

DISSERTATION
INNER RESOURCES (SENSE OF COHERENCE, HOPE, AND SPIRITUAL
PERSPECTIVE) AS PREDICTORS OF PSYCHOLOGICAL WELL-BEING
IN AFRICAN AMERICAN BREAST CANCER SURVIVORS

by

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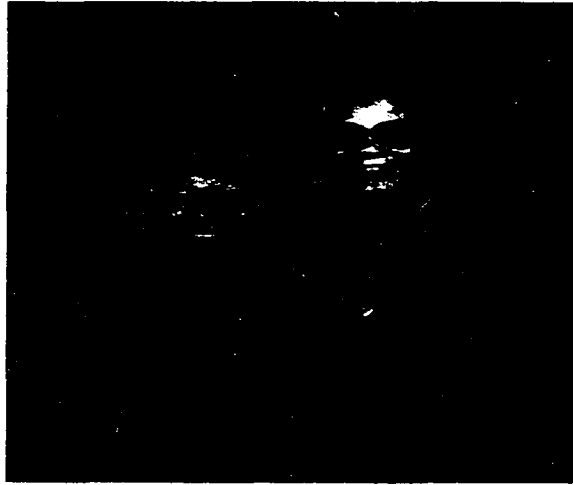
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DEDICATION



**I Remember Mommy
-Olive Steede Richardson-
(August 21, 1922 – April 17, 1992)**

*I remember your gentle, peaceful spirit
And your sassy, colorful mother wit.*

*I remember your outstretched arms, beckoning all,
For helping others fulfilled the Master's call.*

*I remember your positive approach to life
And the "Olive Branch" you extended to ward off strife.*

*I remember your quiet strength and dignity,
And your endurance of pain with serenity.*

*I remember your blissful hope and spirituality,
And your radiant smile, always warm and sunny.*

*I remember your calm acceptance of life's fate
And your belief in paradise beyond Heaven's gate.*

*These memories I'll treasure my whole life through
Until I walk again "In The Garden" with you.*

**- Lynette M. Richardson Gibson
(March, 2000)**

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ABSTRACT

INNER RESOURCES (SENSE OF COHERENCE, HOPE, AND SPIRITUAL PERSPECTIVE) AS PREDICTORS OF PSYCHOLOGICAL WELL-BEING IN AFRICAN AMERICAN BREAST CANCER SURVIVORS

LYNETTE M. RICHARDSON GIBSON No studies have been found on the psychological effects of applying sense of coherence, hope, and spiritual perspective by African American (AA) breast cancer survivors. These variables have each been positively associated with psychological well-being. Although AA women are exposed to major life stressors such as breast cancer, many continue to have high levels of psychological well-being. The reasons for this are unknown.

This descriptive study tested which variables in the Gibson Model of Inner Resources© were significant predictors of levels of psychological well-being in AA breast cancer survivors. One hundred and sixty-two AA breast cancer survivors completed the Abbreviated Herth Hope Index, Spiritual Perspective Scale, Sense of Coherence Scale (13-item), Quality of Life/Breast Cancer (Psychological Well-Being Subscale), and a Demographic Questionnaire. Statistical analyses included correlation, multiple regression, and path analysis.

Data from the study supported the hypotheses. There was a significantly positive relationship between sense of coherence and hope, $r_s = .535$ ($p < .01$), a significantly positive relationship between hope and spiritual perspective, $r_s = .414$ ($p < .01$), and a significantly positive relationship between sense of coherence and spiritual perspective, $r_s = .159$ ($p = .05$). Sense of coherence was significantly positively related to psychological well-being, $r_s = .594$ ($p < .01$) and hope was significantly positively

related to psychological well-being, $r_s = .484$ ($p < .01$). There was a positive relationship between spiritual perspective and psychological well-being that was not significant, $r_s = .096$ ($p = .224$).

Study findings supported the model. Sense of coherence significantly accounted for 37.5% and hope for 5.3% of the explained variance in psychological well-being. Spiritual perspective did not significantly account for any of the explained variance. There were direct paths between sense of coherence and hope, sense of coherence and psychological well-being, hope and psychological well-being, and spiritual perspective and hope. Spiritual perspective predicted psychological well-being indirectly through hope.

Further analysis of spirituality in AA breast cancer survivors is necessary. Further study is needed to test the model and interventions that reinforce survivors' inner resources as they psychologically cope with breast cancer.

CONSTANCE HENDRICKS, Ph.D., RN MAJOR PROFESSOR

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CHAPTER I

INTRODUCTION

Breast cancer is the most common cancer diagnosis affecting women in the United States. The American Cancer Society estimates that 1 out of every 9 women will develop breast cancer during their lifetime (2000). Approximately 182,800 women are expected to be diagnosed in 2000 and 40,800 are expected to die of this disease (American Cancer Society, 2000).

Breast cancer is a chronic illness that has a major impact on survivors both psychologically and physically. In women, it is often a slowly evolving disease that has a high degree of metastasis and recurrence. Although 90 percent of women metastasize by the fifth year, recurrences have been observed up to 25 years later (Greenberg, 1991). Hence, breast cancer has many implications for survivors, who are defined as anyone diagnosed with breast cancer, regardless of the stage or course of illness (Grant, Padilla, and Greimel, 1996).

Breast cancer affects 1 of 11 African American (AA) women nationally (Feuer et al., 1993; Wingo et al., 1996). The breast cancer incidence rate in African-American women is 99.0 per 100,000, making it the most common cancer in this ethnic group (American Cancer Society, 1999). Breast cancer, in AA women, frequently presents as a physically devastating disease with a poor prognosis. African American women are frequently diagnosed with late staged, poorly differentiated tumors that are estrogen receptor negative (Eley, Hill, Chen, Austin, Wesley, Muss, & Greenberg, 1994; Ries,

Kosary, Hankey, et al., 1999). Studies have also shown that AA women present with a higher number of tumors that have negative estrogen receptors, resulting in more aggressive tumor growth (Chen, Correa, Kurman, et al., 1994; Dignam, 2000; Elledge, Clark, Chamness, et al., 1994; Pace & Johnson, 1994). In addition, AA women tend to be diagnosed at an early age (Dignam; Swanson & Lin, 1994), are less sensitive to treatment (Pace & Johnson) and receive less aggressive therapy than other ethnic groups (Breen, Wesley, & Merrill, 1999; Dignam; Pace & Johnson). They also lack access to state of the art cancer treatment (Pace & Johnson), or may receive uncoordinated and incomplete medical care (Ashing-Giwa and Ganz, 1997).

Despite metastasis, African American (AA) women appear to be surviving for longer periods of time. Five-year survival trends for African American women have ranged from 63 percent (1974-76) to 71 percent (1989-1995) (American Cancer Society, 1999). With the high rate of late staged, aggressive breast cancer in AA women and increasing survival trends, studies are needed to identify the inner resources they use to enhance psychological well-being and ultimately their psychological and physical adaptation. This has consequences for the coping strategies they use.

Significance

Breast cancer has the second highest mortality rate in African American women (American Cancer Society, 2000). The studies that have addressed the issue of breast cancer in AA women have focused primarily on early detection and epidemiological variables (Ashing-Giwa & Ganz, 1997). Studies that have addressed psychosocial issues among breast cancer survivors have found that AA women experience a high degree of fatalism, lack of knowledge, lack of trust in the medical system (Ashing-Giwa & Ganz, 1997; Matthews, Donald, & Mitchell, 1994; Powell, 1994), and concerns about social and

emotional support (Ashing-Giwa & Ganz; Matthews, Donald, & Mitchell; Powell; Reynolds et al., 1994).

Within the past ten years, leading psychosocial researchers in adult oncology have called attention to the urgent need to examine the psychosocial functioning of African American cancer survivors (Andersen, 1992; Burish, 1991; Rodrigue, 1997). The existing literature regarding the psychosocial status of adult cancer survivors is based almost exclusively on White, middle-class individuals residing in large metropolitan areas; very few, if any, ethnic minorities are included (Rodrigue). Hence, the generalizability of these findings to other ethnic or socioeconomic groups is limited (Rodrigue). According to Andersen, health professionals may be indirectly increasing the risk for psychological difficulties in African Americans by not being aware of their potentially unique psychosocial needs.

Rodrigue (1997) compared African Americans and Caucasians with comparable sociodemographic variables according to psychological difficulties such as depression, anxiety, global psychological severity, and coping strategies. He found no significant differences between AA and Caucasian survivors in depression, anxiety, or global psychological adjustment. These findings suggest that AA cancer survivors are not necessarily more susceptible to clinical levels of global psychological maladjustment or depression than Caucasians. Rodrigue suggests that future research should include adequate numbers of minority patients in their samples and should examine differences in psychological adjustment to cancer within the AA population and in the African Diaspora.

Only one study, by Ashing-Giwa and Ganz (1997) was found that provided preliminary insights into understanding AA women's experiences with breast cancer. Common themes that were related to psychological well-being included spirituality, psychosocial concerns regarding social support, lack of knowledge about breast cancer, and

the quality of the patient-physician relationship. Although the study revealed findings relative to spirituality, the authors suggested that the "role of spirituality in surviving breast cancer requires further study to understand its effects and benefits" (p. 33). Other positive strategies used by AA breast cancer survivors to cope effectively were not revealed. Therefore, further study is needed to determine effective inner resources used by AA breast cancer survivors that are related to psychological adjustment.

Very little research has focused on the various coping strategies that AA women may employ to maintain their psychological well-being (Caldwell, 1996) while suffering with chronic illnesses such as breast cancer. Studies in Caucasian women that deal with the psychological effects of employing internal resources such as sense of coherence (Forsberg & Bjorvell, 1996; Forsberg, Bjorvell, & Cedarmark, 1996; Mullen, Smith, & Hill, 1993; Persson, Hallberg, & Ohlsson, 1997), hope (Brandt, 1987; Christman, 1990; Fehring, Miller, & Shaw, 1997; Herth, 1989; 1991; McGill & Paul, 1993; Mickley, Soeken, & Belcher, 1992; Mickley & Soeken, 1993; Nowotny, 1989; Raleigh, 1992; Stoner & Keampfer, 1985), SOC and hope (Post-White, 1998; Post-White et al., 1996) and spiritual perspective (Kurtin, 1990; Morgan, 1989; Reed, 1987) have been found; however, only one study was found that looked only at spiritual perspective in AA breast cancer survivors (Guillory, 1992).

Although African American women encompass all socioeconomic levels and are exposed to numerous stressors, they tend to cope successfully. Low income AA women, who often are poorly educated and nonprofessional, are at high risk for psychological stress reactions (United States Department of Health and Human Services, 1991). Despite exposure to major life stressors such as a racist environment (Boyd-Franklin, 1989; Landrine & Klonoff, 1996; Markides & Mindel, 1987; McAdoo, 1983; Mui & Burnette, 1996; Outlaw, 1993; Peters & Massey, 1983; Plummer & Slane, 1996; Smith, 1985; Slavin,

Rainer, McCleary, & Gowda, 1991) low incomes, and multiple role strains (Beale, 1972; Brown, 1990; Carrington, 1980; Jackson & Wolford, 1992; Kessler & Neighbors, 1986; King, 1988; Oakley, 1986; Tomes, Brown, Semanya, & Simpson, 1990), many AA women exhibit successful coping skills (Boyd-Franklin, 1989; Caldwell, 1996; Locke, 1992; Mui & Burnette, 1996). Research in mental health indicates that, although African Americans are more exposed to stressful conditions than Caucasians, many do not exhibit higher levels of psychological distress (Broman, 1989; Haley, et al., 1996; Lawton et al., 1992; Mirowsky & Ross, 1980; Mui & Burnette, 1996; Plummer & Slane, 1996). In her 1998 pilot study, the researcher found that AA breast cancer survivors had higher levels of hope and significantly higher levels of psychological well-being than Caucasian breast cancer survivors. Although sense of coherence and spiritual perspective scores were higher in Caucasian survivors compared to AA breast cancer survivors, these differences were not significant (Gibson, 1998).

It may be coping that is a major factor that alters the response to stress in African Americans (Broman, 1996; Haley, et. al., 1996; Outlaw, 1993; Plummer & Slane, 1996; Slavin, Rainer, McCreary, & Gowda, 1991; Ulbrich, Warheit, & Zimmerman, 1989). Their coping abilities may be partially attributed to prior experiences, cultural factors, and inner resources such as sense of coherence, hope, and spiritual perspective. By identifying effective inner resources used by AA women who cope well with cancer, women from other ethnic groups can be assisted to enhance their coping strategies, subsequent psychological well-being, adaptation, and possibly, survival.

This study built upon personal observations made by the researcher while functioning as the daughter of a African-American breast cancer survivor, an oncology nurse, and community volunteer. In each of these situations, the researcher has spoken with and cared for AA women who have been diagnosed with breast cancer. Some of these

women have chosen not to inform family members of their diagnosis. Rather, they have shouldered and managed the disease with a smiling forbearance, a hopeful attitude, and a high degree of spirituality. The researcher is employing the process of abduction (Peirce, Hartshorne, & Weiss, 1993), which is described as making a conceptual leap from experience, beliefs, and a pre-knowledge of patterns, to arrive at a theory about a phenomenon (Reed, 1995).

Hence, the proposed study advances knowledge of nursing, culture and women's studies in relation to positive coping strategies for a chronic illness, breast cancer. Currently, suitable interventions have not been specifically identified to assist African American women with breast cancer to enhance their psychological well-being.

According to an AA breast cancer survivor, such interventions as support groups, frequently geared toward Caucasian breast cancer survivors, tend to be avoided by AA women (Jacqueline Freeman, personal communication, June 19, 1997). The researcher found, in her 1998 pilot study, that, although breast cancer support groups were preferred by three of the Caucasian women, they were frowned upon by three of the AA women. Two of the AA breast cancer survivors gave reasons for their negative feelings that were based on personal experiences, for example, feeling out of place, having different priorities from Caucasian women, who tended to "worry about the small things," and being treated with unfriendliness and snobbishness by the other Caucasian survivors. One of the AA survivors, who coordinated activities of a support group for AA women, stated that such groups could be positive for AA women if educational classes were incorporated and meetings were "upbeat," with "no tears or sorrow."

In order to identify culturally sensitive, appropriate, and safe nursing interventions, thereby improving psychological well-being and enhancing psychological adaptation, assessment of successful coping strategies and resources must be made. Therefore, findings

will add to the body of nursing knowledge and build middle-range theory regarding diverse perspectives of coping that lead to positive psychological well-being that may enhance adaptation and survival from breast cancer.

Purpose of the Study

The purpose of this descriptive study was to explore which variables in the Gibson Model of Inner Resources (sense of coherence, hope, and spiritual perspective) were significant predictors of psychological well-being levels in African American breast cancer survivors. Sense of coherence, hope, and spiritual perspective were independent variables identified within this framework. The dependent variable was psychological well-being.

Definitions of Terms

For the purpose of this study, the following definitions were used:

African American Breast Cancer Survivors: Women who identify themselves as African American or Black who have been diagnosed with breast cancer for at least 3 months. Survivorship was identified by phase, time since diagnosis, or active versus inactive treatment status.

Breast Cancer: any type of malignant growth that starts in the tissues of the breast. Certain cells change and begin to grow out of control. These cells can spread throughout the body (metastasize) and start new growths at distant sites (American Cancer Society, 1996). Breast cancer is a chronic illness that has a major impact both psychologically and physically. Breast cancer is diagnosed according to stage (I, II, III, IV) or histological type (ductal carcinoma in situ (DCIS), invasive/infiltrating ductal carcinoma, lobular carcinoma in situ (LCIS), invasive/infiltrating lobular carcinoma, papillary carcinoma, or Paget's disease).

Inner Resources: Three inner aspects of the person that were used to cope, namely, sense of coherence, hope, and spiritual perspective.

Sense of Coherence: "a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that (1) the stimuli deriving from one's internal and external environments in the course of living are structured, predictable, and explicable (comprehensibility); (2) the resources are available to one to meet the demands posed by these stimuli (manageability); and (3) these demands are challenges worthy of investment and engagement (meaningfulness) (Antonovsky, 1987, p. 19). Sense of coherence was measured with the Orientation to Life Questionnaire, also known as the Sense of Coherence Scale-13 (SOC-13).

Hope: "a multidimensional, dynamic life force characterized by a confident yet uncertain expectation of achieving good which, to the hoping person, is realistically possible and personally significant" (Dufault & Martocchio, 1985, p. 380). It consists of three dimensions: (1) cognitive-temporal (temporality and future); (2) affective-behavioral (readiness and expectancy); and (3) affiliative-contextual (inter-connectedness) (Herth, 1991). Hope in this study was measured with the Abbreviated Herth Hope Index (HHI) (Herth, 1992).

Spiritual Perspective: "a highly individualized awareness of one's inner self and a sense of connection to a higher being, nature, others, or to some purpose greater than oneself" (Reed, 1986, p. 1) or the extent to which a person holds "certain spiritual views and engages in spiritually-related interactions" (Reed, 1986, p. 1). For this study, spiritual perspective was measured with the Spiritual Perspective Scale (SPS) (Reed, 1986).

Psychological Well-Being: "seeking a sense of control in the face of life-threatening illness characterized by emotional distress, altered life priorities, fears of the unknown as well as positive life changes" (Ferrell, 1996, p. 912). For this study,

psychological well-being was measured with the Psychological Well-Being Subscale of the Quality of Life/Breast Cancer Version (Ferrell, Hassey-Dow, & Grant, 1995; Ferrell, Hassey-Dow, Leigh, Ly, & Gulasekaram, 1995; Ferrell, Grant, Funk, Garcia, Otis-Green, & Schaffner, 1998; Hassey-Dow, Ferrell, Leigh, Ly, & Gulasekaram, 1998; Padilla, Ferrell, Grant, & Rhiner, 1990; Padilla, Grant, Lipsett, Anderson, & Rhiner, 1982; Padilla, Presant, & Grant, 1983).

Assumptions

The study assumptions were:

1. The instruments measured what they purported to measure.
2. Participants were able to understand the instruments.
3. Participants responded honestly to the instruments.
4. Psychological functioning influences physiological functioning.
5. African American women have a distinct method of coping.

Limitations

Because of the nonrandom sampling methods, this study cannot be generalized. In addition, the possibility of experimenter effect (social desirability), self-reporting, and the effect of history (the effect of timing and the environment) limited generalizability.

Research Question

The question that guides the research was: which variables in the Gibson Model of Inner Resources were significant predictors of levels of psychological well-being in African American breast cancer survivors? Given the purpose of the study, it was possible to predict values of psychological well-being based on values of sense of coherence (SOC),

hope, and spiritual perspective in African American breast cancer survivors. Hence, sense of coherence, hope, and spiritual perspective are independent variables and psychological well-being is the dependent variable. According to Burns and Grove (1995), in predictive designs, the value of one variable is predicted based on values from other variables. The aim of the predictive design is to predict the value of the dependent variable from the independent variables. Independent variables that are most effective in prediction are highly correlated with the dependent variable but not highly correlated with other independent variables used in the study (Burns & Grove). It was expected that sense of coherence, hope, and spiritual perspective would be highly correlated with psychological well-being. It was also expected that sense of coherence, hope, and spiritual perspective would be correlated with each other.

CHAPTER II

REVIEW OF THE LITERATURE

The review of the literature will address the concepts sense of coherence (SOC), hope, and spiritual perspective, comprising the independent variables for this study. This will be followed by a discussion of the dependent variable, psychological well-being. A description of the proposed model emanating from the literature will then be given.

The variables selected for this study emanate from a philosophical framework that best fits the reciprocal interaction nursing worldview (Fawcett, 1993). This post-positivist worldview incorporates the interactive-generative paradigm (Newman, 1992) which views reality as multidimensional and contextual and acknowledges the importance of both subjective and objective phenomena in reciprocal interaction (Newman). Objectivity and predictability are valued; when necessary, however, understanding without predictability is sufficient (Newman; Fawcett; Guba, 1990). Change, in this worldview, is viewed as a function of numerous antecedent factors and probabilistic relationships (Newman, Sime, & Corcoran-Perry, 1991). Human beings are viewed as bio-psycho-socio-spiritual organisms (Fawcett; Neuman, 1989; Roy, 1987; Roy and Andrews, 1986; Roy and Corliss, 1993) who primarily interact in reciprocal ways and strive toward an optimal level of health (Fawcett), for example, psychological well-being and psychological adaptation.

Sense of Coherence

The Gibson Model of Inner Resources, in including the sense of coherence (SOC) construct, represents a paradigm in nursing, sociological, and biomedical research that

depicts African American women as having dispositional qualities that serve to promote their health and well being. They, in fact, create order out of the chaos that is constantly bombarding them (Antonovsky, 1979). This is in contrast to a pathogenic approach, which seeks to classify persons as being healthy or ill based on the amelioration of stress. The SOC has emerged as a multidimensional construct which sheds significant light on why some persons manage adversity with relative ease and recover with renewed strength, harmony, and purpose whereas others are unable to cope, leading to dis-ease (Antonovsky, 1994; Sullivan, 1993) or psychological distress.

Antonovsky made several relational statements regarding the SOC that impact this study. He posited that a strong SOC is essential to successful coping with the ubiquitous stressors of living (Antonovsky, 1987), leading to psychological and physical well-being. He also posited that a person with a strong SOC will use personal resources in the best possible way to deal with the challenges of life. This occurs by seeing the broader picture and searching for inner resources, simultaneously taking into account cognitive, affective, and instrumental areas (Antonovsky, 1987; Artinian & Conger, 1997).

The sense of coherence (SOC) construct has been applied among a variety of disciplines, including nursing, medicine, public health, sociology, anthropology, business and industry, and psychology. The SOC has been tested in an array of areas, individuals and groups, and across several cultures. Normative data, derived from studies using the SOC Questionnaire, were obtained from Israeli nationals, Israeli army officer trainees, Israeli health workers, New York State production workers, U.S. psychology and liberal arts undergraduates, Canadian health workers, and Nordic occupational health workers. This study, which described the relationship of sense of coherence, hope, and spiritual perspective to psychological well-being and distress in AA breast cancer survivors, will

further add to this body of knowledge. For the purposes of this review of literature, studies measuring the SOC in cancer survivors and ethnic minority groups will be described.

SOC In Cancer Survivors

Nine studies that used Antonovsky's SOC-13 Scale (1987) to study cancer survivors have found mixed relationships between SOC and coping (Bowman, Bjorvell, Langius, & Cedermark, 1999; Forlaw, 1991; Forsberg & Bjorvell, 1996; Forsberg, Bjorvell, & Cedarmark, 1996; Mullen, Smith, & Hill, 1993; Persson, Hallberg, & Ohlsson, 1997; Post-White, 1998; Post-White et al., 1996; Zayne, 1996). Bowman, Bjorvell, Langius, and Cedarmark evaluated the well-being of 144 Swedish breast cancer patients who received two different models of care. They found that the stronger the SOC, the more positive were the patients' emotional perceptions, perceived general health and mental well-being after surgery. Forlaw explored the relationship of SOC and hardiness to the ability of 26 male and 13 female ambulatory head and neck cancer survivors to maintain their nutritional status during radiation therapy. Hardiness was not significantly related to nutritional status; however, there was a significant relationship found between SOC and nutritional status. Those who maintained or improved nutritional status tended to score higher in SOC. Forlaw concluded that the SOC-13 is more sensitive than the Health Related Hardiness Scale in explaining differences in this group of survivors.

Forsberg and Bjorvell (1996) conducted a descriptive study that related SOC to psychological well-being in 96 Swedish colorectal or gastrointestinal cancer survivors and 20 survivors with ostomies due to Chrohn's or ulcerative colitis. They found that SOC was related to well-being in younger (< 67 years old) cancer survivors. Survivors with a stronger SOC rated their psychological well-being better than those with a weaker SOC. Survivors with a stronger SOC rated themselves as less helpless, more confident, more affiliated, and more valuable.

Additional results from the same purposive sample found that SOC compared positively and significantly with the Health Index score (Forsberg, Bjorvell, and Cedarmark, 1996). The stronger the SOC, the better the perceived well-being. Of these 96 survivors, 43 were women. Another Swedish study, by Persson, Hallberg, and Ohlsson (1997), used a convenience sample of 54 acute leukemia and highly malignant lymphoma survivors. They found that the SOC showed no relationship to the degree of problems and showed a negative relationship to current existential problems and current need for help and counseling ($r = -.51, p < .05$). The mean level of SOC was 73 (normative SOC is 62 in a healthy population). Of the sample, 26 were female, and 28 were male.

Mullen, Smith, and Hill (1993) examined the intervening role of spiritual resources, family strengths, and SOC in the adaptation process of cancer survivors and spouses. In this framework, SOC was conceptualized as an adaptive resource (McCubbin & Patterson, 1983). The study found that relatively high levels of SOC resulted and represented levels that were higher (83% of the highest possible score) than the normal mean score (74% of the highest possible score). SOC was the only significant direct predictor of psychological stress: there was a strong negative correlation between SOC and stress for survivors and spouses. The unstandardized beta of -1.199 for survivors meant that a one-point increase in SOC predicted a 1.199-point decrease in their stress score. In addition, family strengths and spiritual resources appeared to influence psychological stress by strengthening SOC. Hence, SOC was the primary predictor and appeared to play a stress-buffering role by reducing the total effect of accumulated demands on psychological stress (Mullen, Smith, and Hill)..

Post-White (1998), in an experimental study of survivors with solid tumors, found that SOC improved immune status by predicting increased natural killer (NK) and lymphokine activated killer cell (LAK) function. Also, SOC correlated with and directly

predicted an increase in quality of life (QOL) ($r = .67, p < .001$) and resulted in a more hopeful attitude ($r = .64, p < .001$). She concluded that a high SOC was important to one's perception of a quality of life and that similar factors contribute to both the SOC and QOL. Variables that determined SOC scores included a better disease state and more recent time since chemotherapy last course – these accounted for 28% of the variance. However, fatigue, nausea, and vomiting correlated negatively with the SOC ($r = -.31, p < .001$ for both symptoms). Post-White suggested that these scores indicate that SOC is a stable characteristic comprised of psychological and physical components. Demographic factors that positively impacted the SOC were lower disease state, age 50-61, and > 14 years of education. Factors not influencing the SOC were gender, marital status, employment status, diagnosis, and private versus government health care.

In a separate study by Post-White and others (1996), the mean SOC score was higher than that found in the previously reported study, 68.4; $SD = 11.7$ (1996) compared to $X = 63.7$; $SD = 14.3$ (1994). In addition, hope and SOC were found to be highly correlated ($r = .67, p < .001$). The only variable associated with better QOL in this study was a higher SOC. None of the demographic variables and disease characteristics were correlated with SOC. Although ten of the participants had undergone bone marrow transplant, there was no significant difference in their SOC ($p < .05$) compared to subjects that did not undergo the transplants. Also, there were no differences in the SOC scores in the 13 individuals with metastases versus those with early-stage disease.

Zayne (1996) explored the relationships among sense of coherence, coping, and adaptation in 72 adult cancer survivors who were currently receiving cancer-specific treatment. She found that stronger SOC was significantly related to greater use of adaptive coping strategies and less reliance on nonadaptive coping strategies. Zayne concluded that SOC was a predictor of effective coping and mediator of cancer-related stress.

There has been little consistency among studies measuring SOC and coping with cancer. The studies varied in sampling and study design, types of cancer, setting, and treatment type. Post-White's 1994 study was the only one that included breast cancer as a diagnosis. None of the studies included African Americans in their sample. Treatment categories and settings also varied among these studies. Both patient groups studied by Mullen, Smith, & Hill (1993) and Post-White (1998) received chemotherapy while survivors studied by both Forsberg & Bjorvell (1996) and Forsberg, Bjorvell & Cedarmark (1996) had received surgical treatment. Forlaw (1996) was the only researcher who specified survivors who received radiation therapy. Settings varied among outpatient (Forlaw; Post-White), inpatient and outpatient (Mullen, Smith, & Hill); home (Forsberg & Bjorvell; Persson, Hallberg, & Ohlsson, 1997); and inpatient and home (Forsberg, Bjorvell, & Cedermack).

The consistent findings in examining this group of studies was in the use of the SOC: all studies tested the action of SOC as a mediating variable, with cancer functioning as a stressor and quality of life, nutritional status, well-being, psychological stress or adaptive coping strategies representing the dependent variables. All used the SOC-13 scale. Hence, in studies of SOC and cancer, it is uncertain whether AA breast cancer survivors, with varying stages and phases of disease, will respond similarly to the Caucasian cancer survivors studied.

Sense of Coherence in African Americans

Five studies of SOC including African Americans were found. These resulted in positive relationships among SOC, hope, spirituality, various coping responses, and health status. Two studies were carried out in ethnic minority persons (AA and Hispanic) either at risk of or having HIV disease (Nyamathi, 1991; 1993; Lin, Poku, Cain, Holzapfel, & Crawford, 1995). One used a 5-item Likert adapted SOC-13 item scale (Nyamathi 1991;

1993), while the other used the coherency scale by Lewis & Gallston (1989). The other studies were carried out in AA women (George, 1999), single mothers (Hershey, 1997) and persons exposed to traumatic events (Racklin, 1998).

In her study of drug recovery and homeless minority women, Nyamathi (1991; 1993) found that women who had stronger SOC, high self-esteem, and support availability were associated with less emotional distress, fewer somatic complaints, less high-risk behavior, fewer serious concerns, and lower appraisal of threat. Women with strong SOC had significantly less appraisal of threat from their environment. SOC was not associated with race, education, homelessness, or stage of HIV illness. However, stronger SOC was associated with marital status, number of children, reduced depression, and diminished anxiety. Weaker SOC was associated with HIV symptoms (Nyamathi).

In their study of African American HIV-infected males and females, Lin, Poku, Cain, Holzapfel, & Crawford (1995) found that coherence, regardless of stage of illness or the number or severity of symptoms, was a significant negative predictor of level of depression ($\beta = -.32, p = .01$), and anxiety ($\beta = -.32, p = .01$). While stage of illness had no effect on coherence, HIV symptoms had a negative effect ($\beta = -.29, p = .01$); gender was unrelated to coherence.

Two recent studies, which included ethnically diverse groups, studied SOC as a mediating variable that served to mitigate post-traumatic stress disorder symptoms after traumatic exposure. Traumatic distress was decreased and spiritual orientation fostered by buttressing SOC (Racklin, 1998). SOC did not differ by gender or ethnicity. In her study of a racially-mixed group of low-income single mothers, Hershey (1997) found a moderate bivariate correlation between SOC and hope ($r = .30, p < .001$). She also found a direct relationship between SOC and social desirability and an inverse relationship between SOC,

strain, and disengagement strategies. Hershey's and Racklin's studies support the use of SOC in studies of varied socioeconomic and racial groups.

The study by George (1999) examined the relationship between health assessment, health status, and SOC in a random sample of 48 AA women. Women who viewed their current health status as devoid of acute, chronic, or serious health problems had a significantly stronger SOC than those with serious, chronic, or degenerative health problems.

In summary, strong SOC or coherence was associated with fewer health problems, lower emotional distress, post-traumatic stress, anxiety, and depression. Demographic factors associated with SOC included number of HIV symptoms, marital status, and number of children (Nyamathi, 1991; 1993). Those not associated with SOC or coherence were race, level of education, or homelessness (Nyamathi, 1991). Stage of HIV or AIDS had no effect on either SOC (Nyamathi) or coherence (Linn et al.) while the number and type of symptoms had a negative effect (Linn et al.). These studies support the need to further study AA women with chronic illnesses such as breast cancer, to determine the relationships among SOC and inner resources with psychological well-being, and psychological distress.

Sense of Coherence in Breast Cancer Survivors

Two studies were found that included breast cancer survivors. In their 1999 study, Bowman, Bjorvell, Langius, and Cedarmark included 144 Swedish breast cancer patients. In her 1994 study, Post-White included 38 survivors with solid tumors; 23 or 55% had breast cancer. The results were previously described.

Sense of Coherence in African American Breast Cancer Survivors

Only 1 AA survivor was included in the 1996 study by Post-White and others; however, it is unclear whether this AA survivor had breast cancer. Her results were previously described.

Hope

Hope, according to Dufault and Martocchio (1985), is a process based on the perspective of a confident, but uncertain expectation of a good future that is realistically possible and personally significant. Hope has been posited as enhancing the psychological and physical quality of life and survival in cancer survivors (Siegel, 1989). Cancer survivors with hope have been identified as having a "survivor attitude" (Miller, 1985, p. 23).

