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The effects of religion attributes on psychological well-being and health in African-Ameriacns living with HIV infection

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The Effects of Religious Attributes on Psychological Well-Being and Health Status in African-Americans Living With HIV Infection

by

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DISSERTATION

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Abstract

This study examined the effect of religious attributes on anxiety, hope, depression, and health status in 117 African-Americans with Human Immunodeficiency Virus (HIV) infection. Each subject completed the Spiritual Well-Being Scale, Nowotny Hope Scale, State-Trait Anxiety Inventory, Beck Depression Inventory, a demographic survey, and a Sign and Symptom Checklist for Persons with HIV Disease. Analysis of data included correlation and multiple regression analysis. The results demonstrated significant relationships between existential well-being (a component of spiritual well-being) and the following: HIV symptoms and existential well-being (multiple $R = .37$; $P < .05$), HIV symptoms and state anxiety (multiple $R = .65$; $P < .05$), HIV symptoms and trait anxiety (multiple $R = .63$; $P < .05$), gender and hope (multiple $R = .69$; $P < .05$), and HIV symptoms and depression (multiple $R = .63$; $P < .05$). The conclusions of the study indicate that, within this sample population, those individuals who were spiritually well, exhibited less depression and anxiety. These particular participants also reported less HIV symptoms and higher levels of hope. These findings present significant implications for nurses providing care to those living with the HIV virus and all health care professionals seeking opportunities to make a greater impact on the health status of these patients.

William L Holzemer

William L. Holzemer, R.N., Ph.D. FAAN
Committee Chair

CHAPTER I

Study Problem

Significance of the Problem

This is a study of the role of spirituality in the lives of African-Americans infected with the Human Immunodeficiency Virus (HIV). Spirituality is viewed as one component of quality of life (QOL), yet its contribution to QOL for people living with HIV is unclear. The relationship of spirituality and other QOL indicators such as hope, depression, anxiety, and health is also unclear.

The purpose of this study is to examine the effects of spirituality on these indicators. This dissertation also aims to provide an understanding of the benefits of spirituality on African-American men and women, as well as to establish a foundation empowering African-American communities to develop programs through their churches designed for Acquired Immune Deficiency Syndrome (AIDS) prevention and education. Additionally, this study will provide health care workers valuable and practical insights into working in partnership with the black community through black churches to improve QOL for African-Americans living with HIV/AIDS.

Throughout history black churches, and the resulting extended family they provide, have informally contributed to African-American QOL. According to Carter (1982), Frazier (1974), and Wimberly (1979), black churches have played a major role within the African-American community in three critical areas: socialization, political mobilization, and education. As summarized by Heisal and Faulkner (1979), the church has historically served as an influential vehicle for positive change in the black community. It has created and mobilized leadership and offered reinforcement of self-worth, spiritual sustenance, and increased hope among churchgoers. Additionally, the church has been the center of social support and educational and social activities. Tangible help is offered when church members are in crisis.

The ability of black churches to organize their communities suggests that African-Americans depend on their religious institution for all levels of support. Taylor, Thornton, and Chatter (1987) reported that over 82% of African-Americans surveyed indicated that black churches were pivotal to the survival of the African-American community. The survey underscores the premise that black churches hold an incredible amount of social influence within their communities. Understanding the extent to which these social influences sustain an individual's spirituality will enable nurse researchers to develop programs useful in collaboration with both religious and other black community leaders . These programs could take the form of meditation groups, spiritual support groups, and health programs.

Researchers have begun to uncover the benefits of spirituality to health in many communities, particularly among people living with chronic diseases and terminal illnesses. Thomas (1989) focused on spirituality as a therapeutic method for lowering blood pressure in hypertensive patients. Kaczorowski (1989) demonstrated that spirituality can lower anxiety in people living with cancer. In the Time magazine (Wallis, 1996), an article focusing on the benefits of spirituality highlighted ways spirituality was used to improve QOL (references not provided).

The first reported study related to spirituality and health was conducted at Dartmuth Hitchcock Medical Center. The research found that mortality rates in heart-surgery patients could be predicted by the degree one drew comfort from religion. The more individuals participated in some form of spirituality, the less likely they were to suffer deleterious effects from the surgery. In another study, the National Institute on Aging surveyed 4,000 adults living at home and found that those who attended church regularly were less depressed then those who did not participate in religious services. This particular survey was supported by an additional study reporting that religiously committed individuals demonstrated lower rates of depression and anxiety.

The Wallis (1996) article cited a study conducted by Byrd (1988) investigating prayer. In this study, coronary patients (N = 393) were randomly assigned in the following manner: Half of the patients received prayer from health care providers and half did not. Byrd found that the control group needed more antibiotics due to physiological complications than the treatment group who received prayer. These studies demonstrated the connection between spirituality and anxiety, depression, hope, and health.

Sevensky (1979) summarized that religion provides a theoretical framework allowing individuals to make sense of their illness and mortality by providing practical resources for coping with the burdens that illnesses can impart. Perhaps the ability of the individual to gain control over some aspect of their life is additionally beneficial to the healing process.

Understanding that spirituality interacts with healing may promote a decrease in the costs associated with illnesses such as HIV/AIDS. For example, lowering related stress with spiritual interventions can potentially decrease the need for expensive psychological services (i.e., therapy, medication, inpatient hospitalizations, and substance abuse treatment). The more we understand how spirituality interacts with psychological and biological components, the greater success nurse researchers and others will have in unlocking its full potential. This understanding is critical within the black population because, historically, African-Americans have not relied on the medical community, but more on nontraditional entities such as their churches.

African-Americans have commonly exhibited mistrust toward the medical community so, consequently, they may not have accessed traditional methods of care and, as a result, suffered more disproportionately in the incidence of HIV/AIDS. In 1994 the Centers for Disease Control reported that over 29% of the total AIDS cases were black males, and over 54% of the female cases were African-American. The following data underscores the alarming trends in the incidence of HIV infection among

African-Americans despite interventions of education and prevention by health care providers.

In a study exploring risk factors of HIV, Grella, Anglin, and Wugalter (1995) examined 409 heroin addicts in the city of New York. African-Americans comprised 46% of the sample. The study yielded that cocaine users were more likely to engage in sexual exchanges for money and less likely to report condom use. Increased sharing of dirty needles among partners was also found. Compton, Lamb, and Fletcher (1995) reported that HIV prevalence among African-Americans using cocaine in the Los Angeles area was primarily due to risk factors involving risky sexual behavior and the sharing of needles.

Hudgins, McCusker, and Stoddard (1995) also reported an association between cocaine use and risky sexual behavior. The highest proportion of current cocaine users were of the African-American community. The risk is linked to risky sexual practices when under the influence of this drug. Marmor et al. (1990), examining the association among sex, drugs, and HIV infection, found the seropositivity was higher in African-American, heterosexual men and women (n = 209; 3.8%) compared to other groups (Caucasian: n = 210; 0.9% and Hispanic: n = 486; 2.9%).

In another study, Metzger et al. (1993) examined two cohorts of 152 intravenous drug users involved in a treatment program and 103 undergoing treatment. The results revealed an increase in seropositivity from 18% to 33% for individuals not exposed to drug treatment. Seventy-eight of the individuals were African-American. These studies highlight the prevalence of drug use among African-Americans and confirm the risk to this segment of the population for contracting HIV infection.

To further underscore this point, Battjes, Pickens, Haverkos, and Sloboda (1994) surveyed five metropolitan cities in the United States between 1987-1991: New York, Baltimore, Chicago, Trenton, and Ashbury Park. The study revealed a frightening trend in all five cities. In comparison to other groups, African-Americans had the highest

increase in seropositivity among all five cities. Specific results were as follows: In New York (n = 824), 59% of African-Americans were HIV positive compared to 39% of Caucasians; in Ashbury (n = 437), 48% of African-Americans were HIV positive compared to 18.4% of Caucasians; in Trenton (n = 622), 22% of African-Americans were HIV positive compared to 6.1% of Caucasians; in Baltimore (n = 1144), 22.3% of African-Americans were HIV positive compared to 6.7 of Caucasians; in Chicago (n = 1557), 13.7% of African-Americans were HIV positive compared to 7.7% of Caucasians. This study is consistent with others describing the correlation between intravenous drug use and HIV seropositivity. While intravenous drug use is certainly a risk factor for contracting HIV in African-Americans, there are other factors placing African-Americans at risk: access to information, sexual orientation, and lack of education.

Although African-American, gay men comprise approximately 40% of the population of black men with AIDS, little information exists providing health care workers a clear understanding of the needs of this population. Since homosexuality has historically been a taboo subject within the African-American community, some may not be inclined to seek education about HIV prevention strategies, thereby decreasing their access to intervention.

In a study examining the characteristics of African-American college students with HIV/AIDS, Johnson, Gilbert, and Lollis (1994) surveyed 408 students at a southern university. The study found that over 3.18% of the students surveyed had HIV/AIDS. There were notable findings in this study: deficits in knowledge about AIDS transmission (some reported that condoms were not necessary if you love someone), high intravenous drug use, and individuals engaging in riskier sexual behavior were more likely to have HIV/AIDS. Additionally, sexually transmitted diseases were more prevalent. Syphilis was reported to be the strongest predictor of HIV/AIDS in the sample. This study

illustrates the dilemma of reaching the African-American community through educational efforts.

In an effort to understand the impact of HIV/AIDS among women, Wasser, Gwinn, and Fleming (1993) surveyed 35 states and found race, region, and urban residence were strong predictors of HIV status among this population. Notably, HIV prevalence rates were higher among black, childbearing women than their white counterparts, consistent among all 35 states. These findings underscore not only the risk of African-American women for HIV, but indicate that educational efforts do not significantly permeate this segment of the population. Perhaps the spirituality that is highly valued by the African-American community can become a deterrent to this trend of HIV disease as we continue to uncover its benefits.

In addition to investigation of the alarming trends of HIV infection among African-Americans, personal characteristics such as age, gender, and education, and how these factors influence spirituality, are fruitful ground for exploration as well. Although limited and few, some studies have addressed these characteristics in African-Americans participating in collective religion. In a survey of 2,107 African-American churchgoers, Levin and Taylor (1993) found that black women exceeded black men in levels of religiosity in all age-groups. This finding was true even when education, marital status, employment, and health satisfaction were considered. Rosten (1975) found women exhibited more religious involvement than men. However, in other studies, an inverse effect of religiosity and depression was found for women and men, and women were found to have higher levels of depression (Brown, Ndubuishi, & Gary, 1990). These findings underscore the necessity for researchers to examine data for gender differences, even in single ethnic groups.

Sasaki (1979) summarized that being black was a predictor of both frequency of prayer and church attendance, as well as religious affiliation and importance of religious beliefs. Because so few empirical studies exist on the personal characteristics of

spirituality in African-Americans, it is challenging to generalize findings on the effects of age, education, and gender. Uncovering differences with these variables will highlight the richness and diversity among African-American men and women living with HIV infection, particularly when differences exist with QOL indicators such as spirituality, anxiety, depression, hope, and health. It is critical to the well-being of African-Americans that researchers begin to examine spirituality as a component of QOL along with the other indicators. According to Clark, Cross, Deane, and Lowry (1991), as nursing technology increases in complexity, spirituality tends to be considered less often within the context of improving QOL. Although science and spirituality are dichotomous concepts in the traditional sense, unraveling the connection between the two within nursing research will increase our knowledge on how to address spiritual needs.

A qualitative study conducted by Clark et al. (1991) underscores how nursing can utilize spiritual interventions enhancing well-being. Fifteen adults, ten men, and five women—all diagnosed with cancer and involved in a Judeo-Christian faith—reported that nurses who demonstrated a positive attitude, therapeutic touch, and attended to their spiritual needs, contributed to their sense of well-being. All of the patients were permitted to express their own spiritual belief system. These data demonstrate how nurses can effect positive changes in patient well-being by integrating spiritual concepts.

Although patients may turn to clergy or other means of spiritual support, they may also reach out to the most accessible person—the nurse. Because, as stated earlier, few nurse researchers have investigated spirituality among terminally ill patients, little direction exists providing the tools needed to address spiritual concerns. While some nurses do attempt to implement holistic nursing concepts (i.e., focus on the whole person—mind, body, and spirit), there is little evidence to suggest this successfully occurs. Ironically the nursing profession, throughout history, has conceptually supported the idea of treating the "whole person," however translating this into practice poses difficult challenges related to embracing spirituality into clinical practice.

Nursing has attempted to define spirituality since 1963 (Emblem, 1992). It is time to move beyond efforts to "box" the term and uncover its broader meaning to patients. Developing a related framework for nursing will serve as a vehicle towards integrating a holistic approach within clinical practice.

Conceptual Framework

Holism and Nursing

The conceptual framework underlining this study was developed to capture the tenets of the holism approach to patient care. Holism focuses on the mind, body, and spiritual connection, and reflects the multidimensional qualities of individuals. The concept encompasses spiritual, psychological, and physical components, actively recognizing how each contributes to the existence of humanity and/or QOL. Throughout history, the medical profession has heavily weighted its focus on the biological components, ignoring the concepts of holistic practice as a treatment approach. It seems fitting then that nursing should fill this gap in science. How do nurses integrate holistic concepts into their practice? Jacobson and Burkhardt (1989) summarized that, by recognizing self as a spiritual healer, nurses can begin to translate holistic concepts into practice and ultimately improve patient QOL. Practicing holistic care with those living with a terminal illness (e.g., AIDS or cancer) seems a necessity due to the multitude of daily problems these individuals face.

Conceptual Model

As stated earlier, the interaction of spirituality with other indicators of QOL—anxiety, depression , hope, and health—is yet to be understood in patients living with HIV infection. A conceptual model was developed (see Figure 1) to display the interaction among five identified dimensions of QOL: spirituality, hope, depression, anxiety, and health. Spirituality is shown to have a bidirectional relationship with the other dimensions. Although spirituality is depicted as impacting anxiety, hope,

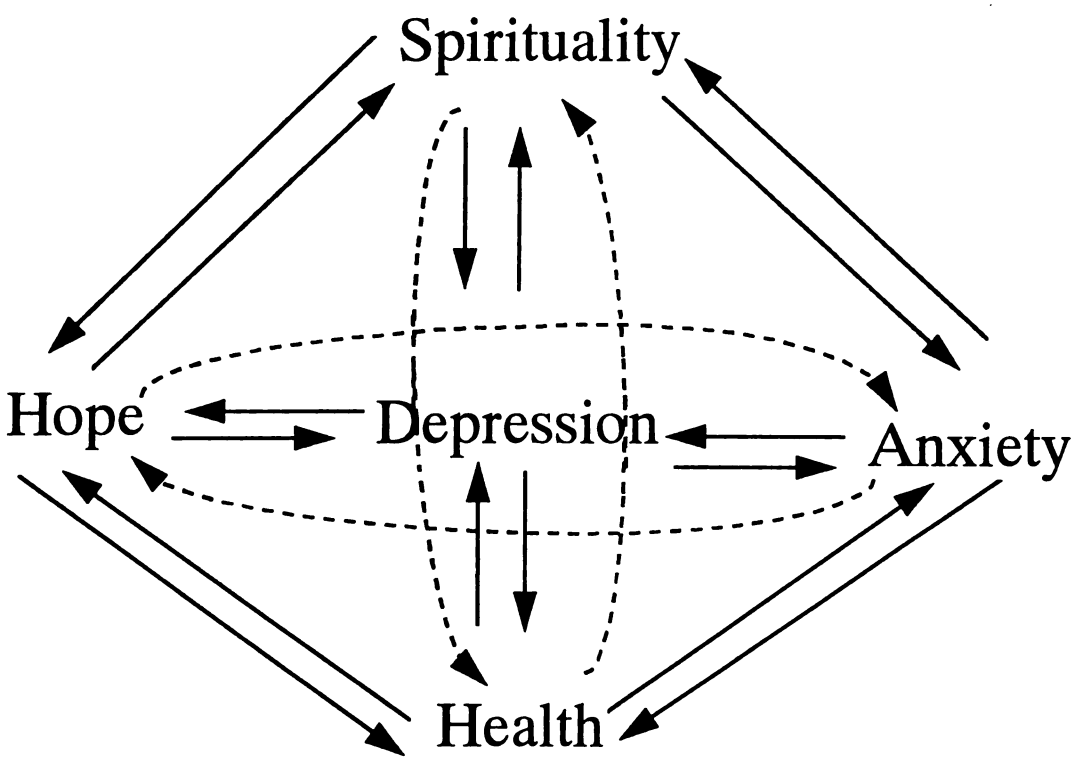

Figure 1. A conceptual interaction between five dimensions of quality of life.

depression, and health, these variables could conversely have an impact on spirituality. This model underscores the premise that, in terms of QOL, each dimension can equally effect the other.

Within the context of HIV/AIDS infection, depression, anxiety, and decreased hope can create greater physical stress on the body and, if one is suffering from spiritual distress, one may experience increased anxiety and depression and less hope. Spirituality has been identified as a significant factor for individuals with a life threatening illness (Bonner, 1988; Carson, Soekin, Shanty, & Terry, 1990; Kaczorowski, 1989). The literature review will summarize the ways the five dimensions of QOL—spirituality, anxiety, depression, hope, and health—are affected by HIV/AIDS and will underscore the importance of understanding how they all interact.

CHAPTER II

Literature Review

This chapter reviews the literature on five dimensions of quality of life (QOL) for those facing terminal illness: spirituality, anxiety, depression, hope, and health. Additionally, a summary and conclusions of these literature findings will be presented.

Literature Findings Related to Five Dimensions of Quality of Life

Spirituality

Reed (1986) examined spirituality, as defined by religiousness and sense of well-being, in a matched sample (n = 114) of terminally ill and healthy adults. Subjects were matched for age, gender, education, and religious affiliation. The purpose was to determine if terminally ill adults would report a greater sense of religiousness than healthy adults.

Religiousness was defined as individual perception of beliefs, and behaviors expressing a sense of relatedness to spiritual dimensions or to something greater than oneself. Well-being was defined as a sense of satisfaction with life. The measures used were the Religious Perspective Scale (King & Hunt, 1975) and the Index of Well-Being Scale (Campbell, Converse, & Rogers, 1988). The reliability and validity were reported.

The Religious Perspective Scale is a 13-item, Likert-type scale of 1–6 words measuring the degree of importance one places on spiritual issues and is scored by averaging all responses. The Index of Well-Being Scale measures overall perception of well-being and scoring is based on a 6-point rating scale. The sum of two scores is derived from a score on the single item of overall life satisfaction and the average score of eight semantic differential items affecting QOL. Completion time of the two scales was not provided.

