the four steps outlined by Baron and Kenny (2009) was used to determine if the relationship between spirituality and QOL among African American men and women who were being treated for heart failure was mediated by heart failure self-care practices. The four steps used in this analysis include:

1. Determine the relationship between the independent variable (spirituality) and the independent variable (QOL). If a statistically significant relationship exists between the two variables, step 2 is completed.
2. Determine if the relationship between the independent variable (spirituality) and the mediator variable (heart failure self-care practices) is statistically significant. If a significant relationship exists between the two variables, the step 3 is completed.

3. Determine if the relationship between the mediation variable (heart failure self-care practices) and the dependent variable (QOL) is statistically significant. If a statistically significant relationship is found, then step 4 can be completed.
4. Holding the mediator variable (heart failure self-care practices) constant, determine if the relationship between the independent variable (spirituality) and the dependent variable (QOL) is zero (nonsignificant). If the result is nonsignificant, then the mediator variable is mediating the relationship between the independent variable (spirituality) and the dependent variable (QOL). If the amount of variable explained in Step 1 is reduced in Step 4, but remains statistically significant, then the mediator variable may be partially mediating the relationship between the independent and dependent variable. To determine if a partial mediation is occurring, Sobel's test is used.

Table 16 presents results of the analysis that used spirituality as the independent variable, heart failure self-care practices as the mediating variable, and QOL as the dependent variable.

Table 16

Mediation Analysis – Mediating Role of Heart Failure Self-care on the Relationship between Spirituality and Quality of Life (N = 142)

Predictor	Outcomes	R^2	F	Standardized β
<u>Step 1</u>				
Spirituality	Quality of life	.15	25.71	.39**
<u>Step 2</u>				
Spirituality	Heart Failure Self-care Practices	.13	21.61	.37**
<u>Step 3</u>				
Heart Failure Self-Care Practices	Quality of life	.25	47.13	.50**
<u>Step 4</u>				
Heart Failure Self-Care Practices	Quality of life	.25	47.13	.50**
Spirituality	Quality of life	.05	30.21	.24**
Sobel Test = 3.84, $p < .001$				

* $p \leq .05$; ** $p \leq .01$

On step 1 of the mediation analysis, a statistically significant relationship was found between spirituality and QOL, $R^2 = .15$, $\beta = .39$, $p < .001$. The relationship between spirituality and the mediator, heart failure self-care practices was statistically significant, $R^2 = .13$, $\beta = .37$, $p < .001$. On step 3, the mediator was used as the independent variable and QOL was the dependent variable. The results of this analysis were statistically significant, $R^2 = .25$, $\beta = .50$, $p < .001$. After holding the mediating variable, heart failure self-care practices, constant, the relationship between spirituality and QOL was statistically significant, $R^2 = .05$, $\beta = .24$, $p < .001$. The amount of explained variance in this relationship decreased from .15 to .05 when the mediating variable was included in the analysis. Because the relationship between spirituality and QOL remained statistically significant, heart failure self-care practices was not a full mediator. To determine if a partial mediation was occurring, Sobel's test was performed. The result of this analysis was statistically significant, Sobel test = 3.84, $p < .001$. Based on this significant finding, it appears that heart failure self-care practices partially mediated the

relationship between spirituality and QOL. Figure 5 presents the mediation model for this analysis.

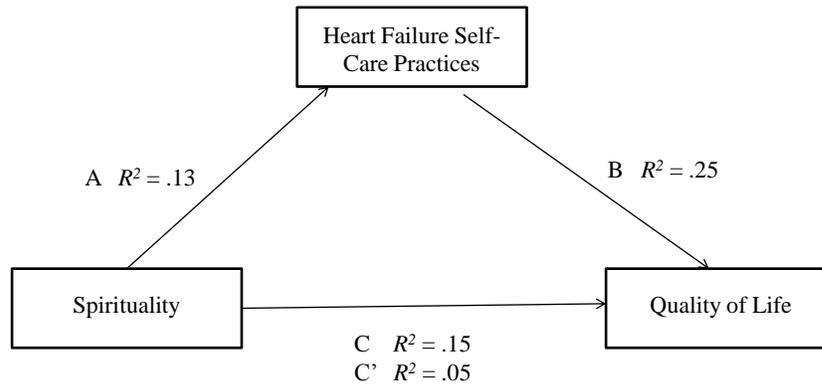


Figure 5: Mediation Model – Spirituality and Quality of life Mediated by Heart Failure Self-Care Practices

Hypothesis Two

Levels of chronic illness self-care for heart failure will mediate the relationship between spirituality and physical and mental health among African American men and women who are being treated for HF.

Two separate mediation analyses were used to test the second hypotheses. The first mediation analysis examines the mediating effect of heart failure self-care practices on the relationship between physical health as measured by the SF-12 and spirituality as measured by the SIBS-R. The results of this analysis are presented in Table 17.

Table 17

Mediation Analysis – Mediating Role of Heart Failure Self-care on the Relationship between Spirituality and Physical Health (N = 142)

Predictor	Outcomes	R^2	F	Standardized β
<u>Step 1</u>				
Spirituality	Physical Health	.05	6.73	.21*
<u>Step 2</u>				
Spirituality	Heart Failure Self-care Practices	.13	21.61	.37**
<u>Step 3</u>				
Heart Failure Self-Care Practices	Physical Health	.03	4.00	.17*
<u>Step 4</u>				
Heart Failure Self-Care Practices	Physical Health	.03	4.00	.17*
Spirituality	Physical Health	.03	4.04	.18*

Sobel Test = 1.81, $p = .071$

* $p \leq .05$; ** $p \leq .01$

The relationship between spirituality and physical health on step 1 of the mediation analysis was statistically significant, $R^2 = .05$, $\beta = .21$, $p < .05$. Thirteen percent of the variance in heart failure self-care practices was explained by spirituality on the second step of the mediation analysis, $R^2 = .13$, $\beta = .37$, $p < .001$. On the third step of the mediation analysis, heart failure self-care practices explained 3% of the variance in physical health, $R^2 = .03$, $\beta = .17$, $p < .05$. Holding heart failure self-care practices constant, the amount of variance in physical health that was explained by spirituality decreased to 3%, $R^2 = .03$, $\beta = .18$, $p < .05$. While the amount of explained variance decreased after holding the mediating variable constant, the relationship between spirituality and physical health remained statistically significant. To determine if a partial mediation was occurring with heart failure self-care, Sobel's test was calculated. The results of this analysis were not statistically significant, indicating that heart failure self-care practices were not mediating the relationship between spirituality and physical health. The model of this mediation analysis is presented in Figure 6.

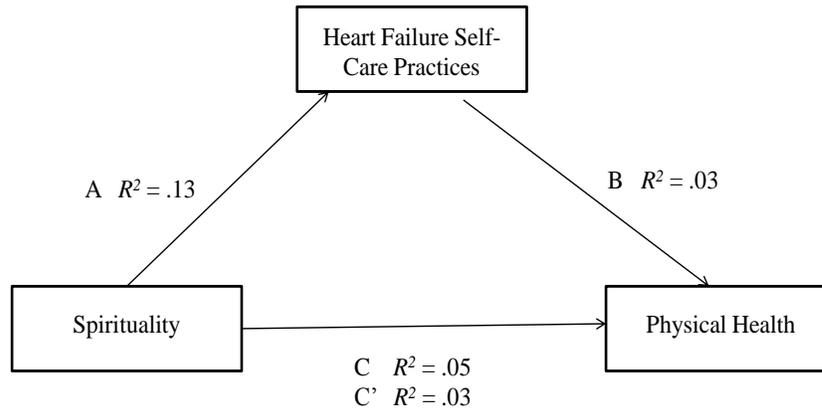


Figure 6: Mediation Model – Spirituality and Physical Health Mediated by Heart Failure Self-Care Practices

A second mediation analysis was completed to test Hypothesis 2. The independent variable was spirituality as measured by the SIBS-R, with mental health as measured by the SF-12 used as the dependent variable. The scores for heart failure self-care practices were used as the mediating variable in this analysis. Table 18 presents results of this analysis.

Table 18

Mediation Analysis – Mediating Role of Heart Failure Self-care on the Relationship between Spirituality and Mental Health (N = 142)

Predictor	Outcomes	R^2	F	Standardized β
<u>Step 1</u>				
Spirituality	Mental Health	.10	15.38	.21**
<u>Step 2</u>				
Spirituality	Heart Failure Self-care Practices	.13	21.61	.37**
<u>Step 3</u>				
Heart Failure Self-Care Practices	Mental Health	.18	30.30	.42**
<u>Step 4</u>				
Heart Failure Self-Care Practices	Mental Health	.18	30.30	.42**
Spirituality	Mental Health	.03	18.21	.19*
Sobel Test = 3.55, $p < .001$				

* $p \leq .05$; ** $p \leq .01$

On the first step of the mediation analysis, a statistically significant relationship was found between spirituality and mental health, $R^2 = .10$, $\beta = .21$, $p < .001$. A statistically significant relationship was found between spirituality and heart failure self-care practices on the second step of the analysis, $R^2 = .13$, $\beta = .37$, $p < .001$. The third step of the mediation analysis produced a statistically significant relationship between heart failure self-care practices and mental health, $R^2 = .18$, $\beta = .42$, $p < .001$. After holding the heart failure self-care practices constant, the amount of variance in mental health that was explained by spirituality decreased to .03, although the relationship between the two variables remained statistically significant, $R^2 = .03$, $\beta = .19$, $p < .05$. To determine if a heart failure self-care practices were partially mediating the relationship between spirituality and mental health, Sobel's test was performed. The results of this test were statistically significant, providing support that heart failure self-care practices were partially mediating the relationship between spirituality and mental health, Sobel Test = 3.55, $p < .001$. Figure 7 is a graphic representation of the mediation model.

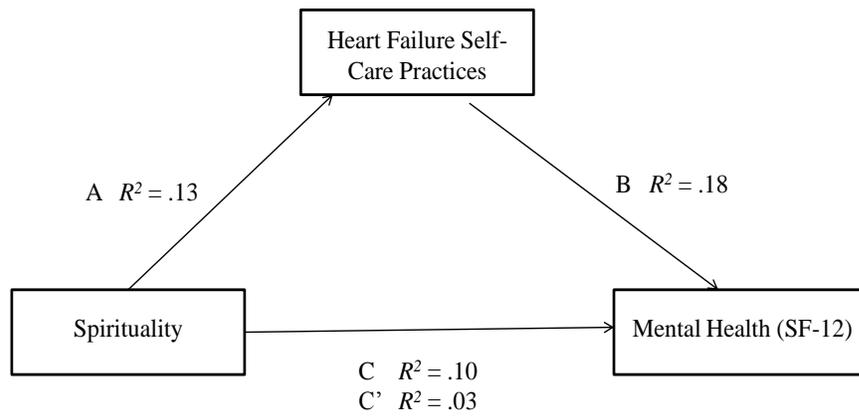


Figure 7: Mediation Model – Spirituality and Mental Health Mediated by Heart Failure Self-Care Practices

The scores for the PHQ-9 were used as the dependent variable in a mediation analysis, with spirituality used as the independent variable. The scores for heart failure self-care practices were used as the mediating variable in this analysis. Table 19 presents results of this analysis.

Table 19

Mediation Analysis – Mediating Role of Heart Failure Self-care on the Relationship between Spirituality and Depression as Measured by the PHQ-9 (N = 142)

Predictor	Outcomes	R^2	F	Standardized β
<u>Step 1</u>				
Spirituality	PHQ-9	.05	7.52	-.23**
<u>Step 2</u>				
Spirituality	Heart Failure Self-care Practices	.13	21.61	.37**
<u>Step 3</u>				
Heart Failure Self-Care Practices	PHQ-9	.40	34.58	-.45**
<u>Step 4</u>				
Heart Failure Self-Care Practices	PHQ-9	.40	34.58	-.45**
Spirituality	PHQ-9	.01	17.66	-.07

* $p \leq .05$; ** $p \leq .01$

A statistically significant relationship was found between spirituality and the scores on the PHQ-9 on the first step of the mediation analysis, $R^2 = .05$, $\beta = -.23$, $p = .007$. On the second step of the analysis, spirituality was a statistically significant predictor of heart failure self-care practices, $R^2 = .13$, $\beta = .37$, $p < .001$. Forty percent of the variance in scores on the PHQ-9 were explained by heart failure self-care practices, $R^2 = .40$, $\beta = -.45$, $p < .001$. After holding heart failure self-care practices constant, the amount of variance in PHQ-9 scores explained by spirituality was reduced of 1%, $R^2 = .01$, $\beta = -.07$, $p = .373$. Based on these findings, heart failure self-care practices were mediating the relationship between spirituality and depression as measured by the PHQ-9. Figure 8 presents results of this analysis.