Hope has been studied as a global multidimensional concept in the elderly, chronically ill persons (Miller, 1992), and adults with cancer (Brandt, 1987; Bunston, Mings, Mackie, & Jones, 1995; Christman, 1990; Fehring, Miller, & Shaw, 1997; Herth, 1989; 1991; Lee-Eun-Hyun, 1998; Mickley & Soeken, 1993; Mickley, Soeken, & Belcher, 1992; Heszen-Niejodek, Gottschalk, & Januszek, 1999; Nowotny, 1989; Post-White, 1991; 1998; Post-White et al., 1996; Raleigh, 1992; Stoner & Keampfer, 1985). It has been identified as a psychological characteristic which has state and trait characteristics (Marcel, 1962; Farran, Herth, & Popovich, 1995).

Hope and coping are "inextricably intertwined" (Farran, Herth, & Popovich, 1995, p. 17). Hope has been proposed as a prerequisite for effective coping (Weisman, 1979; Miller, 1992; Miller & Powers, 1988; Hickey, 1989; Nowotny, 1989; Stephenson, 1991); is essential to physical and psychological well-being (Dufault & Martocchio, 1985; Lynch, 1965; Miller, 1983). Hope, which exists at the very heart of a person, can act as a motivator to move people forward toward new options and alternative methods of coping (Stoll, 1989). In this way, hope is a "sense of the possible" (Lynch, 1965, p. 24). It has affective, cognitive, and behavioral components (McGee, 1984; Herth, 1991; 1992; Farran, Herth, & Popovich, 1995) and is included as an inner resource in this study.

Hope in Cancer Survivors

Several studies were found that focused on hope and cancer (Christman, 1990; Fehring, Miller, and Shaw, 1997; Herth, 1989; 1991; Heszen-Niejodek, Gottschalk, & Januszek, 1999; McGill and Paul, 1993; Nowotny, 1989; Raleigh, 1992; Stoner and Keampfer, 1985). These studies were designed to conceptually identify the dimensions of hope (Dufault, 1985; Nowotny, 1989; Raleigh, 1992); develop instruments (Herth, 1989; 1991; Miller, 1988; Nowotny, 1989;); measure the relationship among hope and measures of coping (Christman, 1990; Fehring, Miller, and Shaw, 1997; McGill and Paul, 1993); and to compare hope scores across variations in the extent of disease.

Dufault (1985) identified dimensions of hope, which were derived from interviews with 35 elderly survivors with cancer. The dimensions included affiliative (relationships with others), active involvement, and behavioral dimensions of hope (Dufault). Nowotny (1989), in a study designed to develop an instrument that measured hope, found that cancer survivors and well adults were moderately hopeful (112 or 75% Vs. 123 or 79% respectively).

The Nowotny Hope Scale demonstrated statistically that hope is a multidimensional dynamic human attribute which incorporates dimensions that have also been identified by others: confidence in the outcome (Travelbee, 1971), relationships to others (Dufault, 1985; Travelbee, 1971; Vaillot, 1970), future possibilities (Hinds, 1984; Miller, 1988; Travelbee, 1971), spiritual beliefs (Fromm, 1973), active involvement (Hinds, 1984; Miller, 1988; Dufault, 1985; Buehler, 1975; Fromm, 1973), and a "comes from within" perspective (Fromm, 1973). Nowotny (1989) based her study on Lazarus' theory of stress appraisal and coping.

Raleigh (1992) studied survivors with cancer (Oncology group) and survivors with other chronic illnesses (Chronic Illness group) to both identify sources that survivors report

as being supportive of their hope and determine if the sources differ between the two groups of survivors. She found no significantly different responses between the two groups. Sources indicated by each group to be supportive of their hope included family, religion, friends, self, and professionals. Strategies used to raise hopes included getting busy, thinking about other things, prayer, and talking to others.

The majority of the cancer survivors reported that they tended to think positively about their illnesses 95.6% of the time. Seventy-six (84%) responded positively that religious or philosophical beliefs were helpful in coping with their illness: faith in God's greater plan or benevolence ($n = 24$) and prayer ($n = 32$) were reported as the most useful religious strategies. The majority of the sample was able to identify goals; however, it was difficult to put such goals into a time frame.

Post-White and others (1996) found similar themes in their triangulated study of breast cancer survivors that included hope along with other variables. The study included a semi-structured interview tool, which was modeled after Hinds' (1984) grounded theory approach to studying hope. A sense of hope was universal to all subjects in this sample. The participants revealed five central themes that influenced their hope: finding meaning, relying on inner resources, having affirming relationships, living in the present, and anticipating survival. The participants each defined strategies used to sustain their hope and the emphasis placed on one theme over others.

Herth (1989) based her study on her Coping Process Nursing Model (CPNM). She examined hope and its relationship to coping responses to measure the influence of specific intrapersonal, environmental, and illness-related variables on hope and coping. These were derived from Dufault's (1985) dimensions. Instruments used included the Herth Hope Scale (HHS) and the Jalowiec Coping Scale (JCS). Results showed a significant positive relationship ($r = .80, p = .001$) between level of hope (HHS scores) and level of coping

response (JCS scores), with a covariance of 64% between hope and coping response. There was a significant difference between the means for level of hope and level of coping response for participants receiving treatment in inpatient or outpatient settings compared to those in home settings. The study also confirmed that survivors who possessed a strong religious faith had a higher level of hope and a higher level of coping response than those with a weak faith.

The following variables were not related to the survivors' level of hope and coping – length of time since first diagnosis and interference in performing job role responsibilities. This lack of relationship to time since first diagnosis was not surprising: the authors contended that persons with high hope are more likely to participate actively in their own care and suggested that the *decision* (emphasis by the researcher) to continue treatment is a form of treatment in itself (Herth, 1989).

In a later study, Herth (1991) performed factor analysis on the Herth Hope Scale and compared it to her adapted Abbreviated Herth Hope Index. Results showed that 30 of the 32 items had a significant loading on one of three factors: (a) temporality and future (cognitive-temporal dimension, 12 items); (b) positive readiness and expectancy (affective-behavioral dimension, 10 items); and (c) interconnectedness (affective-contextual dimension, 10 items). A total of 52% of the variance was explained by the 3-factor solution. Although her sample was composed of 60 survivors with local disease and 60 survivors with metastases, she also failed to find any significant differences in extent of illness (local Vs. metastasized) and level of hope ($p < .05$). This sample of cancer survivors included 19 African Americans, representing 13 percent of the total sample (Herth). Hence, it is unknown whether the findings would be similar in a majority AA sample.

Contrary to Herth (1991), Stoner and Keampfer (1985) found, in survivors being treated for multiple types of cancer, that the highest hope scores occurred in persons with no

evidence of disease and no recall of life expectancy information. Persons with no evidence of disease had higher scores than those currently being treated.. Lowest scores occurred with those who recalled life expectancy and were experiencing ongoing treatment. There was no difference in level of hope between terminally ill survivors and those at other phases.

Bunston, Mings, Mackie, and Jones (1995), in a study that used the Herth Hope Index (1991), studied 98 survivors with head and neck cancer and 96 survivors with ocular melanoma to look at hope, psychological well-being, quality of life, locus of control (LOC), and other symptom-related variables. Results showed that hope was strongly correlated ($p < .001$) with LOC ($r = .41$); moderately correlated with fatigue ($r = .28$), physical functioning ($r = .24$), and occupational status ($r = .26$); and weakly positively correlated to income ($r = .17$, $p < .05$) and education ($r = .21$, $p < .001$). Those survivors who were younger and female had higher hope. However, neither time since diagnosis, cancer site, nor treatment modality were associated with hopefulness. Difficulty coping did not have a direct impact on hope.

Christman (1990) studied hope, psychological adjustment, and other variables in 55 survivors receiving radiation therapy. They found that hope explained 16 percent of the variance in adjustment after 15 days of radiation therapy. By the end of treatment, hope significantly increased the explained variance in adjustment by 11 percent. Significantly, greater uncertainty and less hope were associated with greater adjustment difficulties.

A study by Fehring, Miller, and Shaw (1997) measured hope, spiritual well-being (SWB), existential well-being (EWB), religiosity, and depression/moods. Their sample consisted of 100 elderly adults (mean age 73 years; $SD = 6.23$), of whom 27 percent had breast cancer and 3 percent were AA. Findings showed the following:

1) there was a consistent positive association between SWB and hope, 2) subjects with high intrinsic religiosity had significantly higher hope than the low intrinsic religiosity group, and 3) there was significantly higher hope in the persons with high levels of SWB, religiosity, and EWB.

A longitudinal, triangulated study by Reynolds (1997) of advanced stage cancer survivors found that hope scores, which were high at study entry, did not change over time. Four qualities associated with high hope levels were: reliance on strong spiritual beliefs, maintenance of positive attitudes, accommodation of cancer symptoms, and the presence of supportive resource people. Hope goals were found to be individually defined, unique to the patient population, and influenced by the phase of illness and developmental stage of the individual. However, in another longitudinal study of hope in lung cancer patients, Heszen-Niejodek, Gottschalk, and Januszek (1999) found that hope levels varied according to phase of disease. Cancer patients exhibited the lowest level of hope immediately after they had been diagnosed; however, their hope scores significantly increased five weeks and 6 months after diagnosis. The researchers interpreted the pattern of emotional reaction in the initial phase to be a response to the diagnosis of a life-threatening illness. This was followed by higher hope that signaled more effective emotional adaptation as time passed.

Kurtin (1990) found no significant relationship between hope and life-change or perceived well-being in adults with recurrent cancer. In a 1996 quasi-experimental study by Ott, 43 cancer survivors were assigned either to a thematically structured support group or an open discussion support group. Using the Herth Hope Index (Herth, 1992), findings included: moderate to strong correlations between mental adjustment and hope, health promoting behavior and hope, and fighting spirit and helplessness/hopelessness.

In summary, studies on hope and cancer have compared hope to psychological aspects of cancer. In addition, McGill and Paul (1993) included physical functioning as an aspect of overall functional status. Studies revealed that treatment-related and demographic variables differed. Persons received specified treatments consisting of chemotherapy (Herth, 1989; 1991), radiation therapy (Christman, 1990; Nowotny, 1989), and unspecified treatment types (Bunston, Mings, Mackie & Jones, 1995; McGill & Paul, 1993; Raleigh, 1992; Stoner & Keampfer, 1985). Location of treatment also varied from hospital (Herth; 1989; 1991; Stoner & Keampfer, 1985), to outpatient facility (Herth, 1989; 1991; McGill & Paul, 1993; Stoner & Keampfer, 1985), to home (Herth, 1989; 1991). These variables will be considered in the methodology for the proposed study.

Of nine studies, although 6 specified breast cancer (Fehring, Miller, & Shaw, 1997; Herth, 1989; 1991; McGill & Paul, 1993; Nowotny, 1989; Raleigh, 1992), only 1 represented a sample with > 30% having been diagnosed with breast cancer (McGill & Paul, 1993). African American women were specified in 4 of the studies (Fehring, Miller & Shaw, 1997; Herth, 1989; 1991; Nowotny, 1989) and comprised less than 13% of the sample. Herth (1991), who included a sample comprising 13% African Americans, found that there were no significant differences in the level of hope according to extent of illness (local vs. metastasized). The Abbreviated Herth Hope Index was used in the proposed study.

There were varying results depicting relationships between hope and demographic and psychological factors. Demographically, higher levels of hope were associated with higher incomes and educational levels (McGill & Paul, 1993; Bunston, Mings, Mackie, & Jones, 1995), occupational status, age, and sex, with younger females having higher hope scores (Bunston, et al.). The only psychological variable that positively correlated to hope

included locus of control; neither social support nor difficulty coping were correlated to hope (Bunston, et al.).

However, studies depicted mixed relationships between hope and disease-related factors. There were varying results regarding levels of hope in persons diagnosed with cancer compared to those without cancer. While Nowotny (1989) found comparably moderate levels of hope in cancer survivors and well adults, McGill and Paul's (1993) study indicated that mean hope scores were higher for those without cancer than those with cancer whose physical health was poorer. Six of the nine studies found that there was no relationship between hope and length of time since diagnosis (Bunston, Mings, Mackie and Jones, 1995; Herth, 1989; 1991; Nowotny, 1989; Raleigh, 1992; Stoner and Keampfer, 1985). Two studies specified results relating hope to stage of cancer. Herth (1991) found that there were no significant differences ($p < 0.05$) in level of hope according to extent of illness (local vs. metastasized) and Stoner and Keampfer (1985) reported no difference in level of hope between terminally ill persons and those at other phases. Hence, variation exists in the relationships found among hope and disease-related factors. One study (Heszen-Niejodek, Gottschalk, & Januszek, 1999) examined levels of hope according to cancer phases and found that hope levels significantly increased from immediately post-diagnosis to six months post-diagnosis.

More studies are needed to study the effect of hope on psychological adjustment in AA cancer survivors. Specifically, studies are needed that explore the effects of hope and other inner resources on psychological well-being in breast cancer survivors. The Herth Hope Index, as the only sensitive instrument that was used to measure hope in a sample of AA survivors, was used to measure hope in the proposed study.

Hope in Breast Cancer Survivors

There were three published and three unpublished studies found that measured hope in breast cancer survivors (Brandt, 1987; Ebright, 1998; Lee-Eun Hyun, 1998; Mickley, Soeken, and Belcher, 1992; Mickley and Soeken, 1993; Scales, 1993). Brandt studied women with breast cancer in stages II to IV and Mickley, Soeken, & Belcher studied women in stages I to IV. Lee-Eun Hyun studied women with early breast cancer. Ebright, Mickley and Soeken, or Scales did not specify Stage. While none of the studies linked hope and stage, Mickley et al. (1992) found no direct relationship between hope and length of time since diagnosis. However, Ebright found that the same pattern of appraisal differentiating highest hope from lowest hope was found one to three and ten to twelve months after surgery for breast cancer. Scales (1993) found no differences in level of hope among those who had routine office visits for an examination compared with those who went for chemotherapy.

Results of these studies indicated that women reported high levels of hope (Mickley, Soeken, & Belcher, 1992; Mickley & Soeken, 1993) or low levels of hopelessness (Brandt, 1987). In the studies by Brandt and Mickley, Soeken, & Belcher, hope was associated with effective coping.

Lee-Eun Hyun (1998), in her study of Korean breast cancer survivors, found that hope accounted for 7 percent of the variance in psychosocial adjustment. Although there was no significant interaction between fatigue and hope in accounting for psychosocial adjustment, hope functioned as a mediator between the two variables. In a longitudinal study, Ebright (1998) found, in 73 women with a first-time diagnosis of breast cancer, women with highest hope scored higher on self-esteem; social support; potential for coping/influence (PCI) appraisal; viewed their experience as more of a challenge; had less mood disturbance; and were better adjusted. Hope did not contribute significantly to variation in psychosocial adjustment; however, it was a significant predictor for

psychological adjustment. Together with appraisal and coping variables, hope accounted for 60 percent of the variation in mood disturbance (Ebright).

Hope in African American Breast Cancer Survivors. Although the 1993 study by Mickley and Soeken compared Hispanic to Anglo-American women with breast cancer and the study by Lee-Eun Hyun (1998) studied Korean survivors, none of the studies specified AA women. African American women have not been included in any studies found on hope and breast cancer. In addition, only one study, by (Lee-Eun Hyun, 1998), specified coping instruments or outcomes. Further studies are necessary to determine the effect of hope on such outcomes as psychological well-being and distress in AA women.

Sense of Coherence and Hope in Cancer Survivors

There were two studies found that described relationships between SOC and hope in cancer survivors (Post-White, 1998; 1996). The survivors in these two studies differed in diagnosis, type of treatment, and culture: in the 1998 study, she included 38 survivors with solid tumors, 55% of whom had breast cancer; in 1996, she studied 33 survivors, the majority of whom had hematological cancer; no breast cancer was specified. While her 1998 study depicted survivors receiving chemotherapy, the 1996 study represented survivors admitted to an oncology/hematology unit where treatment type(s) were not specified. Although the 1998 study did not specify a cultural group, the 1996 study included survivors who were Caucasian, Native American, and African American. However, only 1 African American was included. Post-White therefore studied women with breast cancer who varied in diagnosis and type of treatment, but were homogeneous according to culture.

Post-White's methodology differed in the two studies. While she used Antonovsky's SOC scale in both studies (1998; 1996) to study the SOC, she used different scales and methods to study hope. In her 1998 quantitative, correlational study, she used the Nowotny Hope Scale (Nowotny, 1989); however, in her 1996 study, she used a triangulated approach

to data collection, comprised of grounded theory methodology and paper and pencil test [(Herth Hope Scale (1991))].

The results were almost identical. In both studies, Post-White (1998; 1996) found that SOC resulted in a more hopeful attitude. The 1998 study showed that SOC resulted in a correlation of 0.64, while the 1996 study resulted in a correlation of 0.67 ($p < 0.0001$ in both studies) with hope. The stages of cancer, although included, were described differently in Post-White's 1998 and 1996 studies. Her 1998 study included subjects having primarily stage III or IV disease at entry into the longitudinal study. However, the sample in her 1996 study is described according to the phase of cancer (initial diagnosis, recurrence, and second or third cancer): 47% of the sample had an initial diagnosis and 41% had had a recurrence. She found that the less the disease, the higher the SOC (1998); however, there was no difference in levels of hope or SOC in the 13 persons with metastases compared with those with early-stage disease (1996). Therefore, it is difficult to compare results relative to extent of disease.

Spiritual Perspective

Spirituality is described as a holistic, multidimensional humanistic phenomenon that transcends the physical, social, and psychological being in all persons (Elkins, Hedstrom, Hughes, Leaf, & Saunders, 1988; Reed, 1992). It is a part of the ontological foundation of nursing and a basic characteristic of humanness that is important in human health and well-being (Reed, 1992). According to Reed (1992), Schultz and Meleis (1989), the discipline of nursing should acknowledge the relevance of spirituality as a human phenomenon to the discipline of nursing. An individual's spirituality is an "extremely important aspect of his or her whole being" and is important for nursing research (Soeken, 1989, p. 355).

It is thought that while spirituality is constant, spiritual perspective is that aspect of spirituality that changes (Haase, Britt, Coward, Leidy, & Penn, 1992). Reed (1986) coined the term spiritual perspective to represent spirituality. Spirituality is an inherent quality of humans and is the antecedent of spiritual perspective (Haase, Britt, Coward, Leidy, & Penn, 1992). Spiritual perspective is defined as a highly individualized awareness of one's inner self and a sense of connection to a higher being, nature, others, or to some purpose greater than oneself (Reed, 1986).

A pivotal event such as breast cancer is a potential enabler, that is, it serves as an impetus for developing a spiritual perspective (Haase, Britt, Coward, Leidy, & Penn, 1992). The diagnosis and experience of breast cancer is a pivotal life event. As an illness, therefore, breast cancer enables a person's spiritual perspective. Granstrom (1985) agrees, by calling chronic illness a spiritual experience. Survivors reflect on the suffering associated with chronic illness and on relationships with self, others, and God in order to make meaning of their lives (Highfield & Cason, 1983; Soeken, 1989). In essence, chronic illness may be a factor that stimulates the value a person places on his/her relationship with God (Miller, 1985; Reed, 1986; Lowery & Jacobsen, 1985). Thus, spirituality is extremely important, especially during the stress of hospitalization, surgery, procedures, and treatment for chronic illnesses (Camp, 1991) such as breast cancer. Pivotal events such as these provide situations that serve as an impetus for developing a spiritual perspective (Haase, Britt, Coward, Leidy, & Penn, 1992).

The use of spiritual well-being in many studies that correlate spirituality to coping with cancer and well-being is of concern to nurse researchers (Kirschling & Pittman, 1989; Reed, 1992). Several nurses have used the concept, spiritual well-being (SWB) in their studies of spirituality (Fehring, Miller, & Shaw, 1997; Mickley & Soeken, 1993; Mickley, Soeken, & Belcher, 1992). These studies have all found a positive correlation between SWB

and psychosocial or psychological well-being in persons with cancer. Spiritual well-being incorporates intrinsic and extrinsic religiousness and existential and religious well-being. Existential well-being, in particular, has been an important correlate of various indicators of psychological well-being across different clinical groups (Carson, Soeken, & Grimm, 1988; Fehring, Miller, & Shaw, 1997; Mickley & Soeken, 1993; Mickley, Soeken, & Belcher, 1992; Miller, 1995).

Researchers studying SWB have identified the need for a more critical look at its concept and measurement (Kirshling & Pittman, 1989; Reed, 1992). Spirituality is assumed to be a human characteristic that is related to well-being in some way. Combining the variables into one term, *spiritual well-being*, therefore, may introduce ambiguity. If SWB is studied as a predictor or an indicator of well-being, the extent to which the criterion variable, well-being, is confounded with the predictor variable, SWB, is questionable. In addition, using the phrase *well-being* within the term *spiritual well-being*, may imply that SWB is separate from other types of well-being. This is incongruent with the nature of spirituality, which encompasses connectedness and wholeness with the eventual goal of whole person well-being (Reed, 1992). Hence, the use of the term, spiritual well-being, is theoretically and methodologically bothersome; for the current study, spiritual perspective will be used.

Spirituality in African Americans

Spirituality is regarded as a resource that is potentially always present, in both good and bad times (Reed, 1992). Spirituality plays a key role in wellness and illness for Caucasians (Cohen, Bultz, Clarke, et al., 1997; Jung, 1933; Kendall, 1994; Elkins, 1995) and for African Americans (Mbiti, 1970, Barrett, 1974; Asante & Asante, 1985; Richards, 1985; Roberson, 1985; Davis et al., 1991; Clarke-Tasker, 1993; Miller, 1995; Jennings, 1996).

Spirituality plays an essential role in the African American community (Miller, Fleming, & Brown-Anderson, 1998; Pinderhughes, 1982; Russell & Jewell, 1992). African

Americans consider themselves to be “spiritual beings who live in a spiritual universe” (Miller, Fleming, & Brown-Anderson, p. 363). According to Parks (1998), spirituality underscores beliefs and practices for African Americans that provide a foundation for organizing life events.

Spirituality is also a coping mechanism (Blaine & Croker, 1995). Attending to the spiritual dimensions of illness has been a major part of African and AA spiritual practices for centuries (Potts, 1996). Prayer, faith, pastors, and the Bible are important resources to help African Americans to strengthen their spiritual, mental, and physical health (Creel, 1988; Raboteau, 1978). Spirituality is the most “self-determined” component of psychological health and well-being for African Americans (Edwards, 1987). Hence, exploring the meaning of cancer in its spiritual and cultural context is essential for those providing psychological support to African American cancer survivors and their families (Potts, 1996).

According to Richards (1985), the spirituality of African Americans symbolizes their uniqueness and the essence of the culture: the AA emotional or cultural bond or ethos is spiritual. The relationship among the human, the divine, and the AA family is “one of interdependence and reciprocity” (Richards, 1985, p. 212). Spiritual truths are the “essence of things” (Richards, 1985, p. 207) and spiritual power is used to strengthen the life force of African Americans. This strength has resulted in an ethnic group that has been able to reestablish the necessary driving energy for a continued vital existence on the foreign ground encountered when they were forced away from Africa. The spirit of Africa was therefore reborn through the AA ethos (Richards, 1985). Suffering was and is an “opportunity to express spirit” through “ritual drama” (Richards, 1985, p. 218). It is spirituality expressed through such activities as religious activities, oratory, music, and dance. The ingredient found in ritual drama, and which is paramount in AA survival is “soul-force” (Barrett, 1974, p 1), defined as:

...that power of the (African American) man which turns sorrow into joy, crying into laughter, defeat into victory. It is patience while suffering, determination while frustrated and hope while in despair. It derives its impetus from the ancestral heritage of Africa, its refinement from the bondage of slavery, and its continuing vitality from the conflict of the present.

Consequently, African Americans express themselves through perceived spiritual realities and belief in spiritual forces which interrelate and affect them in their daily lives (Edwards, 1987; Potts, 1996). In this way, they create meaning and recreate order out of chaos (Richards, 1985).

An example of chaos that might be experienced by African American women is chronic illness. Using the Spiritual Perspective Scale (SPS) in her study, Martin investigated 100 older, lower socioeconomic AA women with chronic illnesses. These women had a mean SPS score of 5.7 ($SD = .28$). These women also had high self-reported religiosity scores, $M = 9.99$ out of a possible 10. This establishes a relationship between spirituality and religion, since spiritual perspective tends to be high in persons who engage in religious behaviors (Reed, 1987; 1986).

Spirituality has been a source of strength, identity, and empowerment as well as a mediator of both internal and external stressors for AA women (Jackson, 1996). Spiritual beliefs and practices are very important to the way that many AA women construct ways of helping and coping (Parks, 1998). Spiritual beliefs and practices guide them in problem solving and provide peace and comfort during times of stress (Parks). Spiritual practices such as prayer provide coping strategies to ease psychological distress (Parks) in AA women.

Spiritual Perspective and Well-Being In Cancer Survivors

Three studies were found that specifically measured spiritual perspective in cancer survivors (Kurtin, 1990; Morgan, 1989; Reed, 1987); of these only 1 was published (Reed, 1987). However, two other studies were found that examined spirituality in cancer survivors (Reed, 1986; Smith, Stefanek, Joseph, Verdieck, Zabora, & Fetting, 1993). In her 1987

study, Reed utilized the Spiritual Perspective Scale (SPS) to measure spirituality in 100 terminally ill hospitalized cancer survivors, 100 non-terminally ill hospitalized survivors, and 100 healthy, non-hospitalized persons. The terminally ill and non-terminally ill survivors had been hospitalized for 6 and 5 days respectively; the healthy participants were selected from community center, neighborhood, and shopping mall settings.

Reed's 1987 study was a replication of her 1986 study, where she looked at religious perspective using a Religious Perspective Scale (RPS) to compare terminally ill ambulatory survivors with healthy individuals. In the 1986 study, her definition of religious perspective was similar to that of spiritual perspective: both definitions incorporated the personal meaning that spirituality had for the participants, the extent to which spirituality permeated their lives, and their engagement in spiritually-related interactions. The RPS instrument used in 1986 was adapted to the Spiritual Perspective Scale (SPS), with minor modifications that were based on results from the 1986 study.

In both studies, a priori assumptions were verified in the results. The assumption that terminally ill hospitalized survivors would indicate greater spirituality than either of the other two groups was supported in both studies. However, although there was a small significantly positive relationship found between spiritual perspective and well-being in the terminally ill hospitalized group in the 1987 study, Reed's 1986 study reported no relationship between religious perspective and well-being in this group. Another study that found no relationship between spiritual perspective and well-being was a study of 24 adults with recurrent cancer (Kurtin, 1990). This finding was likely due to the small sample size used in Kurtin's study. These results support the addition of other variables that may affect well-being.

Reed found that a significantly greater number of terminally ill adults indicated change toward increased spirituality compared to non-terminally ill or well adults. Change in spiritual views was found to correlate significantly with SPS scores in each group (1987):

the terminally ill group had the highest and most significant correlation while the well adults had the lowest correlation. In addition, age was positively correlated with spiritual or religious perspective in both studies. In light of the similarities of results from both studies, spiritual perspective appears to be a stable concept that is appropriate for older cancer survivors.

Because Reed (1986; 1987) included only cancer survivors as terminally ill participants, it is questionable whether the results were associated with the terminal nature or the diagnosis of the survivors' illness – cancer. Future studies should be carried out comparing spiritual perspective to psychological well-being and distress in cancer survivors at various stages and phases of disease, in order to further specify the resulting spiritual perspective and its relationship to psychological well-being. The current study examined these relationships.

In the study by Smith, Stefanek, Joseph, Verdieck, Zabora, & Fetting (1993), the results supported the hypothesis that spiritual awareness (perspective) and comforting death perspective (which incorporates aspects of spirituality in purpose and meaning) is correlated with lower psychosocial distress, particularly depression and anxiety. In particular, high levels of spiritual awareness and comforting death perspective were associated with low levels of depression and anxiety. In addition, age and spiritual awareness were highly correlated with low levels of depression and anxiety. In a descriptive study of terminally ill cancer patients, Morgan (1989) found that spiritual perspective scores were high and that there was a significant correlation between spiritual perspective and psychosocial adjustment.

In summary, all five studies were all descriptive-correlational and cross-sectional. The studies by Reed, Morgan, and Kurtin included convenience samples while the study by Smith et al was a random sample. The instruments used to measure spirituality included the spiritual/religious well-being perspective scale (Reed), which was sensitive to changes in

spiritual views of cancer survivors and related spirituality to well-being. It is questionable whether similar results would have been obtained with non-terminally ill persons.

In addition, the study by Smith et al. (1993), found relationships between spirituality and psychological distress, specifically depression and anxiety. None of the studies specified African Americans and all 3 interrelated age to well-being or psychological adjustment. While Reed's studies positively correlated age to well-being, the study by Smith et al study explained the variance in psychological distress according to age and spirituality. Morgan's (1989) study correlated Spiritual perspective to psychosocial adjustment. Further studies are needed with large and heterogeneous samples that look at the mediating role of spiritual perspective, using cancer as a stressor and psychological well-being as the dependent variable.

Spiritual Perspective in Breast Cancer Survivors

Both Reed's (1986) study and the study by Smith, Stefanek, and others (1993) included breast cancer survivors. Reed's study had a breast cancer sample representing 23 percent. Smith and others included cancer survivors representing 14 different diagnoses, including breast. They did not specify the exact number of breast cancer survivors. Reed, in her 1987 study, did not specify cancer diagnoses.

Spiritual Perspective in African American Breast Cancer Survivors

While Reed specified a sample of 3 to 4 percent in her 1987 study, neither she (1986) nor Smith and others (1993) specified an ethnic breakdown. Smith and others included a sample composed of 85 percent Caucasian cancer survivors.

However, the Spiritual Perspective Scale was used to measure spirituality in one unpublished study of AA survivors of breast cancer (Guillory, 1992). Guillory studied 135 AA disadvantaged women between the ages of 28 and 96 years of age who were diagnosed with Stage I, II, III, and IV breast cancer. The women were minimally six months post

diagnosis and maximally 25 years post diagnosis. Results showed that the women achieved a mean score of 5.4 on the SPS on a scale of 1-6. The high mean score reflected the survivors' beliefs that they were highly spiritual. This is in agreement with the literature that confirms that people frequently turn to God after they are diagnosed with a life threatening illness (Dow, 1992). However, in her study, Guillory did not find a significant relationship between spiritual perspective and survivorship. Guillory also reported descriptive information. A number of survivors accused God of giving them the illness, but would also say that is why "I must deal with it." Others would praise God for allowing them to live on after the diagnosis and for His goodness. Four subjects volunteered information that they had refused treatment and sought spiritual healing from God.

Four qualitative studies were also found that emphasized the importance of spirituality in AA cancer survivors. In his study of AA men and women, Potts (1996) examined the role of spirituality in the cancer experiences of 16 African Americans living in the southern United States. While specific information was not provided as to the gender of the participants, mastectomy was included as one surgical method. In the first of this two-phase study, participants reported 28 categories of spiritual beliefs that were not prompted by the researcher. In phase 2, participants were specifically prompted to provide 7 new categories and provide greater elaboration concerning the categories revealed in stage I. Four areas of convergence or central themes included: 1) healing is God's work; 2) prayer is important; 3) turn it over to the Lord; and 4) cancer is a subplot.

A triangulated study, by Mathews, Lanin, and Mitchell (1994), concerned indepth interviews of 26 AA breast cancer survivors from Eastern North Carolina who presented with stage III breast cancer at diagnosis. One of the beliefs they acknowledged was that cancer is always in the hands of God; the doctors cannot cure it (Mathews, Lanin, & Mitchell, 1994).

In an ethnographic study by Gates, Lackey, and Brown (1997), 13 AA breast cancer survivors were studied to determine the possibility of a relationship between generic caring behaviors given and received and delay in seeking or continuing treatment. Caring from others or care receiving involved support provided by people such as church members. A Bible was included in artifacts that provided comfort and support. Meaningful environments included a church building. Caring for others or caregiving involved obligations and commitment to others. Especially noted was “a missionary zeal to get other women to seek treatment early” (p. 57).