The findings indicated that the terminally ill group demonstrated greater religiousness (4.1 $\pm$ 1.28) than the healthy group (3.4 $\pm$ 1.23). An explanation for the difference between these scores is not provided. Analysis of variance revealed a significant relationship between gender and group on the Religious Perspective Scale (F [1,113] = 4.205; $p < .05$). As Reed (1986) noted, gender was a significant factor in this sample; the females in the terminally ill group scored higher religiousness on the Religious Perspective Scale than did the males. There were no significant differences in the sample on the measure of well-being.

Pearson's product moment correlation was used to assess the relationship between well-being and religiousness scores. There was a significant positive relationship in the healthy group ($r = .47$; $p < .01$), as opposed to the terminally ill group ($r = .14$). Further analysis indicated that age maturity correlated with well-being in the terminally ill group ($r = .22$; $p < .05$).

The study provided evidence supporting the contention that spirituality as a component of QOL may be more salient for terminally ill individuals. Though not explicated in the study, the degree of religiousness may be influenced by the severity of the illness. The relationship between well-being and religiousness scores was surprisingly weak. This particular result is questionable given the context of a life-threatening illness, and also given the high score received on the Religious Perspective Scale in the terminally ill group. Possible reasons could be that well-being was less related to health than to the ability to carry out daily activities. Both the terminally ill and the healthy group were ambulatory and able to perform these routine functions.

Reed (1987) further explored spirituality and terminal illness comparing adults with varying degrees of health status. Three hundred subjects were matched by age, gender, education, and religious affiliation. Participants were placed in groups of 100 and designated as: terminally ill, hospitalized adults; nonterminally ill, hospitalized adults; and

healthy, nonhospitalized adults. Eighty-one percent of the sample were white, and 12% were Hispanic, 4% were black, 2% were American-Indian, and 3% were Asian-American.

The purpose of the study was to assess the significance of spirituality among nonterminal and terminal, hospitalized adults with healthy adults as a control group. The instruments used were the Spiritual Perspective Scale (Reed, 1986) and the Index of Well-Being (Campbell et al., 1988). Reliability and validity were reported. The scoring of these instruments has been previously described. The participants completed the two instruments, which required 20–60 minutes because the items of each instrument were read to them verbatim.

The findings indicated mean scores on the Spiritual Perspective Scale of 4.53 for Group 1 (terminally ill, hospitalized adults), 4.16 for Group 2 (nonterminally ill, hospitalized adults), and 4.16 for Group 3 (nonhospitalized, healthy adults). The F was significant at an alpha level of $< .02$ for the differences between Group 1 and Group 2. Further, a positive correlation between spiritual perspective and well-being in the terminally ill, hospitalized adults in Group 1 was reported to be .22 ($p < .02$), but there was no relationship for Group 2 or Group 3. Although these correlations connote a relationship between spiritual perspective and well-being, it is minimal. Analyses of the Index of Well-Being scores across the three groups surfaced no significant findings. However, for the perceived health subscale of the Index of Well-Being, Group 1 (1.76 ± 1.02) rated their health significantly lower than Groups 2 (2.88 ± 1.29) and 3 ($3.69 \pm .94$). Additionally, the nonterminally ill, hospitalized adults in Group 2 rated their health significantly lower than the nonhospitalized, healthy Group 3. These results were anticipated. The changes in spiritual views correlated positively with the scores of the Spiritual Perspective Scale for each group: .44 for Group 1, .22 for Group 2, and .16 for Group 3.

Reed's (1987) study provided empirical evidence supporting the significance of spirituality as a QOL indicator to individuals living with a terminal illness. The lack of diversity in the sample did not allow the investigators to explore potential ethnic

differences. Being in the hospital had little effect on the scores compared to nonhospitalized groups. Reed did not detail the reasons for hospitalization in the Group 1 sample nor length of their diagnosis. Additionally, a description indicating the severity of illness in Groups 1 and 2 was also lacking. The social support networks of the participants were not described either so any influence these may have had on the Spiritual Perspective Scale scores is unknown. Length of hospital stay for both terminal and nonterminal, hospitalized groups was provided.

Examining the significance of spirituality on hardiness, Carson and Greene (1992) studied the relationship in a sample of 100 persons who had either tested positive for the Human Immunodeficiency Virus (HIV) or had received a diagnosis of AIDS. Overall, 70% of the sample perceived themselves somewhat religious. The subjects were not randomly selected, but were recruited through a health care facility using convenience sampling. The authors did not report ethnicity of the subjects, but did describe the sample as 86% male with a mean age of 37.1 years. Over 45% were HIV positive, 24 had a diagnosis of AIDS Related Complex (ARC), and 30 had received a diagnosis of AIDS. Most of the subjects were within 2 years of their diagnosis. The purpose of the study was to describe the variation in spiritual well-being (SWB) and selected demographic variables, as well as their association to hardiness.

The subjects completed the SWB Scale (Ellison, 1983), the Personal Views Survey (Hardiness Institute, 1985), and a demographic data survey. The reliability and validity of the scales were reported. The Spiritual Well-Being Scale contains 20 items and has two subscales—Religious Well-Being (RWB) and Existential Well-Being (EWB). The SWB Scale uses a 6-point Likert format ranging from *strongly disagree* to *strongly agree*. The Personal Views Survey has 50 items and assesses hardiness over 3 subscales: commitment, challenge, and control. The three subscales are summed and multiplied by 100 to create a hardiness score. Hardiness is a psychological characteristic representing an

existential striving to order and derive meaning from life stresses (Frankyl, 1963). The reliability and validity of these instruments were reported.

The demographic data survey was derived from a review of the literature indicating a possible relationship between selected demographic variables and SWB and/or hardiness (Carson & Green, 1992). SWB correlated significantly with hardiness ($r = .42$; $p < .01$). When entered into a multiple regression equation, SWB accounted for 17% of the explained variance in hardiness.

EWB significantly correlated with hardiness ($r = .51$; $p < .01$) and accounted for over 26% of the explained variance in hardiness. In summary, the findings suggest that spirituality had a strong association to hardiness in persons with AIDS. In the absence of a control group, however, it is unknown if spirituality would have created the same result in hardiness with patients experiencing other medical conditions. In addition, over 50% of the participants indicated membership in some form of organized religion; this factor could account for additional variance in hardiness by SWB. Severity of illness was not investigated nor was psychosocial functioning, which may have influenced the relationship of SWB and hardiness.

Focusing on religion and hope, Mickley and Soeken (1993) surveyed 25 Anglo-American and 25 Hispanic women diagnosed with breast cancer. The purpose of the study was to determine if Anglo-American and Hispanic women differed on measures of religiosity and hope. The groups were matched on age, income, and education level, and were recruited from a cancer therapy center.

The instruments used for data collection were Feagin's (1964) Intrinsic/Extrinsic Scale measuring religiousness, the SWB Scale (Ellison, 1983), and the Nowotny Hope Scale (Nowotny, 1989). The Intrinsic/ Extrinsic Scale is comprised of 12 items divided into subscales measuring intrinsic and extrinsic religiousness. The scoring of this instrument was not provided. The Nowotny Scale contains 29 items, each item scored using a Likert format from strongly disagree to strongly agree. The Spiritual Well-Being

Scale is a 20-item instrument yielding three scores: a total score, a score for RWB, and a score for EWB. The Nowotny Hope Scale has six subscales: confidence in the outcome, relates to others, possibility of a future, spiritual beliefs, active involvement, and hope that comes from within. The reliability and validity of these instruments were reported.

All of the Hispanic subjects listed their religious preference as Catholic; 56% of the Anglo sample listed Protestant, 24% Catholic, 12% other, and 2% listed no religious preference. The sample included 50% Hispanic and 50% Anglo women within one year of breast cancer diagnosis. Most subjects had undergone a modified radical mastectomy and were receiving chemotherapy. There were no other health problems reported for the majority of participants.

Unpaired *t* tests were done to compare hope, religion, and SWB between the two groups; the only significant finding between the groups was Intrinsic Religiousness with the Hispanics scoring higher than Anglos ($t = 2.07$; $p < .05$). In the 25 Hispanic women, hope was positively correlated with SWB ($r = .61$; $p < .01$), RWB ($r = .43$; $p < .01$), and EWB ($r = .63$; $p < .01$). Intrinsic religiousness was correlated with SWB ($r = .46$; $p < .01$) and RWB ($r = .71$; $p < .01$) in the Hispanic group. Within the sample of Hispanic women, scores for SWB and RWB correlated significantly stronger with intrinsic religiousness than with extrinsic religiousness ($t = 2.28$, $df = 21$, $p < .05$; $t = 3.96$, $df = 21$, $p < .05$).

Hope correlated positively with RWB ($r = .72$; $p < .01$) and EWB ($r = .71$; $p < .01$) in Anglo women. Additionally, hope positively correlated with intrinsic religiousness ($r = .58$; $p < .01$). SWB positively correlated with intrinsic religiousness ($r = .77$; $p < .01$), but did not correlate with extrinsic religiousness. The lack of a control group increases difficulty in accounting for the effects of breast cancer on the SWB and Hope Scales scores. Further, whether the researchers accounted for subgroups within the Hispanic sample was not made clear; hence, these instruments may not be appropriate for all Hispanic women with breast cancer. The sample size was insufficient to rely on the

significance of the correlations; however, for both groups, religiousness was found to be an important factor in coping with breast cancer .

To determine the saliency of religiousness in the terminally ill, Peteet (1985) surveyed 50 hospitalized cancer patients and discovered that 32 of these patients had concerns related to religious issues. The instrument used to survey the participants was not described. The patients who indicated spiritual concerns were designated by those responding *yes* to one or more of the following three statements: (a) previously participated in, or had support from, a religious community while ill; (b) have described their illness in traditional religious terms; and (c) are struggling with problems directly related to a faith or religion. The sample consisted of 26 men and 24 women with a mean age of 47 years. The mean duration of illness was approximately 2 years.

The types of cancer represented by this sample of 50 included: breast, lung, leukemia, ovarian, lymphoma, testicular, prostate, and colon. Cases involving cancer that had metastasized and was inoperable totaled 88%. These patients were followed by the psychiatric consultation service due to the following indications: adjustment disorder, organic brain syndrome, personality disorder, alcohol abuse, major depression, schizophreniform disorder, and marital problems.

Peteet (1985) observed 18 patients actively struggling with religious problems in relation to their illness. These problems manifested themselves through the following: recent loss of religious support, pressure from others to adopt a religious position not of their own choosing, idiosyncratic or bizarre expressions of unusual religious beliefs, conflict between religious views and the acceptance/reality of being ill, and preoccupation with the ultimate meaning of life and illness.

Loss of religious support was described by six patients. This phenomenon was characterized by the perception of a pastor withdrawal. Five patients expressed sensing pressure from others to adopt a religious position not of their own choosing. Some of the participants described a conflict between their religious perspective and their state of health.

For instance, one subject, a 60-year-old female, expressed fear of going to hell because she was no longer able to fulfill her duties as a homemaker. Three of the subjects were struggling with understanding their illness and conceptualizing meaning to their lives. For example, one subject with renal cell carcinoma expressed doubt as to whether his life had any meaning due to his uncertainty regarding its longevity.

Peteet's (1985) study explicated some of the meaning that spirituality plays in the everyday lives of people with a terminal illness. The study also noted that only one fifth of these patients discussed their concerns with hospital staff. Peteet reported that, although many patients desire to discuss their religious concerns, hospital staff may have experienced difficulty with this for some of the following reasons: (a) religion is a highly personal area, (b) religion is associated with superstition, (c) religion is sometimes seen as a kind of consolation to be offered when all else has failed, (d) ambivalence toward one's own faith, and (e) fear of stepping outside professional boundaries. This study raised additional questions regarding the role spirituality plays in the lives of people with a terminal illness. The fact that 32 of 50 patients expressed religious concerns provides an impetus for health care providers to gain a broader understanding of spirituality as a QOL indicator and as a resource in terminal illness.

Investigating the relationship of SWB and anxiety, Kaczorowski (1989) surveyed 114 patients diagnosed with cancer to explore the association between anxiety and SWB. A convenience sampling procedure was used to recruit subjects, and individuals were selected to participate regardless of their stage of cancer diagnosis. These participants completed the State-Trait Anxiety Scale (Spielberger, 1983) and the SWB Scale (Ellison, 1983) in their homes.

The State-Trait Anxiety Inventory has been used extensively in adults with cancer as well as other groups. The instrument has 40 items and measures two types of anxiety: state and trait. The State-Trait Anxiety Inventory uses a 4-point Likert Scale with 20 items assessing how one feels now, and an additional 20 items assessing how one usually feels.

The SWB Scale (Ellison, 1983) uses a 6-point Likert Scale and consists of 20 items measuring EWB and RWB to yield an overall SWB score. The reliability and validity of the scales were reported. The sample consisted of 84 women and 30 men; the women had a mean age of 58 and the men 60. One fourth of the sample was Protestant, half were Catholic, less than one tenth Jewish, and less than one tenth indicated no religion. The sample was Caucasian and upper to middle class with a mean of 15 years of education.

The analyses between SWB and anxiety revealed an inverse relationship. A higher level of SWB correlated with a lower level of anxiety in the total sample ranging from –.29 to –.86. Additionally, partial correlations were made for age, gender, and participation in a group. Women were found to be more religious than men in this sample and, the older the subject, the higher the SWB. The data were not provided, only described.

The length of time since diagnosis did not relate to state-trait anxiety or SWB. Newly diagnosed individuals did not have higher anxiety scores than those diagnosed longer, nor did individuals diagnosed longer have higher SWB scores; in fact, their scores were similar. The study provided empirical evidence that individuals perceiving themselves spiritually healthy experience less anxiety. However, given the religious affiliation of the sample, the scores may be biased because religious groups tend to score higher on the scale when compared with other groups (Bufford, Paloutzian, & Ellison, 1991). Although religious affiliation may have influenced the findings in the study, the correlation between SWB and anxiety provides support for future research to evaluate the relationship between spirituality and anxiety while considering the effects of religious affiliation.

In a study exploring spirituality among adult women (N = 12), Burkhardt (1994) used a qualitative research design (i.e., grounded theory) to determine female understanding of spirituality. Data were collected using in-depth, face-to-face interviews. Grounded theory is a naturalistic design that relies on an inductive approach by the constant analysis of old and new data in categories generated from interviews. The ages of the female sample ranged from 30–80; only one woman had no children. All but two of the

women were educated; three were retired and the remaining women were employed outside the home. The majority of the women were affiliated with some form of religious entity. The participants chose the interview locations and the interviews normally lasted one hour. The women were initially asked to describe their understanding of the term spirituality. The findings of the interviews showed that initially women described spirituality as a relationship with a higher power, dependency on God, and church attendance. Following the initial question, these women began to expand on their understanding by telling personal stories describing their journeys toward their awareness of self (Burkhardt, 1994).

Eight themes emerged from the interviews (Burkhardt, 1994): *becoming*, as reflected by their journey to become spiritual; *being*, as a state of functioning from within; *knowing*, as an awareness of self connections; *doing*, as the expression of spirituality; *strength*, as inner strength derived through nature; *meaning*, as giving them purpose; *journeying*, as change and learning through a spiritual process; and *connecting*, as connecting with the past, present, God, and nature. These findings provide important considerations to bear in mind in terms of understanding the spirituality of women.

First, the data demonstrated that, among women, there is much diversity and richness about how they describe and conceptualize spirituality. Second, the eight themes reflect a process of how women become spiritual. It is through personal journeys, connections with others, nature, taking action, learning, and changing that meaningful spirituality was achieved for these women. This study (Burkhardt, 1994) demonstrates that spirituality is a process of unifying, of bringing together all of life's collective experiences; it is not simply church attendance or praying. Further evident is that nothing happens in isolation; internal and external events connect individuals in sometimes indescribable ways.

In maintaining the validity of the this study (Burkhardt, 1994), all taped interviews were reported to be transcribed by professionals. Each tape was reviewed line by line using field notes, and also reviewed by the participants for validity after being sorted into

categories. This process continued until all possible categories were uncovered. The professionals transcribing the interviews were not described, nor were the interviewers. The locations of the interviews were also not well described. This study did however uncover important insights into the ways women conceptualize spirituality that will facilitate addressing the spiritual needs of women.

In another study, dream-telling was implemented as a tool to increase spiritual awareness among healthy adults. Dombeck (1995) recruited eight individuals through newspaper ads—six women and two men. The purpose of this study was to determine if dream-sharing could increase spiritual awareness. The author defined spiritual awareness as relating to four themes: the awareness of human incompleteness, human relatedness, uncertain direction, and the awareness of suffering and healing. Dombeck also contended that spiritual awareness is the recognition of vulnerability and the desire for something better. The ages of the participants ranged from 25–65. Two of the members were Hispanic, two were Italian-American, one was European, and three were Anglo-American. All but two members of the group were employed, and their religious backgrounds varied.

The researcher (Dombeck, 1995) used the theme-centered interaction model, which is based on existential philosophy with an emphasis to balance the subjective/affective and interactional aspects of the sample group. The subjective and affective aspects of the group were assessed through the process of dream-sharing. The rules were that the dreams of all participants would be honored and that individuals would be encouraged to share their thoughts freely. Group participants would be encouraged to speak for themselves. The operating principles of the interactional model are as follows:

1. Dreams are a gift from each of us.
2. Dreamers have final authority.
3. All participants are given an opportunity to share.
4. Trust is communicated.

5. Dream-sharing is not a therapy group.

6. Sharing time is balanced equally among participants.

Following these principles, the group met over a 10-week period. The sessions began with a sense of competition, adversarial relations, and some bias and gender issues. Many members reported feeling that too much time was spent outlining their differences instead of noting their similarities. However at the end of the dream-sharing sessions, group members were able to come together and share a new awareness.

In overwhelming consistency, individuals reported learning to appreciate the experience of others in spite of their differences. A sense of vulnerability was expressed by some, however in time, trust and confidence was strengthened through the dream-sharing process. Members were able to bond with one another despite the uniqueness of their dream experiences. Further reported was a sense of healing. It was through dream-sharing that an awareness of the symbolic meaning within each dream took on varied dimensions with different people. As group members gave feedback to one another, participants reported becoming more aware of the similar issues within their lives. This study provided useful tools valuable to nurses in increasing the spiritual awareness of patients under their care. Dream-sharing has great potential if used properly in enhancing the spiritual component of QOL.

Examining coping strategies used by long-term cancer survivors, Halstead and Fernsler (1993) utilized the Jalowiec Coping Scale (Jalowiec, 1987) and a subject information sheet to survey men and women (N = 128). The purpose of the study was to describe the coping strategies and their effectiveness. Only 59 surveys were returned. The mean survival years of cancer was 13.03, ages ranged from 41–65, and 88.1% of the sample were women. The ethnicity of the sample was Caucasian.