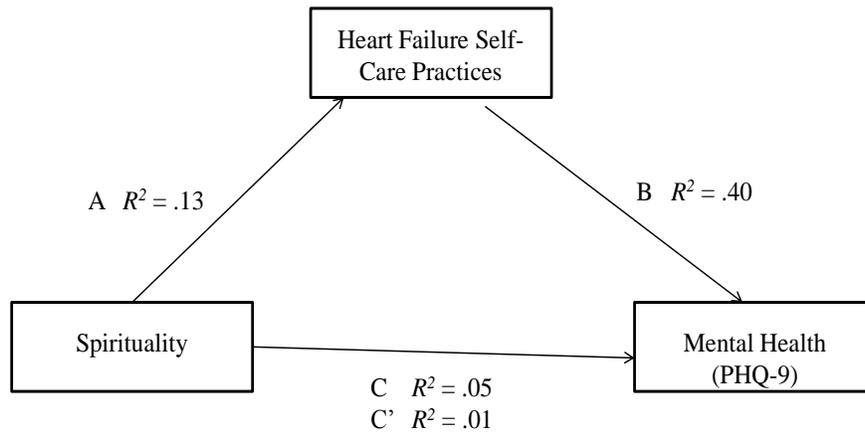


Figure 8: Mediation Model – Spirituality and Mental Health (Depression as measured by PHQ-9) Mediated by Heart Failure Self-Care Practices

A mediation analysis was used to determine if heart failure self-care practices were mediating the relationship between spirituality and depression as measured by the Zung SDS. Spirituality was used as the independent variable, with depression scores from the Zung SDS used as the dependent variable. Heart failure self-care practices were used as the mediating variable. Table 20 presents results of this analysis.

Table 20

Mediation Analysis – Mediating Role of Heart Failure Self-care on the Relationship between Spirituality and Depression as Measured by the Zung SDS (N = 142)

Predictor	Outcomes	R^2	F	Standardized β
<u>Step 1</u>				
Spirituality	Zung SDS	.15	23.82	-.38**
<u>Step 2</u>				
Spirituality	Heart Failure Self-care Practices	.13	21.61	.37**
<u>Step 3</u>				
Heart Failure Self-Care Practices	Zung SDS	.20	35.26	-.45**
<u>Step 4</u>				
Heart Failure Self-Care Practices	Zung SDS	.20	35.26	-.45**
Spirituality	Zung SDS	.06	23.88	-.25**

Sobel Test = -5.98, $p < .001$

* $p \leq .05$; ** $p \leq .01$

A statistically significant relationship was obtained between spirituality and depression scores on the Zung SDS, $R^2 = .15$, $\beta = -.38$, $p < .001$. On the second step of the mediation analysis, a statistically significant relationship was found between spirituality and heart failure self-care practices, $R^2 = .13$, $\beta = .37$, $p < .001$. The relationship between heart failure self-care practices and depression scores as measured by the Zung SDS was statistically significant, $R^2 = .20$, $\beta = -.45$, $p < .001$. After holding heart failure self-care practices constant, 6% of the variance in depression scores as measured by the Zung SDS was accounted for by spirituality, $R^2 = .06$, $\beta = -.25$, $p = .002$. Although the amount of variance was reduced by holding heart failure self-care practices, the relationship between spirituality and depression scores remained statistically significant. To test for partial mediation, a Sobel test was calculated. The results of this analysis were statistically significant, Sobel = -5.98, $p < .001$, indicating that heart failure self-care practices was partially mediating the relationship between spirituality and depression. Figure 9 provides a graphical description of this analysis.

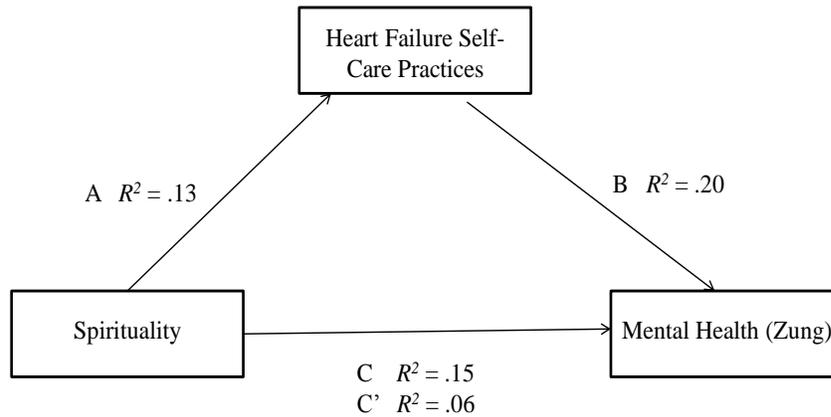


Figure 9: Mediation Model – Spirituality and Mental Health (Depression as measured by Zung) Mediated by Heart Failure Self-Care Practices

Hypothesis Three

Levels of spiritual self-care will mediate the relationship between spirituality and QOL among African American men and women who are being treated for HF.

The third hypothesis was tested using Kenny and Baron's (2009) mediation analysis. The independent variable was spirituality, with QOL used as the dependent variable. The mediating variable in this analysis was spiritual self-care practices. Results of this analysis are presented in Table 19.

Table 21

Mediation Analysis – Mediating Role of Spiritual Self-care on the Relationship between Spirituality and QOL (N = 142)

Predictor	Outcomes	R^2	F	Standardized β
<u>Step 1</u>				
Spirituality	QOL	.16	25.71	.39**
<u>Step 2</u>				
Spirituality	Spiritual Self-care Practices	.33	69.22	.58**
<u>Step 3</u>				
Spiritual Self-Care Practices	QOL	.45	113.81	.67**
<u>Step 4</u>				
Spiritual Self-Care Practices	QOL	.45	113.81	.67**
Spirituality	QOL	<.01	56.52	.01

* $p \leq .05$; ** $p \leq .01$

The relationship between spirituality and QOL on the first step of the mediation analysis was statistically significant, $R^2 = .16$, $\beta = .58$, $p < .001$. On the second step of the mediation analysis, spirituality was accounting for 33% of the variance in spiritual self-care practices, $R^2 = .33$, $\beta = .58$, $p < .001$. Spiritual self-care practices was accounting for 45% of the variance in QOL on the third step of the mediation analysis, $R^2 = .45$, $\beta = .67$, $p < .001$. After holding spiritual self-care practices constant on the fourth step of the mediation analysis, the amount of variance in QOL that was explained by spirituality decreased to less than 1%, $R^2 < .01$, $\beta = .01$, $p > .05$. This relationship was not statistically significant, providing support that spiritual self-practices fully mediates the relationship between spirituality and QOL. Figure 10 provides the graphical representation of the mediation model for spirituality, spiritual self-care practices, and QOL.

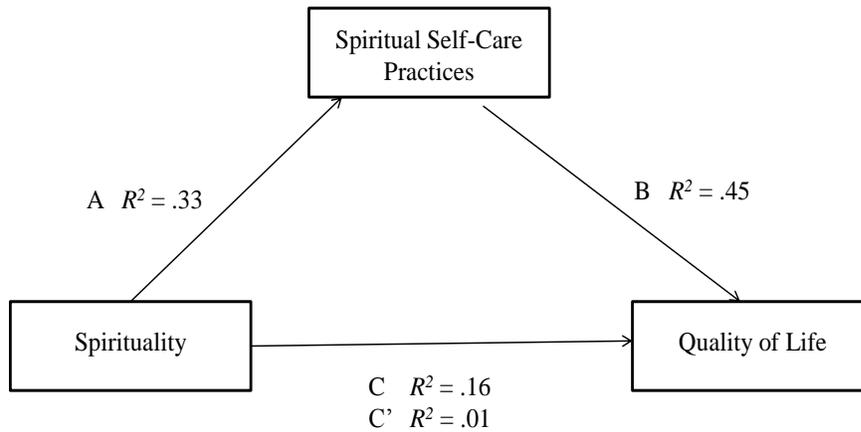


Figure 10: Mediation Model – Spirituality and Quality of Life as mediated by Spiritual Self-care Practices

Hypothesis Four

Levels of spiritual self-care will mediate the relationship between spirituality and physical and mental health among African American men and women who are being treated for HF.

To test this hypothesis, two separate mediation analyses were used. The first mediation analysis used the physical health composite score from the SF-12 as the dependent variable. The independent variable in this analysis was spirituality, with spiritual self-care practices used as the mediating variable. Table 22 presents results of this analysis.

Table 22

Mediation Analysis – Mediating Role of Spiritual Self-care on the Relationship between Spirituality and Physical Health (N = 142)

Predictor	Outcomes	R^2	F	Standardized β
<u>Step 1</u>				
Spirituality	Physical Health	.05	6.73	.21*
<u>Step 2</u>				
Spirituality	Spiritual Self-care Practices	.33	69.22	.58**
<u>Step 3</u>				
Spiritual Self-Care Practices	Physical Health	.16	25.76	.39**
<u>Step 4</u>				
Spiritual Self-Care Practices	Physical Health	.16	25.76	.41**
Spirituality	Physical Health	<.01	12.81	-.20

* $p \leq .05$; ** $p \leq .01$

The relationship between spirituality and physical health on the first step of the mediation analysis was statistically significant, $R^2 = .05$, $\beta = .21$, $p < .05$. On the second step of the mediation analysis, 33% of the variance in spirituality was accounted for by spiritual self-care practices, $R^2 = .33$, $\beta = .58$, $p < .001$. Sixteen percent of the variance in spiritual self-care practices was accounted for by physical health, $R^2 = .16$, $\beta = .39$, $p < .001$. When spiritual self-care practices was held constant on the fourth step, the amount of variance in physical health that was explained by physical health decreased from 5% to less than 1%, $R^2 < .01$, $\beta = -.20$, $p > .05$. Based on this result, it appears that spiritual self-care practices are fully mediating the relationship between spirituality and physical health. The graphic representation of this mediation model is Figure 11.

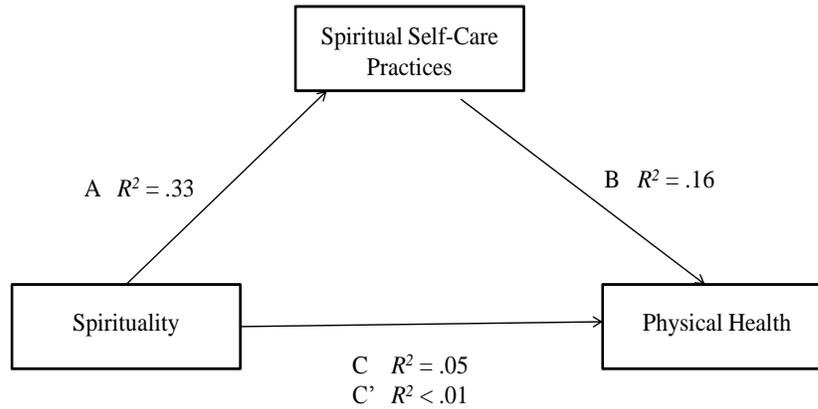


Figure 11: Mediation Model – Spirituality and Physical Health Mediated by Spiritual Self-Care Practices

A second mediation analysis was used to further test Hypothesis 4. The independent variable was spirituality, with mental health composite T-score as measured by the SF-12. The mediating variable in this analysis was spiritual self-care practices. The results of this analysis are presented in Table 23.

Table 23

Mediation Analysis – Mediating Role of Spiritual Self-care on the Relationship between Spirituality and Mental Health (N = 142)

Predictor	Outcomes	R^2	F	Standardized β
<u>Step 1</u>				
Spirituality	Mental Health	.10	15.38	.32**
<u>Step 2</u>				
Spirituality	Spiritual Self-care Practices	.33	69.22	.58**
<u>Step 3</u>				
Spiritual Self-Care Practices	Mental Health	.21	37.28	.46**
<u>Step 4</u>				
Spiritual Self-Care Practices	Mental Health	.21	37.28	.46**
Spirituality	Mental Health	<.01	18.94	.08

* $p \leq .05$; ** $p \leq .01$

Ten percent of the variance in mental health was accounted for by spirituality on the first step of the mediation analysis, $R^2 = .16$, $\beta = .39$, $p < .001$. On the second step of the analysis, a statistically significant relationship was found between spirituality and spiritual self-care practices, $R^2 = .33$, $\beta = .58$, $p < .001$. The relationship between spiritual self-care practices and mental health on the third step of the mediation analysis was statistically significant, $R^2 = .21$, $\beta = .46$, $p < .001$. After holding spiritual self-care practices constant on the fourth step of the mediation analysis, the amount of variance in mental health that was explained by spirituality was reduced to less than 1%, $R^2 < .01$, $\beta = .08$, $p > .05$. Based on this finding, spiritual self-care practices appear to be fully mediating the relationship between mental health and spirituality.

Figure 12 is the graphic representation of this mediation model.