A similar missionary zeal was displayed by noted AA women spiritual leaders in history, who combined their spiritual fervor with their sense of caring for the community. Throughout their ex-slave narratives, spiritual narratives, autobiographies, and testimonies, black women in the nineteenth-century reveal their strength of character and the centrality of spirituality that served to enable them to survive, triumph, and transcend the many struggles and suffering they faced. Some of these women included Zilpha Elaw (Andrews, 1986; Elaw, 1846), Jareena Lee (Andrews, 1986; Lee, 1849), Julia A. Foote (Andrews; Foote, 1886); Harriet Tubman (Bradford, 1961); Sojourner Truth (Stewart, 1991); Maria A. Stewart (Stewart, 1835), Anna Julia Cooper (Loewenberg and Bogin, 1976) and Amanda Berry Smith (Loewenberg and Bogin, 1976). Throughout their narratives, these spiritual women showed an unwavering faith, trust in God, active prayer life, belief in prayer and the Bible, thankfulness and praise to God. Their faith, trust and belief were responsible for their ability to survive, triumph, and transcend difficulties (Andrews, 1986; Tubman, in Bradford, 1961; Foote, 1886 in Gates, 1988; Johnson, 1969; Lee, 1849, in Gates, 1988; Loewenberg & Bogin, 1976).

In a qualitative study of AA breast cancer survivors by Ashing-Giwa and Ganz (1997), women participating in a focus group reported that, although the initial reaction they

had to their diagnosis was death, they felt they had rebounded because of their deep spiritual faith and will to live. Several members shared their belief that only God can heal and that God's healing may lead to a delay in treatment: one woman prayed for six months before seeking treatment. In addition, some reported that their spirituality and religious behavior strengthened as a result of their diagnosis. Eight of the survivors, who also participated in in-depth individual interviews, stated that having a strong spiritual faith was an integral part of their lives. They all attributed their survival to their faith, which, they stated, gave them the internal strength to heal and cope with their illness and its treatments.

In a pilot study of ten AA and Caucasian breast cancer survivors, Gibson reported that the Caucasian women had a higher level of spirituality than AA women. However, while the Caucasian women described personal plans and behaviors such as reading spiritually uplifting books (other than the Bible), journal writing, bicycling, and work, the AA women gave descriptive comments that indicated a strong degree of spirituality and/or religiosity. Several expressed faith or confidence and trust in God as their Savior and emphasized that "God's in control." Strategies they used to cope included daily prayer, studying the Bible daily, attending weekly Bible study or prayer groups, and seeking pastoral counseling. One AA survivor coordinated a support group of primarily AA breast cancer survivors. She reported that the highlight for their support group was their annual anointing or healing ceremony.

The behaviors and beliefs described may be ascribed to spirituality and/or religiosity. According to Cohen (1993), religions prescribe worship, communal gatherings, and other devices to serve spirituality. Research shows that religion and religious organizations are central to the lives of older African Americans. Specifically, older AA women are more likely than younger AA women and men to be affiliated with a religion, attend religious

services as an adult, and become church members (Chatters & Taylor, 1989; Taylor & Chatters, 1991; Levin & Taylor, 1997).

In summary, spirituality/religiosity was the theme especially expressed by the AA women both specifically, through references to God and their faith and through coping strategies such as daily prayer, Bible study, and meditation. In light of the strong references to spirituality in the AA survivors, it was surprising that the spiritual perspective score was lower than that of the Caucasians. One reason for this might be the small sample size. In addition, it is possible that the Spiritual Perspective Scale is not sensitive to AA groups of women. A larger study is justified of AA breast cancer survivors to explore these issues.

SOC and Spiritual Perspective in Breast Cancer Survivors

No studies were found on SOC and spiritual perspective in any group of cancer survivors.

Hope and Spiritual Perspective in Breast Cancer Survivors

One unpublished study was found that correlated spiritual perspective to hope in recurrent cancer survivors (Kurtin, 1990). Kurtin found a significant correlation between hope and spiritual perspective ($r = .39$).

Although no studies were found that measured hope and spiritual perspective in breast cancer survivors, studies. Instead, studies found used concepts such as spiritual well-being (SWB) and religiousness to measure spirituality. In their study of spiritual well-being (SWB), religiousness, and hope among women with breast cancer (Mickley, Soeken, & Belcher, 1992), hope was defined as a multidimensional dynamic attribute which includes the dimensions of possibility and confidence in a future outcome, active involvement which comes from within, relations with others and spiritual beliefs. They further stated that this definition links hope to both SWB and religiousness: hope can address secular issues, such as future plans and relationships with others, as well as religious concerns of an afterlife and

a relationship with God or another higher power. They defined SWB as the affirmation and satisfaction with life and a relationship with God, as well as the perception that one's life has meaning.

Mickley, Soeken, & Belcher (1992) used the Nowotny Hope Scale (Nowotny, 1989), where a high score indicates a high level of hope. Hope was positively correlated with SWB ($r = .661$, $p < .001$) and its components, religious well-being (RWB) ($r = .443$, $p < .001$) and existential well-being (EWB) ($r = .732$, $p < .001$). Religious well being focuses on one's relationship to God while existential well-being focuses on life purpose and satisfaction. Thus, women reporting higher levels of hope tended to have higher levels of both religious and existential SWB. Also, existential well-being, a significant predictor of hope, accounted for 53.6 percent of the variance in hope (Mickley, Soeken, & Belcher). In essence, the women experienced both a close relationship to God and experienced life purpose and satisfaction. According to Paloutzian & Ellison (1982) existential well-being involves a sense of purpose and meaning in life. Both subsample groups in the study by Scales (1993) agreed that the subconcept "spiritual beliefs" contributed most to hope in their lives.

The effects of age, medical variables or religious variables on hope appeared to occur through SWB. In addition, medical variables were not significantly related to SWB, religiousness or hope; therefore, physical health was independent of SWB and hope.

Since no studies were found that related hope and spirituality to psychological well-being in AA breast cancer survivors, there is a need to study these variables. The current study did this.

SOC, Hope, and Spiritual Perspective in Cancer Survivors

No studies were found that investigated sense of coherence, hope, and spiritual perspective. However, one study was found that investigated SOC, hope, and spirituality in cancer survivors (Post-White et al., 1996). Although hope and SOC were highly correlated,

hope was not significantly correlated to the other variables measured, including spirituality. The investigators suggested that, because more than 75% of the subjects indicated that spiritual beliefs and faith in God or a higher being were important to their sense of hope, the results could have been tied more to the tools used for hope (Herth Hope Scale and semistructured interview tool) and spirituality (Spirituality Index).

The investigators suggested that spirituality, hope, and SOC share some of the same elements. They suggested that spiritual and religious beliefs are components of hope, through the person's ability to find meaning in having cancer. This conclusion seems spurious, since the correlation between hope and spirituality was low. The instrument used to measure spirituality had poor reliability; no validity scores were given. Their conclusion was made in light of the literature on spirituality or religiousness in cancer survivors. The researchers also suggested that the other theme common to SOC and hope is reliance on internal resources.

Sense of coherence and hope were also positively correlated to coping in Post-White's 1998 study. Hope and spirituality are both inner resources that appear to be mobilized by SOC. The affective component found within the SOC is finding meaning (Post-White, et al., 1996). According to Post-White et al., finding meaning is inherent in spirituality. The ability to manage, find purpose and meaning in life is central to having cancer (Dufault & Martocchio, 1985; Herth, 1989; Hickey, 1989; Miller, 1989; Nowotny, 1989; Raleigh, 1992) and these, along with comprehending, are essential to a strong SOC. Finding meaning, making sense of the situation, and identifying and mobilizing resources are defined as important elements of SOC, hope (Post-White, 1998) and spirituality (Post-White et al., 1996). Post-White (1998) also found that a stronger SOC resulted in a more hopeful state. Although SOC is considered to be a more stable trait than hope and spirituality (Post -

White, 1998; 1996), all three are vital to a healthy state and psychological quality of life outcomes such as psychological well-being.

Psychological Adjustment

The Surgeon General's Report (1991) states that, in order for an individual to have mental health, he or she should be able to "negotiate the daily challenges and social interactions of life without experiencing cognitive, emotional, or behavioral dysfunction" (p. 208). The assessment of psychological well-being is a primary indicator of mental health (Stewart, Ware, Sherbourne, & Wells, 1988).

Psychological Well-Being in African American Women

Research in mental health indicates that, although African Americans are more exposed to stressful conditions than Caucasians, many do not exhibit higher levels of psychological distress (Beeber, Shea, & McCorkle, 1998; Broman, 1989; Haley, et al., 1996; Lawton et al., 1992; McAdoo, 1997; Mirowsky & Ross, 1980; Mui & Burnette, 1996; Plummer & Slane, 1996). Despite exposure to major life stressors such as a racist environment (Boyd-Franklin, 1989; Landrine & Klonoff, 1996; Markides & Mindel, 1987; McAdoo, 1983; Mui & Burnette, 1996; Outlaw, 1993; Peters & Massey, 1983; Plummer & Slane, 1996; Smith, 1985; Slavin, Rainer, McCleary, & Gowda, 1991) low incomes, and multiple role strains (Beale, 1972; Brown, 1990; Carrington, 1980; Jackson & Wolford, 1992; Kessler & Neighbors, 1986; King, 1988; Oakley, 1986; Tomes, Brown, Semanya, & Simpson, 1990), many AA women exhibit successful coping skills (Boyd-Franklin, 1989; Caldwell, 1996; Locke, 1992; Mui & Burnette, 1996). According to McAdoo, AA lower socioeconomic families tend to have stronger survival than those with higher incomes and more formal education. In African American women, this may be related to their coping abilities.

Coping has been argued to be a major factor that may alter the response to stress in African Americans (Broman, 1996; Haley, et. al., 1996; Outlaw, 1993; Plummer & Slane, 1996; Roberson, 1996; Slavin, Rainer, McCreary, & Gowda, 1991; Ulbrich, Warheit, & Zimmerman, 1989). African American women, particularly, have learned, both throughout and since slavery, to adapt in order to survive. According to Roberson (1996),

(African American) women would never have been able to survive under the perils of the slave system in America had it not been for their creativity in survival and coping skills (p. 203).

Overwhelmingly, throughout slave narratives and spiritual narratives, strengths are revealed of AA women. Examples are: fortitude, nurturing the community, an indomitable will to survive, and resourcefulness (Bradford, for Tubman, 1961; Brent, 1973; Truth, 1991; White, 1985). After slavery was abolished, AA women took whatever work was available, no matter how demeaning, to survive and "prevent racism from destroying the family" (Roberson, p. 40). Their coping abilities may be partially attributed to prior experiences, cultural factors, and inner resources that appear to revolve around concepts such as sense of coherence, hope, and spiritual perspective.

Instead, the majority of studies on psychological adjustment to breast cancer have reported data on samples of Caucasian women. Recent research has included more diverse samples of breast cancer survivors, but the numbers of ethnic minority women have frequently been too small to separate the findings. For example, a study by Beeber, Shea, and McCorkle (1998) found that, in their AA population numbering 114 or 25 percent, African-Americans had higher scores on the Positive Affect subscale than whites. It is unclear as to the gender and type of cancer that are represented in this subgroup of AA survivors. In order to address psychological issues that are relevant to the increasing numbers of AA breast cancer survivors, studies will need to include larger sample sizes (Ashing-Giwa & Ganz, 1997).

Rodrigue (1997) compared African Americans and Whites with comparable sociodemographic variables according to psychological difficulties such as depression, anxiety, global psychological severity, and coping strategies. He studied 42 AA and 56 Caucasian adults with cancer. Mean age was 46.3 years (SD = 12.2 years) and mean duration of illness was 15.4 months (SD = 26.9 months). Most were married and 68% were lower to middle socioeconomic status. They had a variety of cancers. Stage of cancer was somewhat equally distributed across all IV Stages. Results indicated that there were no significant differences between AA and White survivors in depression, anxiety, or global psychological adjustment. These findings suggest that AA cancer survivors are not necessarily more susceptible to clinical levels of global psychological maladjustment or depression than Caucasians. Rodrigue suggests that future research should include adequate numbers of AA survivors in their samples and should examine differences in psychological adjustment to cancer within the AA population and in the African Diaspora.

Breast Cancer Survivorship

Breast cancer, as a chronic illness, tends to have a major impact both psychologically and physically. It is a complex and increasingly challenging disease (Knobf, 1996) for survivors. Changes in treatment and societal attitudes over the past several years have made surviving breast cancer an experience requiring varying coping abilities (Wainstock, 1991). Breast cancer survivors have numerous treatment and rehabilitation options, a higher degree of participation in decision making, increased acceptance from society, and may experience less disfigurement (Wainstock). Whether a breast cancer survivor achieves high levels of psychological well-being depends on a complex interplay of factors and coping strategies.

The psychological impact of breast cancer and women's responses vary considerably (Payne, Sullivan, & Massie, 1996). Major factors that determine her response include her inner resources, psychological make-up, coping abilities, developmental life-cycle stage (young, middle-aged, or elderly) at the time of diagnosis (Payne, Sullivan, & Massie), and her gender (Kagawa-Singer, 1995). In addition, her familial, social, and cultural environment and the emotional and financial support available affect each woman's adaptation to breast cancer (Kagawa-Singer, Rowland & Massie, 1996). Kagawa-Singer emphasizes that a woman's culture influences her response to the fact and meaning of cancer, how emotions will be expressed, and how side effects will be experienced. The role of gender is especially important in breast cancer since it dictates the kinds of support available and appropriate for the woman to expect and seek (Kagawa-Singer).

The challenges of breast cancer are particularly evident when one considers the phases of survival. The first phase is surviving the initial diagnosis and treatment. During this phase, the goals are to survive surgery, radiation, and chemotherapy with their individual effects on the patient. Cure is the driving force. In addition, survival includes the beginning adjustments of placing cancer in the context of other aspects of life, for example, family relationships, work, and role adjustments. During this phase, the survivor faces the possibility of a shortened life (Mullan, 1985). In their landmark study, Weisman and Worden (1976-1977) examined 120 survivors in the first 100 days after receiving a cancer diagnosis and described the extreme distress associated with hearing the news. Intermittent periods of depression and anxiety were common. Intense reactions experienced initially tended to taper off after three months (Waligora-Serafin, McMahan, Pruitt, & Davenport, 1992). The current study included breast cancer survivors who had been diagnosed for at least 3 months. The survivors had proceeded to the second phase.

The second phase involves extended survival and occurs once the patient has completed initial therapy and has gone into remission (Dow, 1990; Mullan, 1985). The dominant response is fear of recurrence. The survivor's focus is directed toward adapting to the physical limitations associated with the breast cancer and treatment, such as hair loss and chronic fatigue (Grant, Padilla and Greimel, 1996). The cancer survivor's responses are modulated by the strength of inner resources, availability of social support, the nature and meaning of the crisis in terms of developmental tasks (Massie and Holland, 1991), coping abilities, and cultural environment (Payne, Sullivan, and Massie, 1996). A study of psychological well-being in the first six months after a cancer diagnosis revealed that most survivors appeared to eventually adjust and use effective coping mechanisms.

Both Weisman and Worden (1976-1977) and Waligora-Serafin, et al. found that survivors, during these initial phases, began to examine their lives, look at the effect of the cancer on their families, and search for meaning. Self-examination and search for meaning both imply aspects of spirituality (Haase, Britt, Penn, & Leidy, 1992). However, a study by Pasacrete (1997) reported that the CES-D detected 70 per cent of patients with breast cancer who met criteria for a formal diagnosis of depression 3 to 7 months following diagnosis. Ninety-six women had had mastectomies, 70 percent had completed radiation therapy within 1 month or more before the interview, and 79 percent were receiving chemotherapy at the time of interview.

Other researchers found that the period following completion of treatment can be a vulnerable time for many women (Fertig, 1997). One study found that 30 percent of women completing adjuvant chemotherapy found termination upsetting, revealing uncertainty about the future, and fear of recurrence (Northouse, 1992; Ward, Viergutz, Tormey, et al., 1992). One of the women in Gibson's 1998 pilot study agreed, stating that she felt deserted and

alone after having such frequent, close contact with her physician and chemotherapy nurses, and feared recurrence upon completion of chemotherapy.

Permanent survival is the final phase and is roughly equated with "cure." It occurs when persons consider the disease to be permanently arrested. Common problems that occur during this phase include employment and insurance difficulties, and various types of discrimination (Mullan, 1985). In addition, long-term secondary effects of cancer become a focus, such as those resulting from radiation, second cancers, sterility, and cardiopulmonary and neurological complications (Grant, Padilla, and Greimel, 199).

Other vulnerable points that are associated with psychological well-being include recurrence and terminal phase of disease (Fertig, 1997). It has been reported that 47-66 percent of breast cancer survivors have been diagnosed with anxiety, depression, or both during the recurrence phase (Hall, Fallowfield, Baum, et al., 1995). Women who thought themselves cured by initial treatment and who were surprised by the recurrence, were found to report a higher level of distress (Weisman & Worden, 1986). The acute emotional turmoil of diagnosed recurrence is similar to the turmoil experienced at the time of initial diagnosis, where the survivor experiences intensified existential concerns, sadness, and depression (Fertig). The terminal phase of breast cancer represents emotional challenges such as fear of increasing debilitation and physical dependency on others, fear of the dying process, fear of death, and fear of a painful death (Fertig).

According to Hassey-Dow (1991), each phase presents its individual set of challenges. The phases of survival may not always occur linearly and progress may be gradual. Hence, resources and support issues differ across phases. Survival from breast cancer has many implications for psychologically coping with the disease, especially for AA women, who already face a myriad of stressors.

Psychological Well-Being and Breast Cancer

Psychological well-being (PWB) has been identified as one of the domains of quality of life for breast cancer survivors (De Haes and Welvaart, 1985; Dow, 1990; Loescher, Clark, Atwood, et al., 1990; Carter, 1993; Wyatt, Kurtz, and Liken, 1993; Ferrans, 1994; Dow, Ferrell, et al., 1996; Ferrell, Grant, et al., 1996; Ferrell, Grant, et al., 1997; 1998; Osborne, 1997; Dow, Ferrell, et al., 1998). PWB was defined for this study as: seeking a sense of control in the face of life threatening illness characterized by positive life changes, emotional distress, altered life priorities, and fears of the unknown (Ferrell, 1996).

Breast cancer can have psychological effects on the survivor that can impact her positively or negatively. Some of these effects, which are included in studies of psychological well-being, include: appearance and self-concept (Quigley, 1989; Smith and Lesko, 1988; Mock, 1993), depression (Dow, Ferrell, Leigh, Ly, & Gulasekaram, 1996; Frank-Stromborg, Wright, et al., 1984; Jenkins, May, and Hughes, 1991; Schag, et al., 1993), anxiety (Gottschalk, and Hoigaard-Martin, 1986; Ward, Viergutz, Tormey, et al., 1992), uncertainty about the future (Hurt, McQuellon, and Barrett, 1994; Mahon, 1991; Quigley, 1989; Smith and Lesko, 1988), fear of recurrence or a second cancer, and metastasis (Hurt, McQuellon, and Barrett, 1994; Mahon, 1991; Northouse, 1981; Chekryn, 1984). As a chronic illness, breast cancer has tremendous psychological effects on the survivor.

Surgery, including either mastectomy or breast-conserving surgery (such as lumpectomy), is the most studied cancer treatment from a psychological perspective (Carroll-Johnson, Gorman, and Bush, 1998). Studies differ in their findings as to whether mastectomy or breast-conserving surgery is more favorable with regard to psychological well-being. Beginning in the 1950s, studies have recognized that the loss of a breast is associated with femininity and self-concept and contributes to low self-esteem, anxiety, and depression (Jacobsen & Holland, 1989).

Psychological Impact of Breast Cancer Surgery

Most early studies, according to Saleeba, Weitzner, and Meyers (1996), examined the emotional impact of different surgical procedures on women with stage I and stage II breast cancer, with or without adjuvant therapy (Ashcroft, Leinster, & Slade, 1985; Fallowfield, Baum, & Maguire, 1986; Meyer & Aspegren, 1989; Sanger & Reznikoff, 1981; Schain, Edwards, & Gorrell, 1983; Steinberg, Juliano, & Wise, 1985). Most of the studies published in the 1980's, as reviewed by Hall and Fallowfield (1989), Kiebert, De-Haes, and Van de Velde (1990), Schain and Felting (1992), Winer (1994), and Ganz (1994), found no difference in psychological well-being between survivors who opted for mastectomy versus those who chose breast conservation treatment (Ashcroft, Leinster, & Slade, 1985; Baider, Rizel, Kaplan De-Nour, 1986; Fallowfield, Baum, & Maguire, 1986; Ganz, Schag, Polensky, et al., 1987; Holmberg, Omne-Pont'n, Burns, et al., 1989; Sanger & Reznikoff, 1981; Schain, Edwards, Correll, et. al., 1983; Wolberg, 1989). According to Gilbar, Ungar, Fried, Taller, Cohen, & Robinson (1997), exceptions included two studies that reported a difference in favor of the breast conservation group (1997) – in emotional adjustment (Taylor, Lichtmann, Wood, et al., 1985) and emotional reactions (Kemeny, Wellisch, & Schain, 1988). Other exceptions were found in the mastectomy group (Levy, Herberman, lee, et al., 1989; Maunsell, Brisson & Deschenes, 1989). The two studies found no difference between the two groups in terms of body image (Ashcroft, Leinster, & Slade, 1985; Wohlberg, Romsaas, Tanne, et al., 1989). Most favored breast conservation surgeries (Baider, Rizel, Kaplan De-Nour, 1986; Baterlink, Van Dam, & Van Dongen, 1985; Beckmann, Johansen, Richardt, et al., 1983; Kemeny, Wellisch, & Schain, 1988; Lasby, Margoiese, Poisson, et al., 1987; Sanger & Reznikoff, 1981; Taylor, Lichtman, Wood, et al., 1985).

Later studies of psychological well-being, conducted in the 1990's, showed more explicit equivalence between mastectomy and breast conservation survivors (Gilbar, Ungar,

Fried, Taller, Cohen, & Robinson, 1997). While Ganz, Schag, Lee, Polensky, & Tan (1992) and Goldberg and others (1992) found no differences in body image, Yilmazer, Aydiner, Ozkan, Aslay, & Bilge, 1994) found that Turkish women who underwent breast conservation had a more positive body image than mastectomy patients. However, Omne-Pont'n and others (1992) indicated that women undergoing a mastectomy had a higher risk of psychological disturbance following mastectomy than those who had breast conservation. Fallowfield, Hall, Maguire, Baum, & A'Hern, (1994) and Hoskins, Budin, and Maislin (1996) found no differences in psychological distress between the groups, while Goldberg and others (1992) confirmed higher levels of anxiety and depression following breast conservation therapy compared with mastectomy. They also found that levels of anxiety and depression were similar among both groups of women for up to 1 year following surgery.

A meta-analytic review carried out by Moyer (1997), of psychosocial outcomes of the two treatment modalities, concluded that the findings were equivocal and tended to show a lack of substantial benefits for breast-conserving surgery compared to mastectomy. Examples included studies by Pozo and others (1992), who performed a longitudinal study and reported no group differences in mood disturbance or self-rated adjustment. Others indicated that there was "little solid evidence for considerable superior adjustment after breast-conserving treatment" (Moyer, p. 284): studies indicating this dearth of evidence included those by Carlsson and Hamrin, 1994; Fallowfield and Clark, 1991; Hall and Fallowfield, 1989; Kiebert and others, 1991; and Schain and Fetting, 1992). Critiques of these studies revealed small sample sizes and inconsistencies such as variability in method of assignment to treatment, time elapsed since treatment, and definitions of quality of life (Kiebert et al., 1991; Moyer & Salovey, 1996).

Moyer (1997) found significant effect sizes, indicating benefits for breast-conserving surgical treatment for three areas specific to psychological outcome: psychological

adjustment, body/self-image, and cancer related fears and concerns. She found the largest and most robust effect sizes showed body/self-image benefits for breast conserving surgery. This represented a "firmly established finding" (p. 290) that was in concert with findings of previous researchers (Kemeny et al., 1988; Lasry et al., 1987; Margolis et al., 1990; Wellisch et al., 1989; Yilmazer, Aydinler, Ozkan, Aslay, & Bilge, 1994). According to Moyer, such findings were not surprising because breast-conserving techniques involve less physical mutilation.

However, the findings for the other two outcome areas revealed patterns not previously found in narrative reviews of the literature (Moyer, 1997). A small but significant effect size for psychological adjustment resulted in benefits for breast-conserving surgery versus mastectomy. This finding was more pronounced for assessments made 12 months or longer after treatment. According to Levy and others (1992) and Steinberg and others (1985), adjuvant radiation therapy that accompanies breast-conserving treatments may be a source of psychological distress. Emotions included in these studies ranged from anxiety and depression to guilt and anger. Moyer asserts that it is possible that women treated with breast-conserving versus breast-removing surgeries may experience different levels of specific feelings. For example, cancer itself might be associated with anxiety, whereas breast loss or disfigurement might be associated with depression (Deadman, Dewey, Owens, Lienster, & Slade, 1989). She also points out that distress may have been experienced because of the different expectations for each type of treatment (Fallowfield et al., 1986) or the type of treatment itself (Moyer).

Other findings by Moyer (1997) were related to cancer-related fears and concerns. A small but significant mean weighted effect size indicated fewer cancer-related fears and concerns in samples treated with breast-conserving surgery. This advantage was significantly better for longer compared with shorter term assessments. This differs from previous studies,

which supported the speculation that women treated with breast-conserving surgery might worry more about cancer recurrence (Fallowfield et al., 1986) or doubted the effectiveness of this form of treatment (Massie & Holland, 1991; Ward, Heidrich, & Wolberg, 1989).

In summary, most breast cancer studies have demonstrated debatable psychological differences between the two types of treatment (Gilbar, Ungar, Fried, Taller, Cohen, & Robinson, 1997), with the exception of body image (Ganz, 1994; Poulsen, Graversen, Beckmann, & Blichert-Toft, 1997), which has been found to be less in breast-conserving surgery compared to mastectomy. A more recent meta-analysis (Moyer, 1997) found that there is optimism for breast-conserving surgery compared with mastectomy for psychological adjustment and cancer-related fears and concerns. In the reviewed studies, no substantial numbers of AA women were included; therefore, findings cannot be generalized to this population. Future studies are therefore needed that specifically address the psychological well-being differences found in ethnic minority groups who are treated with either of these treatment types.

Psychological Well-Being and Breast Cancer in African American Women

In the literature, there is limited research on body image in African American women. It is possible that for some African American women body image and the meanings ascribed to body parts (such as breasts) may impact their psychological well-being. However, no references to body image or body parts have been found in previous research studies, narratives, biographies, or autobiographies of African American women.

In some African American women, breasts may have psychological significance. . For example, slavery is believed to be related to the emphasis placed on large breasts by some AA women. Dunnavant (1995) stated that slave women's breast were often inspected during the trading or auction process: the woman with the larger breasts was considered to be more valuable. An example is the following excerpt from Bancroft (1931, p. 112) in

White (1985), where an auctioneer states, "Show your neck, Betsey. There's a breast for you; good for a round dozen before she's done child-rearing..." Slave women breast-fed their own, as well as the children of plantation owners. Hence, large breasts may be associated with having higher economic value. Today, according to Dunnivant, there are AA women who would rather suffer with breast cancer than have their breast(s) removed.

However, for other AA women, breasts may not be as significant. Audre Lorde, a breast cancer survivor, published an autobiography of her experiences as a survivor. For Lorde (1981), her sense of self was not defined physically by her breast, despite the fact that her "...breasts [had] always been so very precious to (her)..."(p. 32). She pointed out that she would love her "body one-breasted now, or remain forever alien to [herself]" (p. 44). For Lorde, her sense of herself as a lover, educator and writer were paramount. She stated, "to live and to love and to do my work..." (p. 32) were more important than her breasts as parts of herself that she wanted to preserve.

SOC, Hope, Spiritual Perspective and Psychological Well-Being

No studies were found on SOC, hope, spiritual perspective, and psychological well-being.

Hope, Spiritual Perspective and Psychological Well-Being

No studies were found that explored the relationships among hope, spiritual perspective, and psychological well-being. However, there was one study found that described the relationships among hope, spiritual well-being (SWB), religiosity, depression, and other mood states in elderly people coping with cancer (Fehring, Miller, and Shaw, 1997). In this study, religiosity was conceptualized as a continuum with intrinsic religious motivation on one end and extrinsic religious motivation on the other (Allport and Ross, 1967). Intrinsic religiosity was defined as the integrated expression of religious thought and practices while extrinsic religiosity was the use of religion and religious practices for

sociability, status, or solace, and an instrument in motivation systems (Fehring, Miller, and Shaw). Findings included a consistent positive correlation among intrinsic religiosity, SWB, hope, and other positive mood states. A consistent negative correlation was found among extrinsic religiosity, depression, and other negative mood states. Significantly higher levels of hope and positive moods existed in elderly survivors with both intrinsic religiosity and SWB.

According to Miller (1992), indicators of coping well with chronic illnesses such as cancer include having a sense of well-being, being spiritually well, being hopeful, not being depressed, and exhibiting positive mood states. The study by Fehring, Miller, & Shaw (1997) provided evidence that a positive relationship existed between intrinsic religiosity, hope, SWB, a positive mood, and not being depressed. This study provides support for the use of a measure that emphasizes the spiritual component, rather than the religious component when using these types of scales to measure coping with cancer. It also provides support for incorporation of hope and psychological well-being as psychological adjustment variables when studying coping with cancer.

Summary

A large number of studies on the individual concepts of SOC, hope, and spirituality and their relationship to psychological well-being have been carried out. The majority of these used convenience sampling and descriptive correlational or cross-sectional designs. Ten included AA women. Of these, 4 studies included a group of breast cancer survivors in the sample while two studied women with breast cancer only.

Although studies looked at correlates of one or other of the variables, none looked concurrently at all five correlates, SOC, hope, spiritual perspective, and psychological well-being in the same study. Studies reviewed showed variation in the relationship of disease-related factors to SOC, hope, and/or spirituality. No studies were found that studied hope and

psychological adjustment in breast cancer survivors, one study linked hope and spirituality to psychological adjustment. One study also related SOC, hope, and spirituality to quality of life, although specific QOL outcomes were not specified.

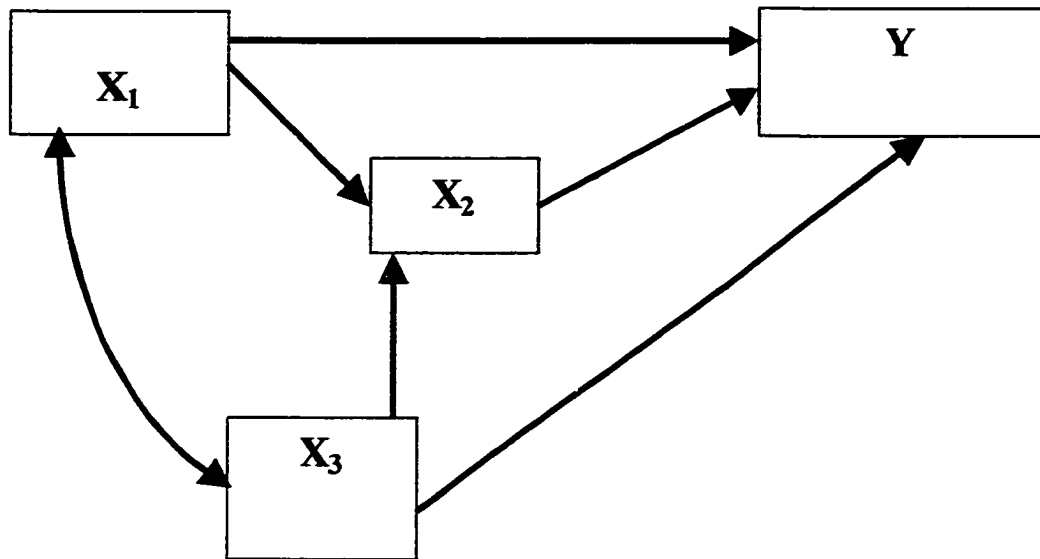
Hence, there is a definite need to combine aspects of these studies in the seldom studied group, African Americans. The proposed study will combine sense of coherence, hope, and spiritual perspective in AA breast cancer survivors as predictors of psychological well-being. In so doing, Antonovsky's proposition, that sense of coherence, along with the mobilized resources, hope and spiritual perspective, will enhance psychological well-being.

Gibson Model of Inner Resources

Concept derivation is a process that is useful in generating new ways of thinking and looking at a phenomenon (Walker & Avant, 1995). The conceptual framework proposed for this study evolved from previous research on the concepts sense of coherence, hope, spiritual perspective, and psychological well-being. Previous studies have demonstrated the existence of positive relationships among sense of coherence, hope, and spiritual perspective to psychological well-being.