The Jalowiec Coping Scale is a 60-item instrument describing coping behaviors. Reliability and validity was reported (Halstead & Fernsler, 1993). The subject information sheet was developed by the researchers to account for demographic and medical data.

Fifty-one percent of the sample were survivors of breast cancer. The findings showed the participants rated prayer or trust in God as the highest coping strategy. No statistically significant differences were found with respect to the length of survivability. An analysis of variance yielded differences between coping styles of the elderly and those of middle-aged survivors. A Tukey post hoc comparison test demonstrated that the elderly used more optimistic strategies than the middle-aged group.

The findings in this study (Halstead & Fernsler, 1993) suggest spirituality was an important coping strategy for cancer survivors. The use of prayer was controlled by the participants. Enhancing the ability to pray, or other forms of meditation, could potentially improve QOL. The study would have been strengthened by correlating the Jalowiec Coping Scale results with measures of depression and anxiety or health to show the effect of coping on these QOL indicators. It would also have been useful to know how these participants were coping previously, and how much they relied on spirituality or religion prior to their diagnosis of cancer. This would have indirectly determined whether their coping was a functional characteristic of having cancer or of a personal nature. Previous empirical evidence suggests that spirituality is a necessary component for coping with terminal illness so this study comports with the previous findings.

In another study exploring the relationship between religion and mental distress, Handal, Lopez, and Moergen (1989) sampled 114 African-American women using the Personal Religiosity Inventory (Lipsmeyer, 1984) and the Langner Symptoms Survey (Langner, 1962). The reliability and validity of the scales were reported. The Personal Religiosity Inventory is a 45-item Likert-type with scales ranging from dimensions of personal prayer to integration (i.e., the perceived influence of one's relationship with God). The Langner Symptoms Survey is a 22-item scale measuring psychological distress. The items are scored either 1 or 0 (i.e., presence or absence of symptoms), and the scores can range from 0–22 with a higher score indicating greater psychological distress. The

participants ages ranged from 18–67, and 91.3% of the sample reported a religious affiliation.

Handel et al. (1989) reported using an analysis of variance procedure in which three levels served as independent variables: high, medium, and low. These levels were derived as mean integration scores. The Langner Symptoms Survey Scale served as the dependent variable. Subjects were placed into one of three groups based on their mean scores—also high, middle, or low. The findings indicated that a statistically significant difference of 4.69 occurred at an alpha level <.05. A Tukey post hoc comparison procedure determined that the low-scoring group reported greater distress (5.07 ± 3.17) than the middle-scoring (2.66 ± 2.28) and high-scoring (3.11 ± 2.75) groups. These findings indicate a meaningful relationship between religion and mental distress. The individuals who scored lower on the integration scale reported greater mental distress.

The Handel et al. (1989) study uncovered important interactions between religion as a component of spirituality and mental distress. However the authors did not describe the nature of the mental distress (i.e., whether or not the distress was anxiety or depression). This information would provide a direct linkage between spirituality and mental health. Further, not much was reported on the similarities and dissimilarities between the groups. Other confounders were never addressed; for example, previous mental health functioning, health status, age, or support systems. While religion was shown to have great potential in lowering mental distress, more attention to sampling issues would have accentuated these findings.

The reliability and validity of the instruments presented in this review of spiritual literature can be found in Table 1. The sample sizes on which the reliabilities are based are also indicated. In some cases, sample sizes were not provided.

Table 1

Reliability and Validity (Campbell et al., 1988; Ellison, 1983; Hardiness Institute, 1985; Jalowiec, 1987; Langner, 1962; Lipsmere, 1984; Nowotny, 1989; Reed, 1986; Reed, 1987)

Measure	*N*	Reliability	Validity
Spiritual Perspective Scale	400	Cronbach's alpha $r = .90$	Criterion-related and discriminate validity
Index Well-Being Scale	Not reported	Cronbach's alpha $r = .93$	Not well-described
Personal Views Survey	Not reported	Cronbach's alpha $r = .82$	Not reported
Spiritual Well-Being Scale	100	Cronbach's alpha $r = .89$ spiritual well-being; $r = .86$ existential well-being; $r = .96$ religious well-being	Face validity
Intrinsic/Extrinsic Scale	Not reported	Cronbach's alpha $r = .69–.79$	Not reported
Nowotny Hope Scale	306	Cronbach's alpha $r = .90$	Concurrent Beck's Hopelessness Scale
Jalowiec Coping Scale	Not reported	Cronbach's alpha $r = .86$	Construct validity
Personal Religiosity Inventory	Not reported	Cronbach's alpha $r = .98$	Convergent/ Divergent
Langner Symptom Survey	Not reported	Cronbach's alpha $r = .80$	Not reported

Depression, Anxiety, and Hope

Cochran and Mays (1994) explored the frequency of depressive symptoms among 829 African-American, homosexual men and women to determine the psychiatric morbidity due to HIV infection. The measure used was the Center for Epidemiological Studies Depression Scale (Radloff, 1977)—a 20-item inventory assessing common symptoms of depression: lack of positive affect, negative affect, somatic symptoms, and interpersonal disruption. A score > 16 would indicate probable clinical depression. Also used was the Life Problems Scale assessing 12 areas of living. The subjects were recruited from African-American, gay organizations. Eighty-four percent of the females sampled indicated they were homosexual and this group had a mean age of 33.2 years. Male subjects describing themselves as homosexual totaled 80% and 29% of the men were HIV positive; the seropositivity of the women was not reported. The men in the sample were categorized into four groups: symptomatic HIV infected (n = 120), asymptomatic HIV infected (n = 117), HIV antibody negative (n = 296), and HIV status unknown (n = 296). The women were not segregated into groups. The results revealed differing levels of depressive symptoms between the groups of men and women.

A one-way analysis of variance (F = 8.21; p .002) and post hoc comparisons showed that men with HIV-related disease reported significantly higher depressive symptoms than the other groups of men. Additionally, the infected men reported more incidence of suicidal thoughts. Further, homosexually active women were found to be as depressed as the HIV positive men. It can be deduced that AIDS-related symptoms account partially for the distress; however, when compared with previous community samples using the same instruments in Caucasian, gay men, African-American males experienced greater distress levels.

This study illustrates the risk of African-American, homosexual men and women for developing depression and anxiety. Several factors not addressed in the study could be the stigma placed on homosexual African-Americans by their community, level of social

support, and severity of symptoms. These factors could have influenced levels of symptoms related to depression or anxiety with HIV infection. An important goal for future researchers would be to link depression and anxiety to precipitating factors possibly unique to the African-American community.

Focusing on suicidality and HIV, McKegney and O'Dowd (1992) examined three groups of patients: those diagnosed with AIDS (n = 322), patients HIV positive (n = 82), and those known to be HIV negative (n = 1,086). These individuals were all seen in psychiatric consultation. The mean age of each group was 37 years for the AIDS patients, 34 years for those HIV positive, and 34 years for the HIV negative group. The individuals with AIDS were described as being sicker than the other two groups. The Karnofsky Scale (Karnofsky & Burchenal, 1949), was used to assess the degree of illness. The AIDS patients were hospitalized for serious complications not described. Fifty percent of the HIV positive patients were admitted for bacterial pneumonia; the HIV negative status group were admitted with cardiovascular, gastrointestinal, pulmonary, and renal problems. Suicidality was assessed using semistructured interviews that were not well described. The results showed that HIV positive patients exhibited a higher degree of suicidality in comparison to the other groups: 21% for HIV positive patients, 11% for AIDS patients, and 10% for those HIV negative. The factors contributing to these differences were also not well described; however, HIV positive patients, learning of their diagnoses for the first time, may be at higher risk than AIDS patients who have known of their status longer.

To determine the levels of anxiety, depression, and hope with HIV infection, Chuang, Devins, Hunsley, and Gill (1989) sampled three different patient groups: HIV positive (n = 24), ARC (n = 22), and AIDS (n = 19). The mean age of the sample was 32 years. The measures used were the following: The Center for Epidemiologic Studies Depression Scale (Radloff, 1977), Profile of Mood States (McNair, Lorr, & Droppleman, 1971), Trait Anxiety Subscale (Spielberger, Gorsuch, & Lushene, 1970), Affect Balance Scale (Bradburn, 1969), Hopelessness Scale (Beck, Weissman, & Lester, 1974), Life

Happiness Scale (Atkinson, 1978), and the Social Network Index (Berkman & Syme, 1979). Interviews were conducted by a psychiatrist over a 60-minute time period. The scales were all standardized measures assessing QOL indicators.

The scale scores were presented in percentage points—a higher percentage point indicates a higher degree of anxiety, depression, and hope. The results showed that across the groups, HIV positive and ARC patients experienced more depressive symptoms, mood disturbances, and trait anxiety when compared with the AIDS patients.

The Center for Epidemiologic Studies Depression Scale indicated 22% for HIV positive patients, 24% for ARC patients, and 13.4% for those with AIDS. A higher percentage score indicates a higher level of depression. The Profile of Mood States Scale indicated 51% for HIV positive, 63% for ARC patients, and 22% for those with AIDS. The Trait-Anxiety Scale indicated 46.1% for HIV positive patients, 45.2% for those with ARC, and 35.1% for AIDS patients. The small sample size in the study limits generalizability of the results due to the possibility of increased random error through sampling. Other factors, such as the presence of social support, were not addressed. Therefore, it is not known if AIDS patients had more social support than HIV positive patients. Additionally, the length of AIDS diagnosis or HIV infection was not addressed. Individuals experiencing a new HIV diagnosis would experience more psychological distress compared to those who had been living with HIV infection for some time. With all its limitations, this study does signify the importance of assessing HIV positive patients for increases in anxiety and depression. Ethnicity of the sample was not reported, so cultural factors such as race cannot be addressed. While it is apparent that anxiety and depression are present with HIV infection, understanding how these QOL indicators change over time will provide the basis for more scientifically based interventions.

Examining psychological frailty and strengths among homosexual men, Viney, Crooks, Walker, and Henry (1991) randomly selected 60 men diagnosed with AIDS and 60 caregivers attending late-stage AIDS patients. The mean age of the AIDS patients was

36 years and the mean age of the caregivers was 38 years. Two groups outside of the gay community were included in the study for comparative purposes. These two groups consisted of 30 healthy university students and 30 men with chronic health conditions such as diabetes and coronary conditions. Each participant was confidentially interviewed for 60 minutes. The measures used in the study were the following: Cognitive Anxiety Scale (Viney & Westbrook, 1976a), Total Anxiety Scale (Gottschalk, Winget, & Glesser, 1969), Ambivalent Hostility Scale (Gottschalk, Winget, & Glesser, 1969), Pawn Helplessness Scale (Westbrook & Viney, 1980), Positive Affect Scale (Westbrook & Viney, 1976), and the Sociality Scale (Viney & Westbrook, 1979b). The scales were not well described. The findings yielded AIDS-infected community members having higher incidence of anxiety, helplessness, and depression. Depression was measured by the Ambivalent Hostility Scale. The seropositive group exhibited more depression than the other two groups (seropositive depression: 1.29, caregivers: .94, chronic health: 1.2, and well: .77). The study supports other research describing AIDS patients' vulnerability to depression and anxiety. The sample size limits generalizability of the results due to the risk of sampling error. The seropositive men were reported to have more strength (i.e., increased happiness) than the well men. This contradicts the finding that seropositive men were more depressed than the well men: The authors do not explain the contradictions; perhaps a more rigorous sampling design would strengthen the findings of the study.

Investigating psychosocial variables related to hope—another QOL indicator—Rabkin, Williams, Neugebauer, Remien, and Goetz (1990) examined a community sample of 208 HIV positive and HIV negative homosexual men. These participants were studied over a 5-year period. Those HIV seropositive numbered 124 and 84 were seronegative. Eighty-seven percent were Caucasian with a median age of 38. The measures used were the Hopelessness Scale (Beck, Weissman, & Lester, 1974), Social Support Scale (Wortman, 1987), Health of Locus Control Scale (Wallston, Wallston, & Devellis, 1978), Commitment Scale (Kobasa, 1979), Life Event Questionnaire, Hamilton

Rating Scale (Williams, 1988), Brief Symptom Inventory (Derogatis & Melisaratos, 1983), and an HIV Symptom Check List. The results showed higher levels of hopelessness were associated with a lower level of social support. Higher scores on a personal measure of control and commitment negatively correlated with hopelessness. The median scores for control and commitment in HIV positive individuals was –0.49 and .42 for HIV negative men. The median scores for the Hamilton Depression Rating Scale was .32 for HIV positive individuals and .42 for HIV negative participants. The Self Report Depression Scale yielded a median score of .69 for HIV individuals and .42 for HIV negative participants. Both depression scales correlated positively with hopelessness; however, the Hamilton Rating Scale completed by the evaluators was rated lower than the respondents rated themselves on the Depression Subscale. Although level of hopelessness was not related to HIV status, depressive symptoms were strongly related to hopelessness over the 5-year period. This underscores the validity of recognizing the importance of hope within the HIV population. Hope was correlated with social support so the presence of social support in persons with AIDS is important. The eventual understanding of how individuals sustain their hope, despite HIV infection, will enable nurses working in clinical practice to develop interventions appropriate for the most critical times—ultimately improving QOL for those with AIDS.

Health

A review of the literature indicates physical health status is a significant dimension to assess when measuring QOL of those with AIDS. Hornquist (1982) wrote that QOL should include measurement of both individual needs and available resources. Stromberg (1988) advocated that investigators grapple with whether to use subjective or objective measures, multiple or single instruments, quantitative or qualitative data, concluding that choice of instrument depends on the goal of the research.

Two other frameworks that have been used to conceptualize health as a component of QOL are those of Ware (1984) and George and Bearon (1980). Based on his belief that disease is a heterogeneous process, Ware conceptualized the disease process as a framework for understanding health as a dimension of QOL. Ware's definition provides a framework for understanding the impact of AIDS on QOL. It suggests that researchers take a comprehensive approach in assessing the impact of acute or chronic diseases. George and Bearon used both subjective and objective dimensions to define QOL (e.g., life satisfaction, self esteem, general health perception, and social role functioning). Both frameworks embrace the notion that the construct—QOL—is multidimensional. This supports the contention that researchers need to embrace this multidimensionality of the construct in their assessment of health status in those with AIDS. As indicated earlier, there is no consensus among researchers regarding the constitution of QOL so this raises several questions in assessing the extent that the literature was able to illuminate this concept in people with AIDS as it relates to health. The questions are as follows:

1. What does QOL mean for individuals at different stages of HIV disease?
2. Does increasing survivability improve QOL?
3. What are the factors that influence QOL?
4. Did the researchers define the meaning of QOL?
5. Can any cultural factors be inferred from these studies?

It is the author's contention that these questions will lead us to conclude that very little research has explored these issues in African-Americans with AIDS. Following this summary, is a conclusion of the state of the science and future directions. The following review of the literature bears out the ways in which health, as a component of QOL, has been measured and conceptualized in people with AIDS. The literature will underscore the importance of controlling HIV-related symptoms and its benefit to the QOL in those living with AIDS.

Wu et al. (1990) explored the effectiveness of AZT (Zidovudine) on HIV symptoms in 31 subjects living with AIDS in a blind clinical trial. The Karnofsky Performance Status (KPS) and the Quality of Well Being Scales measured performance status, mobility, physical activity, and social activity. In addition, mortality rates were used as an outcome measure. Sixteen randomized patients were assigned to take AZT—250 mgs every 4 hours. Fifteen subjects were assigned to take a placebo every 4 hours.

The measures (i.e., the KPS and Quality of Well-Being Scales) were repeated at 6, 9, and 12 month intervals. The subjects were comparable at baseline in terms of diagnostic makeup. After 52 weeks, despite the crossing over of the placebo patients to the experimental group, differences between the groups were undetectable, which may have been due to the small sample size.

Wu et al. (1991) conducted a preliminary study using a 30-item subset of the Medical Outcome Study (MOS) Questionnaire in 73 subjects with HIV infection and ARC. The purpose of the study was to determine if compilation of MOS scales would measure dimensions of QOL, particularly health status, and if they could discriminate between asymptomatic infection and HIV infection in those with early ARC. The 30-item MOS contained scales to measure energy fatigue, cognitive functions, and health distress. Asymptomatic scores were higher on overall health for the 73 subjects with HIV infection and ARC. The latter experienced less pain and increased physical function, along with role function and cognitive function, indicating improved QOL.

In a follow-up study, Wu et al. (1993) examined the effectiveness of the dosage of AZT in men with early HIV disease through a randomized, placebo-controlled trial over a 1-year period. The MOS Questionnaire was used to measure physical functioning.

Thirty-four subjects were assigned a placebo, and 36 subjects were instructed to take AZT—200 mg every 4 hours. The authors reported that there were no differences between the group scores from baseline along dimensions of functional status, physical, social roles, and cognitive functions. At 52 weeks, both groups reported declined overall

health than at baseline, and their scores were similar. The study is thought to have detected the effectiveness of AZT on survival. However, AZT did not significantly impact the functional status of the experimental group as compared with the placebo group, perhaps partially due to small sample size.

The study conducted by Wu et al. (1990, 1993) did not articulate a definition for QOL for their study participants at different stages of HIV disease. Since a repeated measure design was used, the participants were comparable at baseline. Secondly, there was no indication of improved QOL for these participants as a result of taking AZT. The study indicated a decline in mortality rates in those treated with AZT; however, the question of whether or not QOL was improved still remains. The author believes that other factors not implied in the study could have influenced the findings; for example, support systems and previous health status; however, these factors were not explored. The ethnicity factor in the study was not reported leaving the question of cultural influence unresolved.

Gelber (1992) randomized 711 patients within 32 AIDS clinical trial units to measure the effectiveness of respective dosages of AZT on the QOL of people with AIDS. A little less than half the sample—351 subjects—were assigned to receive a placebo; 360 subjects were assigned AZT treatment of 1200 mg per day. The Q twist method was a measure used to yield the amount of time participants were free of symptoms (e.g., adverse effects such as drug toxicity). The study reported incidence of severe symptomatology at approximately 22.8% for the group treated with AZT and approximately 15.1% for those ingesting the placebo. QOL was never defined in the study; however, it was described by the methodology as a time free of symptomatology. As reported by the study, those prescribed AZT experienced a greater number of adverse symptoms than those ingesting a placebo, indicating that AZT did not deliver sufficient therapeutic impact and improve QOL for these individuals. Once again, no other factors were considered for influencing QOL. It is possible that most of these clinical trial participants were so accustomed to the side effects of AZT that, to experience them, held no new significance. Additionally, it is not

known if the time since diagnosis was factored into the study. Participants were characterized as mildly symptomatic; however, if they varied in years of living with the infection, this could explain some of the differences between the AZT and the placebo group. Ethnicity was not reported for the study so, if individual cultural factors had any influence on the reporting of symptomatology, this is also unknown.