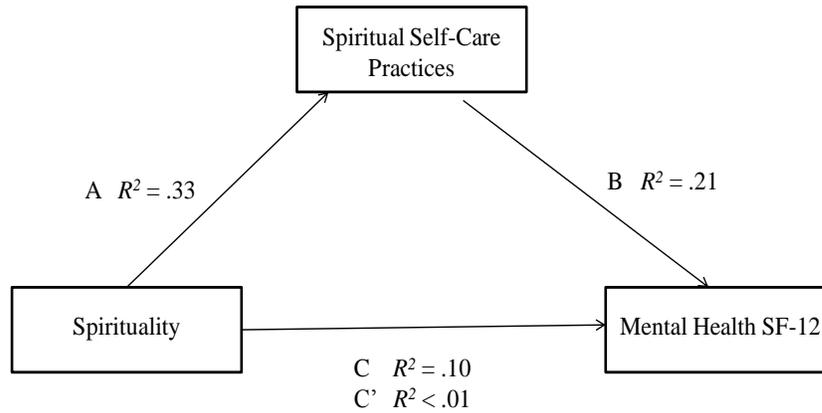


Figure 12: Mediation Model – Spirituality and Mental Health Mediated by Spiritual Self-Care Practices

A mediation analysis was used to test the mediating effects of spiritual self-care practices on the relationship between spirituality and mental health as measured by the PHQ-9. Scores for spiritual self-care practices were used as the independent variable, with scores for depression as measured by the PHQ-9 used as the independent variable. Scores for spiritual self-care practices were used as the mediating variable. Table 24 presents results of this analysis.

Table 24

Mediation Analysis – Mediating Role of Spiritual Self-care Practices on the Relationship between Spirituality and Mental Health (Depression as Measured by the PHQ-9; N = 142)

Predictor	Outcomes	R^2	F	Standardized β
<u>Step 1</u>				
Spirituality	PHQ-9	.05	7.52	-.23**
<u>Step 2</u>				
Spirituality	Spiritual Self-care Practices	.33	69.22	.58**
<u>Step 3</u>				
Spiritual Self-Care Practices	PHQ-9	.29	56.26	-.54**
<u>Step 4</u>				
Spiritual Self-Care Practices	PHQ-9	.29	56.26	-.54**
Spirituality	PHQ-9	.01	29.33	.12

* $p \leq .05$; ** $p \leq .01$

On the first step of the mediation analysis, spirituality was a statistically significant predictor of scores on the PHQ-9, $R^2 = .05$, $\beta = -.23$, $p < .001$. Spirituality was a statistically significant predictor of spiritual self-care practices on the second step of the mediation analysis, $R^2 = .33$, $\beta = .58$, $p < .001$. Twenty-nine percent of the variance in depression as measured by scores on the PHQ-9 was explained by spiritual self-care practices, $R^2 = .29$, $\beta = .29$, $p > .001$. After holding spiritual self-care practices constant, the relationship between spirituality and depression scores was no longer statistically significant, $R^2 = .01$, $\beta = .12$, $p = .160$. Based on this finding, spiritual self-care practices is mediating the relationship between spirituality and depression scores as measured by the PHQ-9. Figure 13 presents the mediation model for this analysis.

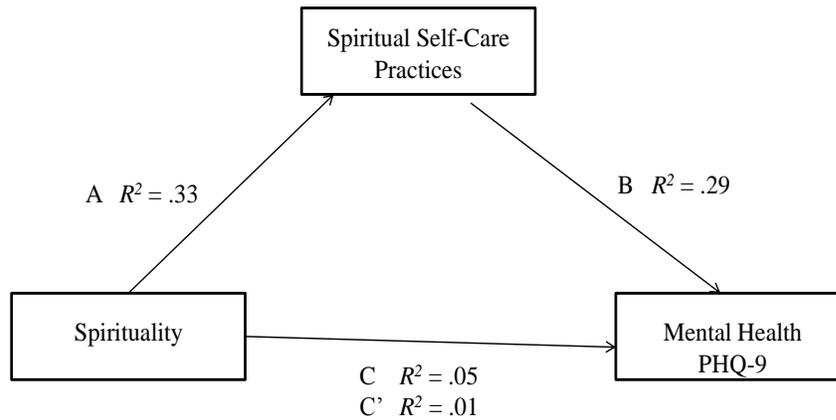


Figure 13: Mediation Model – Spirituality and Mental Health (Depression as measured by the PHQ-9) Mediated by Spiritual Self-Care Practices

A mediation analysis was used to determine if spiritual self-care practices was mediating the relationship between spirituality and mental health as measured by scores on the Zung SDS. The independent variable in this analysis was spirituality, with depression scores from the Zung SDS used as the dependent variable. The scores for spiritual self-care practices were used as the mediating variable. Table 25 present results of this analysis.

Table 25

Mediation Analysis – Mediating Role of Spiritual Self-care Practices on the Relationship between Spirituality and Mental Health (Depression as Measured by the Zung SDS; N = 142)

Predictor	Outcomes	R^2	F	Standardized β
<u>Step 1</u>				
Spirituality	Zung SDS	.15	23.82	-.38**
<u>Step 2</u>				
Spirituality	Spiritual Self-care Practices	.33	69.22	.58**
<u>Step 3</u>				
Spiritual Self-Care Practices	Zung SDS	.39	90.59	-.63**
<u>Step 4</u>				
Spiritual Self-Care Practices	Zung SDS	.39	90.59	-.63**
Spirituality	Zung SDS	.01	45.09	-.03

* $p \leq .05$; ** $p \leq .01$

On the first step of the mediation analysis, a statistically significant relationship was found between spirituality and depression scores as measured by the Zung SDS, $R^2 = .15$, $\beta = -.38$, $p > .001$. The relationship between spirituality and spiritual self-care was statistically significant on the second step of the mediation analysis, $R^2 = .33$, $\beta = .58$, $p > .001$. A statistically significant relationship was found between spiritual self-care practices and depression scores as measured by the Zung SDS, $R^2 = .39$, $\beta = -.63$, $p > .001$. On the fourth step of the mediation analysis, after holding spiritual self-care practices constant, the relationship between spirituality and depression scores on the Zung SDS was no longer statistically significant, $R^2 = .01$, $\beta = -.03$, $p = .701$. Based on these findings, spiritual self-care practices was fully mediating the relationship between spirituality and depression scores as measured by the Zung SDS. Figure 14 presents the mediation model for this analysis.

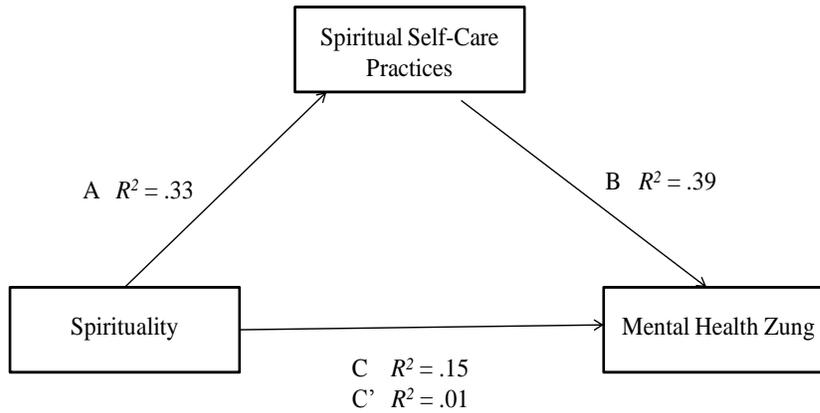


Figure 14: Mediation Model – Spirituality and Mental Health (Depression as measured by the Zung) Mediated by Spiritual Self-Care Practices

Hypothesis Five

A relationship exists between levels of spirituality, spiritual self-care, chronic illness self-care for heart failure, physical and mental health, and QOL among African American men and women who are being treated for HF.

Pearson product moment correlations were used to examine the direction and magnitude of the relationships between the scaled variables (spirituality, spiritual self-care, chronic illness self-care for heart failure, physical and mental health, and QOL). The results of these analyses are presented in Table 26.

Table 26

Pearson Product Moment Correlations – Spirituality, Spiritual Self-Care, Chronic Illness Self-Care for Heart Failure, Physical and Mental Health, and Quality of Life (N = 142)

Independent Variables	Quality of Life				
	Physical Health	Psychological Health	Social Relationships	Environment	Total
Spiritual Involvement and Beliefs Scale - Revised					
Core spirituality	.20*	.39**	.25**	.43**	.35**
Spiritual perspectives/existential	.25**	.40**	.30**	.47**	.40**
Personal application/humility	.08	.18*	.12	.23**	.17*
Acceptance/insight	.21*	.19*	.26**	.30**	.27**
Spirituality - Total	.25**	.37**	.32**	.48**	.39**
Spiritual Self-care Practices Scale					
Intrapersonal spiritual self-care	.48**	.61**	.58**	.66**	.66**
Personal spiritual practices	.32**	.46**	.36**	.53**	.47**
Externalized spiritual self-care	.37**	.49**	.39**	.48**	.49**
Interpersonal spiritual self-care	.35**	.44**	.46**	.47**	.49**
Spiritual self-care practice - Total	.48**	.64**	.56**	.68**	.66**
PHQ-9	-.74**	-.71**	-.55**	-.62**	-.74**
Zung SDS	-.62**	-.70**	-.54**	-.62**	-.70**
Heart Failure Self-care Practices	.47**	.49**	.36**	.31**	.21*
SF-12					
Physical Composite T Score	.67**	.47**	.45**	.44**	.58**
Mental Composite T Score	.65**	.64**	.56**	.60**	.70**

* $p < .05$, ** $p < .01$

The results of the correlations between the independent variables and QOL generally were statistically significant in a positive direction. Negative relationships were found between the four subscales of QOL and the two depression scales, Zung SDS and PHQ-9. Higher scores on the depression scales indicated greater depressive symptomatology with higher scores on the QOL measures indicating higher levels of QOL. Two nonsignificant relationships were found for personal application/humility on the SIBS-R with QOL subscales, physical health ($r = .08$, $p > .05$) and social relationships ($r = .12$, $p > .05$). The statistically significant correlations were in

the medium to high range indicating that participants who indicated higher levels of QOL also had higher scores for spirituality, spiritual self-care practices, heart failure self-care practices, and physical and mental health as measured on the SF-12.

Hypothesis Six

Quality of life for African American men and women being treated for HF can be predicted from demographic variables, such as age, gender, education; support system factors of marital status, living arrangement, support people; religious factors of current religious affiliation and religious background; and self-reported health state of physical and mental health.

A stepwise multiple linear regression analysis was used to determine which of the demographic characteristics could be used to predict QOL for African American men and women who had been diagnosed with heart failure. Because many of the demographic variables were nominally scaled, they were dummy coded for this analysis. Prior to the stepwise multiple linear regression analysis, Pearson product moment correlations (for the continuous variables) and point-biserial correlations (for the dichotomous dummy coded variables) were used to reduce the number of independent variables. Only those independent variables that were significantly related to the dependent variable (QOL) were included in the final stepwise multiple linear regression analysis. Table 27 shows the correlations between QOL and the demographic variables.

Table 27

Pearson Product Moment Correlations and Point-Biserial Correlations – Quality of Life and Demographic Variables (N = 142)

Independent Variables	Quality of Life	
	<i>r</i>	<i>p</i>
Demographic Variables		
<i>Age</i>	.28**	.001
<i>Gender</i>	-.13	.139
Educational level		
Less than high school	.02	.828
High school diploma/GED	.04	.641
<i>Some college</i>	-.17*	.049
<i>Associate's degree</i>	.17*	.040
Bachelor's degree	.08	.364
Graduate degree	-.12	.162
Support Systems		
Marital status		
<i>Single</i>	-.19*	.027
<i>Married</i>	.22**	.010
Widowed	.02	.794
Divorced	-.01	.945
Living with a partner	-.15	.077
Living with		
<i>Spouse</i>	.36**	<.001
<i>Children</i>	-.19*	.027
Alone	.01	.923
Assisted Living Facility	-.09	.266
Senior Residence	-.08	.347
<i>Other</i>	-.23**	.007
Most likely to turn to in times of need		
<i>Spouse</i>	.18*	.037
Sibling	-.13	.124
Parent	-.10	.262
Children	-.02	.817
<i>Other family member</i>	-.17*	.046
Friend	-.01	.894
Clergy/religious advisor	.11	.188
God	.11	.193
Other	.01	.922
Health State		
<i>Self-rating of physical health</i>	-.47**	<.001
<i>Self-rating of emotional/mental health</i>	-.41**	<.001

Independent Variables	Quality of Life	
	<i>r</i>	<i>p</i>
Religious/Spiritual Background		
Religion as a child		
Baptist	.07	.394
Protestant	.01	.943
Catholic	-.02	.790
None	-.14	.093
Religion as an adult		
Baptist	.15	.075
Protestant	-.06	.494
Catholic	.04	.650
<i>None</i>	-.22**	.009
<i>Attend religious services as a child</i>	-.25*	.003
<i>Attend religious services as an adult</i>	-.14	.090
<i>Practice specific traditions related to spiritual beliefs as an adult</i>	-.17*	.041
Other Demographic Variables		
Heart Failure Stage		
Stage 1	.03	.743
Stage 2	.06	.459
Stage 3	-.01	.980
Stage 4	-.05	.548
Work status		
Full time	.05	.551
Part time	.07	.426
<i>Retired</i>	.32**	<.001
Retired, volunteering	.07	.444
<i>Disabled</i>	-.24	.004
Other	-.13	.113

* $p < .05$, ** $p < .01$

Seventeen independent variables (age, educational level – some college and associate’s degree, marital status – single or married, living with spouse, children or other, turning to spouse or other family member in times of need, self-rating of physical health and mental health, religion – none, attended religious services as a child, practice specific traditions related to spiritual beliefs as an adult, work status – retired and disabled) were significantly correlated with QOL. These independent variables were used in the hierarchical stepwise multiple linear regression analysis. The order of entry is the basic conditioning factors as shown in the model. Table 28 shows results of this analysis.