Theoretical models provide symbolic representations of perceptual phenomena in the form of structures comprised of concepts related in some way to form a whole (Chinn & Kramer, 1995). Models provide a sense of understanding as to how theoretic relationships develop and are used to illustrate forms of theoretic relationships (Chinn & Kramer). A model may be drawn mathematically or schematically, using symbols and arrows (Walker & Avant, 1995). Schematic depictions of the Gibson Model of Inner Resources are displayed in Figures 2.1 and 2.2.

Figure 2.1. Predictive Model of Inner Resources



Depiction of the Predictive Model

The multiple regression equation used to analyze the model is depicted in Table 2.1.

Table 2.1.

Multiple Regression Equation for Gibson Model of Inner Resources

$$Y = a + bX_1 + bX_2 + bX_3$$

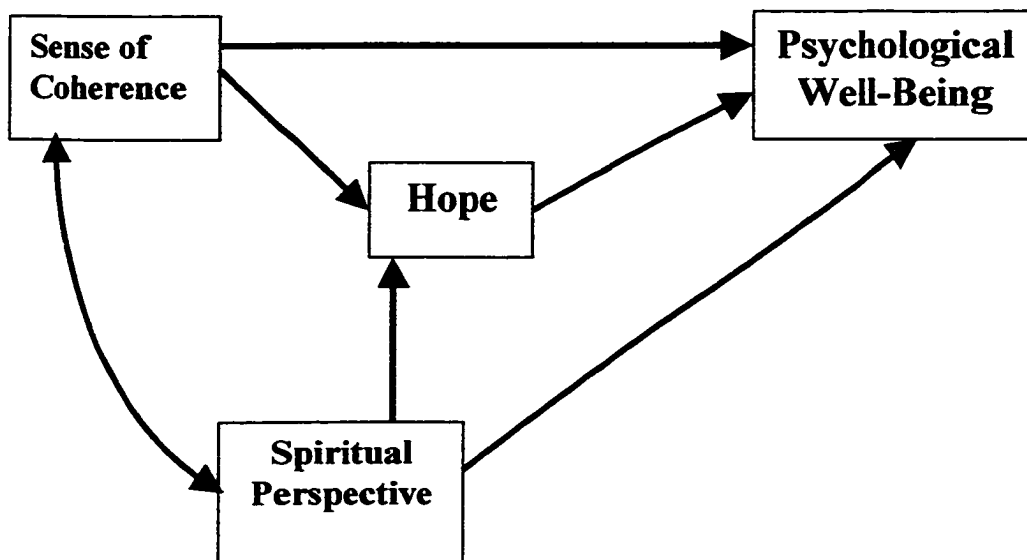
Note:	X₁: Sense of Coherence	X₃: Spiritual Perspective
	X₂: Hope	Y: Psychological Well-Being

Figure 2.2. Proposed Gibson Model of Inner Resources

Contexts: African-American Woman (Socioeconomic stressors)

Breast Cancer Survivorship (Stressors related to Breast Cancer)

Inner Resources



Based on the literature reviewed, the proposed Gibson Model of Inner Resources demonstrates linkages among the concepts. In the proposed Gibson Model of Inner Resources, the inner resources are depicted of those AA women who continue to cope successfully with sociocultural and chronic illness stressors such as breast cancer. Her model largely incorporates Antonovsky's major construct, the sense of coherence (1979; 1987) and the inner resources, hope and spiritual perspective, as they predict psychological well-being.

In Gibson's Model, the contexts of AA culture and breast cancer survivorship set up a tension state. Gibson posits that a high SOC influences other inner resources such as hope and positively relates to spiritual perspective. Spiritual perspective also influences hope. Gibson includes psychological well-being as the outcome that is found to the right of the model. The inner resources, SOC, hope, and spiritual perspective predict levels of psychological well-being. In essence, the Gibson Model, as the framework for this study, is a salutogenic model (Antonovsky, 1979) of coping designed for AA breast cancer survivors.

According to Antonovsky, the salutogenic orientation is concerned with understanding the factors involved with remaining at a given point or moving along the health ease/*dis*-ease continuum from a location on the continuum at a given point in time. In so doing, one focuses on the origins of health and is concerned with salutary or health-promoting factors – factors that are negentropic and actively promote health. This is in contrast to the pathogenic orientation, which focuses on disease and risk factors.

Hence, levels of sense of coherence, hope and spiritual perspective are considered to be health-promoting factors. Specifically, they are inner resources that predict psychological well-being levels in AA breast cancer survivors. Sense of coherence and hope have a positive relationship with each other. Sense of coherence and spiritual perspective have a positive relationship with each other. Spiritual perspective and hope have a positive

relationship with each other. High values of sense of coherence, hope, and spiritual perspective are positively related to and predict psychological well-being.

The methods and approaches used to collect data, empirically evaluate the data, and refine the model will be discussed in the following chapter.

CHAPTER III

METHODS

Overview of Design

A descriptive design was used to study which variables in the Gibson Model of Inner Resources (SOC, hope, and spiritual perspective) predict psychological well-being in African American breast cancer survivors. Data was collected once from each participant.

Settings

This study was conducted at outpatient cancer treatment facilities and in community or group settings. These locations were chosen because of accessibility to AA breast cancer survivor populations. In South Carolina, Berkeley and Richland Counties have the highest incidences of breast cancer in AA women (South Carolina Central Cancer Registry, 1998). It was expected that a higher number of survivors would participate from those counties. The majority of outpatient cancer treatment facilities are housed at Medical Teaching Hospitals, where large numbers of lower income AA survivors are usually treated. Hence, participants were sought from outpatient cancer treatment facilities primarily found at Medical Teaching Hospitals. Women were also contacted who participate in cancer organizations, women's church groups, sororities, and other community or civic organizations.

The researcher planned to invite survivors from the South Carolina Central Cancer Registry (SCCR) who differed from those represented at outpatient facilities. The SCCR has been housing statistical and demographic records of the majority of cancer survivors since 1996. However, the Surveillance Subcommittee of the Department of Health and

Environmental Control Cancer Advisory Committee approved only the release of *numbers* of breast cancer survivors to the researcher, provided the reporting facilities differed from the outpatient facilities already contacted by the researcher. The SCCR then agreed to write a letter to these facilities in support of the proposed research. They did not agree to provide any information other than numbers of breast cancer survivors. Consequently, with the support of her dissertation committee, the researcher did not utilize the SCCR as a source for recruitment of survivors.

Sample

According to the formula found in Kraemer and Themann (1987), with an Alpha of .05, a power of .80, and an effect size of .20, the necessary sample size was calculated to be 152. The sample consisted of 162 AA breast cancer survivors. Criteria for inclusion included: (1) 18 years and older; (2) confirmed diagnosis of breast cancer for 3 months or more; (3) knowledge of breast cancer diagnosis; (4) no previous diagnosis of cancer (other than breast cancer); (5) informed consent; and (6) ability to participate in the interview.

To recruit all socioeconomic levels, the researcher accessed 100 percent of AA survivors fitting the inclusion criteria who were being treated at outpatient facilities. It was expected that, of an accessible number of 30 women at each outpatient facility, 19 would be recruited each month. Over a 6-month period, the sample size from 5 outpatient facilities was expected to be 95.

The researcher followed the following procedures for the outpatient facilities:

1. The researcher received permission from the institutional review board for each outpatient facility (Appendix A);
2. Once permission was received, the outpatient facility sent a letter of support for the study or called the women (Appendix B). They also requested that the women grant permission for their contact information to be given to the

researcher. The contact information consisted of their name, address, and telephone number(s) (Information Form, Appendix C).

3. Once the contact information was received, the women were sent an advance letter (Appendix D) from the researcher, inviting them to participate in the study.
4. The researcher called the participants within 6 weeks to request whether they would prefer to self-administer or have the researcher administer the questionnaire.

To access middle- to upper-socioeconomic status survivors, the researcher used a snowball technique to sample 100 percent of eligible women who participated in cancer organizations, women's church groups, sororities, and other community or civic organizations. The researcher expected to recruit 50 survivors from this category. The researcher carried out the following procedures for women contacted through cancer organizations, women's church groups, sororities, and other community or civic organizations:

1. The researcher advertised the study by flier and/or health fairs, presentations, newspaper articles, and the internet to AA cancer organizations, women's church groups, sororities, and other community or civic organizations;
2. The flier included a toll-free number (See Appendix E) with which to contact the researcher;
3. Interested participants called the researcher using the toll-free number, completed a sign-up sheet, or received a packet of information directly from the researcher that included a cover letter (Appendix F) from the researcher giving a toll-free number, questionnaire (Appendix G), consent form (Appendix H to K), Y-Me brochure and contact number (Appendix L),

recruitment flier, information form, and a self-addressed, stamped envelope for mailing back the questionnaires.

4. The researcher called the participants within 6 weeks to request whether they would prefer to self-administer or have the researcher administer the questionnaire.

The researcher accrued a larger number of participants from cancer organizations, women's church groups, sororities, and other community or civic organizations than expected and recruited fewer numbers from outpatient cancer facilities. The final sample of 162 was above the necessary sample size of 152.

Procedure

Once Institutional Review Board approval was obtained, AA breast cancer survivors were selected according to the inclusion criteria. Because the researcher was targeting AA women, some of whom were lower income, it was expected that there might be limited understanding of the instruments; therefore, questionnaires were administered by the researcher as requested. For those who preferred to have researcher-administered questionnaires, the researcher set an appointment at a mutually agreed upon location. Accordingly, questions were read to the participants as needed and responses marked by the researcher. Demographic data was obtained by the woman. One data collection session was used. If the session(s) had to be discontinued due to fatigue, discomfort, or emotional stress, the partial questionnaire was used in data analysis as appropriate. No sessions had to be discontinued. Because of the possible impact of the demographic variables on sense of coherence, hope, spiritual perspective, and psychological well-being, the demographic questionnaire was administered last.

For those who preferred to self-administer, the researcher, within one week of speaking to participants on the telephone, mailed them packets. For mailed questionnaires,

packets included a letter from the researcher that gave a toll-free number, questionnaire, consent form, Y-Me support brochure and contact number, recruitment flier, information form, and a self-addressed, stamped envelope for mailing back the questionnaires. A post office box was reserved for mailing.

Questionnaires were coded. A separate listing of each woman's name and contact information was kept in a locked area with the researcher's Dissertation Major Advisor. The questionnaires were also coded with the source of data, that is, whether the survivor was from the outpatient facilities, churches, community groups, or organizations.

Each woman was given an incentive gift and certificate of appreciation (see Appendix M) for her participation in the study. Incentive gifts were donated by The Celebrating Life Foundation and Living Beyond Breast Cancer. The Celebrating Life Foundation donated 150 copies of the book, Celebrating Life: African American Women Speak Out About Breast Cancer (Dunnavant, 1995). Living Beyond Breast Cancer donated the book, Getting Connected: African Americans Living Beyond Breast Cancer (Bradley & Scharf, 1998).

Instruments

The five instruments that were used in this study included the Sense of Coherence Scale (13-item) (SOC-13) (Antonovsky, 1993), the Abbreviated Herth Hope Index (HHI) (Herth, 1992), the Spiritual Perspective Scale (Reed, 1992), the Quality of Life/Breast Cancer (Psychological Well-being Subscale, PWB) (Ferrell, & Grant, 1996), and a Demographic Questionnaire that was developed by the researcher.

The Sense of Coherence Scale (SOC-13)

The SOC-13 is a 13-item, 7-point Likert scale with a range from 13 to 91 (Antonovsky, 1993). The instrument was scored by summing the individual items. Items 1, 2, 3, 7, and 10 were reversed scored. The higher the score, the stronger was the SOC. Examples of items were: "Do you have the feeling that you're being treated unfairly?" and "How often do you have the feeling that there's little meaning in the things you do in your daily life?" (Antonovsky). The instrument was composed of three subscales:

1. Comprehensibility, or cognitively perceiving stressors as being predictable, orderly, or understandable;
2. Manageability, or having adequate resources available to manage stressors; and
3. Meaningfulness, or feeling that life has meaning and that most of her problems are demands that are challenges, not burdens (Antonovsky, 1987).

Reliability

The psychometric properties of the SOC Scale indicate that it has good reliability. The original testing of the scale indicated that, for the 26 studies originally reported which were used in a variety of Western populations (using different languages and cultures), there was high internal consistency ($\alpha = .84$ to $.93$) for the 29-item version (SOC-29) and average internal consistency ($\alpha = .74$ to $.91$) for the 13-item version (SOC-13) (Antonovsky, 1993). Subsequent studies have resulted in internal consistency data that varied from $\alpha = .76$ to $\alpha = .92$ in the SOC-13 (Forsberg & Bjorvell, 1996; Forsberg, Bjorvell, & Cedarmark, 1996; Nyamathi, 1993; 1991; Post-White, et al., 1996; Tishelman, Taube, & Sachs, 1991). Hence, the scale has an acceptable level of internal consistency (Nunnally, 1994).

Test-retest reliability results have ranged from low to high, depending on the sample and length of time between retesting. For the SOC-29, test-retest reliability for Israeli retirees and a kibbutz control group ranged from $r = .52$ to $.56$ after one year and $r = .54$ and $r = .55$ after two years (Sagy & Antonovsky, 1990). In a study by Frenz, Carey and

Jorgensen (1993), test-retest reliability ranged from $r = .92$ within a 1-week period in undergraduate students, to $r = .93$ for a period ranging from 7 to 30 days in social service employees; results for clinical psychotherapy survivors were not provided. In a group of U.S. male survivors at veterans' medical centers (Coe, Romeis, Tang, & Wolinsky, 1990), test-retest reliability results were $r = .77$ for the SOC-13 and $r = .80$ for the SOC-29 after a 6-month period.

Validity

Validity results are varied. Attesting to construct validity is the basic property that the SOC measures a *global* construct that incorporates the components of comprehensibility, manageability, and meaningfulness. Antonovsky (1993) found that no separate, meaningful factors could be identified using either of the scales (SOC-29 or SOC-13) and concluded that there is "no basis for deriving distinguishable scores for comprehensibility, manageability, and meaningfulness" (1993, p. 731). Other studies have also concluded that SOC is global with one true construct (Coe, Romeis, Tang, & Wolinsky, 1990; Feldt & Rasku, 1998; Frenz, Carey, & Jorgensen, 1993; Flannery & Flannery, 1990; Flannery, Perry, Penk, & Flannery, 1994; Sammallahiti, Holi, Komulainen, & Aalberg, 1996; Sandell, Blomberg, & Lazar, 1998). In factor analysis, these researchers isolated 2 factors (Sammallahiti et al.), 3 factors (Coe et al.; Feldt & Rasku, 1998; Flannery & Flannery; Flannery et al.; Frenz, et al.), and 5 factors (Frenz et al.). The results of these psychometric studies attest to the SOC construct being unitary or global. There continues to be debate, however, as to the number of factors. Although two studies found there to be 2 and 5 components (which changed to 3 components in the second analysis), none of the studies was able to refute Antonovsky's contention that there are 3 components in the SOC construct, comprehensibility, manageability, and meaningfulness that are intertwined and therefore should not be measured individually.

Content and face validity are evident largely because of the facet approach to construction. Antonovsky (1994) stated that an item was included after three colleagues, had independently concurred that it referred to only one of the SOC components of comprehensibility, manageability, and meaningfulness. Thus, each item was intentionally chosen to represent a distinct profile: deductively, the scale's construction promoted content validity; inductively, the scale was examined post hoc to ascertain its adequacy in representing the theoretical construct.

Criterion validity has also been demonstrated, with correlations ranging from $r = .39$ to $r = .75$ (Antonovsky, 1993). Divergent validity has been shown with high negative correlations with trait anxiety ($r = -.52$ to $r = -.85$) (Hart, 1991; Flannery & Flannery, 1990; Frenz, Carey, & Jorgensen, 1993; Mlonzi & Strumpher, 1998), psychological distress ($r = -.66$) (Flannery & Flannery; perceived stress ($r = .73$, $p < .0001$) (Sammallahti, Holl, Komwolin, & Aalberg, 1996), and depression ($r = -.32$ to $r = -.83$) (Carstens & Spangenberg, 1997; Frenz, Carey, & Jorgensen, 1993; Hawley, Wolfe, & Cathey, 1992; Sammallahti, et al; Schnyder, Buchi, Morgeli, Sensky, & Klaghofer, 1999). Seventy-two percent of psychological distress symptom severity has been predicted by the SOC and it was a significant predictor of depressive symptomatology, $R = .78$ ($p < .000$) (Sammallahti, et al.). The scale also has high positive correlations of $r = .50$ with hardiness (Williams, 1990), perceived health ($r = .47$) and morale or mental health ($r = .71$) (Coe, Romeis, Tang, & Wolinsky, 1990), and self-esteem ($r = .63$) (Nyamathi, 1991). There have been few tests of criterion validity in clinical populations: only three of the represented studies included clinical groups of survivors (Coe, et al.; Frenz, et al., Sammallahti, et al.). In the two studies by Frenz et al. and Sammallahti et al., the patient groups scored lower on the SOC scale than the nonclinical groups: this further attests to criterion validity.

Studies show mixed results regarding discriminant and concurrent validity. Frenz, Carey, & Jorgensen (1993) indicated that there is an absence of significant correlation between SOC and measures of intelligence in undergraduate students; however, social desirability was significant ($r = .39, p < .0001$) in undergraduates and social service employees. Sammallahati, Holi, Komulainen, & Aalberg (1996) concluded that the SOC Scale lacks discriminant validity. Sammallahati et al. also indicated that concurrent validity existed between the SOC and Defense Style Questionnaire; however, this validity was limited only to one aspect of the four scales in the Defense Style Questionnaire, immature defenses.

The Herth Hope Index (HHI)

The Herth Hope Index (HHI), developed by Herth (1992) for use in clinical settings, is an adapted version of the Herth Hope Scale (Herth, 1991). It is a 12-item, 4-point Likert scale with a possible range of scores from 12-48. Scoring consists of summing the points for the subscale and for the total scale. Items 3 and 6 are reversed scored. The HHI has three subscales, entitled, cognitive-temporal, representing temporality and future); affective-behavioral, representing readiness and expectancy; and affiliative-contextual, representing inter-connectedness (Herth, 1992). The higher the score the higher the level of hope. An item example is "I have a positive outlook on life." In developing this version, Herth (1992) designed simple items specifically for persons experiencing alterations in health status.

It was tested on 172 acute, chronic, and terminally ill adults and family caregivers of the terminally ill. Reliability was high: $\alpha = .88$ to $.97$; test-retest was $r = .87$ to $.91$. Content and construct validity were verified by research/measurement, client, and clinical expert

panels. Criterion and divergent validity were high. Consequently, the HHI is a valid and reliable instrument that appears to be clinically useful for breast cancer survivors.

The Spiritual Perspective Scale (SPS)

The Spiritual Perspective Scale (SPS) (Reed, 1987) is an adapted version of the Religious Perspective Scale (Reed, 1986). The SPS is a 10-item Likert scale that is anchored with descriptive words corresponding to each number, 1 to 6. The SPS was designed to measure the saliency of spirituality or participants' perceptions of the extent to which they hold certain spiritual views and engage in spiritually-related interactions (Reed, 1986). The SPS may be administered in structured interview or questionnaire format. The arithmetic mean is calculated for each person. The result is a range of scores from 1 to 6, with 6 representing greater spiritual perspective. Examples are "How often do you read spiritually related material?" and "I seek spiritual guidance in making decisions in my everyday life." Adequate reliability ($\alpha = .93$ to $.95$; inter-item $r = .57$) and construct validity have been demonstrated and remain adequate in research on terminally ill, acutely ill, and healthy individuals (Reed, 1986; 1987). In both studies, women and those reporting a religious background score higher on the SPS (Reed, 1986; 1987).

The Spiritual Perspective Scale was used to measure spirituality in two studies that have been found with AA survivors of breast cancer (Guillory, 1992) and chronic illnesses (Martin, 1999). Guillory studied 135 AA disadvantaged women between the ages of 28 and 96 years of age who were diagnosed with Stage I, II, III, and IV breast cancer. The women were minimally six months post diagnosis and maximally 25 years post diagnosis. Results showed that the women achieved a mean score of 5.4 on the SPS on a scale of 1-6. The high mean score reflected the survivors' beliefs that they were highly spiritual.

This concurs with the literature that confirms that people frequently turn to God after they are diagnosed with a life threatening illness (Dow, 1992). However, in her study, Guillory did not find a significant relationship between spiritual perspective and survivorship. Using the SPS in her study, Martin found that older, lower socioeconomic AA women had a mean SPS score of 5.7 (SD = .28). These women also had high self-reported religiosity scores, $M = 9.99$ out of a possible 10. This establishes some convergent validity, since spiritual perspective tends to be high in persons who engage in religious behaviors (Reed, 1987; 1986). Hence, in these two studies of lower socioeconomic AA women with chronic illnesses, including breast cancer, spiritual perspective scores were high.

Quality of Life/Breast Cancer Version (Psychological Well-Being Subscale) (PWB)

The Quality of Life Scale/Breast Cancer Version (PWB Subscale) is an ordinal scale that measures the PWB domain of QOL in breast cancer survivors (Ferrell & Grant, 1996). It consists of 22 items ranked on a range from 0 (worst outcome) to 10 (best outcome). A mean scores for the PWB subscale is obtained by adding all the items within the subscale and dividing by the number of items. High scores represent high levels of PWB; low scores represent low levels of PWB, or psychological distress. Examples of items are: "How difficult is it for you to cope today as a result of your disease?" and "How much depression do you have?" (Ferrell & Grant).

The instrument is based on previous versions of the QOL instrument (Ferrell, Grant, and Padilla, 1991; Padilla, Ferrell, Grant, and Rhiner, 1990; Ferrell, Grant, et al., 1992). The instrument was revised during a one-year pilot study by Hassey Dow and Ferrell (1995). The survey was mailed to 685 cancer survivors, with 294 being breast cancer survivors. Psychometric analysis was performed on 686 respondents. Two measures of reliability included internal consistency and two-week test retest reliability. Internal consistency, using

Cronbach's alpha coefficient, revealed a subscale alpha of $r = .89$ for PWB. Test-retest reliability for the PWB subscale was $r = .88$.

Content validity was based on a panel of QOL researchers and nurses with expertise in oncology. The second measure used stepwise multiple regression to determine factors most predictive of overall QOL. Of the variables accounting for the greatest percentage, control, future, and appearance were found in the PWB subscale. The fourth measure of validity used Pearson's correlations to estimate the relationships between the subscales of the QOL and the subscales of the FACT-G tool. There was moderate to strong correlation between the QOL PWB subscale and the FACT emotional subscale ($r = .65$).

Demographic Questionnaire

The demographic questionnaire was developed by the researcher and consisted of 1 question each to obtain the following: ethnicity, age, income status, educational level, religious group and denomination, type of breast cancer, length of time since diagnosis, active versus inactive treatment, body location and type of treatment. These questions incorporated the extraneous variables related to this study. Each of the questions was in structured format.

Religiosity

The researcher included three questions measuring religiosity in the demographic questionnaire. These questions were added in response to descriptions of religiosity that AA breast cancer survivors gave in a pilot study conducted by the researcher in 1998 (Gibson, 1998). The three questions sought answers to participants' feelings of comfort in their relationship with God (or a Higher Being), comfort in their church, and whether their church's teachings provided meaningful sources of strength for them. All items had a 5-point Likert scale of 1 to 5, with 1 meaning strongly disagree and 5 meaning strongly agree. According to a content expert on religion and spirituality, these questions measured

religiosity (Alonzo Johnson, personal communication, February 18, 2000), or the religion through which spirituality is expressed (Stolley & Koenig, 1997).

Cancer Symptoms

Three questions were also included to measure the presence of nausea and vomiting and degrees of fatigue. These discomfort symptoms were added because strong negative correlations resulted between each of them and sense of coherence (Post-White, 1998). During the second phase of survivorship, the focus of breast cancer survivors is directed toward adapting to the physical limitations associated with the disease and treatment, particularly chronic fatigue (Grant, Padilla, & Greimel, 1996). The literature on cancer survivorship attests to the finding that fatigue is the “most prevalent and disturbing symptom of cancer and its treatments” (Winningham, et al., 1994). Studies have documented that patients experience fatigue that is associated with chemotherapy, radiation therapy, and other treatments for cancer (Ferrell, Grant, Dean, Funk, & Ly, 1996). Fatigue is also associated with long-term survivorship of cancer survivors and is related to psychological well-being (Ferrell, & Dow, 1997; Ferrell, Grant, Dean, Funk, & Ly; Ferrell, Grant, Funk, Otis-Green, & Garcia, 1998; Halstead & Fernsler, 1994; Whelan, et al, 1997).

Statistical Analysis

Data was entered onto the personal computer and analyzed using SPSS procedures. Descriptive statistics such as frequency tabulations and measures of central tendency (means, modes, variances, standard deviations), charts, and plots were calculated for the continuous variables. Data analysis was also conducted using *Spearman r* correlations, and multiple regression to test 4 hypotheses in this study. Table 3.1 provides a summary of hypotheses with the statistical tests that were used.

Table 3.1

Statistical Analysis according to Research Hypotheses

Research Hypotheses	Concept(s)	Level of Measurement	Statistical Analysis
There is a positive relationship between SOC and hope.	SOC Hope	Interval Interval	Spearman <i>r</i> Correlation
There is a positive relationship between hope and spiritual perspective	Hope Spiritual Perspective	Interval Interval	Spearman <i>r</i> Correlation
There is a positive relationship between SOC and spiritual perspective.	SOC Spiritual Perspective	Interval Interval	Spearman <i>r</i> Correlation
There are positive relationships among SOC, hope, spiritual perspective and psychological well-being.	SOC Hope Spiritual Perspective (Independent Variables) Psychological well-being (Independent Variable)	Interval Interval Interval Interval	Multiple Regression

Analysis of variance tests were computed for differences in age, income, education grade, stage of cancer, time since diagnosis, and level of fatigue. Analysis of covariance was computed using stage of cancer, time since diagnosis, education grade, income level, and age. Table 3.2 provides a summary of purposes, dependent variables, and control variables with the statistical tests that were used.

Table 3.2**Statistical Analysis for Control Variables**

Purpose	Dependent Variable(s)	Independent Variable(s)	Level	Multivariate Method
To determine whether there are differences in age, income level, or educational level for each of the dependent variables.	Sense of coherence Hope Spiritual Perspective	Age	Ordinal	ANOVA
		Income	Ordinal	ANOVA
		Education grade	Ordinal	ANOVA
To determine whether there are differences in stage, time since diagnosis, or fatigue level for each of the dependent variables.	Sense of coherence Hope Spiritual Perspective	Stage of cancer	Ordinal	ANOVA
		Time since diagnosis	Ordinal	ANOVA
		Fatigue	Ordinal	ANOVA
To determine whether there are differences in stage of cancer, time since diagnosis, age, grade, and income for psychological well-being while controlling for sense of coherence.	Psychological Well-Being	Stage of cancer	Ordinal	ANCOVA
		Time since diagnosis	Ordinal	ANCOVA
		Education grade	Nominal	ANCOVA
		Income		
		Age		

Problems with Research Methodology

The potential that other extraneous variables not controlled for within the study may have affected the results. Examples include other chronic illnesses, environmental factors, time of day, and marital status. These were not controlled for within this study because there were limited findings in the literature relative to their occurrence. Another problem with the study was the nonrandom nature of the sample or selection bias: it is possible that the women chosen all had prior experiences that predisposed them to high or low levels of SOC, hope, spiritual perspective or psychological well-being. However, targeting 100% of those women eligible strengthened this aspect. Instrumentation bias may have also occurred as a result of fatigue, discomfort, or effects of interview location.

CHAPTER IV

RESULTS

The purpose of this descriptive research was to study which variables in the Gibson Model of Inner Resources (Sense of coherence, hope, and spiritual perspective) predict psychological well-being in African American (AA) breast cancer survivors. Data analyses, using the statistical package of the Social Sciences (SPSS®) Version 8.0, included descriptive statistics, *Spearman* and *Pearson-R* correlations, multiple regression, ANOVA, and ANCOVA tests. Results presented below include a description of the sample, testing of the four hypotheses, and testing of the predictive model.

Description of the Sample

A convenience sample of African American (AA) breast cancer survivors (at least 3 months post-diagnosis) was obtained from several sources. One setting consisted of participants who responded to a letter sent from three outpatient oncology facilities in the Upstate of South Carolina, granting permission for their names, addresses, and telephone numbers to be given to the researcher. Of the 60 survivors who volunteered from the outpatient oncology facilities, 46 completed the questionnaire (Table 4.1); this represented a response rate of 77 percent. Eleven (92%) from Outpatient Clinic A completed, 18 (64%) from Outpatient Clinic B and 17 (85%) from Outpatient Clinic C completed the questionnaire (Table 4.2). Nurses from Outpatient Clinic A contacted participants by telephone. Participants at Outpatient Clinics B and C were sent letters. Participants at Outpatient Clinic B were sent letters from physicians practicing at that office. Participants at Outpatient Clinic C were sent letters signed by the AA nurse who coordinated the Breast Health Center. This

nurse also conducts monthly breast cancer survivor support group meetings. More women who were contacted by nurses (Outpatient Clinics A and C) completed the questionnaire compared to those who were contacted by physicians.

A second setting consisted of participants belonging to African American women's cancer organizations, church groups, sororities, and other community or civic organizations. Of the 159 breast cancer survivors who volunteered through cancer organizations, women's church groups, sororities, and other community or civic organizations, 116 completed the questionnaires (Table 4.2). This represented a response rate of 73 percent. Many of these women contacted the researcher by telephone after receiving the study flier from family members, friends, health care professionals, church members, or attending an AA cancer support group meeting, sorority or church, community/civic organization function. Other women contacted the researcher after reading about the study on the Internet or in the newspaper. The study was published in two Upstate South Carolina newspapers and in a Social Worker Newsletter circulated over the Internet. The researcher also published the study flier on the Internet to AA organizations.

The researcher received additional telephone calls from family members or friends of participants who had been granted permission by participants to contact the researcher. Two women who volunteered to participate refused to complete the questionnaire and returned it to the researcher. Eighty-eight (76 percent) of the women who volunteered by telephone completed the questionnaire. The last group of women in the organizations category signed up for the study while attending health fairs, conferences, or church-related functions.

The researcher contacted the survivors by telephone within six weeks of receiving the original call. Twenty-eight (65 percent) of the women who volunteered by sign-up sheet completed the questionnaire. More women who volunteered by telephone completed the questionnaire compared to those who volunteered by sign-up sheet.

Once the participant agreed verbally to participate, she gave her preference for a self-administered or researcher-administered questionnaire. Accordingly, the researcher made an appointment at a mutually agreed-upon location or mailed a packet containing a cover letter from the researcher giving a toll-free number, questionnaire, consent form, Y-Me support brochure and contact number, recruitment flier, information form, and a self-addressed, stamped envelope for mailing back the questionnaires.

The final sample (N=162) represented AA breast cancer survivors who were at least 18 years old; had a confirmed diagnosis and knowledge of breast cancer for 3 months or more; had no previous diagnosis of cancer (other than breast cancer); and were able to participate. An overall response rate of 74 percent was achieved. The total sample of 162 exceeded the n established by power analysis (Kraemer and Themann, 1987). Mann-Whitney tests were calculated using data source (outpatient vs. organization) as the grouping variable. No significant differences were found in age ($Z = -1.944, p = .052$), education ($Z = -.894, p = .372$), or income ($Z = -.747, p = .455$) for women recruited from the two settings; therefore, findings were analyzed and reported for the entire sample as one group.

Table 4.1

Recruitment Characteristics of the Outpatient Clinic Sample

Outpatient Clinic	Number Contacted	Number Volunteering	Number of Returns	Percent Participating
A	12	12	11	92
B	84	28	18	64
C	150	20	17	85
Total	246	60	46	77

Table 4.2**Recruitment Characteristics of the Sample from Organizations**

Contact Type	Number Volunteering	Number of Returns	Percent Participating
Telephone	116	88	76
Sign-Up Sheet	43	28	65
Total	159	116	73

Geographic Location of the Sample

Table 4.3 shows the geographic location of the sample. There were 146 (90.1%) who were born in the United States, 15 (9.3%) born in Bermuda, and 1 (.6%) born in South America. Of those born in the United States, 11 (6.8%) were from the Northeast (Connecticut, Delaware, Washington, DC, Maine, Maryland, New Jersey, New York, New Hampshire, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia), 1 (.6%) from the Southwest (California, Colorado, Arizona, Hawaii, Nevada, New Mexico, Utah), 1 (.6%) from the Northwest (Alaska, Idaho, Montana, Oregon, Washington, Wyoming), 8 (4.9%) from the Middlewest (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Nebraska, North Dakota, South Dakota, Ohio, Wisconsin), 117 (72.2%) from the Southeast (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee), and 9 (5.6%) from the Middlesouth (Arkansas, Louisiana, Oklahoma, Texas, Missouri) regions. Of those from South Carolina, 68 (42%) were from the Upstate, 35 (21.6%) from the Midlands, 2 (1.2%) from the Pee Dee region, and 2 (1.2%) from the Lowcountry.