Fischl, Richman, and Grieco (1987) conducted a double-blind, placebo-controlled trial of AZT effectiveness in patients with AIDS. The research participants were stratified according to T cell count and were randomized to receive either AZT or a placebo. Subjects assigned to ingest the placebo numbered 137, and 445 were assigned to receive AZT—250 mg every 4 hours. The participants were comparable at baseline for age, body weight, KPS score, symptoms, total number of T cells, and diagnosis.

The results of the study revealed that 19 subjects in the placebo group and one in the AZT group died during the study. Probability for survival in the AZT group was .98% and .78% for the placebo group. Thus, increased survival time for those prescribed AZT was significantly higher than those not receiving the drug. Additionally, there were no significant differences between the AZT and placebo groups in those with over 100 T cells. However, there were significant findings revealing that subjects in the AZT group experienced increased body weight and T cell count, as compared to those in the placebo group. Overall, this study demonstrated that those treated with AZT had a decrease in mortality rates and opportunistic infections, as well as improved scores on the performance status measure (KPS).

In another double-blinded, randomized control clinical trial, Fischl et al. (1990) assigned 357 participants to the placebo group and 360 to receive AZT for approximately 11 months. Participants were stratified according to the absolute number of T cells. Stratum I contained subjects with a pretreatment T cell count of more than 200 but less than 500. Stratum II was comprised of subjects with a 500–799 pretreatment T cell count. Seventeen subjects (2% of the sample) developed anemia and required transfusions; these

subjects were AZT recipients. Those subjects receiving the placebo did not develop anemia. Fischl et al. reported that subjects with mild, symptomatic HIV infection and T cell counts of 200–500 showed a decrease in the progression of HIV symptoms if they were in the AZT group. However, subjects with < 500 T cells indicated no reportable differences.

In summary, this study demonstrated that AZT delayed the progression of disease for subjects with T cell counts of less than 500. The experimental group experienced a significantly greater number of adverse reactions (vomiting, malaise, nausea, and anemia). QOL was measured counting reportable symptoms related to receiving AZT therapy. Additionally, QOL was defined by the frequency of reported symptoms; the less participants reported symptoms, the greater or more positive the QOL.

In both studies, QOL was implied as an outcome indicator of improvement by two factors: survivability and symptom reporting. Although the study conducted by Fischl et al. (1987) demonstrated that those treated with AZT had a higher probability of survival, the quality of their survival time was not explicated. Similarly, in another study by Fischl et al. (1990), while HIV symptoms were the focus, other daily experiences such as anxiety, depression, and stigma could have been stresses, but were not demonstratively described. The only factor in both studies identified as influencing QOL was the appearance of opportunistic infections. This author asserts that QOL encompasses more than an appearance of a particular symptom of a disease. There are some factors over which AZT has no power or influence; for example, wasting syndrome; physical manifestations of Kaposis Sarcoma; and rejection from family, community, or friends, just to name a few. Ethnicity was not addressed in this study so no inference of the influence of cultural factors could be made. Henry et al. (1992) conducted a randomized, double-blind, clinical controlled trial in 691 HIV patients with anemia. Patients were assigned to receive either the R-HU Erythropoietin (EPO) or a placebo. The 294 subjects were entered in the experimental group to receive the EPO for 12 weeks, and 307 subjects were entered into the control group. A visual analogue scale was used to assess overall QOL.

Henry et al. (1992) reported that, of the 294 patients, 49 were assigned to the EPO group and did not complete the study due to personal factors and disease progression. He also reported that 24 placebo patients did not complete the study due to the following reasons: personal, death, disease progression, discontinuation of AZT therapy, and failure to follow up with investigators. Overall, the study indicated that QOL improved for those receiving EPO therapy. They did not describe the quality or nature of that improvement. EPO is introduced to boost the red blood cells so, for this study, QOL was defined by the absence of anemia. The investigators were not attempting to assess this across various stages of HIV illness. The author found the study's conceptualization of QOL weak and oversimplistic. While anemia is an important health problem, it is one of many adverse reactions secondary to AZT treatment. An obvious oversight was the lack of attention given to the side effects of EPO. It is not known if these participants were in other experimental drug trials, as is common among AIDS patients, causing other unrelated symptoms to be experienced. Survivability was not the impetus of this study; the focus was on symptom management.

Hedge and Glover (1990) conducted research involving group therapy as a means of providing information and support for improving QOL in people with HIV infection. The intent of the study was to determine if group membership might reduce the need to seek individual counseling. The group ranged in age from 21 to 51 years. Seven members of the group were asymptomatic, two had HIV-related symptoms, two were diagnosed as having full-blown AIDS, two had tested negative for HIV infection, and one had not been tested at all. Topics for group discussion were chosen from issues counselors reported as typically addressed in sessions of this nature and participant makeup.

The results of the study indicated that the diversity of the group allowed for sharing experiences through the use of guest speakers and open discussion. Despite initial concern over mixing the group, in terms of diagnostic categories possibly causing conflict, none occurred. The group was programmed to run for 12 weeks. Group members were

administered a questionnaire to measure QOL (not well described in the study) by assessing members' reaction to the formation of the group. Hedge and Glover (1990) reported that long-term coping skills were fostered in the group members. Eight members of the group were able to significantly reduce their individual counseling sessions. In summary, this study demonstrated that, within the context of HIV, group intervention enhanced QOL by increasing group members' satisfaction with the mutual support received in this group setting.

QOL was conceptualized as a decrease in the need for individual counseling; survivability was not an indicator of quality for this study. Individual and cultural factors were not accounted for in this study, contributing to its example of oversimplification of the construct QOL and measurement. There could exist a myriad of factors explaining why any individual would decide against seeking individual counseling; for example, personal and cultural reasons, as well as simply not considering it helpful. To conclude that QOL has improved because individual counseling is no longer sought, is quite a conceptual leap. Another problem is posed with such a small sample size, and the time frame of 12 weeks may not have been a sufficient observation period to test or observe changes in participant behavior.

Literature Summary

Literature on Spirituality

The literature review on spirituality revealed several gaps. First, there is very little known about the measurement of spirituality in those living with HIV infection across the trajectory of the disease. Second, very few studies examined the relationship of spirituality to psychosocial variables and health status. Third, ethnicity was not widely addressed, so future studies need to ascertain the impact of this variable on measures of spirituality. Fourth, there was very little offered on the definition of spirituality; for example, some of

the studies utilized scales generally used to measure spirituality in assessing religiousness (Mickley & Soeken, 1993; Reed, 1986, 1987).

Consequently, there is a need for greater clarity in the conceptualization of spirituality and religion; they are distinct concepts. This author conceptualizes spirituality as either a traditional or nontraditional journey transcending the material realm of life. It is a belief in the unknown and unseen. The author further asserts that religion is an organized system of beliefs. The activities surrounding those beliefs are measured by the degree of religiousness or participation within that system. These studies failed to clearly articulate the vital distinction between spirituality and religion, which leads to a lack of clarity in measurement. An important assessment to be made from those living with a terminal illness is the context in which they place their spirituality. Previous research failed to articulate the importance of contextualizing spiritual development.

There was a general consensus among the studies that spirituality and religion were salient resources; however, little consensus was found in the instrumentation used to collect the data. For example, spirituality was either measured as a characteristic of health, or surveyed to ascertain its degree of utility as a resource. It would seem important to understand the impact of spirituality on other QOL indicators. Previous research certainly articulated the significance of spirituality in terminal illness; however, there needs to be movement advancing from simply describing the importance of the phenomenon of spirituality.

The literature explored the benefit of using different methods to assess the spiritual dimension of QOL. It showed that, among those living with a terminal illness, a variety of spiritual perspectives exist. The literature also investigated personal characteristics and their influence on spirituality. In some instances, females scored higher than males on measures assessing spirituality. Other studies indicated women to be more religious than men, and that age was a strong predictor of spirituality level. In some cases, the sample size may have been too small to detect the effects of gender and age; however, consideration of the

effects of these factors on spirituality has implications for providing more beneficial services to men and women living with HIV infection. The literature overwhelmingly provided empirical evidence suggesting the positive outcomes of spirituality; however, there is still a need to develop interventions that can directly link a positive outcome in QOL to the presence of spirituality or practice of religion. In addition, we need to begin documenting the interaction of spirituality and other dimensions of QOL affected by HIV/AIDS such as anxiety, depression, hope, and health through nursing research to widen the scope of nursing knowledge on the healing contribution of spirituality. The impact potential on QOL must be realized through further research. There exists a dearth of information related to the effect of spirituality on QOL warranting further explication.

Literature on Depression, Anxiety, and Hope

The literature on the psychosocial variables affecting the QOL of people with AIDS has demonstrated individuals living with HIV/AIDS are at risk for psychological distress. What the literature did not explain was the extent to which the level of distress changes over time. Further, the literature did not take into account the effect of spirituality on anxiety, depression, and hope. There was a gap in the literature on the special psychosocial needs of women of color and, to some extent, the role of social support on the psychosocial impact of HIV.

Literature on Health

The literature on health as a dimension of QOL yielded intervention studies with endpoints evaluating the effectiveness of AZT. The review revealed several gaps. There is very little known about ethnicity, race, or culture in the measurement of QOL. Second, nursing research examining health as a QOL indicator in people with AIDS has been minimal. Third, the length of the clinical trials evaluating pharmacological therapeutics did not allow for trending data to emerge, potentially explicating how health status, as a QOL indicator, changes over time.

The literature presented QOL as a multidimensional construct. Future studies accessing diverse populations are needed to determine if different results would be yielded. It is conceivable that data from clinical trials would be used to modify existing clinical therapies available for those with AIDS. It is, therefore, incumbent upon researchers to examine health as a component of QOL in people of color.

Through the search of literature using the key words African-Americans, AIDS, and QOL, it was discovered that no studies were retrievable in nursing or medicine in terms of looking at outcomes of treatment. It may have been difficult to retrieve articles if in fact the studies did not use the term QOL in the titles.

Holzemer and Wilson (1995) state that, although the incidence of seropositivity is marginally decreasing among the white, gay male population in the United States, incidence of HIV infection is increasing among people of color and women and children. Further stated is that these trends have important implications for understanding QOL in those with HIV infection.

The literature review on AIDS and African-Americans yielded global information on AIDS knowledge (Durant et al., 1992; Siegel, Lazarus, Krasnovsky, Durbin, & Chesney, 1991), and many researchers have looked at how to prevent the spread of HIV (Bowser, 1992; Harris, 1992; Wingwood, 1992). One study discussed the social and cultural variables to consider when evaluating QOL in African-Americans with AIDS; Mays and Jackson (1991) outlined similar considerations for researchers. The first consideration was to recognize that an AIDS diagnosis may result in the identification of socially stigmatized behavior previously hidden (i.e., drug use, sexual preference, and multiple partners).

The second consideration is that while African-Americans, like any other group, have experienced rejection from family members and friends, the experience may be more severe due to cultural norms (e.g., the cultural importance of being connected to the extended family is an important factor to consider when evaluating African-Americans with AIDS). The third consideration is that cultural barriers, such as lack of trust toward the

medical system, may complicate the willingness to seek medical care or treatment, support services, or participation in clinical trials.

Although prior research has carved out significant components of QOL (e.g., health status), additional research involving diverse groups is needed to increase our knowledge on QOL in ethnic groups. Second, there is a need to develop instruments measuring the effectiveness of nursing interventions on QOL. Third, a broader understanding of the ways QOL changes over time would enable researchers to assess when to implement specific interventions. As stated earlier, previous research did not address QOL for people of color. Additionally, previously cited statistics of the incidence of AIDS in African-Americans and other communities of color should enlighten future researchers to target these populations.

In summary, the literature provided evidence supporting the need to understand how spirituality effects the QOL of African-Americans and it described the psychosocial impact of HIV in persons with AIDS. Further, though largely focused on physical symptoms, the literature describing the measurement of QOL in persons with AIDS helped us to understand that broader definitions of QOL are needed to enable comprehensive measurement of this phenomenon. The spirituality and QOL studies lacked representation of African-Americans; hence, we cannot confidently generalize this compelling evidence of the empirical findings to this population. This study will address this critical gap in the nursing research related to spirituality in African-Americans with HIV/AIDS. To date, no study in nursing has examined QOL to the extent presented in this study, particularly surrounding African-Americans with AIDS and the role of spirituality within that realm. Further, the literature indicates HIV symptoms have a significant effect on life satisfaction and psychosocial functioning; hence, future research needs to examine how spirituality intervention and controlling HIV symptoms can benefit African-Americans living with HIV/AIDS.

The conceptual model proposed hypothesizes an interaction among anxiety, depression, hope, health, and spirituality. The literature supported the conceptual

framework for this study and that framework was tested here to further refine the scientific investigations into the QOL of African-Americans with HIV/AIDS.

CHAPTER III

Methodology

Study Design

This chapter defines the design and research questions (see Table 2). The setting, recruitment, consent, sampling, measures, and risks/benefits are also addressed.

A cross-sectional design was employed to estimate the relationship among spirituality, hope, anxiety, depression, and health status in people living with Human Immunodeficiency Virus (HIV) infection. A convenience sampling method was used to recruit subjects. A nonprobabilistic sample of 117 African-Americans is included.

Since few studies have addressed the relationships among spirituality, hope, depression, health, and anxiety, more research is needed to explore the ways these variables are effected by the spiritual involvement of people living with Acquired Immune Deficiency Syndrome (AIDS). The literature has documented the psychosocial impact of HIV infection. It can be expected that individuals living with a terminal illness will experience some form of psychosocial reaction.

Setting and Recruitment

Data were collected over a 4-month period and the study was conducted in the counties of Alameda and Los Angeles. The cases of AIDS are approximately 2,767 in Alameda and 19,017 in Los Angeles. A total of approximately 54,927 cases exist in California (Rains, Maxfield, & Do, 1994). The investigator was granted access to three case management agencies in the state of California: Center for HIV Services in Oakland, Minority AIDS Project in Los Angeles, and the Watts AIDS Project in Los Angeles. The populations served by these agencies are covered 70% by Medi-Cal or social security. The settings serve a population that is 50% African-American. The clients were provided space to participate in case management services. The locations are in urban neighborhoods and serve approximately 1000 individuals per month. Because the settings may have attracted

Table 2

Research Questions and Study Variables

Study variables	Research questions
Personal characteristics 1. Age 2. Gender 3. Sexual preference 4. Education	1. What is the contribution of religious attributes to psychological status (hope, depression and anxiety) controlling for personal characteristics in an HIV positive African-American sample?
Religious attributes 1. Existential well-being 2. Religious well-being	2. What is the contribution of religious attributes to health status controlling for personal characteristics in an HIV positive African-American sample?
Psychological status 1. State anxiety 2. Trait anxiety 3. Hope 4. Depression	Analysis 1. Descriptive statistics: mean, standard deviation, frequencies, variance 2. Correlation: correlation matrix; explore correlation among study variables
Health status 1. HIV symptoms	3. Five multiple regression runs using forced entry were conducted

Model				
1. Religious attributes	+	Personal characteristics	⇒	Depression
2. Religious attributes	+	Personal characteristics	⇒	Anxiety
3. Religious attributes	+	Personal characteristics	⇒	Hope
4. Religious attributes	+	Personal characteristics	⇒	Health status

individuals regularly participating in support groups having a religious affiliation, the investigator considered alternative sites, as needed, to decrease sampling bias toward religious groups. The investigator coordinated with the agency directors in recruiting clients. A flier entitled "Quality of Life Study" was posted to assure that all potential participants consider themselves eligible—not just those considering themselves spiritual.

Consent

The use of human subjects was granted approval November 29, 1995. The approval number is H642-12198-01. Prior to administering the questionnaires, a consent form was distributed to the study participants. Once it was completed and returned, the investigator distributed the questionnaires on-site in a group interview format. The participants were seated one chair apart from one another to minimize distraction and to ensure privacy. Upon completion, the participants returned the questionnaires to the investigator and received monetary compensation for their contribution to the study.

Previous research experience revealed that some form of compensation is helpful in the recruitment of subjects and in the achievement of a compliance rate of 80–90%. Reimbursement of $5.00 to each participant enabled the investigator to achieve a response rate of 90%; 13 individuals declined to participate.

Power Analysis and Measures

Power Analysis and Sample Size

Given the final sample size of 117 participants and seven independent variables, the power achieved to detect a significant overall *R*-squared .43 for a regression equation was > .99 at an alpha level of .05. The unique contribution of any single variable above and beyond the other six would have required semisquare partial of at least .04. Interestingly, in the actual analysis, one of the independent variables accounted for a mere .03, yet was

found to be statistically significant. In all five regression analyses, moderate to large effects were detected at an alpha level <.05.

Study Instruments

The measures used in this study were the SWB Scale (Ellison, 1983), Beck's Depression Inventory (Beck, Ward, Mendleson, Mock, & Erbaugh, 1961), Nowotny Hope Scale (Nowotny, 1989), State-Trait Anxiety Inventory (Spielberger, Gorsich, & Lushens, 1970), and the Sign and Symptom Checklist for Persons With HIV Disease (Holzemer, Henry, Reilly, Slaughter, & Portillo, 1994) (see Tables 3–7 for reliability and validity of these measures).

Study Variables

The independent variables for the research questions were religious well-being, existential well-being, gender, sexual preference, HIV symptoms, age, and education. The dependent variables were anxiety, depression, hope, and health status.

Risk and Benefits

The risk associated with the study were the potential anxiety that could result from some of the questions presented on the survey. However, it was made clear to the subjects that they were free to terminate their participation at any time. All collected data were stored in a locked file cabinet. Subjects names were not attached to the survey booklet; a code number was inscribed.

Study Benefits

Participation in the survey provided no direct benefits to the subjects; however, an increased knowledge of the interaction among anxiety, depression, hope, health, and spirituality in African-Americans with HIV infection will provide care providers and the African-American community a framework for improving these dimensions of quality of life for African-Americans living with HIV infection.