Table 28

Stepwise Multiple Linear Regression Analysis – Quality of Life and Basic Conditioning Factors

Variable	Constant	b-Weight	β -Weight	R^2	t	Sig
Included Variables	4.38	.				
Age		.01	.18	.08	2.57	.011
Educational level – Associate degree		.47	.18	.03	2.75	.007
Live with spouse		.38	.11	.11	3.51	.001
Self-rating of physical health		-.28	.07	.15	-4.04	<.001
Self-rating of emotional/mental health		-.19	.07	.03	-2.63	.009
Excluded Variables						
Educational level – Some college			-.15		-2.18	.031
Marital status – Single			-.02		-.24	.813
Marital status – Married			-.02		-.17	.863
Live with children			-.05		-.66	.513
Live with other			-.01		-.09	.930
Turn to spouse in time of need			-.13		-1.30	.196
Live with other family member			-.08		-1.10	.274
No religion as an adult			-.11		-1.63	.105
Attended religious services as a child			-.12		-1.81	.072
Practice specific traditions related to spiritual beliefs as an adult			-.13		-1.91	.058
Work status – Retired			.05		.60	.550
Work Status - Disabled			-.07		-.93	.355
Multiple R		.63				
Multiple R^2		.40				
F Ratio		17.74				
DF		5, 136				
Sig of F		<.001				

Five of the 10 independent variables, self-rating of physical health, age, self-rating of emotional/mental health, education - *associate's degree*, and marital status - *married* entered the stepwise multiple linear regression equation, accounting for 36% of the variance in QOL, $R^2 = .36$, $F(5, 136) = 15.33$, $p < .001$. Self-rating of physical health entered the stepwise multiple linear regression equation first, accounting for 22% of the variance in QOL, $r^2 = .22$, $\beta = -.35$, $t = -4.45$, $p < .001$. Lower scores on self-reported physical health reflected more positive perceptions of physical health, with *excellent* scored as a 1 and *poor* scored as a 4. The negative relationship between self-rating of physical health and QOL indicated that participants who reported better physical health were more likely to have higher scores for QOL. Age was a

statistically significant predictor of QOL in a positive direction, $r^2 = .05$, $\beta = .17$, $t = 2.36$, $p = .020$. Older patients diagnosed with heart failure were more likely to experience better QOL. The third independent variable that entered the stepwise multiple linear regression equation was self-rating of emotional/mental health, $r^2 = .03$, $\beta = -.22$, $t = -2.83$, $p = .005$. Like self-rated physical health, lower scores for self-rated emotional/mental health reflected more positive responses (1 = *excellent* and 4 = *poor*). The negative relationship indicated that patients diagnosed with heart failure who reported better emotional/mental health were more likely to have a better QOL. Participants who reported they had completed associate's degrees were more likely to have better QOL, $r^2 = .04$, $\beta = .05$, $t = 2.58$, $p = .011$. Being married was associated with a better QOL, $r^2 = .02$, $\beta = .24$, $t = 2.09$, $p < .039$. The remaining independent variables, marital status = *single*, education = *some college*, work status = *retired* or *disabled*, and religion as an adult = *none*, did not enter the stepwise multiple linear regression equation, indicating they were not explaining a statistically significant amount of variation in the QOL dependent variable.

Summary

The results of the statistical analyses that were used to describe the sample and test the hypotheses have been presented in this chapter. A discussion of the findings, implications for nursing, and recommendations for further research are presented in Chapter 6.

CHAPTER 6

DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

The purpose of this study was to expand the theory of self-care deficit nursing by including specific constructs of religion, spirituality, and spiritual self-care practices within the structure suggested by Orem (2001). Based on an extensive literature review, practice experience, and a discovery theory-building approach, a new mid-range theory called White's theory of spirituality and spiritual self-care (WTSSSC) was developed. In order to begin to test this mid-range theory, empirical indices of many of the main concepts were identified from prior studies and one new instrument (the Spiritual Self-Care Practice Scale) was developed. Hypothesized relationships among the main concepts of the mid-range theory were examined and tested in a sample of 142 urban African American outpatients who had been previously diagnosed with heart failure. Findings of the present study were presented in Chapter 5. In this chapter those findings will be further discussed as they relate to the support for the mid-range theory (WTSSSC) and by implication as they support the expansion of the grand theory of self-care deficit nursing. In order to clarify the implications of these study findings for the overall theoretical development, this discussion follows the order of constructs mapped out in Chapter 3. Main section headings connect the discussion with the original Orem terms, subheadings use the substructured terms of the WTSSSC.

Basic Conditioning Factors

The mid-range theory suggests that the basic conditioning factors most likely to be relevant to spirituality and spiritual self-care among patients with heart failure are demographics, health, social support, and religion. This relationship is predicted and is part of the WTSSSC from the empirical literature. However, it is not found in Orem's SCDNT and is inconsistent with Orem's theory. To test the predicted relationships between the selected basic conditioning

factors and the outcome measure of quality of life, Hypothesis 6 was tested. Hypothesis 6 was that quality of life among *African American men and women being treated for HF can be predicted from demographic variables such as age, gender, education; support system factors of marital status, living arrangement, support people; religious factors of current religious affiliation and religious background; and self-reported health state of physical and mental health.* Figure 15 shows the proposed relationships tested for the hypothesis.

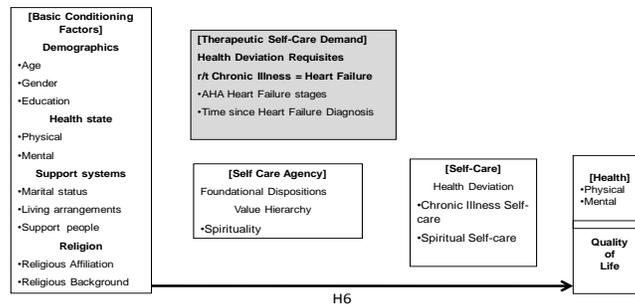


Figure 15: Hypothesis 6

Demographics

Age and education.

The ages of the participants ranged from 18 to 91, with a mean age of about 57 years. Although heart failure can occur at any age, the majority of cases in the US occur among those over the age of 60 (American Heart Association, 2009), however, African Americans are often diagnosed at younger ages (Yancy, 2003). Heart failure rates among African Americans in the US differ by gender (AHA, 2009). An equal number of men and women participated in the present study, although the sample was not intentionally selected for gender balance. Age was a statistically significant predictor of QOL, with older African Americans diagnosed with HF reporting more positive quality of life. As people age, they may become more content with their lives, make peace with themselves, accept the limitations that correspond with their chronic

illness, and enjoy the time they have left. This group of HF patients did not exhibit depressive symptomatology which may have contributed to their quality of life.

The largest group by education level was high school graduates or those with General Education Degrees (GEDs), but a wide range of education levels was represented in the sample. Parallels between study participant demographics and available population estimates help support the appropriateness of the sample. Having completed an associate's degree was a statistically significant predictor of quality of life. Given the age of the participants, completion of an associate's degree was an accomplishment. Many of the participants had grown up at a time when African Americans did not attend any college or other postsecondary educational programs. Many participants said they were proud of their educational accomplishments which may have been a positive contributor to their quality of life.

Social support.

Within the SCDNT, the BCFs are predicted to affect the development of self-care agency and the power to engage in self-care. Two BCFs, social support (being married) and self-reported health status that were substructured from Orem's SCDNT were significant predictors of QOL. African American patients who were married and those who reported their physical and mental health as fair- to-good were more likely to have a better QOL. The fourth BCF that was theorized to be important was religious affiliation/spiritual background. This BCF was not found to be a significant predictor of QOL, although spirituality and spiritual self-care practices were significantly related to QOL.

Health state.

When asked to self-report their physical health, the majority of participants (81%) indicated the fair-to-good range. Given the more severe stages of HF observed in the sample, participants were remarkably positive regarding their self-reported physical health. When a person is experiencing stage C or D heart failure, most clinicians would expect that physical health would be rated as poor. The area of patient self-report of physical health versus clinician ratings has not been fully explored and the present finding is an important addition to the literature. Most participants (84%) rated their mental health in the *fair-to-good range*. This contrasts with previous findings that depression ranged from 30% to 50% among patients diagnosed with HF (Koenig, Vandermeer, Chambers, Burr-Crutchfield, & Johnson, 2006; Friedmann et al, 2006; Sherwood et al., 2007).

Several possible explanations can be considered for these unexpected findings. The present study used a convenience sample derived primarily from two urban heart failure outpatient clinics. It is possible that more depressed patients self-selected out of the sample or were not encouraged to participate by the clinic staff in the same way as less depressed patients. It is also possible that personal attention from the researcher helped reframe participant's perceptions of physical and mental status towards more positive estimates. Since the researcher is not African American, it is possible that personal attention from an "outsider" to the cultural group might encourage some participants to inflate estimates of well-being and downplay poor physical or mental health. Lastly, it should be noted that the two primary data collection sites were well-regarded in the African American community for both clinical excellence and appropriately friendly and patient-centered care. It is possible that participants did not "complain" about how they assessed their health status for fear of their ratings reflecting poorly on their care providers. However, many patients who chose to participate in the study did report

poor physical and mental health status. Clinic staff members were observed to be quite consistent in their approach to potential participants and encouraged eligible patients to join for the small monetary incentive. Clinic staff helped the researcher be more approachable across racial/ethnic/cultural boundaries by characterizing the researcher to patients as “cool” and indicating that sharing information was acceptable. The desire to speak positively about the clinics was addressed through assurances of complete confidentiality for participants.

Support systems.

A sizable percentage of participants (43%) said they had never been married. The largest group of participants (31%) were living independently alone and about 28% indicated they were living with their spouses. When asked who they would turn in to times of need, 90% of the participants indicated God, followed by family members. The only significant support system predictor of quality of life was living with a spouse. Patients with HF are more likely to practice self-care if they have caregivers who can motivate them for continuing their medications and eating properly, as well as having a companion who cares for them. Social support is an important component of quality of life, with spouses usually having a personal interest in maintaining the health of their loved ones.

Religious affiliation and religious background.

Religion was defined for this research in keeping with the Office of Minority Health (2001) definition as a set of beliefs, values, and practices based on a spiritual leader, although this definition continues to be the basis of vigorous debate. Almost 70% of the participants reported they were raised in the Baptist religion, with fewer maintaining a Baptist religious affiliation as adults. A wide variety of different religious affiliations were represented in the study, including Catholic, Christian, Church of God in Christ, and nondenominational. The participants may have provided a religious affiliation that they were not actually practicing

because they thought the researcher expected them to have some type of religious affiliation. The majority of participants (91%) said they had attended religious services as a child and about two-thirds reported they attended services as an adult. The majority (87%) indicated they practiced traditions related to spiritual beliefs as an adult. The participants, regardless of the religion in which they were raised as children or the religion they practice as adults, were adhering to the three components of religion ([a] religion as belief, [b] religion as identity, and [c] religion as way of life) espoused by Gunn (2003). The preponderance of various versions of Christianity in this sample was expected. The African American population was chosen as a focus for this research based, in part, on the expectation that they would represent a relatively highly-engaged religious and spiritual group. In future studies, it would be interesting to compare and contrast findings in a similar study among groups with varied religions and among those with low levels of religious affiliation. Religious affiliation either as a child or as an adult was not a predictor of quality of life because of the lack of variability.