Table 4.3**Geographic Location of the Sample (N=162)**

Geographic Location		Frequency	Percentage
Country	United States	146	90.1
	Bermuda	15	9.3
	South America	1	.6
	Total	162	100.0
U.S. Region	Northeast	11	6.8
	Southwest	1	.6
	Northwest	1	.6
	Middlewest	8	4.9
	Southeast	117	72.2
	Middlesouth	9	5.6
	N/A (Bermuda)	15	9.3
	Total	162	100.0
South Carolina Participants			
	Upstate	68	42.0
	Midlands	35	21.6
	Lowcountry	2	1.2
	PeeDee	2	1.2
	Not from SC	55	34.0
	Total	162	100.0
Data Source	Outpatient	46	28.4
	Organization	116	71.6
	Total	162	100.0

Sociodemographic Characteristics

Sociodemographic characteristics varied among the participants (Table 4.4). The age range of the sample was 31 to 85 years. The sample was comprised of 57 (35.2%) women with ages ranging from 31 to 49, 59 (36.4%) with ages ranging from 50 to 64, and 46 (28.4%) with ages ranging from 65 to 85. The mean age was 56.5 ($SD=12.8$).

Income levels varied among these AA survivors. Of those who responded, 42 (25.9%) had household incomes lower than \$14,999, 18 (11.1%) had incomes ranging from

\$15,000 to \$24,999, 54 (33.3%) had incomes ranging from \$25,000 to \$49,999, and 39 (24.1%) had incomes \$50,000 or higher. Nine (5.6%) chose not to respond. The mean income range was \$30,000 to \$34,999.

Educational levels also varied. Fourteen (8.6%) reported an elementary level of education, 44 (27.2%) reported having a high school education, 32 (19.8) reported having some college, 13 (8.0%) reported completing trade school, 23 (14.2%) had finished college, and 36 (22.2%) had graduate education. For the purposes of analysis, the researcher calculated the number of years that represented each educational level and called this variable grade. The mean grade was 13 years or an educational level of some college (Table 4.4).

Table 4.4

Sociodemographic Characteristics of the Sample (N=162)

Demographic Characteristics	Frequency	Percentage
Age		
31-49	57	35.2
50-64	59	36.4
65-85	46	28.4
Total	162	100.0
Income		
\$ 0-14,999	42	25.9
\$15-24,999	18	11.1
\$25-49,999	54	33.3
\$ > 50,999	39	24.1
No response	9	5.6
Total	162	100.0
Education		
Elementary	14	8.6
High school	44	27.2
Some college	32	19.8
Finished college	23	14.2
Graduate school	36	22.2
Trade school	13	8.0
Total	162	100.0

Religious Preferences

Religious preferences of the sample are shown in Table 4.5. The majority of the sample (133 or 82.1%) belonged to the Protestant religion. Other religions represented included Catholic (5 or 3.1%), Jewish and Jehovah's Witness (1 or .6% each), nondenominational (14 or 8.6%), and other (8 or 4.9%). The majority of the survivors were Baptist (87 or 53.7%). Other protestant denominations included African Methodist Episcopal (A.M.E.) or African Methodist Episcopal Zion (A.M.E. Zion), reported by 20 (12.3%) women, United Methodist (8 or 4.9%), Pentecostal (5 or 3.1%), Church of Christ (3 or 1.9%), Church of God (3 or 1.9%), and Episcopalian (2 or 1.2%). Lutheran, Apostolic Holiness, and Seventh Day Adventist were each reported by 1 (0.6%) of the women. Eighteen (11.1%) reported belonging to other protestant denominations, and 4 (2.5%) indicated more than 1 denomination.

Table 4.5**Religious Preferences of Sample (N=162)**

Religious Preferences	Frequency	Percentage
Religion		
Protestant	133	82.1
Catholic	5	3.1
Jewish	1	.6
Jehovah's Witness	1	.6
Nondenominational	14	8.6
Other	8	4.9
Total	162	100.0
Protestant Denomination		
AME & AME Zion	20	12.3
Apostolic Holiness	1	.6
Baptist	87	53.7
Church of Christ	3	1.9
Church of God	3	1.9
Episcopalian	2	1.2
Lutheran	1	.6
Pentecostal	5	3.1
Seventh Day Adventist	1	.6
United Methodist	8	4.9
Indicated more than 1	4	2.5
Other	18	11.1
N/A	9	5.6
Total	162	100.0

Religiosity

The mean and median for the religiosity items are found in Table 4.6. Out of a total possible score of 5, these participating breast cancer survivors strongly agreed ($M=4.85$, $SD=.60$) that they found comfort in their personal relationship with God (or a Higher Being). Participants also agreed that they found comfort in their church ($M=4.48$, $SD=1.06$) and that their church's teachings were meaningful sources of strength ($M=4.5$, $SD=1.02$).

Table 4.6**Central Tendency Scores of Religiosity Variables (N=162)**

Variable	Median	Mean	Standard Deviation
Comfort in Personal Relationship With God	5.0	4.85	.60
Comfort in Church	5.0	4.48	1.06
Meaningful Church Teachings	5.0	4.50	1.02

Breast Cancer Characteristics, Survivorship, and Treatment

Table 4.7 provides breast cancer characteristics of the sample. The majority (55 or 34%) of AA breast cancer survivors in this sample did not know their breast cancer Stage. Of the remainder, 52 (32%) had Stage I, 38 (23.5) had Stage II, 11 (6.8%) had Stage III, 5 (3.1%) had Stage IV, and 1 (0.6%) woman had Stages I and II. Seventy-two participants (44.4%) were unaware of the type of breast cancer. Of those who knew, 36 (22.2%) had ductal carcinoma in situ (DCIS), 28 (17.3%) had infiltrating ductal cancer, 11 (6.8%) had lobular carcinoma in situ (LCIS), 5 (3.1%) had infiltrating lobular cancer, 6 (3.7%) had papillary cancer, and 4 (2.5%) had Paget's disease. Sixty-five (40.2%) reported having breast cancer in their right breast, 86 (53.1%) in their left breast, 1 (0.6%) in her right underarm, 2 (1.2%) in their left underarm, 7 (4.3%) in both breasts, and 1 (0.6%) in her left breast and left underarm.

Table 4.7**Breast Cancer Characteristics**

Breast Cancer Characteristics	Frequency	Percentage
Stage		
I	52	32.0
II	38	23.5
III	11	6.8
IV	5	3.1
I & II	1	.6
Unknown	55	34.0
Total	162	100.0
Type		
DCIS	36	22.2
Infiltrating Ductal	28	17.3
LCIS	11	6.8
Infiltrating Lobular	5	3.1
Papillary	6	3.7
Paget's	4	2.5
Unknown	72	44.4
Total	162	100.0
Location		
Right Breast	65	40.2
Left Breast	86	53.1
Right Underarm	1	.6
Left Underarm	2	1.2
Both Breasts	7	4.3
Left Breast/Left Underarm	1	.6
Total	162	100.0

Breast Cancer Survivorship

Because the researcher stipulated survivorship as a diagnosis of breast cancer > 3 months with no upper limit, survivorship ranged among the survivors from 4 to 6 months to greater than 20 years (Table 4.8). They had survived breast cancer an average of 25 months to 5 years (Table 4.5). Nine (5.6%) had been a survivor for 4 to 6 months, 24 (14.8%) had survived more than 6 months to 1 year, 29 (17.9%) had survived more than 1 to 2 years, 30

(18.5%) had survived more than 2 to 5 years and 30 (18.5%) more than 5 to 10 years. Seventeen (10.5%) had survived more than 10 to 15 years, 6 (3.7%) had survived more than 15 to 20 years, and 16 (9.9%) had survived longer than 20 years. One woman had no response.

Table 4.8

Breast Cancer Survivorship

Survivorship Time	Frequency	Percent
4-6 Months	9	5.6
➤ 6 Months to 1 year	24	14.8
➤ 1 Year to 2 years	29	17.9
➤ 2 Years to 5 years	30	18.5
➤ 5 Years to 10 years	30	18.5
➤ 10 Years to 15 years	17	10.5
➤ 15 Years to 20Years	6	3.7
➤ 20 Years	16	9.9
No Response	1	.6
Total	162	100.0

Breast Cancer Treatment

One hundred and forty-one survivors (87%) were receiving no active treatment at the time of the study; 21 (13.0%) were being actively treated. The survivors reported having a variety of treatment types. All but 3 survivors (98%) reported having surgery. Twenty-two (13.6%) women had surgery only. Of those, 2 (1.2%) received lumpectomies, 3 (1.9%) received simple mastectomies, 7 (4.3%) received radical mastectomies, and 10 (6.2%) received modified radical mastectomies. Of the remaining women who had surgery, 134 (82.7%) had adjuvant treatment, or surgery in combination with other types of therapy. Of these, 99 (61.1%) had combination therapy or adjuvant treatment that included chemotherapy, 35 (21.6%) had adjuvant treatment without chemotherapy, 73 (45.1%) had

adjuvant treatment that included radiation therapy, and 57 (35.2%) had adjuvant treatment that included hormone therapy. Two (1.6%) women had radiation therapy only. Seven women (4.3%) had reconstruction surgery and six (3.7%) had stem cell treatment. One each reported having no treatment or other treatment(s). One survivor did not respond (Table 4.9).

Table 4.9

Breast Cancer Treatment

Breast Cancer Treatment	Frequency	Percentage
Active Treatment?		
Yes	21	13.0
No	141	87.0
Total	162	100.0
Surgery only	22	13.6
Lumpectomy	2	1.2
Simple Mastectomy	3	1.9
Radical Mastectomy	7	4.3
Modified Radical Mastectomy	10	6.2
Radiation therapy only	2	1.6
Adjuvant Therapy with Chemotherapy	99	61.1
Adjuvant Therapy without Chemotherapy	35	21.6
Adjuvant Therapy with Radiation Therapy	73	45.1
Adjuvant Therapy with Hormone Therapy	57	35.2
Reconstruction Surgery	7	4.3
Stem Cell Treatment	6	3.7
No Treatment	1	.6
No Response	1	.6

Women's Symptom Experience

Table 4.10 represents symptoms reported by the survivors. The majority had no nausea (145, 89.5%) or vomiting (148, 91.3%). However, while 47 (29%) experienced no fatigue, 85 (52.5%) experienced a little fatigue, 21 (13%) had a lot of fatigue, and 7 (4.3%) had extreme fatigue. Two women did not respond.

Table 4.10

Women's Symptom Experience

Women's Symptom Experiences	Frequency	Percentage
Nausea		
Yes	14	8.6
No	145	89.5
No response	3	1.9
Total	162	100.0
Vomiting		
Yes	11	6.8
No	148	91.3
No response	3	1.9
Total	162	100.0
Fatigue		
Not at all	47	29.0
A little	85	52.5
A lot	21	13.0
Extremely	7	4.3
No response	2	1.2
Total	162	100.0

Internal Consistency Reliability of Instruments

Range, mean, and standard deviations for this study and possible ranges are shown in Table 4.11. The mean score was obtained by calculating the average score across all items

for each scale, for example, for the Sense of Coherence Scale, the mean score was between 1 and 7.

Table 4.11

Range, Means and Standard Deviations of Study Variables (n=162)

Variable	Possible Range	Study Range of Scores	Study Mean	Study Standard Deviation	Number of Valid Cases
Mean Sense of Coherence	1-7	2.15-6.54	5.23	.89	(N=162)
Mean Hope	1-4	2.58-4.0	3.59	.36	(N=162)
Spiritual Perspective	1-6	2.5-6.0	5.67	.45	(N=162)
Mean Psychological Well-Being	0-10	2-10	7.12	1.84	(N=162)

The 1997 Statistical Package for the Social Sciences (SPSS) reliability program was used to generate a Chronbach alpha for internal consistency for the Sense of Coherence Scale, the Abbreviated Herth Hope Index, the Spiritual Perspective Scale, and the Psychological Well-Being Subscale of the Quality of Life Scale/Breast Cancer Version (See Table 4.12).

Table 4.12**Comparison of Chronbach Alpha of Study Variables with Prior Reliability**

Instrument	Items	Prior Alpha	Present Alpha
Sense of Coherence Scale	13	.78 (N=96)	.77 (N=162)
Abbreviated Herth Hope Index	12	.97 (N=172)	.81 (N=162)
Spiritual Perspective Scale	10	.90 (N=135)	.87 (N=162)
Psychological Well-Being Subscale (Quality of Life Scale/Breast Cancer)	22	.89 (N=686)	.91 (N=70)

Sense of Coherence Scale

The alpha on the Sense of Coherence Scale was .77 – approximately the same as the previously reported alpha of .78 (Coe, Romeis, & Hall, 1998). The number of valid cases was 162 for 13 items ($n=162$). The total mean score was 68.04 with a standard deviation of 11.51. The average score was 5.23 ($SD = .89$) out of a possible total score of 7. In this study, average scores ranged from 2.15 to 6.54. Scoring for items 1,2,3,7, and 10 were reversed so that higher scores represented higher sense of coherence levels.

Abbreviated Herth Hope Index

The Abbreviated Herth Hope Index had an alpha coefficient of .81. This was lower than the previously reported alpha of .97 that was reported by Herth (1992). The number of valid cases was 162 for 12 items ($n=162$). The total mean score was 43.11 with a standard deviation of 4.33. The average score was 3.59 ($SD = .36$) out of a possible total of 4. In this study, average scores ranged from 2.58 – 4.0. Scoring for items 3 and 6 were reversed so that higher scores represented higher levels of hope.

Spiritual Perspective Scale

The alpha coefficient for the Spiritual Perspective Scale was .87; the previously reported alpha was higher (.90) (Guillory, 1992). The number of valid cases was 162 (n=162) for 10 items. The mean score was 5.67 with a standard deviation of .45 (total possible was 6). In this study the scores ranged from 2.5 to 6.00 with higher scores representing higher levels of spiritual perspective.

Psychological Well-Being Subscale (Quality of Life/Breast Cancer Version)

The alpha coefficient for the Psychological Well-Being Subscale of the Quality of Life/Breast Cancer Version Instrument was .91. This was higher than the reported alpha of .89 (Ferrell & Grant, 1996). The number of valid cases was 70 out of 162 for 22 items. The mean total score was 155.02 with a standard deviation of 38.41. The average score was 7.12 ($SD = 1.84$) out of a total possible score of 10. In this study the average scores ranged from 2-10. Scoring for items 1,2,9-21 were reversed so that higher scores represented higher levels of psychological well-being.

Treatment of Missing Data

For the majority of questionnaires, women answered all items. The only instruments with missing data were the Psychological Well-Being Subscale of the Quality of Life Scale/Breast Cancer Version (PWB) and the Demographic Questionnaire. stage and type . For the PWB Scale, the missing data were not on the instrument but related to actual treatment experienced or not experienced. For example, women may have received surgery and chemotherapy but not radiation therapy as forms of treatment. In the Demographic Questionnaire, many women did not know the stage and type of breast cancer. The researcher had no mechanism to obtain this information from the women or their medical records. The researcher handled unanswered items as missing values as specified by SPSS (1996) and Green, Salkind, and Akey (1997). The substitution with means procedure was

used to provide a sample data set without missing data for statistical analysis (Orme & Reis, 1991; Remer & Burton, 1971).

Analysis of the Research Question and Related Hypotheses

In this section, the results of the analysis of the data in relation to the research question, the research hypotheses, the proposed Gibson Model of Inner Resources, and hypotheses related to control variables are presented.

Tests of Study Hypotheses

Four hypotheses tested relationships among the independent and dependent variables. Three hypotheses tested relationships among the independent variables in the study, sense of coherence, hope, and spiritual perspective while one hypothesis tested relationships of each independent variable to the dependent variable, psychological well-being. Hildebrand (1986) stated that skewness values greater than 0.2 or less than -0.2 indicate severe skewness. Because all four scores resulted in skewed distributions, with the *Z* statistic lying beyond the range of $\pm .02$ (see Table 4.13), the nonparametric statistical test for correlations, *Spearman's rho*, was performed. Table 4.14 presents the correlation analysis for the independent variables in this study. According to Munro (1997), correlations between .00 and .30 are considered to be weak, between .31 and .60 moderately strong, and between .61 and 1.00 strong.

Table 4.13**Skewness of Major Study Variables**

Variable	Mean	Median	Skewness (Z)
Mean Sense of Coherence	5.23	5.42	-1.00
Mean Hope	3.59	3.67	-.90
Mean Spiritual Perspective	5.67	5.80	-2.97
Mean Psychological Well-Being	7.12	1.27	-.52

Research Hypotheses Results

H₁ There is a positive relationship between sense of coherence and hope.

There was a moderately strong, significantly positive correlation between sense of coherence and hope as evidenced by a correlational analysis of $r_s = .535$ ($p = .01$).

H₂ There is a positive relationship between hope and spiritual perspective.

There was a moderately strong, significantly positive correlation between hope and spiritual perspective as evidenced by a correlational analysis of $r_s = .414$ ($p = .01$).

H₃ There is a positive relationship between sense of coherence and spiritual perspective.

There was a weak, significantly positive correlation between sense of coherence and spiritual perspective as evidenced by a correlational analysis of $r_s = .159$ ($p = .05$).

Table 4.14**Correlation Matrix of Independent Variables (N=162)**

Independent Variable	Spiritual Perspective	Sense of Coherence
Sense of Coherence	.16*	
Hope	.41**	.54**

*= $p < .05$ **= $p < .01$

H₄ There are positive relationships among sense of coherence, hope, spiritual perspective and psychological well-being.

Spearman's rho tested the direction and strength of the study variables to the dependent variable, psychological well-being (see Table 4.13). For the study, both sense of coherence and hope showed statistically significant positive correlations to psychological well-being. Sense of coherence showed the strongest significantly positive correlation ($r_s = .594, p < .01$), followed by hope ($r_s = .484, p < .01$). In contrast, spiritual perspective and psychological well-being were not significantly related as evidenced by a correlational analysis of $r_s = .096 (p = .224)$.

Table 4.15**Correlations of Study Variables and Dependent Variable (N=162)**

Dependent Variable	Sense of Coherence	Hope	Spiritual Perspective
Psychological Well-Being	.59 **	.48**	.10

*= $p < .05$ **= $p < .01$

Research Question

Which variables in the Gibson Model of Inner Resources (sense of coherence, hope, spiritual perspective) predict levels of psychological well-being in African American breast cancer survivors?

A stepwise multiple regression analysis was conducted to determine the variation in the dependent variable that could be explained by the independent variables, sense of coherence, hope, and spiritual perspective. The criterion for entry of each variable was that the F to enter value was significant at the .05 level. Table 4.16 presents the results of a stepwise multiple regression analysis with psychological well-being and the independent variables, sense of coherence, hope, and spiritual perspective. In this study, sense of coherence accounted for 37.5% of the explained variance in psychological well-being. Hope accounted for 5.3% of the explained variance. Spiritual perspective explained no further variance; it was not a statistically significant predictor ($F 1, 158 = .712$). The total of sense of coherence and hope accounted for 42.9% of the explained variance in psychological well-being.

Table 4.16

Stepwise Multiple Regression of Independent Variables on Psychological Well-Being
(N=162)

Variable	Multiple R	R Square	R Square Change	F Change
Sense of Coherence	.612	.375	.375	96.622*
Hope	.655	.429	.053	14.977*
Spiritual Perspective	.655	.429	.000	.136

* = $p < .001$

Dependent Variable: Psychological Well-Being

The regression coefficients (β) and beta weights of the independent variables on psychological well-being are presented in Table 4.17.

Table 4.17

Regression Coefficients and Beta Weights for Multiple Regression of Independent Variables on Psychological Well-Being

Variable	Unstandardized Coefficient (B)	Standard Error	Standardized Coefficient (Beta Weight)	Significance
Constant	-2.55	1.50		.09
Sense of Coherence	.95	.15	.46	.00
Hope	1.47	.40	.29	.00
Spiritual Perspective	.10	.27	-.03	.71

Dependent Variable: Psychological Well-Being

The following prediction model was derived:

$$\text{Level of Psychological Well-Being} = \beta_0 + \beta_1 (\text{Sense of Coherence}) + \beta_2 (\text{Hope}) + \beta_3 (\text{Spiritual Perspective})$$

$$\begin{aligned} \text{Level of Psychological Well-Being} = & -2.55 + .95 (\text{Mean Sense of Coherence}) \\ & + 1.47 (\text{Mean Hope}) + .10 (\text{Mean Spiritual Perspective}) \end{aligned}$$

These analyses suggest that AA breast cancer survivors have the inner resources, sense of coherence and hope, which greatly contribute to psychological well-being levels. Surprisingly, spiritual perspective did not significantly influence psychological well-being levels.

Path Analysis

The four variable model was estimated using a series of multiple regression equations as previously stated. Ordinary least squares multiple regression procedures were used to estimate path coefficients. Path coefficients may be standardized regression coefficients (Norris, 1997). The proposed and refined path analysis models are presented. All hypothesized paths are illustrated in the proposed Gibson Model of Inner Resources© (Figure 4.1). Standardized regression coefficients or beta weights for the exogenous variables, sense of coherence and spiritual perspective on hope, an endogenous variable, are given in Table 4.18.

Table 4.18

Regression Coefficients and Beta Weights for Multiple Regression of Exogenous Variables on Hope

Variable	Unstandardized Coefficient (B)	Standard Error	Standardized Coefficient (Beta Weight)	Significance
Constant	.93	.29		.001
Sense of Coherence	.20	.03	.50	.000
Spiritual Perspective	.28	.05	.36	.000

Figure 4.1

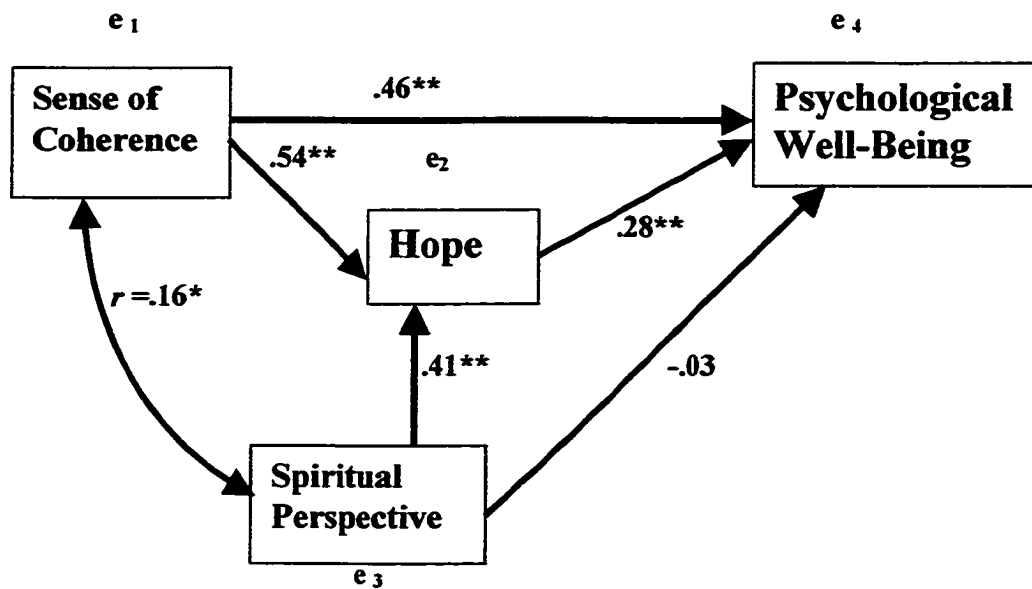
Proposed Gibson Model of Inner Resources: Results of Model Testing

Contexts: African-American Woman (Socioeconomic stressors)

Breast Cancer Survivorship (Stressors related to Breast Cancer)

Inner Resources

$R^2 = .43$



e = unexplained variance

**** $p = .001$**

*** $p = .05$**

All proposed paths were significantly correlated as predicted with the exception of spiritual perspective to psychological well-being. The predictions on psychological well-being were significant except for spiritual perspective. The R^2 for the model presented in Figure 4.1 was 0.43.

Starting from the left side of the model:

1. Sense of coherence has a direct effect on psychological well-being.
2. Sense of coherence and spiritual perspective are exogenous variables; a causal relationship between the exogenous variables, sense of coherence and spiritual relationship is not included in this model.
3. Sense of coherence has an indirect effect on psychological well-being through hope.
4. Sense of coherence has a direct effect on hope.
5. Spiritual perspective has a direct effect on hope.
6. Spiritual perspective has an indirect effect on psychological well-being through its effect on hope.
7. Spiritual perspective has a very small, negative effect on psychological well-being that is not significant.
8. Hope has a direct effect on psychological well-being.

Beta coefficients were tested for significance using a t ratio and any beta smaller than a .05 level of significance was deleted from the model. Additionally, betas that were deleted or never included in the model were tested for significance (Table 4.18). The proposed model was refined to reflect the non-significant effect of spiritual perspective on psychological well-being. The refined Gibson Model of Inner Resources© is presented in Figure 4.2.

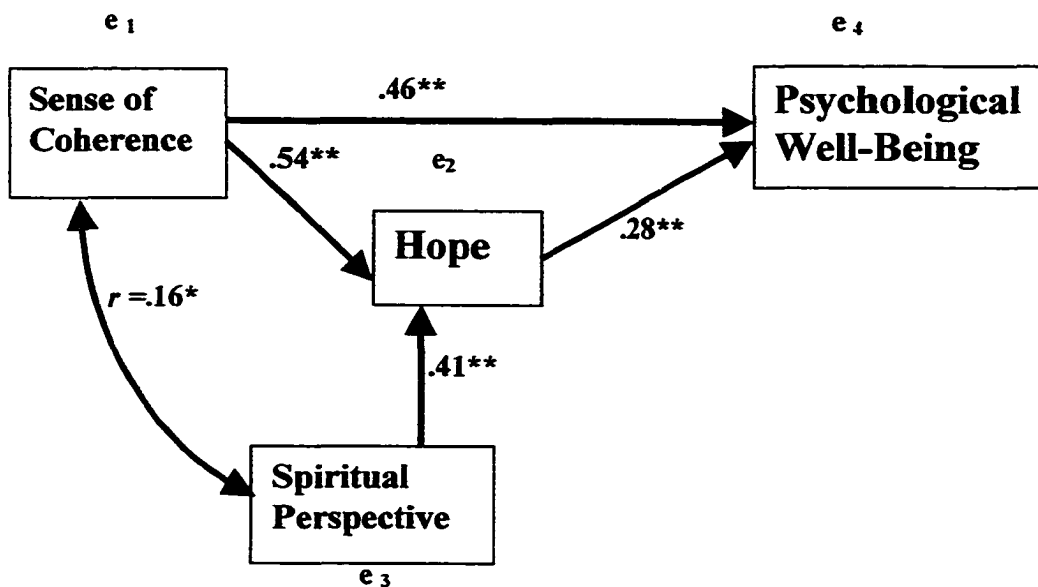
Figure 4.2

Refined Gibson Model of Inner Resources: Results of Model Testing

Contexts: African-American Woman (Socioeconomic stressors)
Breast Cancer Survivorship (Stressors related to Breast Cancer)

Inner Resources

$R^2 = .43$



e = unexplained variance

**** $p = .001$**

*** $p = .05$**

In refined models all non-significant paths ($\alpha = .05$) have been removed and other significant ones added (Norris, 1997). When a path between two study variables is deleted, the assumption is that the magnitude of the path coefficient is zero (Asher, 1983). In the proposed model, the spiritual perspective-psychological well-being path was close to zero (-.03) and was not significant. The spiritual perspective-psychological well-being path was deleted from the model. All other proposed correlations remained unchanged. The R^2 for the refined model remained the same, at .43.

According to the refined model: sense of coherence has a direct effect on psychological well-being; sense of coherence has an indirect on psychological well-being through hope; hope has a direct effect on psychological well-being; spiritual perspective has a direct effect on hope; and spiritual perspective has an indirect effect on psychological well-being through hope.

Statistical Results for Control Variables

To test for the effects of selected control variables, ANOVA and ANCOVA statistical tests were used.

Purpose 1

To determine whether there are differences in age, income level, or educational level for each of the dependent variables, sense of coherence, hope, and spiritual perspective.

Table 4.19 presents the correlation of selected variables, age, grade, income, fatigue, stage, and survivorship. Results of *Spearman Rho* correlations indicated that age was significantly negatively correlated with grade ($r_s = -.217, p < .001$), age was significantly negatively correlated with income ($r_s = -.306, p < .001$), and age was significantly negatively

correlated with fatigue ($r_s = -.188, p < .01$). Age was significantly positively correlated with stage ($r_s = .214, p < .001$) and age was significantly positively correlated with survivorship ($r_s = .250, p < .001$). Grade was significantly positively correlated with income ($r_s = .368, p < .001$); grade was significantly negatively correlated with fatigue ($r_s = -.252, p < .001$), and grade was significantly negatively correlated with stage ($r_s = -.247, p < .001$). Income was also significantly negatively correlated with stage ($r_s = -.336, p < .001$).

Table 4.19

Correlation Matrix of Selected Variables

Variable	Age	Grade	Income	Fatigue	Stage	Survivorship
Age		-.217**	-.306**	-.188*	.214**	.250**
Grade			.368**	-.252**	-.247**	.134
Income				-.102	-.336**	.041
Fatigue					.135	-.147
Stage						.096

** $p < .001$ * $p < .01$

One-way analyses of variance were conducted to determine the effects of age, grade, and income on sense of coherence, hope, and spiritual perspective. Age, grade, and income were between-subjects factors each with three levels. Age levels consisted of: Younger (31-49 years old), Middle-Aged (50 to 65 years old), and (Older - >65 years old). Grade levels included: Highschool or less, Some College, and Graduated from College. Income levels consisted of: Lower-Income ($\$ < 9,999 - \$19,999$), Middle-Income ($\$20,000 - \$39,999$), and Higher-Income ($> \$40,000$).

Significant differences were found for the income groups when hope was the dependent variable, $F(2, 159) = 8.311, p < .001$. Hence, the mean level of hope differed

among income groups. The partial η^2 of .12 suggests that income had a moderate effect on level of hope. Table 4.20 contains the means and the standard deviations on hope for the three income groups.

Post-hoc analyses to the univariate ANOVA for hope consisted of conducting pairwise comparisons to find which income levels affected hope most strongly. Each pairwise comparison was tested at the .05 significance level divided by 3 or 0.017. Bonferroni post-hoc tests found that the level of hope differed in each of the three income levels – lower, middle, and higher. In fact, the level of hope was highest for the higher-income group.

Table 4.20

Means and Standard Deviations for the Three Income Groups Within Hope

Income Level	Hope	
	<u>M</u>	<u>SD</u>
Lower (\$ < 9,999 - \$19,999)	3.42	.39
Middle (\$20,000 - \$39,999)	3.63	.34
Higher (\$ >40,000)	3.69	.32

Significant differences were also found for the income groups when spiritual perspective was the dependent variable, $F(2,159) = 3.862, p < .05$. The mean level of spiritual perspective differed among income levels. The partial η^2 of .046 suggests that income level had a small effect on level of hope. Table 4.21 contains the means and the standard deviations on spiritual perspective for the three income groups.

Post-hoc analysis to the univariate ANOVA for spiritual perspective consisted of conducting pairwise comparisons to find which income levels affected spiritual perspective

most strongly. Each pairwise comparison was tested at the .05 level of significance divided by 3 or 0.017. Bonferroni post-hoc tests found that the level of spiritual perspective differed in the lower and middle-income levels. In fact, the level of spiritual perspective was significantly higher for the middle-income group (\$20,000 - \$39,999).

Table 4.21

Means and Standard Deviations for the Three Income Groups Within Spiritual Perspective

Income Level	Spiritual Perspective	
	<u>M</u>	<u>SD</u>
Lower (\$ < 9,999 - \$19,999)	5.52	.63
Middle (\$20,000 - \$39,999)	5.76	.29
Higher (\$ >40,000)	5.72	.37

No significant differences were found for the age or education groups when sense of coherence, hope, and spiritual perspective were the dependent variables. Hence, age and grade had no effect on levels of sense of coherence, hope, or spiritual perspective.

Purpose 2

To determine whether there are differences in stage, a phase of survivorship, or fatigue level for each of the dependent variables, sense of coherence, hope, and spiritual perspective.