Table 3

Beck Depression Inventory (Beck et al., 1961)

Dimension	Depression
Target population	Psychiatric patients (N = 226); ethnicity was not reported
Items	21
Scaling	Likert Scale, range: 0 = absence –3 = presence
Administration	Self-administered
Length	Seven minutes or less
Scoring	Total score
Reliability	Internal consistency, Cronbach's alpha = 0.86
Validity	Convergent validity with the Zung Rating Depression Scale (Zung, 1974): r = 0.41, p < .01
Utility	Minimal test-taking burden on respondents

Table 4

Nowotny Hope Scale (Nowotny, 1989)

Dimensions	Measures hope along six dimensions: confidence, relates to others, future is possible, spiritual beliefs, active involvement, and hope from within
Target population	Nonterminal and terminal patients (N = 306); ethnicity not reported
Items	29
Scaling	Likert Scale, range: strongly agree—strongly disagree
Administration	Self-administered
Length	Ten minutes
Scoring	Uses a 4-item Likert format and provided levels of hope: Hopeful: 96–116, Moderately Hopeful: 73–94, Low Hope: 51–72, Hopelessness: 29–50
Reliability	Cronbach's alpha 0.90
Validity	Principle components analysis; the total score of the six dimensions demonstrated concurrent validity with Beck's Hopelessness Scale r = .50 at $p < .01$ (Beck et al., 1974)
Utility	Short, easy to score

Table 5

Sign and Symptom Checklist for Persons With HIV Disease (Holzemer et al., 1994)

Dimensions	Intensity of HIV-related signs and symptoms
Target population	Independent patient and nurse pairs (N = 207)
Items	41
Scaling	Mild: 0–1; moderate: 2; severe: 3
Administration	Self-administration
Scoring	Mean rating of endorsed items
Reliability	Patient self-report
Validity	Content validity
Utility	Can be used to assess HIV symptoms

Table 6

Spiritual Well-Being Scale (Ellison, 1983)

Dimensions	Spiritual Well-Being Subscales: Religious Well-Being and Existential Well-Being
Target populations	Cancer and AIDS patients, religious groups; ethnicity not provided (N = 100)
Items	20
Scaling	Likert Scale, range: strongly agree—strongly disagree
Administration	Self-administered
Length	Five minutes to complete
Scoring	Items scored from 1–6 with higher score indicating higher spiritual well-being
Reliability	Test/Retest: 0.93 spiritual well-being, 0.96 religious well-being, and 0.86 existential well-being Internal consistency: 0.89 spiritual well-being, 0.87 religious well-being, and 0.78 existential well-being
Validity	Face validity: the Spiritual Well-Being Scale has theoretically correlated with other scales associated with spirituality: UCLA Loneliness Scale (r = 0.46, n = 137) and Purpose in Life Scale (r = 0.52, n = 172)
Utility	Scale is quick to administer; decreases test-taking burden

Table 7

State-Trait Anxiety Measure (Spielberger et al., 1970)

Dimensions	State anxiety (anxiety felt currently) and trait anxiety (how one usually feels)
Target population	White collar working adults (N = 1,387 males and 451 females)
Items	40
Scaling	State items: not at all–very much so; trait items: almost never–almost always
Administration	Self-administration
Length	Ten minutes or less
Scoring	A total score is derived by a mean rating of the items
Reliability	Cronbach's alpha: state anxiety = .86–.94; trait anxiety = .89–.91
Validity	Construct, convergent, divergent
Utility	Less test-taking burden; less of a challenge for those with reading difficulties

Risk and Benefits

The risk associated with the study were the potential anxiety that could result from some of the questions presented on the survey. However, it was made clear to the subjects that they were free to terminate their participation at any time. All collected data were stored in a locked file cabinet. Subjects names were not attached to the survey booklet; a code number was inscribed.

Study Benefits

Participation in the survey provided no direct benefits to the subjects; however, an increased knowledge of the interaction among anxiety, depression, hope, health, and spirituality in African-Americans with HIV infection will provide care providers and the African-American community a framework for improving these dimensions of quality of life for African-Americans living with HIV infection.

Confidential Procedures

Only research personnel had access to the study data. Subjects were given a full explanation of the study and given a consent form. The researcher distributed and reviewed the questionnaire with the participants. Completion time was 40 minutes to 1 hour. Data analysis included descriptive statistics, correlations, factor analysis, and multiple regression.

CHAPTER IV

Results

Demographics and Study Findings

Education Level, Mean Age, and Income

This chapter presents the findings of the demographics, cross-tabulations, factor analysis, instrument analysis, and the correlation and regression analysis. A convenience sample of African-American men and women with Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) were surveyed (N = 117). The mean age was 38 years with a range from 23–75 (see Table 8 for the demographics of the sample). The years of school completed ranged from grade school to college; over 50% of the sample had completed high school and 43.6% had attended college. Income fell below $10,000 annually for 76.1% (n = 89) of the sample population. Income for 12% of the sample (n = 14) ranged between $10,000 to $25,000, 4.3% ($n$ = 5) ranged between $25,000 and $60,000, and 7.6% ($n$ = 9) had missing data. The majority of the sample (90.6%; n = 106) were unemployed and 9.4% (n = 11) were employed. Sixty-seven percent (n = 79) were on disability, 31.6% (n = 37) were not disabled, and one subject presented missing data. Fifty-eight percent (n = 68) indicated their income was insufficient, 24% (n = 29) reported barely covering expenses, 11% (n = 13) reported some needs unmet, and 1% (n = 1) indicated a completely adequate income.

Gender Statistics, Sexual Preference, and Housing

Males made up the majority of the sample (79.5%; n = 93), while 16% (n = 19) of the population were female. The remaining 4.3% (n = 5) described themselves as "transgender." Forty-nine (41.9%) reported they were heterosexual, 23 (19.7%) bisexual, and 44 (36.8%) reported they were homosexual. A greater portion of the sample (60.7%; n = 71) were single and never married, 6.8% (n = 8) reported being married, 3.4% (n = 4) were widowed, 7.7% (n = 9) were living together as partners, and 1% (n = 1) indicated

Table 8

Demographics of the African-American Sample (N = 117)

	Frequency	Percent
Gender		
Female	19	16.2%
Male	93	79.5%
Transgender	5	04.3%
Sexual preference		
Heterosexual	49	41.9%
Bisexual	23	19.7%
Homosexual	44	37.7%
Missing	1	0.7%
Education completion		
Grade school	3	02.6%
Middle school	4	03.4%
High school	59	50.4%
College	51	43.6%
Average personal income		
< $10,000	89	76.1%
$10,000–25,000	14	12.0%
$25,000–60,000	5	04.3%
Missing	9	7.6%

(table continues)

	Frequency	Percent
Relationship status		
Single/never married	71	60.7%
Divorced	24	20.5%
Living together	9	07.7%
Married	8	06.8%
Widowed	4	03.4%
Other	1	00.9%
Cohabitation		
Alone	53	45.3%
Parents	17	14.5%
Lover/Spouse	18	15.4%
With friends	13	11.1%
Other	15	12.8%
Missing	1	0.9%
Residence		
Apartment	64	54.7%
House	33	28.2%
Homeless/Streets	7	06.0%
Shelter	6	05.1%
Hotel	3	02.6%
Other	3	02.0%
Employment		
Employed	11	09.4%
Disability	79	67.5%

other. The majority of the sample (54.7%; n = 64) reported living in an apartment, 28.2% (n = 33) lived in a house, 6.0% (n = 7) were homeless, 2.6% (n = 3) lived in a hotel, 5.1% (n = 6) in a shelter, and 3.4% (n = 6) had other living arrangements. In terms of cohabitation, 45.3% (n = 53) reported living alone, 14.5% (n = 17) lived with parents, 15.4% (n = 18) lived with a lover or spouse, 11.1% (n = 13) lived with friends, and 12.8% (n = 15) reported other shared living arrangements.

HIV Status and Substance Use

Thirteen-percent (n = 16) of the sample reported living with HIV less than a year. Those living with HIV for a year or longer numbered 101 (86.3%). The longest duration of HIV infection reported was 14 years (1.7%; n = 2). Thirteen subjects (11.1%) had lived with AIDS less than a year and 16.4% (n = 19) reported having AIDS for a year or longer. Eighty-four subjects (71.8%) had received no AIDS diagnosis. Additionally, intravenous (IV) drug use during the past year was reported in 17.1% (n = 20) of the sample. Seventy-nine (77.5%) reported no IV drug use and data were missing on 6.8% (n = 8) of the participants. Cigarette smoking and alcohol use was documented. Most of the sample (39.3%; n = 46) smoked less than a pack per day; 18 (15.4%) never smoked, 14.5% (n = 17) smoked 1 pack per day, and 2.6% (n = 3) smoked more than a pack per day. Data were missing for 33 subjects (28.2%). Alcohol consumption within the sample was reported as follows: consumption of wine in 24.8% (n = 29) of the sample at a rate of 1 to 9 drinks per day, 38.5% (n = 45) reported consuming beer at 1 to 9 drinks per day, and 21.4% (n = 25) drank 1 to 9 glasses of liquor per day. Data were missing for 18 subjects (15.3%) (see Table 9).

Cross-Tabulations by Gender and Sexual Preference

Cross-tabulations were run, controlling for gender and sexual preference (SP) on the following variables: alcohol use, IV drug use, disability, education, living arrangements, religious affiliation, and church attendance (see Tables 10–15).

Table 9

HIV/AIDS Diagnosis, Cigarette Smoking, and Alcohol Consumption

	Frequency	Percent
Diagnosis		
HIV positive 1 year or longer	101	86.3%
AIDS 1 year or longer	19	27.5%
Intravenous drug use	20	17.1%
Cigarette smoking		
Never smoked	18	15.4%
< 1 pack per day	46	39.3%
1 pack per day	17	14.5%
> 1 pack per day	3	02.6%
Missing	33	28.2%
Alcohol consumption		
Wine (1–9 drinks/day)	29	24.8%
Beer (1–9 drinks/day)	45	38.5%
Liquor (1–9 drinks/day)	25	21.4%
Missing	18	15.3%

Table 10

Cross-Tabulations of Alcohol Use by Gender

Variable			Totals
Wine	Male; Yes; 12 (14%)	Female; 4 (22%)	16
	Male; No; 74 (86%)	Female; 14 (78%)	88
Totals	86	18	104
			Phi = –.08; nonsignificant
Beer	Male; Yes; 23 (30%)	Female; 6 (38%)	29
	Male; No; 54 (70%)	Female; 10 (63%)	64
Totals	77	16	93
			Phi = –.06; nonsignificant
Liquor	Male; Yes; 9 (12%)	Female; 3 (18%)	12
	Male; No; 69 (88%)	Female; 14 (82%)	83
Totals	78	17	95
			Phi = –.07; nonsignificant

Table 11

Cross-Tabulations of Alcohol Use by Sexual Preference

Variable			Totals
Wine	Heterosexual; Yes; 7 (17%)	Nonheterosexual; 9 (15%)	15
	Heterosexual; No; 34 (83%)	Nonheterosexual; 53 (85%)	87
Totals	41	62	103
			Phi = –.03; nonsignificant
Beer	Heterosexual; Yes; 10 (26%)	Nonheterosexual; 19 (35%)	29
	Heterosexual; No; 28 (74%)	Nonheterosexual; 35 (65%)	63
Totals	38	54	92
			Phi = .09; nonsignificant
Liquor	Heterosexual; Yes; 5 (13%)	Nonheterosexual; 7 (13%)	12
	Heterosexual; No; 34 (87%)	Nonheterosexual; 48 (87%)	82
Totals	39	55	94
			Phi = –0.01; nonsignificant

Table 12

Cross-Tabulations of Intravenous Drug Use by Gender and Sexual Preference

Variable			Totals
IV drugs	Male; Yes; 15 (16%)	Female; 5 (29%)	20
	Male; No; 76 (84%)	Female; 12 (71%)	88
Totals	91	17	108
			Phi = –.12; nonsignificant

IV drugs	Heterosexual; Yes; 13 (30%)	Nonheterosexual; 7 (11%)		20
	Heterosexual; No; 31 (70%)	Nonheterosexual; 56 (89%)		87
Totals	44	63		107
			Phi = –.23; significant .01	

Table 13

Cross-Tabulations of Disability, Education, and Living Arrangements by Gender and Sexual Preference

Variable			Totals
Disability	Male; Yes; 63 (64.9%)	Female; 16 (84.2%)	79
	Male; No; 34 (35.1%)	Female; 3 (15.8%)	37
Totals	97	19	116
			Phi = –.15; nonsignificant
Disability	Heterosexual; Yes; 32 (65.3%)	Nonheterosexual; 46 (69.7%)	78
	Heterosexual; No; 17 (34.7%)	Nonheterosexual; 20 (30.3%)	37
Totals	49	66	115
			Phi = .04; nonsignificant
Education			
High school or less	Male; 55 (56.1%)	Female; 11 (57.9%)	66
College or greater	Male; 43 (43.9%)	Female; 8 (42.1%)	51
Totals	98	19	117
			Phi = .01; nonsignificant

(table continues)

Variable			Totals
Education			
High school or less	Heterosexual; 33 (67.3%)	Nonheterosexual; 32 (47.8%)	65
College or greater	Heterosexual; 16 (32.7%)	Nonheterosexual; 35 (52.2%)	51
Totals	49	67	116
			Phi = .19; significant .03
Living arrangements			
Living alone	Male; Yes; 51 (52.6%)	Female; 12 (63.2%)	63
	Male; No; 46 (47.4%)	Female; 7 (36.8%)	53
Totals	97	19	116
			Phi = –.07; nonsignificant
Living arrangements			
Living alone	Heterosexual; Yes; 31 (63.3%)	Nonheterosexual; 31 (47%)	62
	Heterosexual; No; 18 (36.7%)	Nonheterosexual; 35 (53%)	53
Totals	49	66	115
			Phi = –.16; nonsignificant

Table 14

Cross-Tabulations of Religious Affiliation by Gender and Sexual Preference

Variable				Totals
Religious affiliation				
	Baptist	Male; 50 (52%)	Female; 9 (50%)	59
	Non-Baptist	Male; 46 (48%)	Female; 9 (50%)	55
Totals		96	18	114
				Phi = .01; nonsignificant

Religious affiliation			
Baptist	Heterosexual; 27 (56%)	Nonheterosexual; 32 (49%)	59
Non-Baptist	Heterosexual; 21 (44%)	Nonheterosexual; 33 (51%)	54
Totals	48	65	113
			Phi = –.06; nonsignificant

Table 15

Cross-Tabulations of Church Attendance by Gender and Sexual Preference

Variable				Totals
Church attendance				
	Regularly	Male; 31 (60%)	Female; 7 (58%)	38
	Not regularly	Male; 21 (40%)	Female; 5 (42%)	26
Totals		56	12	64
				Phi = .01; nonsignificant

Church attendance				
	Regularly	Heterosexual; 12 (50%)	Nonheterosexual; 26 (65%)	38
	Not regularly	Heterosexual; 12 (50%)	Nonheterosexual; 14 (35%)	26
Totals		24	40	64
				Phi = .14; nonsignificant

Additionally, cross-tabulations were conducted on the following: Beck Depression Inventory (BDI) (Beck et al., 1961) groupings, and the Nowotny Hope Scale (NHS) (Nowotny, 1989) (see Tables 16–17).

T Test of Instrument Scores

T tests were conducted by gender groupings and SP on the following measures: State-Trait Anxiety Inventory (Spielberger et al., 1970), NHS, Spiritual Well-Being (SWB) Scale (Ellison, 1983), and the BDI (Beck et al., 1961) (see Table 18). There were no significant findings between males and females for any variable; however, significant findings for SP were detected. Heterosexuals reported higher state anxiety (.48 $\pm$ .151), more depression (19.6 $\pm$ 12.7), and less hope (85.6 $\pm$ 1.92), compared to nonheterosexuals (.40 $\pm$ .129, 14.1 $\pm$ 12.2, and 90.5 $\pm$ 13.3, respectively).

Spiritual Development Findings

Questions regarding spiritual development were asked of the sample to determine their experiences with religion or spirituality (see Table 19). The question categories were the following: church attendance; religious affiliation; influential spiritual environment; most influential spiritual person; importance of religion as a child, teen, and adult; importance of religion before and after HIV infection; and whether religion became inconsequential following HIV infection diagnosis. The results are as follows: 32.5% (n = 38) attended church regularly, 31.6% (n = 31) attended on holidays only, 23.1% (n = 27) never attended, and 12.8% (n = 15) attended church more than once per week. Religious affiliation was reported as follows: 51.3% were Baptist (n = 60), 14.5% were Protestant (n = 17), 5.1% were Catholic (n = 6), 1.7% were Buddhist (n = 2), 1.2% were Seventh-Day Adventist (n = 2), 23.9% (n = 28) indicated the category of other, and data for 1.8% (n = 2) was missing.