Basic Conditioning Factors and Self-care Agency

Although not part of the hypotheses testing, determining the relationship between the BCFs and self-care agency was considered an important consideration for testing the WTSSSC. Statistically significant correlations were found between spirituality and age, self-rating of physical health, living with someone other than family, religious background and religious affiliation, and in times of need, turning to God, siblings, and children. These findings indicated that higher levels of these variables were associated with increased levels of spirituality. The remaining BCFs were not statistically significant predictors of spirituality. These findings support the link between BCFs and self-care agency, which is consistent with both Orem's SCDNT and White's TSSSC.

Therapeutic Self-Care Demand

In White's TSSSC, the focus is on the health deviation requisites that accompany chronic illnesses. For this study, heart failure was selected as the exemplar chronic illness because it is a leading cause of morbidity and mortality in the US, as well as being widely prevalent in the urban African American community. Whereas health promotion and developmental requisites are included in the theory of self-care deficit nursing, they are not included at this time in White's mid-range theory. Although participants were assessed using the American Heart Association Heart Failure Stages, and asked about the length of time since diagnosis, for this study these two variables were only used to further characterize the sample. The theoretically-predicted relationships between basic conditioning factors, these aspects of therapeutic self-care demand, and self-care agency were not examined in this context. The sample for this study was selected to reflect a relatively homogenous group of heart failure patients in an effort to hold this constellation of variables more constant.

American Heart Association heart failure stages.

The greatest numbers of patients diagnosed with heart failure were categorized as either stage C or D (82%). Stages of heart failure provide a means of determining the severity of the disease (AHA, 2001). The four stages of heart failure as defined by McCormick (2007-2008b) and as applied in the present study were:

Stage A – At risk, no signs/symptoms

Stage B – Tested & diagnosed, no signs/symptoms

Stage C – Tested & diagnosed, noticeable signs/symptoms (e.g., overall fatigue, shortness of breath), medication/ lifestyle changes prescribed

Stage D – Progressive signs/symptoms, require strict monitoring of BP, daily weight, and adherence to lifestyle factors (diet / exercise) Surgical options prn

As most participants in the present study were at stage C or D, their responses regarding limitations in physical activity, medication, and surgery were not unexpected. Most participants (44%) reported their physical activities were somewhat limited. Over 70% of the participants said they did not weigh themselves daily. While daily weights are a very important part of the self-care practices associated with HF, most of the participants did not perform this activity. When asked why they did not weigh themselves, the most common response was that they did not own a scale. Participants were drawn from urban clinics and most of them were unemployed, retired, or disabled. As a result, many could not afford to purchase a home scale. Grant funding to support the purchase of home scales or to offset even part of the cost seems to be a promising approach to explore. Further study is warranted to determine if receiving a scale at diagnosis would assist patients with HF to be more compliant with self-care practices.

Self-Care Agency

Self-care agency (SCA) involves the ability of an individual diagnosed with a chronic illness such as heart failure to use practices and behaviors to care for themselves. Ability allows people to seek knowledge regarding heart failure and make appropriate decisions about using the self-care behaviors that can result in better health outcomes and improved QOL. Engaging in self-care behaviors can prevent future hospital admissions for HF patients and reduce distressing symptoms. Self-care among people with HF includes both maintenance and management activities. Orem's SCA has a three-part hierarchical structure including (a) foundational capabilities and dispositions (FCD), (b) 10 power components enabling self-care operations, and (c) actual operations needed for self-care. Each of these components can be enhanced by addition of spirituality as a construct within SCA. As part of foundational capabilities, spirituality was added to reflect two sets of foundational dispositions. These FDAs affect goals sought and those significant orientative capabilities and dispositions affecting self-awareness. To be able to

engage in self-care activities, an individual needs to be oriented to time, health, other people, events, and objects. A person also has moral, economic, aesthetic, material, and social values, particular interests and concerns, and habits of daily living that influence their self-care capabilities. In White's theory of spirituality and spiritual self-care, the construct of spirituality was viewed as a Foundational Disposition.

Spirituality

Spirituality was defined as the beliefs a person holds related to their subjective sense of existential connectedness including beliefs that reflect relationships with others, acknowledge a higher power, recognize an individual's place in the world, and lead to spiritual practices. In the context of Orem's theory, spirituality is an orientative capability that reflects a person's priorities and value hierarchy. In this study, as in others, African Americans have been shown to turn to God to do what physicians or modern medicine cannot; work together with God to achieve good health; and be empowered to take care of themselves (Holt, Lukwago, & Kreuter, 2003). Spirituality is the primary focus of interest for this mid-range theory.

Self-Care

A practical definition of self-care is "the practice of activities that maturing and mature persons initiate and perform, within time frames, on their own behalf in the interests of maintaining life, healthful functioning, continuing personal development, and well-being, through meeting known requisites for functional and developmental regulations" (Orem, 2001, p. 522). From the concept of self-care, two theoretical concepts were substructured: chronic illness self-care and spiritual self-care.

Chronic Illness Self-Care

The mean scores for chronic illness (HF) self-care practices generally were positive, indicating that patients were taking the initiative to be involved in their self care. Hypothesis 1

was that levels of chronic illness self-care for heart failure would mediate the relationship between spirituality and quality of life among African American men and women who are being treated for HF. Figure 16 presents a diagram of the hypothesis being tested.

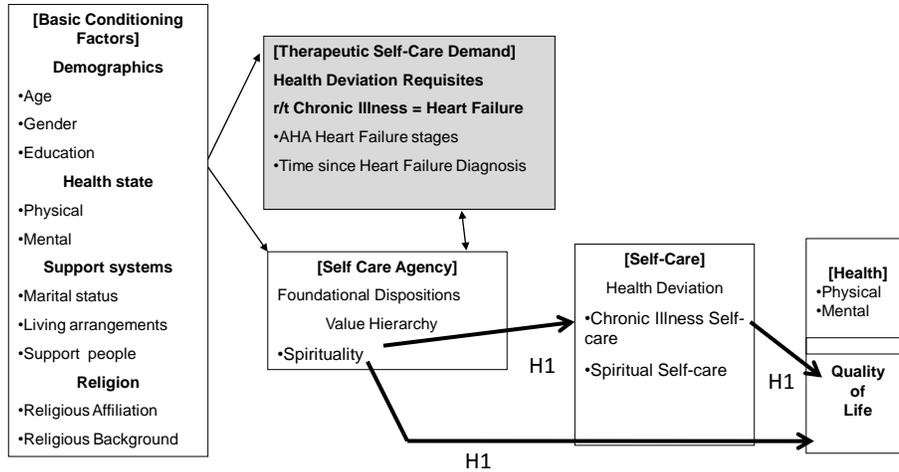


Figure 16: Hypothesis 1

Chronic illness self-care behavior partially mediated the relationship between spirituality and QOL. This finding provided initial support for WTSSSC. A partial mediation indicated that while heart failure self-care was influencing the relationship between spirituality and QOL, other variables also were important factors in this relationship. The lack of a full mediation may be the result of socioeconomic status (SES) that could be affecting African American patients' abilities to use the behaviors listed on the heart failure self care instrument. Some examples of the potentially problematic behaviors of self-care for heart failure include: not owning a home scale, lack of transportation to purchase fresh fruits and vegetables as well as food that is low in sodium, inability to afford medications, lack of transportation to attend regular visits with the doctor. These chronic illness self-care behaviors are essential if the patient is going to be proactive in caring for heart failure. The linkage between the ability to engage in chronic illness

self-care practices and patient clinical outcomes among HF patients is demonstrated by findings in the literature that African American patients diagnosed with HF live longer and are less ill during hospitalization when compared to Caucasian patients hospitalized with HF. This improvement in health status is attributed to African Americans receiving controlled diets, daily monitoring of weight, and medications in the hospital (Kamath, Drazner, Wynne, Foonarow, & Yancy, 2008).

Stock, Mahoney, Reece, and Cesario (2008) concluded that patients with chronic diseases who engage in self-care behaviors often enjoy a positive QOL in spite of their deteriorating physical health.. The significant relationship between spirituality and HF self-care practices showed that patients diagnosed with HF who were more spiritual were more likely to be involved in self-care practices for their HF. Consistent with this finding, it appears that when the patients are using self-care practices to maintain their health, they experience a more positive QOL. According to Loeb (2006), the goal of self-care is to have an improved QOL. The partial mediation of HF self-care practices indicates that other factors may also be influencing the relationship between spirituality and QOL. Some of these factors may be family and social support, physician-patient trust, and nurse-patient education to practice self-care.

To further examine the relationship between chronic illness self-care practices and the outcomes of overall physical and mental health, an additional hypothesis related to chronic illness self-care was tested. Hypothesis 2 was that *levels of chronic illness self-care for heart failure would mediate the relationship between spirituality and physical and mental health among African American men and women who are being treated for HF*. Figure 17 presents the diagram for this hypothesis.

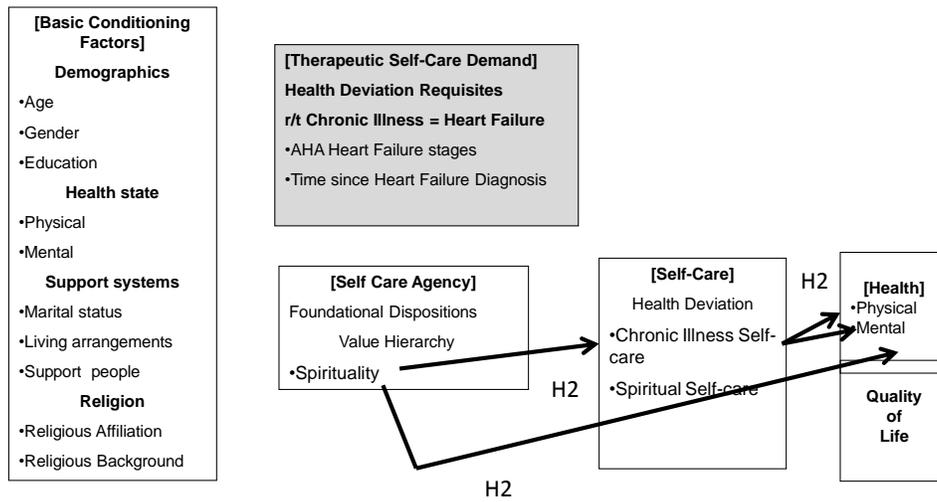


Figure 17: Hypothesis 2

This hypothesis was examined using four different approaches which yielded different findings. Initially, the physical health subscale of the SF-12 tool was planned as one of the primary outcome measures. Analysis revealed that spirituality was significantly related to physical health, but that chronic illness self-care did not mediate the relationship. For mental health outcomes, the SF-12 mental subscale was used. Chronic illness self-care partially mediated the relationship between spirituality and mental health. In response to some concerns that the SF-12 mental subscale consisted of four items, it was decided to include two well-established additional measures of mental health. Both the PHQ-9 and the ZUNG SDS purport to measure depressive symptomatology which has been widely associated in the literature with chronic illness in general, African Americans, and heart failure specifically. When the analysis for hypothesis 2 was done using the PHQ-9 as the mental health outcome measure, chronic illness self-care was found to fully mediate the relationship between spirituality and mental health. Using the Zung SDS as the outcome measure, chronic illness self-care was found to

partially mediate the spirituality to mental health relationship. These differences may be explained by looking at the tool items and listening to participants as they completed the various tools. The items on the PHQ-9 were easily understandable for participant whether they were answering independently or having the items read to them. The item stems were clear and the response set easy to use. In contrast, the items and response options on the Zung seemed to confuse many participants and engendered more questions to the researcher about the intent of the items.

Spiritual Self-Care

Spiritual self-care was defined as the set of spiritually-based practices in which people engage to promote continued personal development and well-being in times of health and illness. Orem's (2001) self-care theory did not address spirituality directly, but suggested that the use of self-care practices could influence QOL and well-being. In White's TSSSC mid-range theory, mediation of the relationship between spirituality and quality of life was hypothesized. Hypothesis 3 was that *levels of spiritual self-care would mediate the relationship between spirituality and quality of life among African American men and women who are being treated for HF*. Figure 18 presents the diagram for the third hypothesis.