One-way analyses of variance were conducted to determine the effect of stage, survivorship, and fatigue level on sense of coherence, hope, and spiritual perspective. Stage was a between-subjects factor with two levels, localized cancer (Stage I) and cancer with

metastasis (Stage I, II, or III). Survivorship and fatigue were between-subjects factors each with three levels. Survivorship levels consisted of: less than five years, more than five to 10 years, and more than 10 years. Fatigue levels included no fatigue, a little fatigue, and a lot to extreme fatigue.

Significant differences were found for fatigue levels when sense of coherence was the dependent variable, $F(2, 159) = 8.068, p < .001$. Hence, the mean level of sense of coherence differed among fatigue levels. The partial η^2 of .092 suggests that fatigue had a small effect on level of sense of coherence. Table 4.22 contains the means and the standard deviations on hope for the three fatigue levels.

Post-hoc analyses to the univariate ANOVA consisted of conducting pairwise comparisons to find which fatigue levels affected sense of coherence most strongly. Each pairwise comparison was tested at the .05 level of significance divided by 3 or 0.017. Bonferroni post-hoc tests found that the level of sense of coherence differed in all three fatigue levels. In fact, the level of sense of coherence was significantly higher for the group with no fatigue.

Table 4.22

Means and Standard Deviations for the Three Fatigue Levels Within Sense of Coherence

Fatigue Level	Sense of Coherence	
	<u>M</u>	<u>SD</u>
No Fatigue	5.47	.72
A Little Fatigue	5.28	.89
A Lot to Extreme Fatigue	4.68	.93

No significant differences were found for stage or survivorship groups when sense of coherence, hope, or spiritual perspective were the dependent variables. Hence, stage and survivorship had no effect on levels of sense of coherence, hope, or spiritual perspective.

Purpose 3

To determine whether there are differences in age, income level, stage, or survivorship for the dependent variable, psychological well-being, controlling for sense of coherence.

Analysis of covariance was computed to evaluate the effect of age, grade, income, stage, and survivorship on the dependent variable, psychological well-being. Sense of coherence was the covariate. Descriptions of groupings for age, grade, income, stage, and survivorship have been previously reported.

Significant differences were found for income levels, $F(2, 158) = 3.516, p = .032$. The partial η^2 of .043 suggests that income level had a small effect on level of psychological well-being. Post-hoc analyses consisted of conducting pairwise comparisons to find which income levels affected psychological well-being most strongly. Each pairwise comparison was tested at the .05 level of significance divided by 3 or 0.017. Bonferroni post-hoc tests found that the level of psychological well-being did not differ significantly according to income levels. However, the level of psychological well-being was greater for those in the middle-income group (Table 4.23).

No significant differences were found for age, grade, stage or survivorship groups when psychological well-being was the dependent variable. Hence, age, grade, stage, and survivorship had no effect on levels of psychological well-being.

Table 4.23

Means and Standard Deviations for the Three Income Groups Within Psychological Well-Being

Income Level	Psychological Well-Being	
	<u>M</u>	<u>SD</u>
Lower (\$ < 9,999 - \$19,999)	6.82	2.11
Middle (\$20,000 - \$39,999)	7.55	1.80
Higher (\$ >40,000)	7.02	1.61

The following chapter presents a discussion of the study findings, limitations, and implications for Nursing. Recommendations and a study summary are also included.

CHAPTER V

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

The Purpose of this descriptive research was to explore which variables (Sense of coherence (SOC), hope, and spiritual perspective) in the Gibson Model of Inner Resources were significant predictors of psychological well-being levels in African American (AA) breast cancer survivors. Three hypotheses tested relationships among the independent variables in the study, SOC, hope, and spiritual perspective. One hypothesis tested relationships of each independent variable to the dependent variable, psychological well-being. In addition, this investigation tested a predictive model that was derived from the literature, from previous research (Gibson, 1998), and from clinical experience. The proposed model was empirically tested using multiple regression and path analysis. Finally, three hypotheses tested the effects of selected control variables. Data were collected on each of the study and control variables.

Comparison of Research Hypotheses to the Literature

H₁ There is a positive relationship between sense of coherence and hope.

The current study generally supported results of other studies measuring similar variables. A moderately strong, significant positive relationship was found between the independent variables, SOC and hope. One reason for such a strong relationship could be the high scores achieved by the AA women. In the current study, AA breast cancer survivors scored higher on the SOC Scale (Coe, Romeis, & Hall, 1998) and the Herth Hope Index

(Herth, 1992) compared to scores of chronically ill adults, who were predominantly Caucasian.

The moderate correlation (Munro, 1997) between SOC and hope is similar to results found by Post-White (1996; 1998), who also found a moderate correlation (Munro) in two separate studies of cancer survivors who were primarily Caucasian. Hershey (1997), in a study of racially-mixed, low-income mothers, found a low bivariate correlation between SOC and hope. Gibson (1998), in a pilot study of AA and Caucasian breast cancer survivors, found a low positive correlation between SOC and hope that was not significant. This pilot study finding may have resulted from the small sample size of 10. It is clear from these studies that the correlation found between SOC and hope is found in both AA and Caucasian breast cancer survivors and racially-mixed groups of women.

The results of this hypothesis supported previous studies that found a significantly positive relationship between SOC and hope. In the population of essentially middle-income AA breast cancer survivors, as SOC increased, hope increased.

H₂ There is a positive relationship between hope and spiritual perspective.

The current study supported previous studies that found a strong relationship between hope and spiritual perspective or other measures of spirituality. A low (Munro, 1997), significantly positive relationship was found between hope and spiritual perspective. This relationship could be attributed to the high scores achieved by the AA women on both the Herth Hope Index and the Spiritual Perspective Scale. The mean hope score was higher for women in the current study compared to chronically ill women in a study reported by Herth (1992), who used the Herth Hope Index. Current scores were also higher than those of lower

income AA breast cancer survivors (Guillory, 1992), as measured by the Spiritual Perspective Scale.

A similar positive relationship between hope and spiritual perspective was found in previous studies measuring similar constructs. In a 1998 pilot study, Gibson found a moderate (Munro, 1997), significantly positive relationship. Kurtin (1990) also found a similar significantly positive relationship in an unpublished study of cancer survivors. In a study by Mickley, Soeken, & Belcher (1992), hope was positively correlated with spiritual well-being and its components, religious well-being and existential well-being. Religious well-being focused on one's relationship to God while existential well-being focused on life purpose and satisfaction (Paloutzian & Ellison, 1982). Women reporting higher levels of hope tended to have higher levels of religious and existential well-being. Additionally, breast cancer survivors in Scales' study (1993) agreed that "spiritual beliefs" contributed most to hope in their lives.

Hence, the current study supported findings of previous studies that resulted in positive relationships between hope and spirituality. This hypothesis supported hypotheses from other studies – as hope increased, spiritual perspective increased.

H₃ There is a positive relationship between SOC and spiritual perspective.

The weak, significantly positive relationship between SOC and spiritual perspective differed from findings in the literature. The researcher expected that SOC would be highly and positively correlated to spiritual perspective. One reason was that the mean scores found on both the SOC Scale (Coe, Romeis, & Hall, 1998) and the Spiritual Perspective Scale (Guillory, 1992) were higher in the current study compared to previous studies. Additionally, in a 1998 pilot study, Gibson found a high (Munro, 1997) correlation

between SOC and spiritual perspective. Mullen, Smith, and Hill (1993) also found a high, positive correlation between SOC and spirituality. In their study, higher levels of spiritual resources were associated with higher levels of SOC: the positive impact of spiritual resources appeared to reduce psychological stress through SOC.

Antonovsky (1987) stated that meaningfulness was the most central component of SOC because of its motivational element. According to Reed (1987), sense of meaning is an indicator of spiritual perspective. It seems likely, then, that the meaningfulness component of SOC would be highly correlated to spirituality. It is possible that, because previous relationships have primarily been found in Caucasians, the current findings can be attributed to the culture of the current participants.

It is possible that spiritual perspective was perceived differently by the AA women in this study compared to Caucasians studied by Reed (1986; 1987). The Spiritual Perspective Scale measures the meaning that spirituality has for participants. Specific references were not found in the literature relating to the meaning ascribed to spirituality by African Americans. Instead, references were found that related to the significance of spirituality. Spirituality was found to be important to African Americans for: (1) recreating order out of chaos; (2) facilitating resiliency and strengthening the life force (Richards, 1985); (3) coping and providing psychological support (Blaine & Croker, 1995; Potts, 1996); and (4) fostering self-determination (Edwards, 1987). For AA women, spirituality was described as being important for: (1) organizing life events (Parks, 1998); (2) providing a source of strength, identity, and empowerment (Jackson, 1996); (3) enabling problem solving; and (4) providing peace and comfort during times of stress (Parks, 1998). It is possible that the meanings ascribed to spirituality as found in the Spiritual Perspective Scale are different from those that would be identified by the AA participants in this study.

In her studies, Reed measured spiritual perspective primarily in terminally ill cancer patients. In the current study, the majority of women had Stage II breast cancer. It is possible that spiritual perspective is truly a construct that is most appropriate for terminally ill cancer survivors.

The Spiritual Perspective Scale may not be the most sensitive or specific measure of spirituality for AA women. As a result, the relationship between SOC and spiritual perspective was not a strong one. However, as found in previous studies, SOC increased as spiritual perspective increased. In the current study, spiritual perspective increased a smaller amount compared to increases found in previous studies that measured similar relationships to SOC.

H₄ There are positive relationships among SOC, hope, spiritual perspective, and psychological well-being.

Statistically significant positive relationships were found among SOC, hope, and psychological well-being. There was little, if any (Munro, 1997), of a positive correlation between spiritual perspective and psychological well-being. The relationship was also not significant.

Sense of Coherence and Psychological Well-Being

Several studies have supported the finding of a moderately strong, significantly positive relationship (Munro, 1997) between sense of coherence and psychological well-being. Forsberg and Bjorvell (1996) found that SOC was moderately correlated (Munro, 1997) to well-being in younger (< 67 years old) cancer survivors. Survivors with a stronger

SOC rated their psychological well-being better than those with a weaker SOC; they related themselves as less helpless, more confident, more affiliated, and more valuable.

Other studies of cancer survivors found that SOC was related positively and significantly to the Health Index score, a measure of perceived well-being (Forsberg, Bjorvell, & Cedarmark, 1996) and quality of life (Post-White, 1998; 1996). Zayne (1996), who explored the relationships among SOC, coping, and adaptation in 72 adult cancer survivors who were currently receiving cancer-specific treatment, found that stronger SOC was significantly related to greater use of adaptive coping strategies and less reliance on non-adaptive coping strategies. Mullen, Smith, and Hill (1993) found that there was a strong, negative relationship between SOC and psychological stress in cancer survivors.

Studies of ethnically diverse groups, including African Americans, also overwhelmingly demonstrate the moderately strong correlation between SOC and psychological well-being or similar variables. In a study of drug recovery or homeless AA and Hispanic women, Nyamathi (1991; 1993) found that women who had stronger SOC also had less emotional distress, reduced depression, and diminished anxiety. In an investigation with a racially-mixed group of low-income single mothers, Hershey (1997) found an inverse relationship between SOC, strain, and disengagement strategies.

One pilot study was found that measured SOC and psychological well-being in AA breast cancer survivors. In this study, Gibson (1998) found that AA breast cancer survivors had psychological well-being scores that were significantly higher than those of Caucasian breast cancer survivors. In other recent studies of cancer patients, African Americans demonstrated psychological distress that was either less than (Beeber, Shea, & McCorkle, 1998) or the same as (Rodrigue, 1997) that of Caucasian cancer survivors.

These findings suggest that AA cancer survivors are no more susceptible to clinical levels of global psychological maladjustment or depression than Caucasians (Rodrigue).

Hence, the finding of a moderately strong correlation between SOC and psychological well-being in AA breast cancer survivors was expected. The researcher also expected that SOC would be a significant predictor of psychological well-being and would account for a large amount of the variance in psychological well-being. According to Janice Phillips (1999), a leading African American (AA) nurse researcher on breast cancer, African American breast cancer survivors in particular are:

steadfast in demonstrating their courage and strength, diligent in combining forces with others with similar experiences, and motivational with their testimonies of courage, hope, (spirituality) and celebration (1001).

This quotation depicts the successful psychological coping by AA breast cancer survivors that may be partially attributed to a strong SOC. Included in the construct of SOC are the three concepts, comprehensibility, manageability, and meaningfulness. Comprehensibility is cognitively perceiving stressors as being predictable, orderly, or understandable.

Manageability is having adequate resources available to manage stressors; and meaningfulness is the feeling that life has meaning and that most of one's problems are demands that are challenges, not burdens (Antonovsky, 1987). In particular, the word, coherence, infers steadfastness and endurance. In order to endure, one must demonstrate courage and strength. Additionally, Mitchell's statement implies that AA women share with others who are similar and use testimony and hope as resources to manage their stressors. Hence, this quotation is an apt depiction of AA breast cancer survivors whose SOC influences their psychological well-being.

Additionally, the literature abounds with studies and narratives showing that AA women have survived major stressors with an endurance that could be attributed to a

strong SOC. Ladner (1971) states that historically, Black women, because of their freedom to develop as individuals despite the harshest circumstances and because of the suffering from tremendous hardships, have developed a female personality that has “obstinate strength and ability to survive” and a “peculiar humanistic character and quiet courage viewed as the epitome of what the American model of femininity should be” (p. 239). Hence, despite exposure to major life stressors such as a racist environment (Boyd-Franklin, 1989; Landrine & Klonoff, 1996; Markides & Mindel, 1987; McAdoo, 1983; Mui & Burnette, 1996; Outlaw, 1993; Peters & Massey, 1983; Plummer & Slane, 1996; Smith, 1985; Slavin, Rainer, McCleary, & Gowda, 1991), low incomes, and multiple role strains (Beale, 1972; Brown, 1990; Carrington, 1980; Jackson & Wolford, 1992; Kessler & Neighbors, 1986; King, 1988; Oakley, 1986; Tomes, Brown, Semanya, & Simpson, 1990), many AA women exhibit successful coping skills (Boyd-Franklin, 1989; Caldwell, 1996; Locke, 1992; Mui & Burnette, 1996).

African American women have learned, both throughout and since slavery, to adapt in order to survive. According to Roberson (1996),

(African American) women would never have been able to survive under the perils of the slave system in America had it not been for their creativity in survival and coping skills (p. 203).

Overwhelmingly, throughout slave and spiritual narratives, AA women have revealed their strengths. Examples include: fortitude, nurturing the community, an indomitable will to survive, and resourcefulness (Bradford, for Tubman, 1961; Brent, 1973; Truth, 1991; White, 1985). After slavery was abolished, AA women took whatever work was available, no matter how demeaning, to survive and “prevent racism from destroying the family” (Roberson, p. 40). These examples portray women who displayed a high level of

SOC. They are women who: (1) understood that stress was a part of their lives (comprehensibility); (2) employed the resources to manage their stressors (manageability); and (3) appeared to find meaning through their experiences, rather than despair (meaningfulness). Hence, their coping abilities could have been partially attributed to prior experiences, cultural factors, and, possibly, a strong sense of coherence.

Consistent with prior studies and narratives, this study supported the finding that there is a significantly positive relationship between SOC and psychological well-being. Simply stated, as SOC increased, psychological well-being increased.

Hope and Psychological Well-Being

The current study also supported other studies that found significantly positive correlations between hope and psychological well-being or similar variables. Previous studies also found that hope significantly predicted psychological well-being. Fehring, Miller, and Shaw (1997) reported a consistent positive correlation between hope and positive mood states. Ott, in a 1996 quasi-experimental study, found moderate to strong correlations between hope and mental adjustment. Lee Eun Hyun (1998), in a study of Korean breast cancer survivors, found that hope functioned as a mediator between fatigue and psychosocial adjustment. In a longitudinal study, Ebright (1998) found that women with highest levels of hope scored higher on self-esteem, potential for coping/influence appraisal, viewed their experience as more of a challenge, had less mood disturbance, and were better adjusted. Christman (1990) reported that less hope was associated with greater adjustment difficulties following radiation therapy while Bunston, Mings, Mackie, and Jones (1995) reported that the more emotional distress patients had, the less hopeful they were about the future.

It is apparent that the current findings of a moderately strong relationship between hope and psychological well-being supported previous research findings. In essence, as hope increased, psychological well-being increased.

Spiritual Perspective and Psychological Well-Being

Spiritual perspective was positively related to well-being; however, the relationship was not significant. This finding was surprising because the relationship was postulated from the literature, which indicates that terminally ill and seriously ill hospitalized patients who have a high level of spiritual perspective also have high levels of well-being (Morgan, 1989; Reid, 1987).

The current study also showed that spiritual perspective was a significant predictor of psychological well-being through hope. This is different from other studies, which have found that spirituality was a strong predictor of psychological well-being in AA groups. For example, a study by Jones (1998) found that spirituality was a strong predictor of mental health for AA adults from the southeastern United States. Coleman (1996) found that existential well-being (a component of spiritual well-being) was a significant predictor of psychological well-being in African Americans living with HIV disease. Additional studies of African Americans with HIV disease have documented that spirituality was an important factor in maintaining psychological well-being (Boyle, Ferrell, Hodnicki, & Muller, 1997; Hudson & Morris, 1994; Sowell, Moneyham, Guillory, et al., 1997).

Other studies have yielded similar results in AA breast cancer survivors. Gibson (1998) found a high correlation between spiritual perspective and psychological well-being in a pilot study of AA and Caucasian breast cancer survivors. Guillory (1992) also found, in AA low-income breast cancer survivors, a moderate, significantly positive relationship

between spiritual perspective and quality of life, which includes the dimension of psychological well-being. The AA women in the pilot study (Gibson) and those in the current study gave descriptions of the positive effect their spirituality had on their ability to cope with breast cancer. Consequently, the researcher expected there to be a higher significantly positive correlation between spiritual perspective and psychological well-being.

Spiritual perspective had a very low, positive correlation with psychological well-being and had an imperceptible effect on psychological well-being. It was not surprising that, with the low correlation between these two variables, spiritual perspective would have a weak effect. The results found in the current study were similar to results found in two other studies. Reed (1986) reported no relationship between religious perspective and well-being while Kurtin (1990) also found no relationship between spiritual perspective and well-being in adults with recurrent cancer. Kurtin's study results were likely due to the small sample size of twenty-four.

Consequently, results are inconclusive regarding the relationship between spirituality and psychological well-being. The AA women in the current study had a mean income range of \$30,000 to \$34,999. Both spiritual perspective and psychological well-being differed according to income level. Middle-income AA women had significantly higher levels of spiritual perspective and psychological well-being than either the lower- or higher-income groups. The Spiritual Perspective Scale and Psychological Well-Being Subscale appeared to vary according to income level.

In light of the negligible correlation between spiritual perspective and psychological well-being, it is possible that the Spiritual Perspective Scale lacks the sensitivity or specificity to measure spirituality in AA breast cancer survivors. African

American nurse researchers have questioned its specificity in measuring the spirituality that is experienced by AA women (Gibson, 1998, Guillory, 1992, and Martin, 1999). Each of these researchers used the Spiritual Perspective Scale to measure spirituality in AA women with chronic illness (Martin) or breast cancer (Gibson; Guillory).

The Spiritual Perspective Scale measures participants' perceptions of the meaning ascribed to spirituality, the extent to which spirituality permeates their lives, and the extent to which they engage in spiritually related interactions (Reed, 1986). The meaningfulness aspects were described earlier as they relate to African Americans.

According to Miller, Fleming, and Brown-Anderson (1998), African Americans consider themselves to be "spiritual beings who live in a spiritual universe" (p. 363). Richards (1985) adds that the relationship among the human, the divine, and the AA family is "one of interdependence and reciprocity" (p. 212) and spiritual truths are the "essence of things" (p. 207). Spirituality essentially underscores beliefs and practices for African Americans that provide a foundation for organizing life events (Parks, 1998). It would appear, from these statements, that spirituality would permeate the lives of African Americans. It is questionable as to the degree and specificity of spiritual permeation that is measured by the Spiritual Perspective Scale for African American women who are breast cancer survivors.

According to Richards (1985), the suffering that is experienced by African Americans is often spiritually expressed through religious activities, oratory, music, and dance. Additionally, Creel (1988), Parks (1998), and Raboteau (1978) state that African Americans use prayer, faith, pastors, and the Bible to strengthen their spiritual, mental, and physical health. Gibson (1998) reported that AA women expressed a faith or confidence and trust in God as their Savior and emphasized that "God's in control." Strategies used to cope

included daily prayer and meditation, daily study of the Bible or attendance at weekly Bible study or prayer groups. These themes revealed relationships that were primarily transpersonal (with God), intrapersonal (with self), and interpersonal (with others). Gates (1997) added that church buildings and church members provided support to AA female breast cancer survivors.

Gates also described caring for others or caregiving as providing support to breast cancer survivors. Especially noted was a was “a missionary zeal to get other women to seek treatment early” (p. 57). Many of the AA women in a 1998 pilot study (Gibson) also described activities that involved a sense of “busyness” or remaining constantly busy and a need to witness to other women about breast cancer early detection and treatment.

A similar missionary zeal was demonstrated in descriptions of AA spiritual leaders in history, who combined their spiritual fervor with their sense of caring for the community. Throughout their ex-slave narratives, spiritual narratives, autobiographies, and testimonies, black women in the nineteenth-century revealed strength of character and a spirituality that anchored them and enabled them to survive, triumph, and transcend the many struggles and suffering they faced. Some of these women included Zilpha Elaw (Andrews, 1986; Elaw, 1846), Jareena Lee (Andrews, 1986; Lee, 1849), Julia A. Foote (Andrews; Foote, 1886); Harriet Tubman (Bradford, 1961); Sojourner Truth (Stewart, 1991); Maria A. Stewart (Stewart, 1835), Anna Julia Cooper (Loewenberg and Bogin, 1976) and Amanda Berry Smith (Loewenberg and Bogin, 1976). Throughout their narratives, these spiritual women showed an unwavering faith, trust in God, active prayer life, belief in prayer and the Bible, thankfulness and praise to God. The researcher posits that AA breast cancer survivors, like AA ex-slave women, spiritual women, and female

leaders of the nineteenth century, learn to successfully cope in spite of their physical, psychological, and/or spiritual suffering.

Although the Spiritual Perspective Scale incorporates aspects of prayer, faith, and relationships with family members and friends, specific references to spiritual resources, such as persons, activities, buildings, and objects (for example, pastors, church, the Bible, music, and dance) are not included. Also not included is the need to give to others or a “missionary zeal” to help the community; this zeal is explored by numerous AA writers, such as Alice Walker (1983) and is evident throughout ex-slave narratives, spiritual narratives, autobiographies, and testimonies.

It is evident that the Spiritual Perspective Scale did not specifically measure the type of spirituality experienced by these AA breast cancer survivors. No spirituality instruments were found that were designed for African American women. It is possible that all aspects of AA women’s spirituality cannot be measured quantitatively. A combination of qualitative and quantitative research may be necessary to isolate the spirituality that is experienced by AA female breast cancer survivors.

Contrary to findings from other studies and narratives, the current study, that measured the relationship between spiritual perspective and psychological well-being, found that the two variables were not significantly related. As spiritual perspective increased, psychological well-being increased less than ten percent. This increase was not a significant one.

Limitations of the Study

The findings of this study contribute to an understanding of how the inner resources (SOC, hope and spiritual perspective) of AA breast cancer survivors effect psychological well-being. However, there are issues that limit the generalizability of study findings.

First, while there was a fair degree of heterogeneity in the sample population, 126 or 76% of the AA breast cancer survivors lived in the South. Although survivors lived in other parts of the United States and Bermuda, including larger numbers of women from other parts of the nation and from Bermuda would have provided a more heterogeneous sample. In addition, the majority of the women had middle to upper income levels and a college education. Expanding the study to AA women from lower income and educational levels would have provided a more heterogeneous sample.

The fact that the convenience sample represented a much smaller number of outpatients compared to women from organizations greatly limits generalizability. Only 28 percent of patients were from outpatient oncology settings; however, 72 percent of the women were contacted from cancer organizations, women's church groups, sororities, and other community or civic organizations greatly. There was a lack of follow-through in completing questionnaires. One reason for this might be the six-week time lapse for some women between volunteering and completing the surveys. Another reason might be that older women, particularly, preferred to have researcher-administered questionnaires. At least two older women failed to return the questionnaires after they were mailed. Older women living alone might experience loneliness. The researcher spent two hours with one older woman in her home. This woman had recently experienced a traumatic encounter and ventilated with the researcher, who immediately referred her to a community facility for

follow-up. It is possible that older breast cancer survivors prefer researcher-administered questionnaires for ease of completion and to assuage their loneliness.

Measurement error may have affected the ability of the model to explain the variance (Kerlinger, 1986). The questionnaire was either self-administered or administered by the researcher at varying times of day over a 7-month period from June, 1999 until January, 2000. It is also unclear as to whether other illnesses might have influenced responses to the different parts of the questionnaire. Examples include fatigue. The fatigue experienced by the women might have been related to their breast cancer, their treatment, or other illnesses such as rheumatoid arthritis, diabetes, and fibromyalgia. One woman wrote a note indicating that she was unsure whether her responses were due to her breast cancer or to the complication of seizures.

Although the majority of participants experienced little difficulty completing instruments, a number of participants questioned the Herth Hope Index item; "I can see a light in a tunnel." In such cases, the investigator attempted to explain to participants that this meant that if they imagined they were in a tunnel, there would be a light at the end or a way out. Participants were then able to answer the question. In the context of today's language, with the large number of reports of near-death or after-death experiences, this sentence might have been misinterpreted to mean, "I can see the light" or "I am walking into the light." This might explain the lower reliability score of .87 received in the current study compared to the reliability of .97 reported by Herth (1992). Further analysis should be undertaken to compare the southeastern women in the current study with the women from other parts of the United States and Bermuda to ascertain whether there was a geographical and/or cultural variation to the way this statement was perceived.

Additionally, the Psychological Well-Being Subscale of the Quality of Life Scale (Breast Cancer Version) might have led to instrument error. Many breast cancer survivors

had received adjuvant therapy consisting of varying combinations of treatment. Hence, questions relating to feelings about treatment types were not applicable to all survivors. Examples include cancer chemotherapy and cancer radiation (see PWB Scale, Appendix). It is assumed that participants answered the questions according to the specific treatments they had received. Some participants also did not answer the question, “How distressing were the following aspects of your treatment? Completion of treatment.” Participants who received surgery only or surgery and hormonal treatment might have interpreted this question to refer to radiation therapy or chemotherapy only and refuse to answer. It is also unclear whether participants answered the question, “Are you in active treatment?” in varying ways. For example, participants who were being treated with hormonal agents might have answered this question yes or no, depending on their interpretation of “active treatment.”

Both the Spiritual Perspective Scale and the Psychological Well-Being Scale may not have been sensitive to or specific for this population. Participants reported, in additional comments, many descriptions of their beliefs and feelings relative to their relationship to God and the positive effect their spirituality and religion had on their ability to cope with breast cancer. The results that show a low correlation and virtual lack of effect of spiritual perspective on psychological well-being are not congruent with participants’ descriptions. Item analysis of both instruments is necessary to analyze whether these instruments were sensitive to the current population.

All instruments represent subjective responses which reflect how one feels at that moment in time. Responses may not be stable over time; therefore, the investigator only measured a certain point in time. It is the investigator’s hope that the AA breast cancer survivors answered the questionnaire honestly, but it remains a possibility that participants, particularly those to whom the questionnaire was self-administered, gave “socially correct” or “expected” responses rather than fully disclose their thoughts, feelings, and beliefs.

However, when means were compared between self-administered and researcher-administered responses, there were no significant differences.

Lastly, the proposed Gibson Model of Inner Resources and the refined model only explained 43% of the variance in psychological well-being. It is possible that the selected instruments lacked the sensitivity and/or specificity to test these constructs from the AA breast cancer survivor's perspective.

Implications of the Study

The purpose of this section is to explore the implications of the study for its relation to nursing practice, nursing knowledge and theory development, and nursing research.

Implications for Nursing Practice

As a practice discipline, one objective of nursing research is to improve clinical practice. The goal of this study was to explore inner resources that AA female breast cancer survivors used that had a salutogenic (health-promoting) effect by enhancing their psychological well-being levels. The study found that SOC and hope accounted for 43% of the variance in psychological well-being and that spiritual perspective was not a significant predictor. This study and others have not fully accounted for all the inner resources that influence psychological well-being. For example, the literature suggested positive relationships between SOC and hope (Post-White, 1996; 1998); SOC and spirituality (Mullen, Smith, & Hill, 1993); and SOC and psychological well-being (Bowman, Bjorvell, Langius, & Cedarmark, 1999; Forsberg, & Bjorvell, 1996; Forsberg, Bjorvell, & Cedarmark, 1996; Gibson, 1998; Hershey, 1997; Lin, Poku, Cain, Holzapfel, & Crawford, 1995; Mullen, Smith, & Hill; Nyamathi, 1991; 1993; Racklin, 1998; Zayne, 1996). Previous studies also found positive relationships between hope and psychological well-being (Brandt, 1987;

Bunston, Mings, Mackie, & Jones, 1995; Christman, 1990; Fehring, Miller, & Shaw, 1997; Gibson, 1998; Herth, 1989; 1991; 1992; Ebright, 1998; Lee-Eun-Hyun, 1998). Hope was also positively correlated to spirituality (Mickley & Soeken, 1993; Mickley, Soeken, & Belcher, 1992; Kurtin, 1990). Studies measuring spirituality and psychological well-being were also found (Morgan, 1989; Reed, 1986; 1987; Smith, Stefanek, et al, 1993). Other studies of AA cancer survivors suggested a high degree of spirituality (Gates, et al., 1997) and attested to the importance of spirituality (Potts, 1996; Gates, et al., Mathews, Lanin, & Mitchell). It is apparent that humans are viewed as bio-psycho-socio-spiritual organisms (Fawcett, 1993; Neuman, 1989; Roy, 1987; Roy & Andrews, 1986; Roy & Corliss, 1993) who primarily interact in reciprocal ways and strive toward an optimal level of health (Fawcett), in this case, psychological well-being.

The majority of breast cancer survivors in the current study were unaware of their breast cancer stage or diagnosis. Practitioners should educate survivors as to their stage/diagnosis in order to increase self-involvement in decisions regarding optimal treatment modalities.

Nursing interventions to promote psychological well-being have been developed largely based on Caucasians. The Gibson Model of Inner Resources is a parsimonious model that is easily understood and able to be applied to clinical practice. Enhanced understanding of inner resources and their positive impact on psychosocial outcomes from breast cancer in AA women may lead to the identification and testing of care strategies that are effective in enhancing SOC, hope, and spiritual perspective. Findings from this study support the need for clinicians to consider the presence and use of inner resources prior to choosing interventions for AA breast cancer survivors.

The literature abounds with studies, autobiographies, narratives, and testimonies that support the presence of high levels of inner resources that enhance psychological coping in

AA women. This study can instruct clinicians, who need to be aware of the inner resources that many AA use. In particular, clinicians should incorporate into their practice the knowledge that southeastern AA breast cancer survivors who are middle and upper income tend to have high levels of sense of coherence, hope, and spirituality and that these strongly influence their ability to psychologically cope with breast cancer.

The lack of inner resources such as SOC, hope, or spirituality may influence the success of client responses to prescribed interventions. Clinicians may need to focus their efforts on developing interventions that enhance SOC, hope, and spirituality with AA breast cancer survivors. Such interventions could have direct or indirect effects on psychological well-being in AA women who are breast cancer survivors.

Funding agencies should study the particular types of strategies that are most preferred and effective to enhance inner resources, leading to psychological well-being in AA breast cancer survivors. Programs that are culturally sensitive should then be developed. Ultimately, funds should be allocated for aggressive forms of treatment that provide quality of life in AA breast cancer survivors.

The current findings emphasize the need to carefully assess inner resources before embarking on individual or group treatments to treat psychosocial distress without considering the strategies AA breast cancer survivors use to cope psychosocially. Specific interventions might include using positive affirmations, providing positive, hopeful messages, and engaging in discussions related to spirituality, incorporating Bibles and other religious guides, prayer, spiritual music, and spiritual study (individual and/or group). Of particular importance is the need to develop strong, positive, trusting relationships with AA breast cancer survivors. Such relationships might be best facilitated through the provision of strong messages of belief in their ability to successfully cope. Clinicians might teach AA

breast cancer survivors that their successful ability to cope may be found in stories told by AA women ancestors or read in their narratives, gospel songs, or poetry.