Those indicating that their church was the most influential environment in their spiritual development totaled 51.3% (n = 60). Home was reported as the most spiritually

Table 16

Beck Depression Groupings by Gender and Sexual Preference

Range	Male	Female	Totals
Minimal	36 (37%)	5 (26%)	41 (35%)
Mild	21 (21%)	6 (32%)	27 (23.1%)
Moderate	25 (26%)	3 (16%)	28 (23.9%)
Severe	16 (16%)	5 (26%)	21 (17.9%)
Totals	98 (84%)	19 (16%)	117

Phi = .15; nonsignificant

Range	Heterosexual	Nonheterosexual	Totals
Minimal	9 (18%)	31 (46%)	40 (34.5%)
Mild	12 (24%)	15 (22%)	27 (23.3%)
Moderate	17 (35%)	11 (16%)	28 (24.1%)
Severe	11 (22%)	10 (15%)	21 (18.1%)
Totals	49	67	116

Phi = .31; significant $P = .01$

Table 17

Nowotny Hope Scale Groupings by Gender and Sexual Preference

Range	Male	Female	Totals
Hopeful	31 (36%)	6 (37%)	37 (36%)
Moderate	48 (55%)	6 (37%)	54 (53%)
Low hope	7 (8%)	4 (25%)	11 (11%)
Totals	86	16	102

Phi = .20; nonsignificant

Range	Heterosexual	Nonheterosexual	Totals
Minimal	10 (18%)	26 (44%)	36 (35.6%)
Moderately	26 (62%)	28 (47%)	54 (53%)
Low hope	6 (14%)	5 (8.5%)	11 (10.8%)
Totals	42 (41.2%)	59 (58.4%)	101

Phi = .21; nonsignificant

Table 18

T Test by Gender and Sexual Preference for the State-Trait Inventory, Nowotny Hope Scale, Religious Well-Being, Existential Well-Being, and Beck Depression Inventory

Variable	Mean	SD*	Standard error
State			
Male (n = 97)	.433	.145	.015
Female (n = 18)	.459	.140	.033
Mean difference = –026; t value = –.70; DF 113; P = .48			
Levene test for equality of variance: F = .718; P = .39			
Trait			
Male (n = 97)	44.3	10.9	1.10
Female (n = 17)	44.4	12.1	2.93
Mean difference = –.0835; t value = –.03; DF 112; P = .97			
Levene test for equality of variance: F = .718; P = .39			
Nowotny Hope Scale			
Male (n = 98)	89.5	12.2	1.24
Female (n = 19)	83.2	18.4	04.2
Mean difference = –.0835; t value = –.03; DF 112; P = .97			
Levene test for equality of variance: F = 6.8; P = .01			

(table continues)

Variable	Mean	SD*	Standard error
Religious Well-Being Subscale			
Male (n = 98)	46.5	8.7	.881
Female (n = 19)	46.5	9.2	2.13
Mean difference = .0471; t value = .02; DF 115; P = .98			
Levene test for equality of variance: F = .596; P = .44			
Existential Well-Being Subscale			
Male (n = 98)	43.1	9.6	.973
Female (n = 19)	41.9	11.6	2.63
Mean difference = 1.21; t value = .42; DF 115; P = .62			
Levene test for equality of variance: F = 1.45; P = .23			
Beck Depression Inventory			
Male (n = 98)	15.7	12.2	1.23
Female (n = 19)	19.5	15.3	3.23
Mean difference = –3.80; t value = –1.19; DF 115; P = .23			
Levene test for equality of variance: F = 1.87; P = .17			
State			
Heterosexual (n = 48)	.48	.151	.022
Nonheterosexual (n = 66)	.40	.129	.016
Mean difference = .0845; t value = 3.14; DF 91; P = .002			
Levene test for equality of variance: F = .000; P = .987			

Variable	Mean	SD*	Standard error
Trait			
Heterosexual (n = 47)	46.2	10.31	1.50
Nonheterosexual (n = 66)	42.9	11.49	1.41
Mean difference = 3.32; t value = 1.58; DF = 111; P = .116			
Levene test for equality of variance: F = 2.74; P = .100			
Nowotny Hope Scale			
Heterosexual (n = 49)	85.6	13.49	1.92
Nonheterosexual (n = 67)	90.5	13.39	1.63
Mean difference = 4.86; t value = 1.93; DF = 103; P = .05			
Levene test for equality of variance: F = .035; P = .853			
Religious Well-Being Subscale			
Heterosexual (n = 49)	46.5	8.89	1.27
Nonheterosexual (n = 67)	46.5	8.81	1.07
Mean difference = .0781; t value = .05; DF = 114; P = .96			
Levene test for equality of variance: F = .001; P = .977			
Existential Well-Being Subscale			
Heterosexual (n = 49)	41.0	10.35	1.48
Nonheterosexual (n = 67)	44.4	9.50	1.16
Mean difference = 3.16; t value = 1.71; DF = 114; P = .09			
Levene test for equality of variance: F = .186; P = .66			

Variable	Mean	SD*	Standard error
Beck Depression Inventory			
Heterosexual (n = 49)	19.6	12.7	1.82
Nonheterosexual (n = 67)	14.1	12.2	1.52
Mean difference = 5.64; t value = 2.40; DF = 101; P = .01			
Levene test for equality of variance: F = .003; P = .95			

*SD = standard deviation

Table 19

Spiritual Development

	Frequency	Percent
Religious affiliation		
Baptist	60	51.3%
Protestant	17	14.5%
Catholic	6	05.1%
Buddhist	2	01.7%
Seventh Day Adventist	2	01.7%
Other	28	23.9%
Missing	2	1.8%
Church attendance		
Regularly	38	32.5%
Holidays only	37	31.6%
> once per week	15	12.8%
Never attend	27	23.1%
Influential spiritual environment		
Church	60	51.3%
Home	37	31.6%
Other	16	14.0%
Missing	4	3.1%

(table continues)

	Frequency	Percent
Influential person on spiritual development		
Mother	27	23.1%
Jesus Christ	17	14.5%
Minister	16	13.7%
Other	14	12.0%
Friends	12	10.3%
None	7	6.0%
Missing	6	5.0%
Sister	5	4.3%
Brother	4	3.4%
Grandmother	4	3.4%
Partner/Lover	2	1.7%
Relative	2	1.7%
Father	1	.9%
Importance of religion		
As child	105	90.0%
As teen	108	92.0%
As adult	93	70.0%
Importance of religion after being diagnosed HIV positive		
Important	71	61.0%
Importance of religion prior to HIV positive diagnosis		
Important	98	84.0%
Religion unimportant following HIV positive diagnosis		
Unimportant	31	26.0%

influential environment for 31.6% (*n* = 37). Sixteen subjects (14%) indicated other environments were influential and data were missing for four subjects (3.1%). The most influential people to the spiritual development of this sample were mothers (23.1%; *n* = 27), followed by Jesus Christ (14.5%; *n* = 17), minister (13.7%; *n* = 16), friends (10.3%; *n* = 12), other (12.0%; *n* = 14), sister (4.3%; *n* = 5), brother (3.4%; *n* = 4), grandmother (3.4%; *n* = 4), partner/lover (1.7%; *n* = 2), father (.9%; *n* = 1), relative (1.7%; *n* = 2), and none (6.0%; n = 7). Data on six subjects (6.5%) were missing.

Subjects were asked how important religion was as a child, teen, and now adult; 90% (*n* = 105) agreed that religion was important as a child, 10% (*n* = 12) disagreed, 92% (*n* = 108) agreed religion was important as teen, 8% (*n* = 9) disagreed, and 79.0% (*n* = 93) agreed religion is important as an adult, and 21% (*n* = 24) disagreed. Most of the sample (61%; *n* = 71) agreed religion increased in importance following HIV positive diagnosis and 39% (*n* = 46) disagreed. Religion was important to 98 subjects (84%) prior to becoming HIV positive, and 19 participants (16%) disagreed. Religion became inconsequential following HIV infection diagnosis for 31 subjects (26%) and 74% (*n* = 86) disagreed. In addition, the sample was asked if they had an HIV support system in place; 94% (*n* = 110) reported the existence of a support system and 6% (*n* = 7) indicated none. Individual percentages related to HIV symptoms endorsed by this sample are reported in Table 20 and followed by data on total HIV symptoms per case in Table 21.

The majority of the sample, who indicated experiencing symptoms associated with HIV infection, reported moderate-severe symptoms. The average number of symptoms selected was 23.46 $\pm$ 15.25, indicating the sample endorsed at least 50% of the symptoms on the Sign and Symptom Checklist for Persons With HIV Disease (Holzemer et al., 1994). The mean score was derived from a mean rating of the endorsed items. The instrument is scored 0–3 (0 = none, 1 = mild, 2 = moderate, 3 = severe). The total number of items equal 41.

Table 20

Percentages for the Sign and Symptom Checklist for Persons With HIV Disease (N = 117)

Items	None	Mild	Moderate	Severe
1. Shortness of breath (SOB)	37.6%	29.9%	29.1%	03.4%
2. SOB (activity)	35.9%	09.4%	41.9%	12.8%
3. Coughing	33.3%	28.2%	29.1%	09.4%
4. Wheezing	41.0%	33.3%	22.2%	03.4%
5. Diarrhea	41.0%	24.8%	23.1%	11.1%
6. Loose stools	43.6%	21.4%	24.8%	10.3%
7. Constipation	47.9%	26.5%	22.2%	03.4%
8. Nausea	41.0%	23.9%	30.8%	04.3%
9. Vomiting	54.7%	28.2%	13.7%	03.4%
10. Gas/Bloating	33.3%	23.9%	31.6%	11.1%
11. Abdomen pain	43.6%	20.5%	23.1%	12.8%
12. No appetite	41.9%	23.9%	23.9%	10.3%
13. Weight loss	35.0%	24.8%	17.9%	22.2%
14. Sore throat	49.6%	27.4%	17.1%	06.0%
15. Thrush	53.8%	17.9%	17.9%	10.3%
16. Insomnia	34.2%	25.7%	21.4%	18.8%
17. Anxiety	35.0%	25.6%	22.2%	17.1%
18. Depression	35.9%	22.3%	24.8%	17.1%
19. Fear	43.6%	22.2%	23.1%	11.1%
20. Memory loss	41.0%	29.1%	14.5%	15.4%
21. Difficulty concentrating	41.0%	23.1%	19.7%	16.2%
22. Disorientation	48.7%	25.6%	13.7%	12.0%

(table continues)

Items	None	Mild	Moderate	Severe
23. Dizziness	48.7%	24.8%	23.9%	2.6%
24. Headaches	29.9%	22.2%	33.3%	14.5%
25. Numbness/Tingling	42.7%	20.5%	24.8%	12.0%
26. Night sweats	34.2%	23.9%	21.4%	20.5%
27. Day sweats	51.3%	20.5%	22.2%	06.0%
28. Fever	51.3%	24.8%	18.8%	05.1%
29. Chills	44.4%	25.6%	23.9%	06.0%
30. Swollen glands	48.7%	23.9%	21.4%	06.0%
31. Fatigue	35.9%	20.5%	26.5%	17.1%
32. Weakness	38.5%	14.5%	35.0%	12.0%
33. Painful joints	39.3%	13.7%	30.8%	16.2%
34. Muscle aches	38.5%	17.9%	26.5%	17.1%
35. Dry mouth	40.2%	17.9%	27.4%	14.5%
36. Thirst	40.2%	14.5%	28.2%	17.1%
37. Rash	49.6%	20.5%	23.1 %	06.8%
38. Itchy skin	41.0%	22.2%	22.2%	14.5.%
39. KS lesions	65.0%	22.2%	09.4%	03.4%
40. Heart racing	53.8%	18.8%	23.1%	04.3%
41. Chest pain	47.9%	15.4%	27.4%	09.4%

Table 21

HIV Symptom Totals by Identification Number (N = 117)

(1) 7	(11) 5	(21) 16	(31) 41	(41) 22
(2) 0	(12) 34	(22) 26	(32) 7	(42) 10
(3) 6	(13) 8	(23) 32	(33) 41	(43) 41
(4) 21	(14) 34	(24) 41	(34) 6	(44) 40
(5) 41	(15) 4	(25) 6	(35) 35	(45) 4
(6) 12	(16) 10	(26) 19	(36) 41	(46) 7
(7) 22	(17) 41	(27) 41	(37) 41	(47) 26
(8) 40	(18) 41	(28) 0	(38) 41	(48) 38
(9) 21	(19) 41	(29) 20	(39) 8	(49) 41
(10) 30	(20) 21	(30) 29	(40) 26	(50) 3
(51) 4	(61) 40	(71) 3	(81) 41	(91) 17
(52) 41	(62) 13	(72) 41	(82) 41	(92) 25
(53) 41	(63) 18	(73) 41	(83) 40	(93) 41
(54) 41	(64) 41	(74) 39	(84) 6	(94) 38
(55) 41	(65) 23	(75) 14	(85) 3	(95) 4
(56) 4	(66) 41	(76) 33	(86) 23	(96) 18
(57) 38	(67) 9	(77) 1	(87) 41	(97) 41
(58) 41	(68) 37	(78) 41	(88) 8	(98) 4
(59) 41	(69) 18	(79) 8	(89) 28	(99) 7
(60) 41	(70) 21	(80) 12	(90) 0	(100) 24
(101) 13	(102) 12			

(table continues)

(103) 41

(104) 11

(105) 40

(106) 39

(107) 2

(108) 2

(109) 10

(110) 1

(111) 41

(112) 7

(113) 9

(114) 41

(115) 4

(116) 18

(117) 38

Mean	SD	Range	Maximum Count
23.46	15.25	1–3	41

Instrument Analysis

Instrument analysis was conducted on the following: BDI (Beck et al., 1961), State-Trait Inventory (Spielberger et al., 1970), SWB Scale (Ellison, 1983), and the NHS (Nowotny, 1989). Additionally, a factor analysis was obtained, using principal components analysis and varimax rotation.

Beck Depression Inventory

The BDI (Beck et al., 1961) is a 21-item scale designed to measure clinical depression. It is scaled 0–3; 0 = none and 3 = severe. Scores can range from 0–63. The mean score in this sample was 16.62, standard deviation (SD) equaled 12.66, and the range was low to 52 (see Table 22). The BDI groupings and findings for this sample of 117 HIV positive African-Americans are shown in Table 22, as well as the published normative data compared with the sample mean (Tanaka & Huba, 1984).

Table 22

Sample Findings With Beck Depression Inventory (N = 117)

Score	Classification	Frequencies/Percentages
0–9	Minimal depression	41 (35.0%)
10–16	Mild depression	27 (23.1 %)
17–29	Moderate depression	28 (23.9%)
30–63	Severe depression	21 (17.9%)

Note. Normative data for dysthymic patients: 17.48 $\pm$ 7.15 (N = 99); sample mean: 16.62 $\pm$ 12.66 (N = 117).

Cronbach's measure of internal consistency was calculated with a result of 0.93, similar to published reports. Next, the BDI was submitted to principal components factor analysis with varimax rotation using a SPSS factor. The findings are presented in Table

23. Factor 1 explained 44.6% of the variance so that the instrument was judged to have a one-factor solution. Additionally, the item and total scores for the BDI are presented in Table 24.

State-Trait Anxiety Inventory

The State-Trait Inventory (Spielberger et al., 1970) is designed to measure strait anxiety (N = 20 items) and trait anxiety (N = 20 items). It is scored from 1–4: 1 = not at all and 4 = high/very much for state items. For the trait items, 1 = almost never and 4 = almost always. The mean score in this sample for state items was 44.4; SD equaled 14.62 with a range of 20–95. The mean score for trait items was 44.6 with a SD of 10.98 and a range of 22–74. The scores of this sample of 117 HIV positive African-Americans were compared to the published normative data in Table 25 (Spielberger & Sarason, 1980). The sample mean was close to the mean scores of the prison inmates.

Table 25

Comparison of Study Sample with State-Trait Normative Data (N = 117)

Sample mean		Normative group		
		Neuro/Psych (N = 461)	General med/surg (N = 161)	Prison inmates (N = 212)
State	44.4 ± 14.62	46.6 ± 12.46	41.9 ± 12.70	44.6 ± 10.47
Trait	44.6 ± 10.98	47.7 ± 13.24	42.3 ± 13.77	45.9 ± 11.04

Cronbach's measure of internal consistency was calculated with a result of .91 for trait anxiety and .92 for state anxiety, similar to published reports. Next, the State-Trait Anxiety Inventory was submitted to principal components factor analysis with varimax rotation using a SPSS factor. The findings are presented in Table 26 and 27. Factor 1 explained 43.8% of the variance for the state items, and 38.3% of the trait items so the

Table 23

Beck Depression Inventory Factor Analysis Findings (n = 91)

	Rotated factor loadings				
	1	2	3	4	Communality
1. Feeling sad	.62	.20	.18	.42	.62
2. Feeling discouraged	.74	.37	.03	.18	.72
3. Feel like a failure	.63	.39	–.08	.15	.58
4. Get satisfaction	.70	.21	.23	.18	.62
5. Feel guilty	.60	.54	.26	.01	.71
6. Feel punished	.56	.53	.22	.06	.65
7. Feel disappointed	.63	.36	.19	.19	.60
8. Feel any worse off	.22	.78	.25	.01	.71
9. Suicidal thoughts	.71	.06	.17	.25	.60
10. Crying	.17	.57	–.14	.52	.65
11. Feeling irritated	.27	.58	.30	.43	.69
12. Interest in others	.15	.38	.49	.31	.50
13. Making decisions	.47	.23	.27	.42	.53
14. Look any worse	.19	.37	.54	.50	.72
15. Working effort	.24	.09	.10	.77	.68
16. Sleeping	.72	–.13	.27	.30	.70
17. Getting tired	.31	.00	.25	.74	.70
18. Appetite	.48	.16	.57	.17	.61
19. Losing weight	.07	–.02	.78	–.02	.62
20. Worried about health	.16	.26	.61	.35	.59
21. Interest in sex	.45	.20	.51	.13	.52
Eigen values	9.37	1.50	1.25	1.17	
% Variance	44.6	07.2	06.0	05.6	

Table 24

Beck Depression Inventory Items and Total Scores (N = 117)

Items	Level of endorsements 0	1	2	3	Mean	SD
1. Feeling sad	60	41	1	15	0.752	0.991
2. Feeling discouraged	66	29	15	6	0.664	0.894
3. Feel like a failure	67	28	17	5	0.658	0.882
4. Getting satisfaction	49	50	6	10	0.800	0.890
5. Feeling guilty	73	25	15	3	0.552	0.817
6. Feeling punished	67	16	13	21	0.897	1.185
7. Feels disappointed	69	35	10	3	0.547	0.760
8. Any worse off	60	35	13	9	0.752	0.937
9. Suicidal thoughts	75	31	6	4	0.474	0.751
10. Crying	61	22	11	23	0.966	1.189
11. Feel irritated	47	45	16	8	0.871	0.900
12. Lost interest	66	30	16	4	0.638	0.848
13. Decision making	62	38	12	2	0.596	0.749
14. Look any worse	70	28	12	3	0.561	0.820
15. Work effort	43	41	23	9	1.325	3.817
16. Sleeping	41	50	19	7	.932	0.868
17. Getting tired	32	63	15	6	.957	0.785
18. Appetite	56	39	15	6	0.750	0.874
19. Weight loss	55	26	19	15	0.948	1.083
20. Worried about health	45	46	17	8	0.897	0.898
21. Interest in sex	49	42	15	10	0.879	0.943
				Totals	16.40	12.77

Table 26

State Items and Factor Analysis Findings (n = 102)

Items	Rotated factor loadings 1	2	3	4	Communality
1. Feel calm	.42	.62	.36	–.16	.70
2. Feel secure	.28	.69	.24	.18	.65
3. Am tense	.73	.33	.09	–.10	.66
4. Feel strained	.67	.28	.12	–.04	.55
5. Feel at ease	.21	.81	.02	–.08	.70
6. Feel upset	.71	.29	.02	.04	.60
7. Worrying about misfortune	.07	.10	.04	.81	.68
8. Feel satisfied	.13	.70	.06	.45	.71
9. Feel frightened	.53	.13	–.56	–.20	.66
10. Feel comfortable	.33	.77	–.03	. 22	.75
11. Feel self-confident	.21	.48	.50	.17	.56
12. Feel nervous	.76	.19	–.00	.13	.62
13. Am jittery	.77	.28	.02	–.01	.67
14. Feel indecisive	.68	.11	.46	–.00	.69
15. Am relaxed	.39	.69	.14	.10	.66
16. Feel content	.21	.43	.67	–.04	.67
17. Am worried	.74	.25	.08	.16	.64
18. Feel confused	.68	.08	.39	.32	.72
19. Feel steady	.15	.59	.44	–.06	.57
20. Feel pleasant	.33	.60	.39	–.28	.70
Eigen values	8.76	2.02	1.23	1.14	
% Variance	43.8	10.1	6.2	5.7	

Table 27

Trait Items and Factor Analysis Findings (n = 102)

Items	Rotated factor loadings 1	2	3	4	Communality
21. Feel pleasant	.78	.13	.00	.02	.64
22. Feel nervous	.32	.53	.38	.16	.55
23. Feel satisfied	.72	.03	.29	–.09	.61
24. Happiness	–.18	.16	.31	.63	.55
25. Feel like failure	.29	.42	.50	.28	.60
26. Feel rested	.50	–.12	.59	.19	.65
27. Calm cool collected	.58	.11	.54	–.05	.64
28. Difficulties	.19	.49	.21	.35	.44
29. Worry much	.14	.38	.74	–.01	.71
30. Am happy	.69	.18	.30	.38	.53
31. Disturbing thoughts	.18	.57	.14	.38	.53
32. Lack self confidence	.34	.63	.13	–.30	.58
33. Feel secure	.80	.28	.16	.09	.76
34. Decision making	.71	.23	.06	–.13	.58
35. Feel inadequate	.32	.76	–.01	.18	.72
36. Am content	.72	.18	.30	.16	.66
37. Unimportant thoughts	–.06	.64	.40	.11	.59
38. Disappointments	.15	.37	–.16	.71	.69
39. Am steady	.80	.13	–.03	.02	.65
40. Turmoil state	.03	.79	.01	.23	.67
Eigen values	7.66	2.63	1.25	1.06	
% Variance	38.3	13.2	6.3	5.3	

instrument was judged to have a one-factor solution for each scale. Item and total scores for the State-Trait scales are reported in Tables 28 and 29.