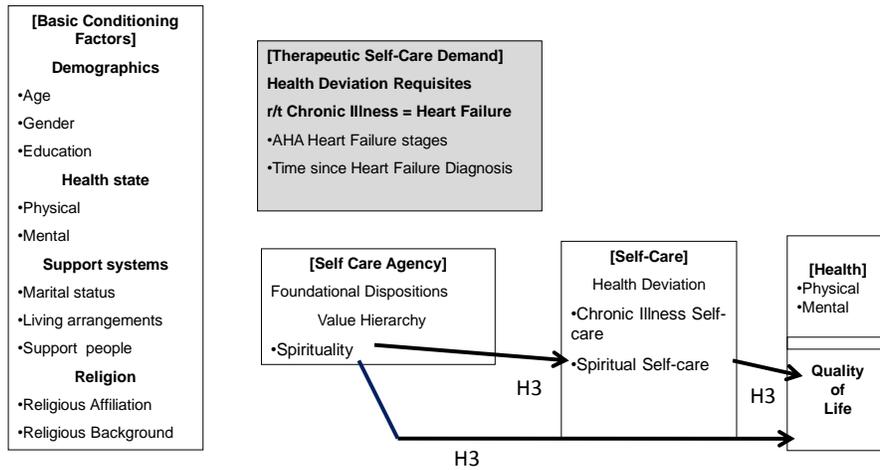


Figure 18: Hypothesis 3

Spiritual self-care practices mediated the relationship between spirituality and QOL thereby providing support for the theoretical relationship. The amount of variance explained by the relationship between spirituality and QOL decreased when spiritual self-care practices were held constant. The relationship between spirituality and QOL for African Americans has been extensively documented in the literature (Newlin, Knafl, & Melkus, 2002; Polzer & Miles, 2005; Taylor, Chatters, & Jackson, 2009; Unson, Trella, Chowdhury, & Davis, 2008; Wittink, Joo, Lewis, & Barg, 2008). This association was one of the reasons for testing the mid-range theory with an African American sample. Spirituality and the use of spiritual self-care practices in managing a chronic illness, such as HF, is an extension of Orem's (2001) self-care theory. Spiritual self-care practices go beyond the health care practices recommended by nurses and physicians. They include personal aspects such as (e.g., making time for self, feeling at peace and/or in harmony, giving love to others,), spiritual practices (e.g., attending religious services, praying, living a moral life, reading for inspiration,), physical spiritual practices (e.g., engaging in physical activity, volunteering, hiking or walking,), and interpersonal spiritual practices (e.g.,

maintaining friendships, being with family, receiving love from others,). Spiritual self-care is based on an individual’s mind/spirit/body connection, upbringing, moral and religious background, and life experiences that originate from faith, feelings, and emotions. These practices are important in maintaining the relationship between health and QOL. While spirituality is an important predictor of QOL, results of this analysis provide additional support that spiritual self-care practices mediate this relationship and should be considered as an important predictor of QOL. African American patients diagnosed with HF who use spiritual self-care practices as part of their daily activities are more likely to enjoy a better QOL.

In White’s TSSSC mid-range theory, mediation of the relationship between spirituality and physical health was hypothesized. Hypothesis 4 was that *levels of spiritual self-care would mediate the relationship between spirituality and physical and mental health*. These relationships are shown in Figure 19.

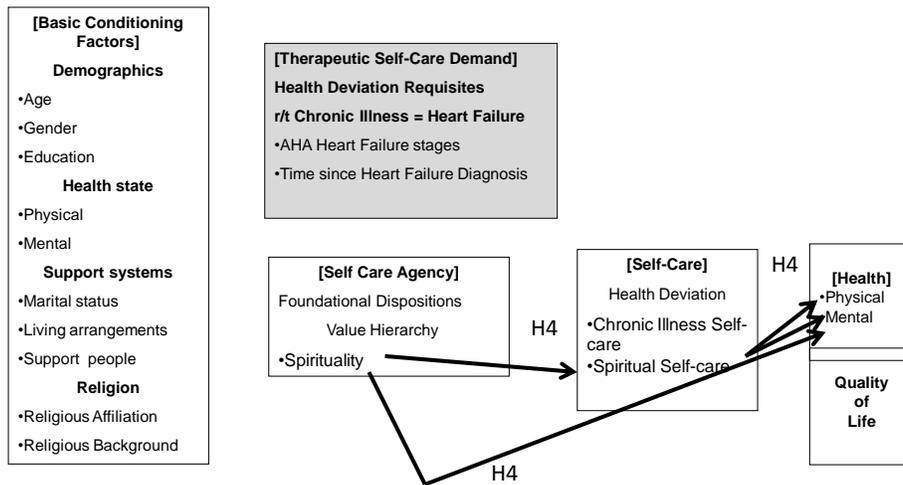


Figure 19: Hypothesis 4

Full mediation was found for the relationship between spirituality and physical health. This finding provides support for the theory that spiritual self-care practices affect the

relationship between spirituality and physical health. Many African American patients include spiritual practices as part of their lives. The relationship between spirituality and spiritual self-care practices is significant for African Americans diagnosed with heart failure. This relationship was expected as the majority of African Americans practice their spiritual beliefs on a daily basis.

Spiritual self-care practices were also found to mediate the relationship between spirituality and mental health. The amount of variation in the relationship between spirituality and mental health decreased when spiritual self-care practices were held constant. This mediation provides support for the theory that practicing spiritual self-care is an important factor in mental health for patients diagnosed with heart failure. Participants in this study were involved in spiritual self-care practices that were contributing to their treatment. They generally self-reported their emotional/mental health as fair to good which may have contributed to more positive levels of mental health. Based on scores for the PHQ-9 and Zung SDS, the majority of the participants in the study were not depressed. Many participants, although diagnosed with a serious chronic illness, appeared to be using their spirituality and their religion to maintain a positive attitude about their condition. Many newly-diagnosed patients said that they were happy with their physicians and their overall health care and felt that their doctors were giving them the best care for their physical conditions. In discussing their relationships with their physicians during data collection, most knew their doctors were highly respected in the field and referred to their physicians as powerful figures in their lives. They felt “blessed” to be able to access such high quality care.

Health and Well-Being

According to Orem (2001), health is defined as “a descriptor of living things to their structural and functional fullness and soundness” (p. 516). She defined well-being as “a perceived condition of personal existence including persons’ experiences of contentment, pleasure, and kinds of happiness, as well as spiritual experiences, movement to fulfill one’s self-ideal and continuing personal development” (p. 524). While the constructs of health and well-being are considered to be a single outcome in Orem’s SCDNT, her definitions of them are distinctly different. As a result, for the purpose of the present study, health and well-being were separated into the two constructs of health and quality of life. Quality of life is an individually defined and perceived state. For the purpose of the present study, QOL was defined using the the World Health Organization definition of “an individual’s perception of their position in life in the context of the culture and value system in which they live and in relation to their goals, expectations, standards, and concerns” (WHOQOL, 1994, p. 28). Although the definitions of well-being and quality of life are similar, the term “quality of life” is widely used in the current literature to describe individuals’ perceptions of their lives given their past and present experiences in multidimensional domains (e.g., physical, psychological, social, and environment).

Health

According to Orem (2001), health is individuals’ perceptions of the integrity of both their physical and mental functioning. Orem continued that people’s self-appraisal of their health integrates their perceptions of their physical, mental, and social well-being. Adults are expected to care for themselves to maintain their health and lifestyles. Health is conceptualized as the maintenance of normal life processes, development of human potential, prevention of injury and pathologic states, and promotion of general well-being. While White’s theoretical approach to

health is aligned with Orem’s definition, spirituality is proposed as an additional factor that can influence individuals’ interpretation of their level of physical, mental, and social functioning, even in the context of chronic illness. Understanding patients’ perceptions of their health states is often rooted in their deeply-held beliefs about spirituality.

Quality of Life

To examine the hypothesized relationships between constructs in the WTSSSC, correlational analysis was completed. Hypothesis five was that *a relationship exists between levels of spirituality, spiritual self-care, chronic illness self-care for heart failure, physical and mental health, and QOL among African American men and women who are being treated for HF.* Figure 20 shows a diagram of this hypothesis.

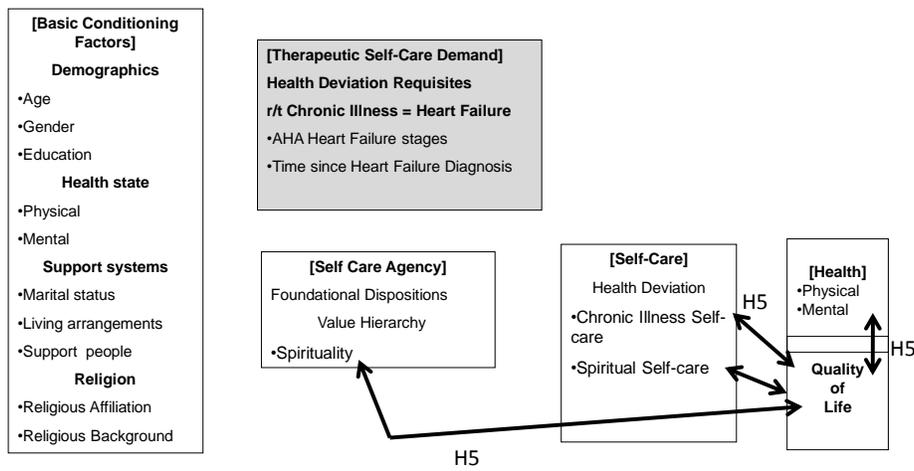


Figure 20: Hypothesis 5

The important findings in this analysis were the strong correlations in the expected directions between quality of life and the independent variables of spirituality, spiritual self-care practices, heart failure self-care practices, depressive symptomatology, and physical and mental

health. Participants who had more positive perceptions regarding their quality of life were more likely to be more spiritual, engage in more spiritual and heart failure self-care practices, have fewer depressive symptoms, and have more positive physical and mental health. These correlations support White's TSSSC that spirituality and spiritual self-care practices should be added to enhance Orem's SCDNT.

Conclusions

The results of this study provided support that the White's midrange theory of spirituality and spiritual self-care (WTSSSC) is a viable extension of Orem's self-care deficit nursing theory (SCDNT). The relations between QOL and spirituality, spiritual self-care practices, chronic illness self-care for heart failure, and physical and mental health were statistically significant and in the expected directions. The midrange theory can be used to incorporate spirituality and spirituality self-care practices which can mitigate the effects of chronic disease related to overall QOL for African Americans who have been diagnosed with heart failure. In conceptualizing the WTSSSC, five concepts in the SCDNT (Orem, 2001), (a) basic conditioning factors (BCFs); (b) self-care agency/foundational dispositions (SCA); (c) self-care behavior (SC); (d) health; and (e) well-being, were substructured and empirically tested. Theoretical relationships of the mid-range theory derived from Orem's theory of self-care deficit nursing were supported with associations noted between empirical measures of mid-range theory constructs. The mid-range theoretical support, in turn, reflects support for the original theory.

Limitations

As with all research studies, some limitations have to be acknowledged. The sample used in this study was drawn from two large clinics located in an urban area. African American patients diagnosed with heart failure in rural or suburban communities or other parts of the

country may have answered differently as they may have had different life experiences. Generalization beyond the present sample should be approached with caution.

The participants were not asked to identify any co morbid conditions that could be affecting their ability to use self-care practices associated with heart failure. In part this omission was driven by the need to limit the number of items in the survey to minimize subject burden. Another area omitted was individual participant self-rating of socioeconomic status. Feedback from community members who previewed the demographic items suggested that these be taken out. Inclusion of the education information was deemed sufficient to imply socioeconomic status as SES and education are closely linked. Additionally, the sample was drawn from a clinic population known to be predominantly composed of low income urban residents.

Participants volunteered for the study. Their survey responses may have reflected response bias as they attempted to please the researcher. They appeared to respond thoughtfully to the surveys, but because they completed seven instruments they may have experienced some fatigue causing responses to become more automatic. The general time required to finish was 60 minutes, which was long for patients with a chronic illness to maintain attention. The researcher sat with most of the participants while they completed their surveys. None of the patients complained directly about fatigue or boredom, although some exhibited signs of being tired. At that point, the researcher helped them by reading the remaining items.

No one withdrew once they had started giving responses. Many participants talked at length during and after completion of the research instruments. Many participants said that they appreciated the opportunity to join the research and that they had personally benefitted from going through the instruments and taking the time to think about the role of spirituality in their lives and health.

Implications for Nursing Practice

The results of this study have provided additional support for the use of spiritual self-care practices to assist in managing chronic illness, specifically heart failure. Nurses who work with patients diagnosed with heart failure should provide instruction on self-care practices specifically for heart failure (weight and diet management, medication compliance, sleep, etc.) and then encourage the use of spiritual self-care practices to enhance the well-being and QOL for these individuals.

Spiritual assessments, beyond asking about current religious affiliations, should be completed for patients being admitted to hospitals or being seen in health care facilities. These assessments, conducted by professional nursing staff, should include what and how the patients practice their spiritual beliefs, the types of physical activities (e.g., practicing yoga, doing tai chi, or meditation), and the interpersonal relations they have with others. Times that patients may set aside for prayer should be noted so that the staff knows to schedule nursing care around these periods. The spiritual assessment should be guided and inclusive, but not intrusive, by conducting the assessment as a dialogue and not a script. An assessment tool can be established to provide structure to the dialogue, but provide sufficient flexibility to allow patients and nurses to exchange information comfortably. The assessment tool should include spiritual practices (e.g., special foods, religious practices, etc.) that can influence patients while in the hospital, clinical practice, and at home. Understanding these practices can help nurses when caring for patients, especially those with chronic disease, such as HF.