Such strategies might empower AA breast cancer survivors to self-identify and continually utilize their inner resources. They might also facilitate enhancement of inner resources by practitioners in clinical practice. Using the Gibson Model of Inner Resources in the clinical arena will further delineate the model and validate its usefulness. Nurses can use The Gibson Model of Inner Resources when seeking to understand the experiences of AA women who are surviving and psychologically coping with breast cancer.

Implications for Nursing Knowledge and Theory Development

The goal of this research was to contribute to Nursing knowledge of psychosocial and oncology nursing. Within this study, the theoretical constructs of the model were supported by the data. Knowledge that inner resources (SOC and hope) have a direct effect on psychological well-being and spiritual perspective, as influenced by hope, has an indirect effect on psychological well-being; advances knowledge about the significant influence these inner resources have on psychological coping in AA breast cancer survivors.

As nurse educators promote an understanding of the salutogenic (health-promoting) effects of inner resources on psychological well-being in AA breast cancer survivors, curricula including these concepts will be added. The Gibson Model of Inner Resources emphasizes the interaction of bio-psycho-socio-spiritual factors and culture in persons coping psychologically with breast cancer. New nursing diagnoses and interventions will evolve from continued explication of the Gibson Model of Inner Resources. These diagnoses and interventions will foster client psychosocial coping through the identification and use of inner resources. This study supports the development of clinical reasoning and decision-making as

vital components of nursing curricula to prepare practitioners with the essential tools for diagnosis and treatment of actual or potential human responses (American Nurses Association, 1995) that may impact successful psychosocial coping with cancer.

According to Chinn and Kramer (1995), essential factors of theory development include clarity, simplicity, generality, accessibility, and importance. The Gibson Model of Inner Resources is conceptually simple and provides a framework to explore inner resources as predictors of psychosocial coping and organize further model development and testing.

The refined Gibson Model of Inner Resources derived from this study established a model for further testing. The next steps in theory testing and knowledge development include the evolution of new research questions particularly related to refining the spirituality resource and identification of other inner resources. Continued data collection and model testing will ensue. In addition, this investigation supports nursing knowledge development by theory testing of salutogenic coping by chronically ill AA women.

In conclusion, this research contributes to existing knowledge about the complexity of psychosocial coping associated with breast cancer in AA women. Currently, there is a dearth of research on psychosocial coping in AA breast cancer survivors. In addition, this study advances knowledge about SOC, hope, and spiritual perspective in AA women.

Implications for Nursing Research

The goal of nursing research is to provide basic and clinical information that can be used to improve practice and health care. Study findings reflect the need to continue ongoing research to explicate the totality of inner resources that predict psychological

well-being in AA breast cancer survivors. Additionally, efforts must continue to further develop a predictive model for psychological well-being in this population.

Future research includes the continued testing of the model and propositions derived from the study results. Future research is necessary to compare inner resources among the various stages and phases of cancer survivorship. The Gibson Model of Inner Resources establishes a basis for future empirical testing with populations of varying cultures having different chronic illnesses from a variety of settings. The model needs to be tested with diverse groups of AA and Black (non-American) breast cancer survivors as well as other cancer survivors and men. The model also needs to be tested in healthy women. Future research is needed to identify and test inner resources that predict physical well-being in AA women and other diverse groups of cancer survivors and survivors of other chronic illnesses. Future testing will continue to identify inner resources and other factors that predict psychological well-being across diverse populations.

Further study is necessary to test sense of coherence and spiritual perspective in diverse groups of AA breast cancer survivors and to compare those findings to Caucasian survivors of breast cancer. It is also necessary to correlate the meaningfulness subscale of the SOC scale with spiritual perspective.

Currently, there is a paucity of information found in the literature of nursing interventions to strengthen SOC. In the current study, SOC explained the highest percentage of variance in psychological well-being. Further research is therefore necessary to develop and test interventions to enhance sense of coherence.

Enhancing specificity may enhance validity. Analysis of the participants' descriptions may reveal additional considerations and explain current findings, particularly

those related to spiritual perspective. Future analysis of instruments used in this study is necessary to measure their specificity for this group of AA women through factor and item analysis. Factor analysis of the Spiritual Perspective Scale used with the current group of breast cancer survivors is necessary to test whether the instrument was specific to this group of AA women. Should the instrument have a different factor analysis structure, a literature search for a spirituality instrument that is specific and sensitive to AA women is necessary. If an unsuccessful search results, qualitative research study will be necessary to explore spirituality in AA women. Development of a new spirituality instrument or refinement of the current instrument may be necessary to glean the specific spirituality of AA women, particularly those who are breast cancer survivors.

Further research is necessary to test spiritual perspective and psychological well-being in low-income AA breast cancer survivors and compare results to those from the current study. In addition, item analysis needs to be carried out on the Spiritual Perspective Scale and the Psychological Well-Being Scale in order to assess sensitivity of these instruments in this population.

Qualitative studies may be necessary to identify the latent variables found within key constructs that represent inner resources. Funding agencies should increase funding for qualitative research, particularly for qualitative research that explores or further delineates inner resources that impact quality of life. Qualitative studies must be conducted to explore inner resources that AA and other culturally diverse groups of women perceive that enhance their psychosocial well-being, particularly those related to spirituality. Further research is necessary to qualitatively explore the meanings ascribed to spirituality for AA female breast cancer survivors. Qualitative studies are also necessary to explore body image and the meanings ascribed to body parts (for example, breasts) by AA breast cancer survivors and

women. Results could lead to instrument development that could measure the impact of these meanings on psychological and physical well-being.

Future research should include further model testing. Using the Gibson Model of Inner Resources© as the foundation, additional funding should be secured to develop and test interventions.

Recommendations

It is recommended that this study be replicated using a similar research design to test the model in a larger and diverse group of AA breast cancer survivors. The addition of different instruments that have been measured in similar samples of AA women may be necessary. The addition of other variables may contribute to further explanations of the variation in psychological well-being. Qualitative studies must also be considered to discover those factors that were not identified in this quantitative study. A longitudinal study is necessary to determine the presence and levels of inner resources according to stage and phase of breast cancer survivorship.

Replication studies should refine the demographic information collected. A system must be initiated that enables the participants to obtain information from their medical record regarding stage and type of cancer. Such information will enhance the researcher's ability to have more complete data with which to explore the impact of stage and type of breast cancer on SOC, hope, spiritual perspective and psychological well-being. Additionally, the demographic questionnaire must include other variables, such as chronic illnesses, that may have confounded results. The demographic questionnaire should request treatment information in such a way that different treatments and combinations of treatment can be tested as to their effect(s) on the study variables. Both denominations and the religiosity scale also should be clarified. The denomination should reflect the participant's religious

choice or membership at the time of the questionnaire. This would eliminate the confusion experienced by participants who chose denominations based on membership at different times during their lives. The religiosity scale should be clarified to reflect those aspects of religious experience that are most significant to AA women. Qualitative study, by means of focus groups, would facilitate the construction of a culturally sensitive and specific religiosity questionnaire.

Qualitative studies are needed to identify culturally sensitive and appropriate coping strategies or interventions that enhance inner resources. These should be compared with the current results and interventions developed that foster the use of inner resources identified as most influential to psychological well-being. A longitudinal study should be undertaken to determine if research-based interventions increase the level of psychological well-being across stages of breast cancer and phases of survivorship.

Further analysis of this study is essential. Consideration needs to be given to investigate the behavior of instruments used in the study. Hence, factor and item analysis are necessary to ascertain whether current instruments were sensitive and specific to this group of AA breast cancer survivors. In addition, qualitative analysis of the participants' descriptions is imperative. Resulting findings should be compared to the current quantitative results and refinement or adjustments made as necessary in future study. Consideration must also be given to further investigate the differences that exist among sociodemographic and cancer-related characteristics of the study population as well as their influence on the Gibson Model of Inner Resources.

Continued efforts are needed to expand the study to include AA breast cancer survivors from lower socioeconomic levels. Including more survivors from outpatient clinic settings would facilitate the inclusion of larger numbers of women from lower socioeconomic levels. Other sources might include AA breast cancer support groups. When planning

recruitment strategies, it will be essential to consider insider/outsider issues, especially those related to trust. The use of a similar snowball technique, although not recommended for quantitative study, is one way to establish trust (through networking) in AA communities. Exploring ways to incorporate snowball techniques into further quantitative study is necessary. In addition, a quicker response time (for example, no longer than 4 weeks) from the researcher is necessary to improve response rates for survivors who volunteer to participate.

When planning future studies of AA breast cancer survivors, a list of community resources would be helpful. Although participants received a brochure with information and the number for the breast cancer organization, Y-Me, several survivors requested additional information from the researcher on community support, breast cancer prostheses, expected cancer treatment modalities, and cancer support. Such a list would serve to enhance trust and facilitate a sense of empowerment and decision-making.

Results that include larger numbers of lower socioeconomic women should be compared with current findings in order to provide a more accurate profile of AA breast cancer survivors. Future research should also replicate the study in women who are survivors of other types of cancer and chronic illnesses from different cultures. Findings would allow broader generalizations of the results and test the efficacy of the model.

Summary

The purpose of this descriptive research was to explore which variables in the Gibson Model of Inner Resources (Sense of coherence, hope, and spiritual perspective) significantly predicted psychological well-being levels in African American (AA) breast cancer survivors. Four hypotheses were also tested: 1) there is a positive relationship between sense of coherence and hope; 2) there is a positive relationship between hope and spiritual

perspective; 3) there is a positive relationship between sense of coherence and spiritual perspective; and 4) there are positive relationships among sense of coherence, hope, spiritual perspective and psychological well-being. After data collection, the variables were placed in a causal model that was deductively derived from clinical practice and related literature. Path analysis procedures were used to test the proposed model.

The majority of participants (n=116) were invited who participated in cancer organizations, women's church groups, sororities, and other community or civic organizations from throughout parts of the United States and Bermuda. A smaller number (n=46) of women were obtained from three comprehensive outpatient cancer centers in the Upstate of South Carolina.

The major findings of the study supported the proposed theoretical model. The most significant direct predictors of psychological well-being were sense of coherence and hope. Although there was a positive correlation between spiritual perspective and psychological well-being, spiritual perspective was not a significant predictor. However, path analysis results indicated that spiritual perspective was a significant predictor of hope. Spiritual perspective predicted psychological well-being indirectly through its influence on hope.

Although there was no significant relationship between spiritual perspective and psychological well-being and spiritual perspective was not a significant predictor of psychological well-being, spirituality is of importance to AA breast cancer survivors. The literature abounds with studies, autobiographical accounts, narratives, and testimonies that attest to the importance of spirituality as an inner resource that influences psychological well-being in AA women. Hence, the current study was incomplete as it pertained to spirituality and psychological well-being. Further study, particularly of

spirituality and psychological well-being in AA breast cancer survivors is necessary to provide the sensitivity and specificity needed for confident results.

In conclusion, this was a significant study. The researcher successfully accomplished the study's primary goals. One goal of this investigation was to test four hypotheses that measured the proposed relationships among the study variables in an effort to more fully understand the effect(s) of inner resources on psychological well-being. The data strongly supported all four proposed hypotheses. A secondary goal was to test The Gibson Model of Inner Resources©, a model that was deduced from the literature and from clinical experience. The Gibson Model of Inner Resources© withstood the rigors of empirical testing. The inner resources, sense of coherence and hope significantly contributed much to predicting psychological well-being. Spiritual perspective contributed to psychological well-being indirectly through hope: both spiritual perspective and hope were necessary to influence psychological well-being in this population of AA breast cancer survivors.

By applying the knowledge that many African American women psychologically cope with breast cancer through the inner resources, sense of coherence, hope, and spiritual perspective, nurse research scientists can analyze African American breast cancer survivors according to the salutogenic perspective found in The Gibson Model of Inner Resources©. Further explication of these variables and their interrelationships will guide future research. The development and testing of culturally sensitive interventions are imperative. Such interventions should empower African American breast cancer survivors to utilize their inner resources to positively influence psychological well-being.

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APPENDICES

Appendix A: Institutional Review Board Approval Letters



DEPARTMENT OF ADMINISTRATIVE
AND CLINICAL NURSING
COLLEGE OF NURSING

TO: Ms. Lynette Gibson
PhD Candidate

FROM: Carol A. Williams, DSN
Chair, College of Nursing Ethics Committee

RE: Ethics Application

DATE: June 29, 1999

Your research project, "Inner Resources as Predictors of Psychological Well-Being in African-American Breast Cancer Survivors" received an expedited review by Dr. Wanda Anderson-Loftin for the College Ethics Committee on May 7, 1999 and was approved on May 26, 1999.

Please notify the Ethics Committee Chair immediately if there are any injuries in connection with your project. Approval to conduct the study is valid for a twelve month period. Should your study continue for over twelve-months, it will be necessary to submit a progress report. If you make any modifications in your study procedures from those approved by the Ethics Committee, it will be necessary to submit your changes to the Committee for approval.

UNIVERSITY OF SOUTH CAROLINA • COLUMBIA, SOUTH CAROLINA 29208 • 803 777-7013 OR 4482 • FAX 803 777-3771

AS ADOPTED BY THE BOARD OF TRUSTEES



Greenville Hospital System

June 18, 1999

Ms. Lynette M. Gibson, RN

RE: IRC File #06-99-09

Study Title: Inner Resources (Sense of Coherence, Hope, and Spiritual Perspective) as Predictors of Psychological Well-Being in African American Breast Cancer Survivors

Items Submitted for IRC Review: Protocol and Consent Form

Dear Ms. Gibson:

On Wednesday, June 16, 1999, the Chairman of the Institutional Review Committee (IRC) of the Greenville Hospital System reviewed your above-mentioned study that was presented for expedited approval. Expedited approval was given for one year. Please keep in mind the following requirements of the Institutional Review Committee:

1. A copy of the accepted protocol proposal and consent form must be on file in the IRC Office.
2. A report to the IRC is required at the end of the approved time period giving the results of the patients involved in the study, the status of the study and whether or not renewed approval is desired.
3. Immediate notification must be sent to the IRC Office of any complications as a result of the study, as well as any revisions/amendments to the protocol or consent form. For your convenience, forms are enclosed with this letter.

The above requests allow the GHS Institutional Review Committee to be in compliance with the requirements in Part 56, Subchapter D, Part 3 of the 21 Code of Federal Regulations published January 27, 1981.

Please note that your next update is due in May 2000. Be sure to utilize the IRC File # (06-99-09) on any communication regarding this study.

701 Grove Road Greenville SC 29605-5601 864-455-7000

Ms. Lynette M. Gibson, RN
June 18, 1999
Page 2

Thank you for your assistance in this matter. Should you have any questions, please do not hesitate to call the IRC office at 455-4984.

Sincerely,

Gregory A. Formanek, MD, Chairman
Institutional Review Committee

GAF/kc
Enclosure

August 25, 1999

Lynette M. Gibson, R.N., Ph.D. (candidate)

Investigator: Lynette M. Gibson, R.N., Ph.D. (candidate)

Study Sponsor: Investigator Initiated

Protocol Number: 001

Original IRB Review Date: August 19, 1999

Study Title: *"Inner Resources (Sense of Coherence, Hope, and Spiritual Perspective) as Predictors of Psychological Well-Being in African American Breast Cancer Survivors."*

Dear Ms. Gibson:

The above referenced protocol and consent form were approved at the August 19, 1999, meeting of the Spartanburg Regional Medical Center Institutional Review Board.

Informed Consent Changes: <input checked="" type="checkbox"/> Were Required (see attached) <input type="checkbox"/> Were Not Required

This approval is for 12-months. Before the expiration of this approval interval, should the protocol remain active, please submit in a timely manner a request for extension of the approval accompanied by a progress report indicating the number of subjects on study, unanticipated problems in the design, or implementation of the project.

As the investigator, you are reminded to promptly notify the SRMC IRB of any adverse events or changes in the protocol. Changes in an approved protocol may not be instituted prior to SRMC IRB approval, except where necessary to eliminate apparent hazards to human subjects.

Respectfully,

Charles M. Webb, M.D.
IRB Chairman

CMW/mvp

ITEM #78: GIBSON (Investigator Initiated) 001: *"Inner Resources (Sense of Coherence, Hope, and Spiritual Perspective) as Predictors of Psychological Well-Being in African American Breast Cancer Survivors."*

Discussion Notes: The reviewers noted that their assessment included the risk/benefit ratio, selection of subjects, provisions for monitoring the data, and the content and clarity of the informed consent document (if applicable).

Approved (vote taken by secret ballot) with the following informed consent changes:

1. Page 1 of 2, 3rd paragraph, last sentence, start a new paragraph.
2. Page 1 of 2, 4th paragraph (as previously referenced), add as the second sentence, "In addition, you will not receive financial compensation for your participating in this study. As a study participant you will receive a gift not to exceed the value of \$20.00."
3. Page 1 of 2, last paragraph, change the last two sentences to read, "If you have any questions, you may call Lynette M. Gibson, RN, at 1 (800) 484-8668 (Code 3092), write her at P. O. Box 6871, Greenville, SC, 29606-6871, or e-mail her at Lynette.Gibson@spartanburg.edu. You can also call Matthew Van Patton, Coordinator of the Institutional Review Board at Spartanburg Regional Medical Center at (864) 560-6892 if you have any questions, comments, or concerns about the study or your rights as a research subject."
4. Page 2 of 2, update to the SRMC standard "Consent" statement.
5. Editorial changes.

Vote: 17 approved / 0 disapproved / 1 abstained / 0 tabled

August 31, 1999

Lynette M. Gibson, R.N., Ph.D. (candidate)

Investigator: Lynette M. Gibson, R.N., Ph.D. (candidate)

Study Sponsor: Investigator Initiated

Protocol Number: 001

Original IRB Review Date: August 19, 1999

Study Title: *"Inner Resources (Sense of Coherence, Hope, and Spiritual Perspective) as Predictors of Psychological Well-Being in African American Breast Cancer Survivors."*

Dear Ms. Gibson:

This letter serves to amend our previous correspondence dated August 25, 1999, and its attachments. As you will note, some additional changes in the content of your informed consent were required. These changes have been made to the informed consent draft attached to this document.

Please accept my apologies for any inconvenience this may have caused you. If you have any questions, please do not hesitate to call me at (864) 560-6892.

My regards,

Matthew A. Van Patton
IRB Coordinator

Enclosures: List of Changes
Informed Consent dated August 31, 1999

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ITEM #78: GIBSON (Investigator Initiated) 001: *"Inner Resources (Sense of Coherence, Hope, and Spiritual Perspective) as Predictors of Psychological Well-Being in African American Breast Cancer Survivors."*

Discussion Notes: The reviewers noted that their assessment included the risk/benefit ratio, selection of subjects, provisions for monitoring the data, and the content and clarity of the informed consent document (if applicable).

Approved (vote taken by secret ballot) with the following informed consent changes:

1. Page 1 of 2, 3rd paragraph, last sentence, start a new paragraph.
2. Page 1 of 2, 4th paragraph (as previously referenced), add as the second sentence, "In addition, you will not receive financial compensation for your participating in this study."
3. Page 2 of 2, update to the SRMC standard "Consent" statement.
4. Editorial changes.

Vote: 17 approved / 0 disapproved / 1 abstained / 0 tabled



2600 Bull Street
Columbia, SC 29201-1708

September 13, 1999

Lynette M. Gibson, RN, MS, Ph.D.(candidate)

Dear Ms. Gibson:

I am writing in response to your request for release of confidential data from the South Carolina Central Cancer Registry (SCCCR) for your proposal entitled "Inner Resources (Sense of Coherence, Hope, and Spiritual Perspective) as Predictors of Psychological Well-Being in African American Breast Cancer Survivors". As I initially explained, the Surveillance Subcommittee of the DHEC Cancer Control Advisory Committee is responsible for the approval process for SCCCR confidential data release. Each request is reviewed by assigned reviewers who are members of the Surveillance Subcommittee.

Upon completion of review of your proposal by the SCCCR and the reviewers, the proposal is approved with the following changes/recommendations:

Pg. 4, 12. Describe the protocol for data collection:

The SCCCR will provide the numbers of living African American breast cancer cases included in the SCCCR database for 1996 and 1997 for each reporting facility. Determination will be made whether the medical facilities provided by the SCCCR differ from those already contacted by the researcher. If so, the researcher will contact these facilities for approval for release of these patients' confidential information.

The SCCCR will write a letter to these facilities in support of the proposed research. Upon approval from the medical facilities for release of patient names, the researcher will contact physicians/patients by letter for agreement for participation. All medical record review will occur at the medical facility where patient medical records are housed.

According to your proposal, methods are described to contact major outpatient cancer treatment facilities for approval to solicit patients for an effective sample

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

size of 152 African American breast cancer patients. The SCCCR is listed as an additional source of patient names. It was the consensus that the hospitals should be contacted directly for patient solicitation.

Other comments provided by the reviewers include the following:

Reviewer #1 - "I would recommend the Anderson/Greenville area data bases be completely exhausted before going to the SCCCR. If the SCCCR data were considered, a systematic sample should be obtained, beginning with the upstate population. This will maintain a consistent population, at least geographically."

Reviewer #2 - "I strongly encourage the researcher to make her research as population-based as possible, for it to be valid."

Reviewer #3 - "I am not convinced she needs 150 patients; the sample size appears to be based on advice from her committee rather than any hypothesized group differences."

Thank you for considering the SCCCR as a valid data resource for your research project. If you have any questions regarding this decision, please don't hesitate to call me at (803) 898-3626.

Sincerely,

Susan Bolick-Aldrich
Director
South Carolina Central Cancer Registry

cc: James Ferguson, Ph.D.
Murray B. Hudson, MPH
Daniel Lackland, Dr.PH

November 5, 1999

Lynette M. Gibson, RN, Ph.D. (Candidate)

RE: **IRB Protocol Number 99029**
Inner Resources (Sense of Coherence, Hope, and Spiritual Perspective) as Predictors of Psychological Well-Being in African American Breast Cancer Survivors – Lynette M. Gibson, RN, Ph.D. (candidate)

Dear Ms. Gibson:

The Institutional Review Board appreciated your presentation of the reference protocol at their November 3, 1999 meeting. The information you provided was very helpful in the decision making process.

The IRB members voted to approve this protocol, the informed consent and your participation in the protocol. Your participation in this protocol, and use of the approved informed consent is valid through November 1, 2000. Continued participation in the protocol after this date requires submission of an Investigator's Update Report Form for IRB review and approval. Should the protocol be closed prior to this date, please indicate this on the Investigator's Update Report Form and submit it for IRB review.

Each protocol presented to the IRB of Palmetto Baptist Medical Center is assigned an "IRB Protocol Number". All future correspondence to the IRB must include the IRB Protocol Number, as listed above.

Please contact Christine Marks, Manager, Medical Staff Services at 296-5085, with any questions.

Sincerely,

Robert H. Blease, DDS (M)
Chairman, Institutional Review Board

IRB APPROVAL

NOV 3 99 NOV 1 00

Appendix B: Sample Letter From Outpatient Facility

November 10, 1999

Breast Health Center
Palmetto Baptist Medical Center
Taylor at Marion Street
Columbia, SC 29220

Dear Breast Cancer Survivor:

Ms. Lynette M. Gibson is an African American Registered Nurse (RN) who is studying for a Ph.D. degree at the University of South Carolina College of Nursing. As the daughter of a mother who survived breast cancer, she is interested in studying the ways that African American breast cancer survivors cope. She has found no studies that look at the positive ways that African American women cope and survive breast cancer. This information will help physicians, nurses, and other health care providers improve the care and help received by breast cancer survivors.

I fully support Ms. Gibson in her research project. To show her my support, I would like to provide her with a list of African American breast cancer survivors, along with their addresses and telephone numbers. She will then contact you to answer a questionnaire that describes ways that you may use to cope with breast cancer. The questionnaire should take about 30 minutes to complete. Your help and the help of other African American breast cancer survivors are essential to her study's success.

If you would like for me to provide her with your name, address, and telephone number, please do one of the following within two weeks of receiving this letter:

- 1. Notify my office, at (803) 771-5244 or**
- 2. Sign and print your name and check the line on the enclosed card.**

Return the card in the self-addressed, stamped envelope that says, "Yes, I wish to participate..."

Thank you.

Yours sincerely,

Isabel Law, RN

Appendix C: Information Form

**Inner Resources As Predictors of Psychological Well-Being
In African American Breast Cancer Survivors
Lynette M. Gibson**

CODE _____

Information Form

NAME

ADDRESS

**TELEPHONE NUMBER(S) AT WHICH YOU WOULD LIKE TO BE
CONTACTED:**

_____ (H) _____ (W) _____ (OTHER)

Appendix D: Advance Letter

P. O. Box 6871
Greenville, SC 29606-6871
(Date)

Dear Breast Cancer Survivor:

I am an African American Registered Nurse (RN) studying to get my Ph.D. degree at the University of South Carolina College of Nursing. As the daughter of a mother who survived breast cancer, I am interested in studying the ways that African American breast cancer survivors cope. I will be calling you between the months of June and December to invite you to participate in my study of African American breast cancer survivors.

I have found no studies that look at the positive ways that African American breast cancer survivors cope. I would like to change this, so that nurses and other health care providers can learn more about the strengths of African American women. Knowing this can improve the care and help received by breast cancer survivors.

I am writing before I talk with you because I have found that many people appreciate being advised in advance that they will be asked to participate in a research study. When I talk with you, I will ask you if you would prefer to answer the questions yourself or have me ask you the questions. If you would like for me to ask you the questions, I will do so in a mutually agreed upon private place.

Altogether, the questionnaire should take about 30 minutes to complete. Your help and the help of other African American breast cancer survivors are essential to the study's success. At the completion of the questionnaire, to show my appreciation, I will give you a gift not to exceed the value of \$20.

If you have any questions, please feel free to ask me. You may also call me at 1(800) 484-8668 (Code 3092) or contact me by mail or e-mail, at lynetteG@aol.com.

Thank you for your interest,

Lynette M. Gibson, RN, Ph.D. (candidate)
Doctoral Candidate
University of South Carolina

Appendix E: Recruitment Fliers

**Lynette M. Gibson, RN, MS, Ph.D. (candidate)
Faculty Member, Clemson University, Clemson, SC
Doctoral Student, University of South Carolina
Daughter of a Nine-Year Breast Cancer Survivor**

1 (800) 484-8668 (Code 3092) e-mail LynetteG@aol.com

Mrs. Lynette Gibson is a Registered Nurse (RN) who is working on her Ph.D. (Doctoral Degree) in Nursing Science at the University of South Carolina. She is preparing to begin her study on African American breast cancer survivors. As the daughter of a woman who survived breast cancer for nine years, she is interested in knowing how African American breast cancer survivors cope. Mrs. Gibson has found no nursing studies that look at the positive strengths of African American women. She wants to change this so that nurses and other health care providers can learn how to best help African American women cope with breast cancer.

If you, or anyone you know, has survived breast cancer for 3 months or more, please call Mrs. Gibson at **1 (800) 484-8668 (code 3092)** or e-mail her at ***lynetteG@aol.com***. Women who participate will be invited to answer a questionnaire. The questionnaire is expected to take no longer than 30 minutes. To show her appreciation, Mrs. Gibson will give each participant a gift. As a member of Allen Temple AME Church in Greenville, South Carolina, Mrs. Gibson is the Health and Wellness Ministries Coordinator. She is also active in the local and district AME Women's Missionary Society. She has spoken numerous times at AME, Baptist, United Methodist, and Seventh Day Adventist programs and events. She is a charter member of Chi Eta Phi (Nursing) Sorority, Inc., Delta Phi Chapter, a Board Member of the South Carolina Women's Cancer Coalition, and is past Chairperson of the Greenville Breast Cancer Task Force. Mrs. Gibson believes that she was meant to use her mother's experience to touch other women's lives. This study is part of her mission to inspire others through the strengths of African American breast cancer survivors. Thank you.

Help Needed with Doctoral Study

African American Breast
Cancer Survivors
Needed for Confidential
Study

If interested, please call
Lynette Gibson, RN,
PhD(candidate)
at (800)484-8668 (code 3092)

E-mail
lynetteG@aol.com
Gifts Will Be
Provided

Appendix F: Cover Letter

Date

P. O. Box 6871
Greenville, SC 29606-6871

Dear Breast Cancer Survivor:

I am an African American Registered Nurse (RN) studying to get my Ph.D. degree at the University of South Carolina College of Nursing. As the daughter of a mother who had breast cancer, I am interested in studying the ways that African American breast cancer survivors cope. I have found no studies that look at the positive ways that African American breast cancer survivors cope. I would like to change this, so that nurses and other health care providers can learn more about the strengths of African American women. Knowing this can improve the care and help received by breast cancer survivors.

Enclosed you will find a duplicate consent form and pink questionnaire booklet. Altogether, the questionnaire should take about 30 minutes to complete. Please return the questionnaire in the enclosed, self-addressed, stamped envelope by **(DATE)**.

Your help and the help of other African American breast cancer survivors in completing the questionnaire are essential to the study's success. At the completion of the questionnaire, to show my appreciation, I will send you a Thank You certificate and copy of the book, Celebrating Life: African America Women Speak Out About Breast Cancer.

If you have any questions, please feel free to call me at 1(800) 484-8668 (Code 3092) or contact me by mail or e-mail, at lynetteG@aol.com. Thank you for your interest and time.

Sincerely,

Lynette M. Gibson, RN, Ph.D. (candidate)
Doctoral Candidate
University of South Carolina

Appendix G: Data Collection Instruments

Date _____

Code _____

Source: Outpatient _____

Cancer Registry _____

Organization _____

Information Questionnaire

Please answer the following questions:

1. **How old are you?** _____
2. **Are you African American or Black? (Please √)**
_____ Yes _____ No
3. **What is your country of origin? (Please √)**
_____ (1) United States
_____ (2) Africa
_____ (3) Bermuda
_____ (4) West Indies
_____ (5) South America
_____ (6) Other (Specify if not listed) _____
4. **What is your household income per year? (Please √)**
_____ \$9,999 or less _____ 25,000 - 29,999
_____ 10,000 - 14,999 _____ 30,000 - 34,999
_____ 15,000 - 19,999 _____ 35,000 - 39,999
_____ 20,000 - 24,999 _____ 40,000 - 49,999
_____ 50,000 or more
5. **What is your highest level of education? (circle)**
1) Elementary/grade school What grade? (fill in) _____
2) High School What grade? (fill in) _____
3) Some College
4) Finished College
5) Graduate School
6) Trade School For what occupation? (fill in) _____
6. **To what religious group do you belong? (Please √):**
_____ (1) Protestant _____ (2) Catholic
_____ (3) Jewish _____ (4) Jehovah's Witness
_____ (5) Nondenominational
_____ (6) Other (Specify if not listed) _____

METHODIST

BAPTIST

African Methodist Episcopal Zion (AME Zion) Freewill Baptist

United Methodist

Southern Baptist

PRESBYTERIAN

LUTHERAN

EPISCOPALIAN

SEVENTH DAY ADVENTIST

CHURCH OF CHRIST

CHURCH OF GOD

APOSTOLIC HOLINESS

PENTECOSTAL

If you would like to specify your denomination further, write the specifics here _____

8. I find comfort in my personal relationship with God (or a Higher Being).

Strongly disagree 1 2 3 4 5 Strongly agree

Strongly disagree 1 2 3 4 5 Strongly agree

Strongly disagree 1 2 3 4 5 Strongly agree

11. What stage of breast cancer do/did you have? (Please ✓)

I II III IV

12. What type of breast cancer do/did you have? (Circle)

- (1) Ductal Carcinoma in Situ (DCIS) (cancer cells that start in the ducts/roadways and have not gone through the walls)
- (2) Invasive/Infiltrating Ductal Carcinoma (cancer that has gone through the walls of the duct into the fatty part of the breast)
- (3) Lobular Carcinoma in Situ (LCIS) (cancer cells that start in the lobules/grape-like parts and have not gone through the walls)
- (4) Invasive/Infiltrating Lobular Carcinoma (cancer cells that start in the lobules/grape-like parts and go through the walls)
- (5) Papillary carcinoma (cancer that is in the duct with bloody nipple discharge/liquid)
- (6) Page's Disease (cancer cells in the ducts/roadways that begins in the nipple or areola/area around the nipple)

13. How long have you been a breast cancer survivor?

- (1) ___ 4 to 6 months
- (2) ___ more than 6 months to 1 year
- (3) ___ more than 1 year to 2 years
- (4) ___ more than 2 to 5 years
- (5) ___ more than 5 to 10 years
- (6) ___ more than 10 to 15 years
- (7) ___ more than 15 to 20 years
- (8) ___ more than 20 years

14. Where is/was your breast cancer located?

- (1) ___ Right breast
 - (2) ___ Left breast
 - (3) ___ Right underarm
 - (4) ___ Left underarm
 - (5) ___ Neck
 - (6) ___ Other (Specify)
-

15. Are you in active treatment?

- (1) ___ Yes
- (2) ___ No

16. What type of treatment are/were you receiving? (please ✓)

- (1) ☐ Chemotherapy (drugs)
- (2) ☐ Hormone Therapy (e.g. Tamoxifen)
- (3) ☐ Radiation Therapy
- (4) ☐ Peripheral Blood Stem Cell Transplantation (bone marrow transplant)
- (5) ☐ Surgery

Specify type of surgery: ☐ lumpectomy
☐ modified radical mastectomy
☐ simple mastectomy
☐ radical mastectomy
☐ reconstruction

(6) ☐ Other (fill in) _____

(7) ☐ None

17. Are you having any of the following (Please ✓)?

A. Nausea (sick on the stomach)?

- (1) ☐ Yes
- (2) ☐ No

B. Vomiting?

- (1) ☐ Yes
- (2) ☐ No

C. Fatigued (tired)?

- (1) ☐ Not at all
- (2) ☐ A little
- (3) ☐ A lot
- (4) ☐ Extremely

Date _____

Code _____

Source: Outpatient _____
Cancer Registry _____
Organization _____

Part I

Here is a series of questions relating to various aspects of our lives. Each question has seven possible answers. Please mark the number which expresses your answer, with numbers 1 and 7 being the extreme answers. If the words under 1 are right for you,, circle 1; if the words under 7 are right for you, circle 7. If you feel differently, circle the number which best expresses your feeling. Please give only one answer to each question.