Spiritual Well-Being Scale

The SWB Scale is a 20-item scale with two subscales: Religious Well-Being (RWB), and the Existential Well-Being (EWB). The RWB and the EWB subscales each contain 10 items. The RWB subscale items assess one's relationship with God, while the EWB subscale assesses one's perception of life satisfaction. It is scaled 1–6 where 1 = strongly disagree and 6 = strongly agree. Scores can range from 60–180. The mean scores for this sample were 88.5 with a SD of 17.09 for SWB, 45.6 with a SD of 8.58 for RWB, and 42.5 with a SD of 10.11 for the EWB items. The scores of this sample of 117 African-Americans were compared to the published normative data of Bufford et al. (1991) in Table 30. The mean scores of this sample were close to the mean scores of the medical patients in the normative group.

Table 30

Comparison of Study Sample with Spiritual Well-Being Norm (N = 117)

	Sample mean	Normative sample Medical patients (N = 56)
Religious well-being	45.6 ± 8.58	51.5 ± 9.67
Existential well-being	42.5 ± 10.11	48.5 ± 8.38
Spiritual well-being	88.5 ± 17.09	99.8 ± 16.01

Cronbach's measure of internal consistency was calculated with a result of .87 for SWB, .81 for EWB, and .76 for RWB, similar to published reports. Next, the SWB Scale was submitted to principal components factor analysis with varimax rotation using SPSS factor. The findings are presented in Tables 31 and 32. Factor 1 for the RWB Scale

Table 28

State Items and Total Scores (N = 117)

Items	Level of endorsements 1	2	3	4	Mean	SD
1. Am calm	42	21	39	13	2.20	1.06
2. Am secure	34	23	40	17	2.35	1.06
3. Am tense	32	50	22	13	2.13	.946
4. Am strained	37	37	24	16	2.16	1.03
5. Feel at ease	30	24	42	18	2.42	1.04
6. Feel upset	44	41	21	9	1.95	.940
7. Worrying	45	38	15	17	2.29	3.07
8. Am satisfied	28	22	46	19	2.48	1.03
9. Feel frightened	48	38	10	15	2.27	4.03
10. Feel comfortable	32	21	52	10	2.34	.983
11. Feel confident	36	29	34	14	2.23	1.03
12. Feel nervous	45	40	17	13	1.98	1.00
13. Feel jittery	53	38	14	9	1.81	.937
14. Feel indecisive	46	48	12	8	1.84	.878
15. Feel relaxed	31	19	54	13	2.41	1.00
16. Am content	25	28	48	14	2.44	.966
17. Worried	43	42	17	14	2.01	1.00
18. Am confused	54	35	16	11	1.86	.986
19. Steady	33	23	46	15	2.36	1.03
20. Feel pleasant	35	30	35	15	2.26	1.03
				Totals	43.7	14.72

Table 29

Trait Inventory Items and Total Scores (N = 117)

Items	Level of endorsements 1	2	3	4	Mean	SD
21. Feel pleasant	35	27	42	12	2.26	1.00
22. Nervous/restless	30	54	21	11	2.11	.902
23. Satisfied with self	30	30	45	10	2.30	.957
24. Happy as others	25	40	24	26	2.44	1.06
25. Feel like failure	50	49	13	5	1.76	.814
26. Feel rested	26	20	51	20	2.55	1.02
27. Calm, cool, collected	28	28	52	9	2.35	.933
28. Difficulties piling	35	55	13	14	2.05	.945
29. Worry too much	39	50	20	7	1.95	.869
30. Am happy	35	24	41	16	2.32	1.05
31. Disturbing thoughts	28	57	20	10	2.10	.872
32. Lack self confidence	44	47	15	9	1.90	.908
33. Feel secure	31	18	52	15	2.44	1.02
34. Makes decisions	24	23	60	8	2.45	.901
35. Feel inadequate	32	57	16	9	2.01	.862
36. Am content	35	26	51	13	2.42	.957
37. Unimportant thoughts	25	54	27	8	2.15	.847
38. Disappointments	25	52	26	11	2.20	.894
39. Am steady person	34	24	49	9	2.28	.976
40. State of tension	30	45	20	20	2.26	1.03
				Totals	44.37	11.31

Table 31

Religious Well-Being Items and Factor Analysis (n = 102)

Items	Rotated factor loadings 1	2	Communality
1. Don't find satisfaction with prayer	.25	.79	.69
3. Believe God loves me	.52	.48	.51
5. Believe God is impersonal	.63	.83	.69
7. Have a meaningful relationship	.81	.10	.66
9. Don't get personal satisfaction	.17	.78	.64
11. Believe God is concerned	.68	.21	.50
13. Don't have satisfying relationship	.17	.68	.50
15. Relationship with God helps me	−.81	.16	.68
17. Feel fulfilled when close to God	.87	.16	.77
19. Relationship with God contributes to my well-being	.85	.15	.74
Eigen values	4.59	1.78	
% Variance	46.0	17.9	

Table 32

Existential Well-Being Items and Factor Analysis Findings (n = 102)

Items	Rotated factor loadings 1	2	3	Communality
2. Don't know who I am	.09	.32	.67	.57
4. Life is positive experience	.44	.62	.18	.62
6. Feel unsettled about future	.58	−.25	.57	.73
8. Feel fulfilled and satisfied	.88	.20	.06	.82
10. Feel a sense of well-being	.76	.23	.08	.63
12. Don't enjoy much about life	.47	.37	.40	.47
14. Feel good about future	.72	.22	.16	.60
16. Feel life is full of conflict	.09	.00	.77	.60
18. Life doesn't have meaning	.05	.66	.52	.71
20. Believe there is purpose	.24	.82	−.06	.74
Eigen values	4.03	1.23	1.19	
% Variance	40.4	12.3	11.9	

explained 46.0% of the variance. Additionally, Factor 1 for EWB explained 40.4% of the variance so that the instrument was judged to have a one-factor solution per subscale. Tables 33 and 34 display the items and total scores for the SWB Scale.

Nowotny Hope Scale

The NHS (Nowotny, 1989) is a 29-item instrument designed to measure hope along six dimensions: confidence, relates to others, future is possible, spiritual beliefs, active involvement, and comes from within. It is scaled on a 1–4 scale where 1 = strongly disagree and 4 = strongly agree. Scores can range from 29–116. The scores of this sample of 117 African-Americans were compared to the published normative data in Table 35. The results show that 89% of the sample were either moderately hopeful or hopeful, similar to the normative data.

Table 35

Comparison of Study Sample with Nowotny Hope Scale Normative Data (N = 117)

Score	Classification	Sample	Normative Data Cancer Patients (N = 150)
29–50	Hopelessness	(0)	1
51–72	Low hope	11 (9.4%)	18 (12%)
73–94	Moderate hope	54 (46.2%)	112 (75%)
95–116	Hopeful	37 (31.6%)	19 (13%)

Cronbach's measure of internal consistency was calculated with a result of .92, similar to published reports. The NHS was then submitted to a principal components factor analysis with varimax rotation using SPSS factor. The findings are presented in

Table 33

Religious Well-Being Scale Items and Total Scores (N = 117)

	Level of endorsements							
Items	1	2	3	4	5	6	Mean	SD
1. Don't find satisfaction	13	6	13	15	0	70	4.6	1.82
3. Believe God loves me	3	1	7	17	3	86	5.3	1.22
5. God is impersonal	13	2	12	13	1	76	4.8	1.76
7. Relationship with God	8	3	7	32	10	56	4.7	1.51
9. Don't get satisfaction	8	2	11	21	3	68	4.8	1.62
11. God is concerned	4	1	2	20	8	82	5.3	1.21
13. Don't have satisfying	13	7	13	17	7	58	4.4	1.79
15. God helps me	52	11	27	25	11	2	2.5	1.70
17. Feel fulfilled	5	3	8	28	11	62	4.9	1.40
19. God contributes	5	3	6	29	8	65	4.9	1.39
					Totals		46.5	8.77

Table 34

Existential Well-Being Scale Items and Total Scores (N = 117)

	Level of endorsements							
Items	1	2	3	4	5	6	Mean	SD
2. Don't know who I am	10	3	14	20	7	62	4.6	1.65
4. Life is positive	5	3	9	19	10	71	5.0	1.41
6. Feel unsettled	22	14	24	16	14	26	3.5	1.80
8. Feel satisfied with life	18	12	16	24	15	32	3.8	1.78
10. Feel well-being	12	11	18	28	15	32	4.0	1.65
12. Don't enjoy life	11	8	12	25	11	50	4.4	1.69
14. Feel good	17	9	18	24	19	30	3.9	1.72
16. Life is full of conflict	27	14	29	13	16	18	3.2	1.74
18. No meaning	4	6	12	20	8	66	4.9	1.47
20. Believe in purpose	1	1	8	23	7	76	5.3	1.13
					Totals		42.9	9.91

Table 36. Factor 1 explained 35.6% of the variance so that the instrument was judged to have a one-factor solution. Item and total scores for the NHS are presented in Table 37.

Correlation and Multiple Regression Analysis

Independent and Dependent Variables

Twelve variables were analyzed in the current study. The personal characteristics chosen were age, SP, HIV symptoms, gender, and education. The other variables were anxiety, hope, depression, health as measured by HIV symptoms, and spirituality. The dependent variables were hope, anxiety, health, and depression. The independent variables were spirituality as measured by RWB and EWB, age, education, SP, HIV symptoms, and gender. The first correlation matrix and regression analysis were conducted on health as the dependent variable measured by the Sign and Symptom Checklist for Persons with HIV Disease (Holzemer et al., 1994) (see Tables 38 and 39).

Dummy Coding

Three variables were dummy coded for the following analyses: education (i.e., 1 = college or greater and 0 = high school or less), gender (i.e., 1 = male and 0 = nonmale—female or transgender), and SP (i.e., 1 = nonheterosexual and 0 = heterosexual). EWB was the only predictor of health status, and accounted for 7% of the explained variance in health status as measured by HIV symptoms.

The next regression analysis was conducted twice, once each for the dependent variables of state-trait anxiety. The predictor variables included: RWB, EWB, age, education, gender, HIV symptoms, and SP (see Tables 40–41).

A regression analysis was conducted using state anxiety as the dependent variable and the following predictor variables: RWB, EWB, age, education, gender, HIV symptoms, and SP (see Table 42). EWB was the strongest predictor (11%) of state anxiety, followed by HIV symptoms (7%) and SP (3%). EWB, higher HIV symptoms, and being heterosexual accounted for 3% of the variance in state anxiety. Correlations

Table 36

Nowotny Hope Scale Factor Analysis Findings (n = 102)

Items	Rotated factor loadings 1	2	3	4	5	6	7	Communality
1. Accomplish	.16	.80	.10	.15	.06	–.01	.02	.71
2. Take whatever	.12	.65	.41	.06	–.09	.14	–.06	.66
3. Difficulty goals	.29	–.14	–.02	.18	.06	.68	–.33	.73
4. Availability	–.10	.14	.35	.68	–.10	–.09	–.30	.74
5. Feel confident	.10	.22	.67	.26	.05	.02	.30	.68
6. Make change	.36	.50	.46	.07	.03	.01	.10	.61
7. Can adapt	.25	.28	.43	.45	.08	.23	.34	.71
8. Challenge	.15	.42	.64	.14	.24	.13	.21	.75
9. Expectations	.24	.21	.70	.10	.56	.17	.03	.65
10. Beliefs help	.17	.11	.24	.12	–.01	.09	.82	.79
11. Feel confident	.40	.10	.16	.41	.30	–.01	.35	.57
12. Feel alone	–.26	.25	.14	–.14	.73	.21	–.12	.76
13. Tunnel light	.36	.02	.46	.39	.22	.11	.12	.57
14. Decisions	.01	.24	–.12	.73	.09	–.09	.23	.67
15. Use prayer	.44	–.01	.32	.01	.47	.15	.31	.64
16. Sit & wait	–.14	.14	.02	–.16	–.12	.75	.21	.68
17. Decisions	.63	.35	.09	.06	.06	–.04	.09	.55
18. Control	.63	.33	.14	–.12	.02	–.12	.06	.56
19. Expectations	.73	.11	.22	.13	–.04	.12	.02	.63
20. Scripture	.32	.12	.08	.24	.65	–.12	.06	.63
21. Challenge	.54	.08	.61	–.08	.23	–.06	–.03	.74
22. Confidence	.62	.29	.28	.20	.07	.21	.21	.68

(table continues)

Items	Rotated factor loadings 1	2	3	4	5	6	7	Communality
23. Go to family	.16	.14	.41	.63	.02	.02	.07	.61
24. Look forward	.31	.45	.50	.25	.20	–.01	.14	.66
25. Doing things	.46	.56	.20	.13	.08	.23	.24	.66
26. Ability	.02	.03	.16	–.03	.13	.67	.07	.50
27. Have goals	.24	.70	.05	.17	.34	–.06	–.14	.72
28. Accomplish	.50	.46	.20	.11	.33	.01	.05	.63
29. Outlook	.25	.54	.29	.29	.18	.14	.04	.58
Eigen values	10.3	1.88	1.77	1.51	1.28	1.28	1.09	
% Variance	35.6	6.5	6.1	5.2	4.4	4.6	3.8	

Table 37

Nowotny Hope Scale Items and Total Scores (N = 117)

Items	Level of endorsements 1	2	3	4	Mean	SD
1. Accomplish	8	10	47	52	3.22	.872
2. Take whatever	3	15	51	45	3.21	.770
3. Difficulty goals	14	54	28	21	2.47	.925
4. Availability	18	27	30	42	2.82	1.08
5. Feel confident	15	26	42	33	2.80	.998
6. Make change	3	6	50	57	3.38	.707
7. Can adapt	6	11	47	50	3.23	.834
8. Challenge	6	20	52	38	3.05	.843
9. Expectations	3	26	54	34	3.01	.788
10. Beliefs help	7	18	35	57	3.21	.918
11. Feel confident	6	17	49	44	3.12	.850
12. Feel alone	37	43	23	14	2.12	.993
13. Tunnel light	14	13	55	34	2.94	.944
14. Decisions	27	24	40	26	2.55	1.07
15. Use prayer	3	9	44	61	3.39	.742
16. Sit & wait	13	27	52	24	2.75	.912
17. Decisions	4	8	50	55	3.33	.754
18. Control	2	9	43	63	3.42	.711
19. Expectations	3	4	51	58	3.41	.686
20. Scripture	8	19	43	46	3.09	.913
21. Challenge	2	19	51	43	3.17	.764
22. Confidence	3	12	50	51	3.28	.755

(table continues)

Items	Level of endorsements 1	2	3	4	Mean	SD
23. Go to family	12	19	48	37	2.94	.950
24. Look forward	7	14	50	46	3.15	.857
25. Doing things	2	12	55	48	3.27	.715
26. Ability	15	32	35	32	2.73	1.01
27. Have goals	6	14	50	47	3.17	.837
28. Accomplish	5	13	58	40	3.14	.783
29. Outlook	10	10	53	43	3.11	.892
				Totals	88.06	13.74

Table 38

Correlation Matrix for the Dependent Variable Health (n = 116)

	Health	RWB	EWB	Age	ED	Gender	SP
Health		–.170*	–.339**	.022	–.069	.040	–.170*
RWB			.637**	.051	.210*	.003	.004
EWB				.043	.246*	.051	.158
Age					.090	–.028	–.251*
ED						–.004	.195*
Gender							.212*
HIV							
SP							

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

ED = education; SP = sexual preference

Table 39

Health Regression Analysis

Dependent variable: Health as measured by HIV symptoms

Variables entered:

1. SP (sexual preference)
2. RWB (religious well-being)
3. Gender (male/female)
4. Age (in years)
5. ED (education)
6. EWB (existential well-being)

Multiple R = .37

R square = .13

Variable	Beta	Semipartial correlation	t	Significant t
RWB	.054667	.041626	.468	.6405
EWB	–.365064	–.27317	–3.077	.0026*
Age	–3.57404	–.000341	–.004	.9969
ED	.037191	.035047	.394	.6941
Gender	.088063	.085883	.966	.3361
SP	–.138794	–.125724	–1.414	.1601

Note. Listwise deletion used.

* < .05

Table 40

Correlation Matrix for the Dependent Variable State Anxiety (n = 114)

	RWB	EWB	Age	ED	Gender	HIV	SP
State	–.222**	–.520**	–.049	–.048	–.067	.475**	–.290**
RWB		.632**	.053	.209*	–.021	–.182*	–.005
EWB			.045	.248**	.032	–.350**	.154
Age				.079	–.039	.010	–.265**
ED					–.027	–.090	.181*
Gender						.012	.192*
HIV							–.194*
SP							

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

Table 41

State Anxiety Regression Analysis

Dependent variable: state anxiety

Variables entered:

1. SP (sexual preference)
2. RWB (religious well-being)
3. Gender (male/female)
4. HIV (HIV symptoms)
5. Age (age in years)
6. ED (education)
7. EWB (existential well-being)

Multiple R = .65

R Square = .43

Variable	Beta	Semipartial correlation	t	Significant t
RWB	.115117	.087998	1.196	.2344
EWB	–.480406	–.346957	–4.715	.0000*
Age	–.099284	–.094655	–1.286	.2011
ED	.118247	.111746	1.519	.1318
Gender	–.015096	–.014752	–.200	.8415
HIV	.300772	.277756	3.775	.0003*
SP	–.202201	–.181569	–2.468	.0152*

Note. Listwise deletion used.