Health care professionals who are responsible for completing an assessment can also provide patient education for the person diagnosed with heart failure that is aligned with their personal and physical abilities. Health care providers need to understand which self care practices are possible for people within the patient's environment. Suggesting that a patient

exercise by walking may be ineffective if the person lives in a high crime neighborhood where walking is dangerous. Helping develop a low cost home exercise program may be a viable alternative. Clinicians may also provide information to patients regarding the purchase of inexpensive scales to encourage them to weigh themselves daily or provide scales. as another example, people who lack access to fruit markets or large supermarkets could be helped to search in their neighborhood stores for low sodium alternatives and frozen fruits and vegetables.

Recommendations for Nursing Education

Nursing education needs to include spirituality and the importance of spiritual self-care practices as part of teaching Orem's theory of self-care to enhance patient health and QOL. This education could be presented in nursing education classes in colleges and universities; professional development classes; and presentations at state, regional, national and international conferences. These educational opportunities should not emphasize religion or specific religious practices, but should distinguish between spirituality and religiosity. This is not to say that religion should be ignored, but should be only one part of spirituality. Student and practicing nurses could become more comfortable talking about spiritual self-care practices through such educational programs.

Nurses working in hospitals, clinics, and in the community need to be aware of the importance of self-care practices that include spiritual self-care as a way to manage chronic health conditions and maintain a positive quality of life. Professional development programs are needed to introduce assessment tools for spiritual self-care practices that can be used to evaluate and create patient education programs tailored to specific patient needs. These professional development programs could be offered at seminars, hospital inservices, and workshops. Continuing education credits could be provided for those attending these types of programs.

Implications for Nursing Theory

All theories are made up of parts that can be expanded as time and needs change. Theories need to be looked at and tested as the times in which they were developed and circumstances for which they are applied change over time. The empirical data supports the extension of Orem's SCDNT, with the expanded knowledge related to the effect of self-care on health and quality of life. WTSSSC builds on Orem's SCDNT by adding spirituality and spiritual self-care. While these additions are important in building science regarding treatment of African American patients diagnosed with HF, additional research is needed to extend this theory to people from other ethnic/cultural groups and those diagnosed with other chronic illnesses. WTSSSC is useful in helping patients with chronic illnesses use their spiritual practices in addition to their self-care practices in managing and controlling their chronic illnesses. This theory is important for clinical practice as health care providers continue to recognize the importance of spirituality and spiritual self-care practices in chronic illness health care.

Recommendations for Further Research

Based on the results of this initial study on spiritual self-care practices as an extension of Orem's SCDNT, further research is needed to explore the benefits of these practices for helping patients with chronic illnesses. White's TSSSC was supported in the present study; however additional research is needed to validate the mid-range theory.

The study should be replicated with a more diverse sample of patients diagnosed with heart failure. The present study used a sample of African American patients who were seeking care at two urban heart failure clinics. Future studies could use patients from a variety of cultural/ethnic backgrounds diagnosed with HF from suburban and rural locations to replicate the present study.

A more comprehensive demographic survey should be used in further research to obtain all pertinent information about basic conditioning factors that can affect self-care practices. The items on the demographic survey need to include information on socioeconomic status (education, occupation, and income) in a culturally sensitive manner. In addition, information regarding other cultural issues for specific ethnic groups (e.g., Muslim, Asian Indian, etc.) need to be added to obtain data that may explicate differences in application of White's TSSSC.

A new tool was developed for the measurement of spiritual self-care practices. As with all developing instruments, the SSCP needs to be further tested and refined. There was some question about whether 4 items might overlap with items in the chronic illness self-care tool used in this research. Although the tool performed well both with and without the contested items, the author strongly believes that all of the SSCP items are conceptually appropriate and valid with the construct that the tool purports to measure. Further theoretical explication and continued work on the tool to provide additional evidence of construct validity and reliability in different populations is planned. The development and initial testing of this instrument represents a major contribution of this dissertation research.

This study should also be replicated with a sample of patients who have other types of chronic illnesses (e.g., hypertension, diabetes, arthritis,) to determine if using spiritual self-care practices along with chronic illness self-care practices can contribute to health promotion. The present study focused on heart failure as a chronic illness because HF is more common among urban African American patients. WTSSSC needs to be tested to assess its efficacy with other types of chronic diseases and illnesses.

As WTSSSC is focused on health maintenance for chronic illness, the theory needs to be extended to health promotion and disease prevention. Research has not been reported previously on the effectiveness of spirituality and spiritual self-care practices in helping people maintain

health and delay or prevent the onset of chronic illnesses. Future research should investigate the spiritual self-care practices used by healthy people of all ages and across the diverse racial/ethnic/cultural populations cared for by American nurses.

The researcher plans to continue research on spirituality and spiritual self-care practices by pursuing a post-doc and conduct additional research on the use of spiritual self-care practices in managing chronic illnesses. The researcher will continue to work on validating the Spiritual Self-Care Practices scale to develop an instrument that can be used by nurses to assess patients with chronic illnesses in hospital and clinic settings, as well as in their home. The results of the assessment can be used in developing self-care plans that are feasible for patients to use in maintaining their health and quality of life.

APPENDIX A

INSTRUMENTS

SPIRITUAL INVOLVEMENT AND BELIEFS SCALE – REVISED

How strongly do you agree with each of the following statements? Use the following scale

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Mildly Disagree	Neutral	Mildly Agree	Agree	Mostly Agree

Place a check mark in the column that most closely matches your agreement with each of the following statements.	1	2	3	4	5	6	7
1. I set aside time for meditation and/or self-reflection.							
2. I can find meaning in times of hardship.							
3. A person can be fulfilled without pursuing an active spiritual life.							
4. I find serenity by accepting things as they are.							
5. I have a relationship with someone I can turn to for spiritual guidance.							
6. Prayers do not really change what happens.							
7. In times of despair, I can find little reason to hope.							
8. I have a personal relationship with a power greater than myself.							
9. I have had a spiritual experience that greatly changed my life.							
10. When I help others, I expect nothing in return.							
11. I don't take time to appreciate nature.							
12. I have joy in my life because of my spirituality.							
13. My relationship with a higher power helps me love others more completely.							
14. Spiritual writings enrich my life.							
15. I have experienced healing after prayer.							
16. My spiritual understanding continues to grow.							
17. I focus on what needs to be changed in me, not on what needs to be changed in others.							
18. In difficult times, I am still grateful.							
19. I have been through a time of suffering that led to spiritual growth.							
20. I solve my problems without using spiritual resources.							
21. I examine my actions to see if they reflect my values.							

22. How spiritual a person do you considered yourself? (with "7" being the most spiritual). Circle your response.

7 6 5 4 3 2 1

REVISED HEART FAILURE SELF-CARE BEHAVIOR SCALE

Directions: Listed below are behaviors that people with heart failure commonly use to take care of themselves. We are interested in how often you use these behaviors. Use the following scale to rate each behavior listed.

0	1	2	3	4	5
None of the Time	A little of the Time	Some of the Time	A Good Bit of the Time	Most of the Time	All of the Time

Place a check mark in the column that most closely matches the frequency with which you use these self-care behaviors:	0	1	2	3	4	5
1. I weight myself every day of the week.						
2. When I am short of breath, I rest.						
3. When I am short of breath or tired, I ask for health with something I am unable to do.						
4. I contact my doctor when I feel more short of breath.						
5. I contact my doctor when I see my feet, ankles, legs, or stomach swell.						
6. I contact my doctor when I have gained 2 pounds or more in a day, or 3 pounds or more since my last visit to the doctor.						
7. I watch how much water I pass (urinate or pee) every day.						
8. I am careful not to drink "too many" fluids						
9. When I feel anxious about my worsening symptoms of heart failure, I talk with my doctor about it.						
10. I contact my doctor when I have nausea or do not feel like eating.						
11. To help reduce my symptoms, like fatigue or shortness of breath, I limit the activities that are hard for me.						
12. I believe that having heart failure is a condition that I can adjust to.						
13. I spread my activities out over the whole day so I do not get too tired.						
14. I pan rest times during my day.						
15. I contact my doctor when I realize I am feeling tired all the time.						
16. I watch that I do not eat canned soups or TV dinners.						
17. I take my pills every day.						
18. I take my pills as the doctor prescribed – I take all the doses of my pills.						
19. I always refill prescriptions for my pills on time.						
20. I have a system to help tell me when to take my pills.						
21. I stay away from people who have a cold or flu.						
22. I am physically active (for example, walk or ride a bike) on 3 to 4 days a week.						
23. I get a flu shot once a year.						

0	1	2	3	4	5
None of the Time	A little of the Time	Some of the Time	A Good Bit of the Time	Most of the Time	All of the Time

Place a check mark in the column that most closely matches the frequency with which you use these self-care behaviors:	0	1	2	3	4	5
24. I limit my alcohol intake to one glass of beer or wine, or one shot a day.						
25. I am a non-smoker.						
26. I keep my appointments with my doctor.						
27. I put my feet up when I sit in a chair.						
28. I talk to my doctor and family about my condition in order to make choices and plans for the future.						
29. I think a person can live a happy and good life even after having heart failure.						

ZUNG SELF-RATING DEPRESSION SCALE

Below are 20 statements. Please rate each using the following scale:

1. Some or a little of the time
2. Some of the time
3. Good part of the time
4. Most or all of the time

Place a check mark in the column that most closely matches the frequency of each of the following items:	1	2	3	4
1. I feel down-hearted and blue.				
2. Morning is when I feel the best.				
3. I have crying spells or feel like it.				
4. I have trouble sleeping at night.				
5. I eat as much as I used to.				
6. I still enjoy sex.				
7. I notice that I am losing weight.				
8. I have trouble with constipation.				
9. My heart beats faster than actual.				
10. I get tired for no reason.				
11. My mind is as clear as it used to be.				
12. I find it easy to do the things I used to.				
13. I am restless and can't keep still.				
14. I feel hopeful about the future.				
15. I am more irritable than usual.				
16. I find it easy to make decisions.				
17. I feel that I am useful and needed.				
18. My life is pretty full.				
19. I still enjoy the things I used to do.				

Patient Health Questionnaire – Version 9

Over the last 2 weeks, how often have you been bothered by any of the following problems. Use the following scale to rate each of the items.

1	2	3	4
Not at all	Several Days	More than half the days	Nearly every day

Place a check mark in the column that most closely matches the number of days you have been bothered by any of the following problems:	1	2	3	4
1. Little interest or pleasure in doing things				
2. Feeling down, depressed, or hopeless				
3. Trouble falling or staying asleep, or sleeping too much				
4. Feeling tired or having little energy				
5. Poor appetite or overeating				
6. Feeling bad about yourself – or that you are a failure or have let yourself or your family down				
7. Trouble concentrating on things, such as reading the newspaper or watching television				
8. Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual				

Your Health and Well-Being

This survey asks for your views about your health. This information will help keep track of how you feel and how well you are able to do your usual activities. *Thank you for completing this survey!*

For each of the following questions, please mark an in the one box that best describes your answer.

1. In general, would you say your health is:

Excellent	Very good	Good	Fair	Poor
▼	▼	▼	▼	▼
<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

2. The following questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

Yes, limited a lot	Yes, limited a little	No, not limited at all
▼	▼	▼

- a. Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf ₁ ₂ ₃
- b. Climbing several flights of stairs ₁ ₂ ₃

3. During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

All of the time	Most of the time	Some of the time	A little of the time	None of the time
▼	▼	▼	▼	▼

a Accomplished less than you would like.....₁..... ₂..... ₃..... ₄..... ₅

b Were limited in the kind of work or other activities₁..... ₂..... ₃..... ₄..... ₅

4. During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

All of the time	Most of the time	Some of the time	A little of the time	None of the time
▼	▼	▼	▼	▼

a Accomplished less than you would like.....₁..... ₂..... ₃..... ₄..... ₅

b Did work or other activities less carefully than usual.....₁..... ₂..... ₃..... ₄..... ₅

5. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

Not at all	A little bit	Moderately	Quite a bit	Extremely
▼	▼	▼	▼	▼
<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

6. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks...

All of the time	Most of the time	Some of the time	A little of the time	None of the time
-----------------	------------------	------------------	----------------------	------------------



a Have you felt calm and peaceful? ₁ ₂ ₃ ₄ ₅

b Did you have a lot of energy? ₁ ₂ ₃ ₄ ₅

c Have you felt downhearted and depressed? ₁ ₂ ₃ ₄ ₅

7. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc.)?

All of the time	Most of the time	Some of the time	A little of the time	None of the time
-----------------	------------------	------------------	----------------------	------------------



₁

₂

₃

₄

₅

Thank you for completing these questions!

WORLD HEALTH ORGANIZATION – QOL – BREF

Instructions: The assessment asks how you feel about your QOL, health, or other areas of your life. Please answer all of the questions. If you are unsure about which response to give to a question, please choose the one that appears most appropriate. This can often be your first response.