1. Do you have the feeling that you don't really care about what goes on around you?

1	2	3	4	5	6	7
very seldom or never						very often

2. Has it happened in the past that you were surprised by the behavior of people whom you thought you knew well?

1	2	3	4	5	6	7
never happened					always happened	

3. Has it happened that people whom you counted on disappointed you?

1	2	3	4	5	6	7
never happened					always happened	

4. Until now your life has had:

1	2	3	4	5	6	7
no clear goals or purpose at all						very clear goals and purpose

5. Do you have the feeling that you're being treated unfairly?

1	2	3	4	5	6	7
very seldom or never						very often

6. **Do you have the feeling that you are in an unfamiliar situation and don't know what to do?**

1	2	3	4	5	6	7
very often						very seldom or never

7. **Doing the things you do every day is:**

1	2	3	4	5	6	7
a source of deep pleasure and satisfaction						a source of pain and boredom

8. **Do you have very mixed-up feelings and ideas?**

1	2	3	4	5	6	7
very often						very seldom or never

9. **Does it happen that you have feelings inside you would rather not feel?**

1	2	3	4	5	6	7
very often						very seldom or never

10. **Many people – even those with a strong character – sometimes feel like sad sacks (losers) in certain situations. How often have you felt this way in the past?**

1	2	3	4	5	6	7
never						very often

11. **When something happened, have you generally found that:**

1	2	3	4	5	6	7
you overestimated or underestimated its importance						you saw things in the right proportion

12. How often do you have the feeling that there's little meaning in the things you do in your daily life?

1	2	3	4	5	6	7
very often						very seldom or never

13. How often do you have feelings that you're not sure you can keep under control?

1 2 3 4 5 6 7
very often very seldom or never

CODE _____

PART II

Date _____

Code _____

Listed below are a number of statements. Read each statement and place a [X] in the box that describes how much you agree with that statement right now.

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I have a positive outlook toward life.				
2. I have short, intermediate, and/or long range goals.				
3. I feel all alone.				
4. I can see a light in a tunnel.				
5. I have a faith that gives me comfort.				
6. I feel scared about my future.				
7. I can recall happy/joyful times.				
8. I have deep inner strength.				
9. I am able to give and receive caring love.				
10. I have a sense of direction.				
11. I believe that each day has potential.				
12. I feel my life has value and worth.				

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CODE _____

PART III

Date _____

Code _____

Introduction and Directions: A person's spiritual views may be an important part of their life. In general, spirituality refers to an awareness of one's inner self and a sense of connection to a higher being, nature, others, or to some purpose greater than oneself. I am interested in your response to the questions below. There are no right or wrong answers, of course. Answer each question to the best of your ability by marking an "X" in the space above that group of words which best describes you.

1. In talking with your family or friends, how often do you mention spiritual matters?

/	/	/	/	/	/
Not at all	Less than once a year	About once a year	About once a month	About once a week	About once a day

2. How often do you share with others the problems and joys of living according to your spiritual beliefs?

/	/	/	/	/	/
Not at all	Less than once a year	About once a year	About once a month	About once a week	About once a day

3. How often do you read spiritually-related material?

/	/	/	/	/	/
Not at all	Less than once a year	About once a year	About once a month	About once a week	About once a day

4. How often do you engage in private prayer or meditation?

/	/	/	/	/	/
Not at all	Less than once a year	About once a year	About once a month	About once a week	About once a day

Directions: Please indicate the degree to which you agree or disagree with the following statements by marking an "X" in the space above the words which best describe you.

5. Forgiveness is an important part of my spirituality.

/	/	/	/	/	/
Strongly Disagree	Disagree	Disagree more than agree	Agree more than disagree	Agree	Strongly Agree

6. I seek spiritual guidance in making decisions in my everyday life.

/	Strongly Disagree	/	Disagree	/	Disagree more than agree	/	Agree more than disagree	/	Agree	/	Strongly Agree	/
---	----------------------	---	----------	---	--------------------------------	---	--------------------------------	---	-------	---	-------------------	---

7. My spirituality is a significant part of my life.

/	Strongly Disagree	/	Disagree	/	Disagree more than agree	/	Agree more than disagree	/	Agree	/	Strongly Agree	/
---	----------------------	---	----------	---	--------------------------------	---	--------------------------------	---	-------	---	-------------------	---

8. I frequently feel very close to God or a "higher power" in prayer, during public worship, or at important moments in my daily life.

/	Strongly Disagree	/	Disagree	/	Disagree more than agree	/	Agree more than disagree	/	Agree	/	Strongly Agree	/
---	----------------------	---	----------	---	--------------------------------	---	--------------------------------	---	-------	---	-------------------	---

9. My spiritual views have had an influence upon my life.

/	Strongly Disagree	/	Disagree	/	Disagree more than agree	/	Agree more than disagree	/	Agree	/	Strongly Agree	/
---	----------------------	---	----------	---	--------------------------------	---	--------------------------------	---	-------	---	-------------------	---

10. My spirituality is especially important to me because it answers many questions about the meaning of life.

/	Strongly Disagree	/	Disagree	/	Disagree more than agree	/	Agree more than disagree	/	Agree	/	Strongly Agree	/
---	----------------------	---	----------	---	--------------------------------	---	--------------------------------	---	-------	---	-------------------	---

Do you have any views about the importance or meaning of spirituality in your life that have not been addressed by the previous questions?

Thank you very much for answering the questions

© Reed, 1986

Date _____

Code _____
Source: Outpatient _____
Cancer Registry _____
Organization _____

Part IV

Directions: We are interested in knowing how your experience of having breast cancer affects your Psychological well being. Please answer all of the following questions based on your life at this time.

Please circle the number from 0 - 10 that best describes your experiences:

Psychological Well Being Items

1. How difficult is it for you to cope today as a result of your disease?

not at all 0 1 2 3 4 5 6 7 8 9 10 very difficult
difficult

2. How difficult is it for you to cope today as a result of your treatment?

not at all 0 1 2 3 4 5 6 7 8 9 10 very difficult
difficult

3. How good is your quality of life?

extremely 0 1 2 3 4 5 6 7 8 9 10 excellent
poor

4. How much happiness do you feel?

none at all 0 1 2 3 4 5 6 7 8 9 10 a great deal

5. To what degree do you feel like you are in control of things in your life?

none at all 0 1 2 3 4 5 6 7 8 9 10 completely

6. How satisfying is your life?

not at all 0 1 2 3 4 5 6 7 8 9 10 completely

7. How is your present ability to concentrate or to remember things?

extremely 0 1 2 3 4 5 6 7 8 9 10 excellent
poor

8. How useful do you feel?

not at all 0 1 2 3 4 5 6 7 8 9 10 extremely

9. Has your illness or treatment caused changes in your appearance?

not at all 0 1 2 3 4 5 6 7 8 9 10 extremely

10. Has your illness or treatment caused changes in your self concept (the way you see yourself?)

not at all 0 1 2 3 4 5 6 7 8 9 10 extremely

How distressing were the following aspects of your illness and treatment?

11. Initial diagnosis

not at all 0 1 2 3 4 5 6 7 8 9 10 very distressing
distressing

12. Cancer chemotherapy

not at all 0 1 2 3 4 5 6 7 8 9 10 very distressing
distressing

13. Cancer radiation

not at all 0 1 2 3 4 5 6 7 8 9 10 very distressing
distressing

14. Cancer surgery

not at all 0 1 2 3 4 5 6 7 8 9 10 very distressing
distressing

15. Completion of treatment

not at all 0 1 2 3 4 5 6 7 8 9 10 very distressing
distressing

16. How much **anxiety do you have?**

none at all 0 1 2 3 4 5 6 7 8 9 10 a great deal

17. How much **depression do you have?**

none at all 0 1 2 3 4 5 6 7 8 9 10 a great deal

To what extent are you fearful of:

18. Future diagnostic tests

no fear 0 1 2 3 4 5 6 7 8 9 10 extreme fear

19. A second cancer

no fear 0 1 2 3 4 5 6 7 8 9 10 extreme fear

20. Recurrence of your cancer

no fear 0 1 2 3 4 5 6 7 8 9 10 extreme fear

21. Spreading (metastasis) of your cancer

no fear 0 1 2 3 4 5 6 7 8 9 10 extreme fear

22. To what degree do you feel your life is back to normal?

None at all 0 1 2 3 4 5 6 7 8 9 10 a great deal

Appendix H: Informed Consent Form

(University of South Carolina, Anderson Area Medical Center, and

Palmetto Baptist Hospital)

P. O. Box 6871
Greenville,
South Carolina 29606-6871.

I understand that, as part of her requirements for a Doctor of Philosophy Degree, with a major in nursing science at the University of South Carolina, Lynette M. Gibson, Registered Nurse, is conducting a study about breast cancer survivors. I understand that the information obtained can be used to help nurses and other health care providers to learn more about how women cope with breast cancer. I understand that knowing this can improve the care and help received by breast cancer survivors.

I understand that the only risks connected with being in this study are possible fatigue and uncomfortable feelings while answering the questions. If I become tired or have uncomfortable feelings, I can do one of the following:

1. Discontinue participation temporarily in the study;
2. Withdraw totally from the study;
3. Contact my personal health care provider; or
4. Contact the 24-hour hot line breast cancer support organization, Y-Me, at
1 (800) 221-2141.

I understand that by taking part in this study I will fill out a form with questions that ask how I handle breast cancer. The questions will take approximately thirty minutes to complete. I understand that the information collected will be coded so that my name will not be used or connected with the study in any way, and that any

documents connected with the study will be kept in a locked file at the University of South Carolina.

I understand that I am free to withdraw my consent and stop participating at any time. If I do withdraw from the study, my care or treatment will not be affected in any way.

I also understand that Lynette M. Gibson will want to review my medical records to obtain information regarding my diagnosis and treatment. My signature below gives her permission to review my medical record for that purpose. I also understand that written and oral reports and presentations may result from this study and that, if I choose, I may request a copy. I have been told that I may call Lynette M. Gibson, RN, at 1 (800) 484-8668 (Code 3092), write her at P. O. Box 6871, Greenville, SC, 29606-6871, or e-mail her at lynetteG@aol.com if I have any questions. I understand the above things have been explained to me and all my questions answered. I will be provided a copy of this consent form, and freely give my consent.

Participant

Lynette M. Gibson, Investigator

Date

Appendix I: Informed Consent Form

Greenville Hospital System

Consent to Participate in a Research Study:
"Inner Resources of African American Breast Cancer Survivors"

P. O. Box 6871
 Greenville,
 South Carolina 29606-6871.

I understand that, as part of her requirements for a Doctor of Philosophy Degree, with a major in Nursing Science at the University of South Carolina, Lynette M. Gibson, Registered Nurse, is conducting a research study of approximately 150 African American breast cancer survivors. I understand that the information obtained can be used to help nurses and other health care providers to learn more about how women cope with breast cancer. I understand that knowing this can improve the care and help received by breast cancer survivors.

Women who can be included in this research are those who: (1) are African American women who are 18 years and older; (2) have had a confirmed diagnosis of breast cancer for 3 months or more; know their breast cancer diagnosis; (4) have no previous diagnosis of cancer (other than breast cancer); (5) give informed consent; and (6) are able to participate in the interview. Those who are excluded include: (1) men; (2) women or girls less than 18 years of age; (3) all non African American women; (4) women with a confirmed diagnosis of breast cancer of less than 3 months; (5) women having a previous cancer (other than breast cancer).

I understand that the only risks connected with being in this study are possible fatigue and uncomfortable feelings while answering the questions. If I become fatigued or have uncomfortable feelings, I can do one of the following:

1. Discontinue participation temporarily in the study;
2. Withdraw totally from the research;
3. Contact my personal health care provider; or
4. Contact the 24-hour hot line breast cancer support organization, Y-Me, at 1 (800) 221-2141.

I understand that there is no additional cost associated with participation in this research.

I understand that, by taking part in this research, I will fill out a form with questions that ask about me, my breast cancer, and how I handle breast cancer. I can either fill out the form myself or have Ms. Gibson read the questions to me and write my answer on the questionnaire. The questions will take approximately thirty minutes to complete. I understand that the information collected will be coded so that my name will not be used or connected with the study in any way, and that any documents connected with the study will be kept in a locked file at the University of South Carolina. I understand that I will receive a certificate of appreciation and a copy of the book, Celebrating Life: African American Women Speak Out About Breast Cancer for participation in this research. The researcher will receive no compensation for this research.

I understand that I am free to withdraw my consent and stop participating at any time. If I do withdraw from the study, my care or treatment will not be affected in any

Participant's Initials _____

way. I understand that withdrawal from this research should not affect my medical condition.

I understand that the medical records of my outpatient visits will be in my regular hospital chart and are therefore confidential. I understand that other research study records will be maintained by the researcher in a similarly confidential manner. I also understand that Lynette M. Gibson will want to review my medical records to obtain information regarding my diagnosis and treatment. My signature below gives her permission to review my medical record for that purpose.

I also understand that written and oral reports and presentations may result from this study and that, if I choose, I may request a copy. I understand that care will be taken to make sure that I am not identified by name. I have been told that I may call Lynette M. Gibson, RN, at 1 (800) 484-8668 (Code 3092), write her at P. O. Box 6871, Greenville, SC, 29606-6871, or e-mail her at lynetteG@aol.com if I have any questions. In addition, I may contact a representative of the Institutional Review Committee of the Greenville Hospital System for information regarding patients' rights in a research study. I can obtain the name and number of this person by calling (864)455-8997.

I understand all the above things that I have read or that have been explained to me and have had all my questions answered. I have been given a copy of this consent form, and freely give my consent.

Participant Signature

Date

Witness Signature

Date

Investigator Signature

Date

Appendix J: Informed Consent Form

Spartanburg Healthcare System

Informed Consent Document For
"Inner Resources as Predictors of Psychological Well-Being in African American Breast Cancer Survivors."

As part of her requirements for a Doctor of Philosophy Degree, with a major in Nursing Science at the University of South Carolina, Lynette M. Gibson, Registered Nurse, is conducting a study about African American breast cancer survivors. The information obtained can be used to help nurses and other health care providers to learn more about how women cope with breast cancer. Knowing this can improve the care and help received by breast cancer survivors.

The only risks connected with being in this study are possible fatigue and uncomfortable feelings while answering the questions. If you become tired or have uncomfortable feelings, you can do one of the following:

1. Discontinue participation temporarily in the study;
2. Withdraw totally from the study;
3. Contact your personal health care provider; or
4. Contact the 24-hour hot line breast cancer support organization, Y-Me, at 1 (800) 221-2141.

By taking part in this study you will fill out a form with questions that ask how you handle breast cancer. The questions will take approximately thirty minutes to complete. The information collected will be coded so that your name will not be used or connected with the study in any way. Any documents connected with the study will be kept in a locked file at the University of South Carolina.

There is no cost associated with participation in this study. In addition, you will not receive financial compensation for your participating in this study. As a study participant you will receive a gift not to exceed the value of \$20.00

You are free to withdraw your consent and stop participating at any time. If you do withdraw from the study, your care or treatment will not be affected in any way.

Lynette M. Gibson will want to review your medical records to obtain information regarding your diagnosis and treatment. Your signature below gives her permission to review your medical record for that purpose. Written and oral reports and presentations may result from this study. If you choose, you may request a copy. If you have any questions, you may call Lynette M. Gibson, RN, at 1 (800) 484-8668 (Code 3092), write her at P. O. Box 6871, Greenville, SC, 29606-6871, or e-mail her at lynetteG@aol.com. You can also call Matthew Van Patton, Coordinator of the Institutional Review Board at Spartanburg Regional Medical Center at (864) 560-6892 if you have any questions, comments, or concerns about the study or your rights as a research subject.

Patient's Initials: _____

IRB Approved Consent
Date of Approval: August 31, 1999
Signature: Matthew Van Patton

Page 1 of 2

CONSENT STATEMENT

I have read or had read to me the preceding information describing the study. All of my questions have been answered to my satisfaction, and this form is being signed voluntarily by me indicating my desire to participate in this study. I am not waiving any of my legal rights by signing this form. I will receive a copy of this informed consent.

Participant

Date

Lynette M. Gibson, Investigator

Date

Patient's Initials: _____

IRB Approved Consent
Date of Approval: August 31, 1999
Signature: Matthew Van Patton

Page 2 of 2

Appendix K: Y-ME Letters

May 14, 1999

June Adler
Y-Me Breast Cancer Organization
Fax Number (312) 294-8598

Dear Ms. Adler:

I am a Registered Nurse who is a faculty member at Clemson University, a Board Member of the South Carolina Women's Cancer Coalition, and member of the Greenville Breast Cancer Task Force. As a faculty member at Clemson, I was invited last summer to the Cancer Early Detection and Screening Program for Nurse Educators, sponsored by the Oncology Nursing Society. While there, I had the opportunity to hear impressive information on the services provided by the Y-Me Breast Cancer Organization.

I am also a Doctoral Candidate in Nursing Science at the University of South Carolina who is preparing to conduct doctoral research on breast cancer survivors, entitled, "Inner Resources (Sense of Coherence, Hope, and Spiritual Perspective) as Predictors of Psychological Well-Being in African American Breast Cancer Survivors." The Nursing Ethics Committee at the University is requesting that I have follow-up available should the survivors become uncomfortable and need to discuss their feelings. I am requesting to include your Y-Me Breast Cancer hot-line number, 1-800-221-2141, in my letter of consent to participants. It would greatly help if you would write a letter of support to me indicating that the participating survivors can call your hot-line if they need to discuss uncomfortable feelings that they might experience.

I am excited about this research, since I have found no studies of African American breast cancer survivors that discuss ways that they cope with breast cancer. I appreciate your support in this endeavor and look forward to receiving your letter. My fax number is (864) 250-8889 - The University Center, Greenville, South Carolina, Attention: Lynette M. Gibson. My telephone number is (864)242-1821. Thank you.

Sincerely:

Lynette M. Gibson, RN, MS, Ph.D. (candidate)
University of South Carolina

Y-ME

National Breast Cancer Organization

212 W. Van Duren St.
Chicago, IL 60607-3309
Business H.L. 985-2338
FAX 312 254-3557
24-hour Hotline (800) 221-2141
Specialty Center (603) 886-9505

May 17, 1999

Lynette M. Gibson
The University Center
Greenville SC
Fax: 864/250-8889

Dear Lynette:

You have my permission to include our 24-hour toll-free Hotline number to participants in your study. You may share this number with anyone who might want to use it. If you give me your complete address, I would be happy to send you our brochure. Good luck!

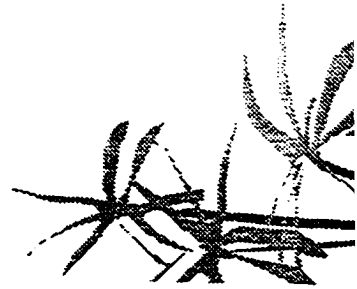
June Adler

National Breast Cancer Organization

Thank You
Ms. Lynette
Gibson
for Helping Us
to Identify Inner
Resources
of Breast Cancer
Survivors

Thank You

***for Helping Us
to Identify Inner Resources
of Black Bermudian Breast
Cancer Survivors***



Appendix M: Instrument Approval Letters

Helen Antonovsky
9 Harnagid St.
93114 Jerusalem
ISRAEL

Ms Lynette M. Gibson

U.S.A.

February 5, 1998

Dear Ms. Gibson

Thank you for your letter. You may have permission to use the Orientation to Life Questionnaire (SOC). You can find a copy of the two versions in *Unraveling the Mystery of Health* (Antonovsky, 1987). There are instructions in the book about how to give the questionnaire and the scoring system. In addition I am sending you an article on "The Structure and Properties of the Sense of Coherence Scale" which appeared in 1993. I think you can find the necessary psychometric information there. It is not clear to me from your letter whether you've read *Unraveling*. I suggest that you read it to get the theoretical background of the scale before you use it. It would be very helpful in doing the research for your dissertation.

My e-mail address (actually, my son's) is
msavish@pluto.nisc.huji.ac.il
My telephone number is 072-2-5030754

Good luck on your dissertation. If you would like any more help or information, please don't hesitate to write.

Sincerely yours,

Helen Antonovsky, PhD

January 30, 1998

Lynette M. Gibson, RN, PhD


Dear Ms. Gibson,

I appreciate your interest in hope and in the Herth Hope Index. I have enclosed a copy of both the Herth Hope Index and the Herth Hope Scale along with scoring instructions. Both scales are currently being used in research studies by a number of investigators primarily with adults, however, I have only recently begun to compile further psychometrics. I have also enclosed a reference list I have compiled on hope.

You have my permission to use either the Herth Hope Index or the Herth Hope Scale in your dissertation research project examining hope. If you decide to use either of my scales in your research study, I would like to request that you send me an abstract of your completed research and any psychometrics pertaining to my scale. There are no charges connected with the scale.

I would love to meet you but unfortunately will not be able to attend the Southern Nursing Research Society meeting as I will be doing an NLN Site Visit during that period of time. Congratulations on your poster presentation, it is a wonderful opportunity to talk with others about your work and share ideas. I look forward to hearing more about your work. If I can be of any further assistance, please do not hesitate to contact me.

Sincerely,


Kaye Ann Herth, Ph.D., R.N., F.A.A.N.
Chair, Department of Nursing

Enclosures

Request Form

I request permission to copy the Spiritual Perspective Scale (SPS) for use in my research entitled,

THE RELATIONSHIP OF SENSE OF COHERENCE, HOPE, AND SPIRITUAL PERSPECTIVE
TO MENTAL WELL-BEING AND DISTRESS IN WOMEN WITH BREAST CANCER.

In exchange for this permission, I agree to submit to Dr. Reed a copy of the following:

1. An abstract of my study purpose, framework, and findings, especially which includes the correlations between the SPS scale scores and any other measures used in my study. (This will be used by Dr. Reed to assess construct validity).
2. The reliability coefficient as computed on the scale from my sample (Cronbach's alpha).
3. A copy of the one-page scoring sheet for each subject tested or #4.
4. A computer printout listing the data requested (See #3) and data coding dictionary (to decipher coded data).

Any other information or findings that could be helpful in assessing the reliability or validity of the instrument would be greatly appreciated (e.g. problems with items, comments from subjects, other findings).

These data will be used to establish a normative data base for clinical populations. No other use will be made of the data submitted. Credit will be given to me in reports of normative statistics that make use of the data I submitted for pooled analyses.



Position and Full Address

(Signature)

PhD (CANDIDATE)

COLLEGE OF
UNIVERSITY OF SOUTH CAROLINA NURSING

3 CLOVERDALE LANE

GREENVILLE SC 29607

Permission is hereby granted to copy the SPS for use in the research described above.

Pamela G. Reed

4-16-98

(Date)

Please send two signed copies of this form, and a stamped, self-addressed envelope to:

Pamela G. Reed, RN; PhD; FAAN
The University of Arizona College of Nursing
1305 N. Martin St. Tucson, AZ 85721

Quality of Life Breast Cancer



City of Hope

N A T I O N A L M E D I C A L C E N T E R

Dear Colleague:

The Quality of Life (BREAST CANCER VERSION) is a forty six-item ordinal scale that measures the Quality of Life of a breast cancer patient. This tool can be useful in clinical practice as well as for research. This instrument can be administered by mail or in person. It is based on our previous pain research and has been recently adapted to represent the special QOL needs of breast cancer survivors.

Directions: The patient is asked to read each question and decide if he/she agrees with the statement or disagrees. The patient is then asked to circle a number to indicate the degree to which he/she agrees or disagrees with the statement according to the word anchors on each end of the scale.

The scoring should be based on a scale of 0 = worst outcome to 10 = best outcome. Several items have reverse anchors and therefore when you code the items you will need to reverse the scores of those items. For example, if a subject circles "3" on such an item, $(10-3 = 7)$ thus you would record a score of 7. The items to be reversed are: 1-7, 9, 10, 17-29, 31, 33-39 & 43. Subscales can be created for analysis purposes by adding all of the items within a subscale and creating a mean score.

You are welcome to use this instrument in your research/clinical practice to gain information about Quality of Life of breast cancer patients. You have permission to duplicate this tool. If possible we would like copies of your data so that we may include it in our database to continue evaluating the tool.

The QOL Breast Cancer instrument is based on previous versions of the QOL instrument by researchers at the City of Hope National Medical Center (Grant, Padilla, and Ferrell). This instrument was revised over a one year pilot by Hassey-Dow and Ferrell (1995). The revised instrument includes 46 items representing the four domains of quality of life including physical well being, psychological well being, social well being and spiritual well being. The study was conducted as a mail survey to the membership of the National Coalition for Cancer Survivorship. The total N was 686 and 294 of these were breast cancer survivors. This survey included a Demographic tool, the QOL tool and the FACT-G tool developed by Cella. Psychometric analysis was performed on 626 respondents including measures of reliability and validity. Two measures of reliability included test re-test and internal consistency. In order to perform test re-test reliability, a

511 EAST DUARTE ROAD, DUARTE, CALIFORNIA 91010-0269 (615) 359-8111
A National Cancer Institute Designated Clinical Cancer Research Center

randomly selected sample of 150 subjects who completed the initial QOL survey were asked to repeat this tool approximately two weeks later. 110 of the 150 subjects responded for an overall response of 73%. Of the 110 respondents, only those with complete data sets on all variables were used (N=70). The overall QOL-CS tool test re-test reliability was .89 with subscales of physical $r = .88$, psychological $r = .88$, social $r = .81$, spiritual $r = .90$. The second measure of reliability was computation of internal consistency using Cronbach's alpha coefficient as a measure of agreement between items and subscales. Analysis revealed an overall $r = .93$. Subscale alphas ranged from $r = .71$ for spiritual well being, $r = .77$ for physical, $r = .81$ for social, and $r = .89$ for psychological. Several measures of validity were used to determine the extent to which the instrument measured the concept of QOL in cancer survivors. The first method of content validity was based on a panel of QOL researchers and nurses with expertise in oncology. The second measure used stepwise multiple regression to determine factors most predictive of overall QOL in cancer survivors. Seventeen variables were found to be statistically significant accounting for 91% of the variance in overall QOL. Variables accounting for the greatest percentage were control, aches and pain, uncertainty, satisfaction, future, appearance and fatigue. The fourth measure of validity used Pearson's correlations to estimate the relationships between the subscales of the QOL-CS and the subscales of the established FACT-G tool. There was moderate to strong correlation between associated scales including QOL-CS Physical to FACT Physical ($r = .74$), QOL-CS Psych to FACT Emotional ($r = .65$), QOL Social to FACT Social ($r = .44$). The overall QOL-CS correlation with the FACT-G was .78. Additional measures of validity included correlations of individual items of the QOL-CS tool, Factor Analysis, and Construct Validity discriminating known groups of cancer survivors.

The instrument has also recently been used in breast cancer survivors at the City of Hope (N-298).

Good luck with your research!!

Betty R. Ferrell PhD, FAAN
Associate Research Scientist

Marcia Grant, DMSc, FAAN
Research Scientist
Director Nursing Research & Education

City of Hope National Medical Center
1500 E. Duarte Road
Duarte, CA 91010

Tools #1:3/96

Appendix N: Newspaper Article

The Greenville News
Tuesday
NOVEMBER 9, 1999



Kathy Spencer-Mention
Columnist

Breast cancer study seeks black women

After a nine-year battle with breast cancer, Lynette Gibson's mother succumbed to the disease in 1992. But in the course of that near decade, Gibson discovered the measure of her mother's strength.

"I was very proud of her," Gibson said. "She survived with a strength and dignity that was amazing to me. She had a lot of spirituality."

Gibson's mother read the Bible, managed her household and stayed connected with her family and friends. And in the last 11 months of her illness, when cancer had spread to her spine and stripped her of her vision, the woman who had long enjoyed sewing, crocheting and knitting stood tall.

"I thought it would be devastating to her," Gibson said. "But she never complained. We got her the Bible on tape. She'd ask to have those played. And her sister and me, when I was home, or my father or someone who was there would read her her Bible. They would talk and pray; that's how she survived."

Now, Gibson, a nurse and lecturer in the School of Nursing at Clemson University, is focusing on the strength of other African-American breast cancer survivors through a study "Inner Resources (Sense of coherence, hope & spiritual perspective) as Predictors of Psychological Well-being in African American Breast Cancer Survivors."

The six-month study, initiated in June, is examining what resources or strengths African-American women have that enhance their ability to cope psychologically with breast cancer.

"There are studies that have found that women who use spirituality, hope and have a high level of coherence ... are able to cope psychologically well," Gibson said. "And most of those studies have been done on Caucasian women."

Gibson said that African-American women have coped well with other struggles they have faced historically and, therefore, should be able to cope well with breast cancer.

Thus far, women participating in the study, which involves answering a questionnaire, have been Protestant (primarily Baptist), in their early 50s, with annual earnings ranging from \$25-\$29,000 and at least one year of education beyond high school.

Many of the women have come from the Upstate: Greenville, Spartanburg and the Anderson area. However, the study is open to women throughout the nation. "And I have some from Bermuda," said Gibson, a Bermuda native and Greenville resident, who is working on a doctorate in nursing science at the University of South Carolina.

"Right now, I'm looking at psychological coping, but in later studies I plan to look at physical coping," Gibson said.

The study is open to African-American women over age 18 who have been diagnosed with breast cancer for at least three months. Participants must not have had other forms of cancers previously, but may have had recurrent breast cancer.

For more information, call (800) 484-8668, code 3092. Or e-mail Gibson at Lynette-G@aol.com

Kathy Spencer-Mention can be reached at 298-4320.

NEW MILLENNIUM

HEALTH NEWS

Breast Cancer Study Seeks Black Women

(Reprinted from the Greenville News, Nov. 9, 1999, LIFESTYLE)

After a nine-year battle with breast cancer, Lynette Gibson's mother succumbed to the disease in 1992. But in the course of that near decade, Gibson discovered the measure of her mother's strength.

"I was very proud of her," Gibson said. "She survived with a strength and dignity that was amazing to me. She had a lot of spirituality."

Gibson's mother read the Bible, managed her household and stayed connected with her family and friends. And in the last 11 months of her illness, when cancer had spread to her spine and stripped her of her vision, the woman who had long enjoyed sewing, crocheting, and knitting, stood tall.

"I thought it would be devastating to her," Gibson said. "But she never complained. We got her the Bible on tape. She'd ask to have those played. And her sister and me, when I was home, or my father or someone who was there would read her her Bible. They would talk and pray; that's how she survived."

Now, Gibson, a nurse and lecturer in the School of Nursing at Clemson

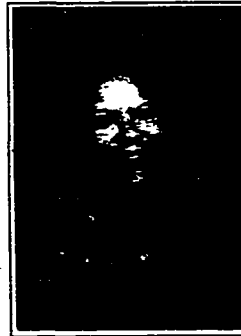
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Lynette M. Gibson
R.N., Ph.D (candidate)

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