Please keep in mind your standards, hopes, pleasures, and concerns. WE ask that you think about your life in the last two weeks.

Read each question, assess your feelings, and place a check mark in the column that gives the best answer for you.

		Very poor	Poor	Neither poor nor good	Good	Very Good
1	How would you rate your QOL?					

		Very Dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very Satisfied
2	How satisfied are you with your health?					

		Not at all	A little	A moderate Amount	Very Much	An extreme amount
3	To what extent do you feel that physical pain prevents you from doing what you need to do?					
4	How much do you need any medical treatment to function in your daily life?					
5	How much do you enjoy life?					
6	To what extent do you feel your life to be meaningful?					

		Not at all	A little	A moderate Amount	Very Much	An extreme amount
7	How well are you able to concentrate?					
8	How safe do you feel in your daily life?					
9	How healthy is your physical environment?					

The following questions ask about how completely you experience or were able to do certain things in the last two weeks.

		Not at all	A little	Moderately	Mostly	Completely
10	Do you have enough energy for everyday life?					
11	Are you able to accept your bodily appearance?					
12	Have you enough money to meet your needs?					
13	How available to you is the information that you need in your day-to-day life?					
14	To what extent do you have the opportunity for leisure activities?					

		Very Poor	Poor	Neither Poor nor Good	Good	Very Good
15	How well are you able to get around?					

		Very Dissatisfied	Dissatisfied	Neither Dissatisfied nor Satisfied	Satisfied	Very Satisfied
16	How satisfied are you with your sleep?					
17	How satisfied are you with your ability to perform your daily living activities?					
18	How satisfied are you with your capacity for work?					
19	How satisfied are you with yourself?					
20	How satisfied are you with your personal relationships?					
21	How satisfied are you with your sex life?					
22	How satisfied are you with the support you get from your friends?					
23	How satisfied are you with the conditions of your living place?					
24	How satisfied are you with your access to health care?					
25	How satisfied are you with your					

		Very Dissatisfied	Dissatisfied	Neither Dissatisfied nor Satisfied	Satisfied	Very Satisfied
	transport?					

		Never	Seldom	Quite Often	Very Often	Always
26	How often do you have negative feelings such as blue mood, despair, anxiety, depression?					

SPIRITUAL SELF-CARE PRACTICES SCALE

For each question, please place a check mark in the column that best reflects the frequency with which you practice each of these items

1	2	3	4	5
Never	Not Often	Often	Very Often	Always

Use the scale above to rate the extent with which you practice each of these items.	1	2	3	4	5
1. Meditating, contemplating, or reflecting					
2. Attending religious services					
3. Having meaningful conversations with others					
4. Practicing yoga or Tai Chi					
5. Hiking or walking					
6. Praying					
7. Living a moral life					
8. Helping others					
9. Volunteering					
10. Being with family					
11. Being with friends					
12. Reading for inspiration					
13. Resting to regain health and energy					
14. Making time for self					
15. Eating healthy food					
16. Feeling at peace and/or in harmony					
17. Maintaining friendships					
18. Engaging in physical activity					
19. Mending broken relationships					
20. Maintaining positive relationships					
21. Receiving love from others					
22. Giving love to others					
23. Maintaining a sense of hope for the future					
24. Laughing					
25. Finding meaning in both good and bad situations					
26. Forgiving others					

1	2	3	4	5
Never	Not Often	Often	Very Often	Always

Use the scale above to rate the extent with which you practice each of these items.	1	2	3	4	5
27. Forgiving yourself					
28. Following medical orders					
29. Asking questions about medical orders					
30. Resolving conflicts					
31. Singing or listening to music					
32. Consulting a spiritual advisor					
33. Contributing to a religious group					
34. Giving alms to the poor or doing other acts of charity					
35. Following a special diet (e.g., Kosher, Halal, vegetarian, etc.)					
36. Wearing special clothing or jewelry (e.g., yarmulke, birka, cross, star of David)					

Demographic Questionnaire

The following items are about you. There are no right or wrong answers and all responses will be confidential. No individual will be identifiable in the final report.

Age

Gender

- Male
 Female

Marital Status

- Single, never married
 Married
 Widowed
 Divorced
 Living with partner

Educational Level

- Less than high school
 High school graduate/GED
 Some college/Technical school
 Associate degree
 Bachelor's degree
 Graduate degree

Work Status

- Working full-time
 Working part-time
 Retired
 Retired, volunteering
 Disabled
 Other Specify _____

With whom do you live?

- Spouse
 Children
 Alone (Independently)
 Assisted living facility
 Senior residence
 Other family/friends

What year were you diagnosed with heart failure?

What stage of heart failure are you currently in?

- Stage 1 Stage 2 Stage 3 Stage 4 Don't know

To what extent are your physical activities limited by your diagnosis of heart failure?

- Not limited Somewhat limited Limited Very limited

Are you currently taking medications for your diagnosis of heart failure?

- Yes No

Are you noticing any symptoms related to your diagnosis of heart failure? (e.g., shortness of breath, fatigue)

- Yes No

As part of your routine, do you weigh yourself daily?

- Yes No

Have you had any surgery to help with your daily symptoms? (e.g., pacemaker)

- Yes No

How would you rate your present state of physical health?

- Excellent Good Fair Poor

How would you rate your present state of emotional/mental health?

- Excellent Good Fair Poor

In which religion were you raised (if any)?

Did you attend religious services as a child?

- Yes No

What is your present religion (if any)

Do you attend religious services as an adult?

- Yes No

Do you practice specific traditions related to spiritual beliefs as an adult? Yes No

In times of need, who are you most likely to turn to (check all that apply)?

- Spouse Children Clergy/Religious advisor
 Sibling Other family member God
 Parent Friend
 Other (Specify)_____

APPENDIX B**RESEARCH INFORMATION SHEET**

Title of Study: SPIRITUALITY AND SELF-CARE: EXPANDING SELF-CARE DEFICIT THEORY

Principal Investigator: Mary L. White, RN, MSN, APRN-BC, PhD-C

Study Purpose:

The purpose of this study is to examine spirituality and spiritual self-care in self-care practices that can improve the QOL of African American men and women diagnosed with heart failure.

Study Procedures:

If you decide to take part in the study, you will be asked to complete eight surveys, Zung Self-Rating Scale, Spiritual Involvement and Beliefs Scale, Patient Health Questionnaire, Heart Failure Self-Care Scale, Short Form (SF-12) Health Survey, World Health Organization QOL-Bref, Spiritual Self-Care Practices Scale, and a demographic survey. You can complete these surveys in 35 to 40 minutes.

After you have finished the surveys, place all surveys into the envelope provided. Return the envelope to the receptionist who will check to make sure that all pages have been completed. She will only check to make sure that you have not missed any pages and not for individual responses. After determining that all pages have been completed, she will return the envelope to you. You will then place the envelope in the lock box to maintain your privacy. At this time, she will give you an envelope with \$20.00 as a gift for your participation.

Benefits:

As a participant in this research study, there will be no direct benefit for you; however, information from this study may benefit other people now or in the future.

Risks:

There are no known risks or additional effects that are likely to result from your participation in this study. In the unlikely event of an injury from participation in this study, no reimbursement, compensation, or free medical treatment is offered by Wayne State University or the researcher. If as a result of your participation in the study, you feel anxious, please discuss your feelings with your healthcare provider at the time of your appointment.

Costs:

There will be no costs to you for participation in this research study.

Research Information Sheet

Title of Study: SPIRITUALITY AND SELF-CARE: EXPANDING SELF-CARE DEFICIT THEORY

Principal Investigator: Mary L. White, RN, MSN, APRN-BC, PhD-C

Compensation:

You will receive \$20.00 for completing the surveys. The money will be given by the receptionist when you return your survey packet.

Confidentiality:

All information collected about you during the course of this study will be kept confidential to the extent permitted by law. All information will be presented in aggregate, with no individual participant identifiable in the study.

Voluntary Participation /Withdrawal:

Your participation in this study is voluntary, with the return of your completed survey evidence of your willingness to participate in the study. Once you have returned your completed survey, you can withdraw until the end of the data collection period. Following this period, your survey will not be identifiable, preventing your withdrawal. Your decision will not change any present or future relationships with Wayne State University or its affiliates.

Questions:

If you have any questions about this study now or in the future, you may contact Mary L. White at the following number . If you have questions or concerns about your rights as a research participant in this study, please contact the Chair of the Human Investigation Committee at (313) 577-1628.

Consent to Participate in a Research Trial:

The return of your completed surveys is evidence of your willingness to participate in this study. Please retain this information sheet in case you have any questions or would like additional information regarding this study.

APPENDIX C

HUMAN INVESTIGATION COMMITTEE APPROVAL



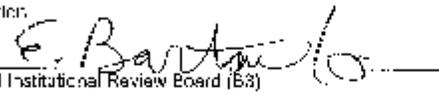
HUMAN INVESTIGATION COMMITTEE
101 East Alexandrine Building
Detroit, Michigan 48201
Phone: (313) 577-1628
FAX: (313) 993-7177
<http://hic.wayne.edu>



MEMORANDUM

*NOTE: This is not an IRB approval
(Specific Minor Revisions Required)*

To: Mary White
Adult Health/Administration
311 Cahn Building

From: Ellen Barton, Ph.D. 
Chairperson, Behavioral Institutional Review Board (B3)

Date: September 01, 2009

RE: IHC # 00209B3X
Protocol Title: Spirituality and Self-Care: Expanding Self-Care Deficit Nursing Theory
Sponsor:
Protocol # 0009007192

The above-referenced exempt protocol was reviewed by the Chairperson/designee of the Wayne State University Institutional Review Board (B3). The following is requested:

- Information Sheet - (1) Under the Purpose section, please add the word research before study. (2) Under the Risks section, please delete 2nd sentence as this is a survey project. (3) Under the Study Procedures section, provide a time estimate. (4) Under the Confidentiality section, please use the sentence "All information collected about you during the course of IR's study will be kept without any identifiers." Please see the Behavioral Information Sheet template, available on the HIC website.

Please direct your response to Erin Stohl, Research Compliance Administrator.

Include with your resubmission:

- A cover memo addressing the above issues.
- One copy of this memo and accompanying papers.
- As applicable, one copy of the revised pages of the protocol, protocol summary form, consent/assent/information sheet, advertisements/flyers/participant brochures, and/or HIPAA forms with **highlighting** of all changes made (please **do not** use the Microsoft tracking tool).
- Two clean copies (without highlighting) each of the revised consent form requiring IRB approval stamp.
- Note: Forms should be downloaded from the HIC website at each use.

Failure to respond within 60 days of the date of this memo will be interpreted as a withdrawal of the study.

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ABSTRACT**SPIRITUALITY AND SPIRITUAL SELF-CARE: EXPANDING
SELF-CARE DEFICIT NURSING THEORY**

by

MARY LOUISE WHITE**December 2010****Advisor:** Dr. Stephanie Myers Schim**Major:** Nursing**Degree:** Doctor of Philosophy

The purpose of this study was to extend the theory of self-care deficit nursing by including specific constructs of religion, spirituality, and spiritual self-care practices within the structure suggested by Orem's self-care deficit nursing theory. Based on an extensive literature review, practice experience, and a discovery theory-building approach, a new mid-range theory called White's theory of spirituality and spiritual self-care (WTSSSC) was developed. To begin to test this mid-range theory, empirical indices of many of the main concepts were identified from prior studies and one new instrument (the Spiritual Self-Care Practice Scale) was developed. Hypothesized relationships among the main concepts of the mid-range theory were examined and tested in a sample of 142 urban African American outpatients who had been previously diagnosed with heart failure.

The results of this study provided support that White's midrange theory of spirituality and spiritual self-care (WTSSSC) is a viable extension of Orem's self-care deficit nursing theory (SCDNT). The relations between QOL and spirituality, spiritual self-care practices, chronic illness self-care for heart failure, and physical and mental health were statistically significant and in the expected directions. The midrange theory can be used to incorporate spirituality and

spirituality self-care practices which can mitigate the effects of chronic disease related to overall QOL for African Americans who have been diagnosed with heart failure.

Results of this study have provided additional support for the use of spiritual self-care practices to assist in managing chronic illness, specifically heart failure. Nurses who work with patients diagnosed with heart failure should provide instruction on self-care practices specifically for heart failure (weight and diet management, medication compliance, sleep, etc.) and then encourage the use of spiritual self-care practices to enhance the well-being and QOL for these individuals. Nursing education needs to include spirituality and the importance of spiritual self-care practices as part of teaching Orem's theory of self-care to enhance patient health and QOL. This education could be presented in nursing education classes in colleges and universities; professional development programs; and presentations at state, regional, national and international conferences. Further research is needed to continue development of the WTSSSC.

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