* < .05

were then run on trait anxiety as the dependent variables and the following predictor variables: RWB, EWB, age, education, gender, HIV symptoms, and SP, followed by a regression analysis (see Tables 42 and 43).

Table 42

Correlation Matrix for the Dependent Variable Trait Anxiety (n = 113)

	RWB	EWB	Age	ED	Gender	HIV	SP
Trait	–.242**	–.551**	–.037	–.073	.002	.458**	–.149
RWB		.628**	.041	.201	–.014	–.187*	–.009
EWB			.034	.237*	.038	–.356**	.149
Age				.090	–.024	.021	–.255**
ED					–.047	–.084	.173*
Gender						.008	.172*
HIV							–.192*
SP							

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

A regression analysis using forced entry was run with trait anxiety as the dependent variable and the following predictor variables: RWB, EWB, age, education, gender, HIV symptoms, and SP (see Table 43). Findings for the Trait Anxiety Scale were similar to the State Anxiety Scale.

The next correlation and regression analysis was conducted on hope as the dependent variable and the following predictor variables: RWB, EWB, age, education, gender, HIV symptoms, and SP (see Tables 44 and 45). Fifteen percent of the variance in hope was explained by EWB followed by male gender. The other predictor variables did

Table 43

Trait Anxiety Regression Analysis

Dependent variable: trait anxiety

Variables entered:

1. SP (sexual preference)
2. RWB (religious well-being)
3. Gender (male/female)
4. HIV (HIV symptoms)
5. Age (age in years)
6. ED (education)
7. EWB (existential well-being)

Multiple R = .63

R Square = .40

Variable	Beta	Semipartial correlation	t	Significant t
RWB	–.241712	.112234	1.487	.1399
EWB	–.549247	–.397914	–5.273	.0000*
Age	–.044932	–.042937	–.569	.5706
ED	.064540	.061034	.809	.4204
Gender	.031873	.031217	.414	.6799
HIV	.288828	.266321	3.529	.0006*
SP	–.038349	–.034702	–.460	.6465

Note. Listwise deletion used.

* < .05

Table 44

Correlation Matrix for the Dependent Variable Hope (n = 116)

	RWB	EWB	Age	ED	Gender	HIV	SP
NHS	.466**	.659**	–.002	.278**	.190	–.248*	.178
RWB		.637**	.051	.210*	.003	–.170	.004
EWB			.043	.246**	.051	–.339**	.158
Age				.090	–.028	.022	–.251**
ED					–.004	–.069	.195*
Gender						.040	.212*
HIV							–.170
SP							

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

Table 45

Hope Regression Analysis

Dependent variable: hope

Variables entered:

1. SP (sexual preference)
2. RWB (religious well-being)
3. Gender (male/female)
4. HIV (HIV symptoms)
5. Age (age in years)
6. ED (education)
7. EWB (existential well-being)

Multiple R = .69

R Square = .48

Variable	Beta	Semipartial correlation	t	Significant t
RWB	.082824	.063002	.908	.3660
EWB	.552423	.397006	5.721	.0000*
Age	–.031138	–.029755	–.429	.6689
ED	.122153	.115027	1.658	.1003
Gender	.158783	.154192	2.222	.0284*
HIV	–.040967	–.038016	–.548	.5849
SP	.017902	.016069	.232	.8173

Note. Listwise deletion used.

* < .05

not contribute a significant variation in one's level of hope. EWB and gender were significant predictors of hope at an alpha level < .05.

The last correlation and regression analysis was run using depression as the dependent variable and the following predictor variables: RWB, EWB, age, education, gender, HIV symptoms, and SP using forced entry (see Tables 46 and 47). EWB is a strong predictor of level of depression, accounting for 15% of the explained variance. HIV symptoms accounted for 6% of the explained variance in depression. The relationship between depression and EWB is an inverse linear relationship, indicating one's level of depression is influenced by the presence of EWB. These predictors were significant at an alpha level < .05. Low EWB and high HIV symptoms were related to depression.

EWB, a component of spirituality, and HIV-related symptoms followed by gender and SP, were most related to the dependent variables: anxiety, health, hope, and depression. These findings suggest that EWB (i.e., life satisfaction and purpose) has tremendous potential for lowering anxiety, depression, and stress associated with HIV symptoms, as well as for increasing hope. The presence of HIV symptoms as a strong predictor also suggests that the presence or absence of HIV symptoms effects anxiety, depression, hope, and spirituality.

This study demonstrated the inverse relationship spirituality has with health as measured by HIV symptoms, depression, and state-trait anxiety. Additionally, spirituality correlated with hope (see Figure 2). These findings support the previous conceptual model suggesting an interaction among these QOL indicators. These relationships were significant at an alpha level of <.05. The inverse relationships support the contention that spirituality should be valued equally with the other QOL indicators.

Table 46

Correlation Matrix for the Dependent Variable Depression (n = 116)

	RWB	EWB	Age	ED	Gender	HIV	SP
Beck	–.206	–.532**	–.053	–.075	–.136	.420**	–.219
RWB		.637**	.051	.210*	.003	–.170	.004
EWB			.043	.246**	.051	–.339**	.158
Age				.090	–.028	.022	–.251**
ED					–.004	–.069	.195
Gender						.040	.212*
HIV							–.170
SP							

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

Table 47

Depression Regression Analysis

Dependent variable: depression

Variables entered:

1. SP (sexual preference)
2. RWB (religious well-being)
3. Gender (male/female)
4. HIV (HIV symptoms)
5. Age (age in years)
6. ED (education)
7. EWB (existential well-being)

Multiple R = .63

R Square = .40

Variable	Beta	Semipartial correlation	t	Significant t
RWB	.178965	.136134	1.825	.0707
EWB	–.551027	–.396003	–5.309	.0000*
Age	–.077942	–.074480	–.999	.3202
ED	.066829	.062930	.844	.4007
Gender	–.099906	–.097018	–1.301	.1961
HIV	.257179	.238651	3.200	.0018*
SP	–.100946	.238651	–1.215	.2271

Note. Listwise deletion used.

* < .05

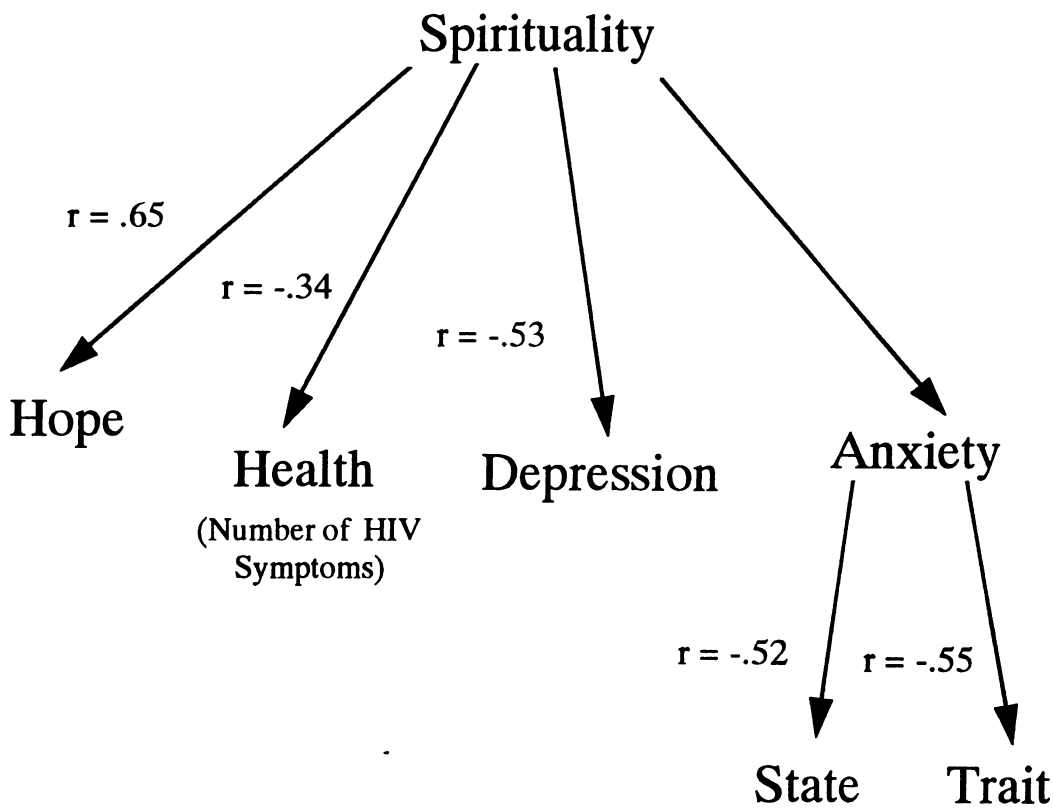

Figure 2. Correlations among quality of life indicators

CHAPTER V

Study Implications

Discussion

The examination of the relationship among spirituality, hope, anxiety, depression, and health status was completed in this sample of African-Americans living with Human Immunodeficiency Virus (HIV) infection. This chapter describes the interpretation and the significance of the findings, along with the limitations of the study, implications for nursing, and the direction of future nursing research.

Instrument Findings

The alpha reliabilities and the factor analysis supported the reliability and validity of the instruments used in the study. Mean substitution was incorporated to calculate the mean scores of all instruments used in the study, with the exception of the Sign and Symptom Checklist for Persons With HIV Disease (Holzemer et al., 1994). The factor analysis using the SPSS factor with principal components analysis and varimax rotation was conducted on the State-Trait Inventory (Spielberger et al., 1970), Nowotny Hope Scale (Nowotny, 1989), SWB Scale (Ellison, 1983), and the Beck Depression Inventory (Beck et al., 1961) and judged them all to be measuring a one-factor solution, connoting they measure only one underlying dimension.

Interpretation of Findings

Previous studies have investigated the relationship of spirituality and health in individuals living with HIV infection or cancer. While the effects of spirituality on health were explained, very little research accounted for psychosocial variables and the biophysical component's of African-Americans living with HIV infection. In studies related to the effect of spirituality on health, associations between spirituality and physical and mental health were reinforced (Carson & Green, 1992; Kaczorowski, 1989; Mickley &

Soeken, 1993; Reed, 1986, 1987). In studies that examined the psychosocial impact of HIV infection, the association between HIV infection and psychological distress was supported (Cochran & May, 1993; McKegney & O'Dowd, 1992; Rabkin et al., 1990; Viney et al., 1991; Wingwood, 1992). Further, studies examining the association of HIV symptoms to quality of life (QOL) supported the correlation between the symptoms and one's perception of health (Fischl et al., 1987; Fischl et al., 1990; Gelber, 1992; Henry et al., 1992; Wu et al., 1990, 1991, 1993).

Authors of previous work have described the importance of the black church to QOL within the African-American community (Carter, 1982; Frazier, 1974; Nelson et al., 1971; Taylor et al., 1987; Wimberly, 1979), hence the nature of the proposed research questions. What is the contribution of religious attributes to psychological status controlling for personal characteristics in an HIV positive African-American sample? What is the contribution of religious attributes to health status controlling for personal characteristics in an HIV positive African-American sample? In an attempt to address these questions, a multiple regression analysis using listwise deletion was conducted.

The five regressions examined the effect of religious well-being (RWB), existential well-being (EWB), education, age, gender, sexual preference (SP), HIV symptoms as a measure of health, state-trait anxiety, depression, and level of hope. Additionally, HIV symptoms, as a measure of health, were regressed with these variables. In the first regression examining health, no significant relationships were demonstrated among RWB, age, education, gender, or SP; however, lower EWB predicted higher HIV symptoms at an alpha level $<.05$. The effect of EWB as a component of spiritual well-being (SWB) on health, supported the previous work testing the positive effect of spirituality.

In the next regression examining state anxiety, EWB was the strongest predictor accounting for 11% of the variance, followed by HIV symptoms accounting for 7% and being heterosexual 3% at an alpha level $< .05$. There was found to be an inverse relationship between state anxiety and EWB.

Trait anxiety was regressed next, and it was found that EWB and HIV symptoms were the only significant predictors with EWB accounting for 15% and HIV symptoms 7% at an alpha level < .05. Hope was then regressed and 15% of its variance was explained by EWB and 2% by gender at an alpha level < .05. The last regression run was on depression and EWB accounted for 15% of the explained variance, followed by HIV symptoms accounting for 6% at an alpha level < .05. Additionally, there was found to be an inverse relationship between depression and EWB.

What do the results of these regression analyses mean with regard to this sample of HIV-infected African-Americans? EWB, which measures life satisfaction and sense of life purpose, was the strongest predictor of all of the analyses, followed by the number of HIV symptoms, anxiety, depression, hope, and health perception. Additionally, the regression models underscore the necessity of assessing the symptomatology of HIV-infected individuals when examining psychosocial and spiritual variables. Previous studies examining spirituality did not address the symptomatology of the samples as a factor. In this study, the inverse relationship found among health and HIV symptoms indicated that, as HIV symptoms increased, perception of health within the sample population was lower. Further analysis showed that satisfaction with life and life purpose significantly correlated with either higher or lower levels of state-trait anxiety and depression. These findings indicate that, as one loses their sense of life satisfaction and purpose, anxiety levels and depression are likely to rise. The findings in the regression analysis supported the conceptual model proposed in the study (see Figure 1). The model proposed a bidirectional relationship among spirituality, anxiety, hope, health, and depression.

Why did RWB, age, and education not demonstrate a significant impact? RWB and EWB are highly correlated, and the sample was fairly homogenous on the demographic variables. Further, the fact that women comprised only 16% of the sample, caused the effects of gender to be difficult to assess. Gender had a significant effect on the hope variable, indicating its strong influence on the level of hope. As mentioned previously, a

greater representation of women in the sample would be necessary to examine this question further. Cross-tabulations were conducted to assess differences between gender and SP. This sample was fairly homogeneous on many variables such as alcohol consumption, intravenous drug use, disability, education, living arrangements, religious affiliation, and church attendance. This would explain the nonsignificant contribution in most of the regression runs. Over 50% of the sample were Baptist, with the remaining 50% involved in another type of religion. This indicates that this was a fairly religious sample; 32% attended church regularly, while the balance attended on holidays or other sporadic time periods.

With respect to HIV symptoms, over 50% of the 41 symptoms were endorsed by the sample with a mean score of 23.46. The number of symptoms were significant for this sample and found to be from moderate to severe in nature.

T tests were conducted on the following measures to assess for differences between gender and SP: State-Trait Inventory (Spielberger et al., 1970), Nowotny Hope Scale (Nowotny, 1989), SWB Scale (Ellison, 1983), and the Beck Depression Inventory (Beck et al., 1961). The results were found to be nonsignificant on all the measures with respect to gender, indicating gender was nonsignificant in terms of their endorsement of these study measures. However, SP was significant for depression, anxiety, and hope; heterosexuals reported more depression, state anxiety, and lower hope than nonheterosexuals. This finding may be due to the support services provided to the gay community. The sample percentage of women in the sample may have biased the results here as well. Cross-tabulations were then conducted by gender and SP on the groupings of depression and hope scores. The hope groupings were found to be nonsignificant. These findings further describe the similarities of the sample.

Study Significance

What is the meaning of this research on spirituality, anxiety, depression, hope, and health? How did this study increase our knowledge about spirituality and health? How can

this research benefit entities such as black churches? How will this research improve the QOL of African-Americans living with HIV or AIDS (Acquired Immune Deficiency Syndrome)? First, this research demonstrated that spirituality should be equally valued as an indicator of QOL. It further demonstrated an interaction among spirituality and the other QOL indicators: anxiety, depression, hope, and health. The interaction underscored the importance of spirituality on levels of anxiety, depression, hope, and health as measured by HIV symptoms. The regression analysis showed spirituality to be a strong predictor of the other QOL indicators.

As medical providers struggle to develop cures and treatments for diseases that are affordable and accessible to the most vulnerable populations, health care professionals have within their reach a powerful force that has the potential to produce incredible benefit. This force is spirituality. For too long, health care providers have avoided discussion of spiritual issues with those under their care. Although the conceptualization of mind, body, and spirit has been articulated in the nursing literature, the courage to address the spiritual component is often lacking. Health professionals have observed the suffering endured by individuals with cancer, AIDS, and other terminal diseases. Anxiety, depression, decreased hope, and physical health problems must be treated along with the disease.

It is clear that medication cannot relieve these individuals of the daily pain they live with, and further, it can be inferred that prescribed drugs cannot provide meaning and purpose to their lives; medications are often a constant reminder of the pathology of disease. This study provided a beginning point for researchers to continue exploring how to best instill meaning and purpose in the lives of those living with HIV/AIDS. Without a sense of meaning or purpose, reasons for living may decline more rapidly.

This study will provide black churches with ideas and options to instill meaning and purpose back into the lives of African-Americans living with AIDS who may have lost their perceived reason for living. Additionally, black churches will come to understand that spirituality is valued by these individuals. Some value spirituality more in the traditional

sense (e.g., church attendance), while others take more nontraditional paths toward spirituality (e.g., meditation and gardening activities to bring about a sense of solace). The church was found to have the most significant influence on spiritual development, underscoring its importance in the lives of this African-American sample.

Despite their spiritual nature, many people living with AIDS share their stories of church discrimination; however, spirituality remains an important component of their survival. For too long, some churches have imposed doctrine by instilling a sense of fear through dogma, excluding others who's lifestyle deviated from the mainstream of their congregations. Churches need to rethink their approach to reaching out to others as part of the community. It is the mission of the church and the role of spirituality to bring hopeful light to others living in despair, and to provide ongoing strength to those rescued from despair. Perhaps if more unconditional love is demonstrated towards individuals who relinquished their spiritual journey due to AIDS, they would be able to find new paths and directions toward a meaningful spiritual place benefiting their QOL.

Black churches are in a pivotal position to reach out to African-Americans living with AIDS. While some churches have begun this process, others are unable to see beyond their closed doctrine to lend support to this hurting population. This study presented data indicating that African-Americans with AIDS valued spirituality as children, teens, and adults. Therefore, whatever lifestyle or road taken by these individuals living with AIDS, their spiritual foundation remains strong and unbroken. Nurses are in an informed and educated position to teach congregations how to provide support and services to those with lifestyles they are unable to accept. For years, nurses have provided care to individuals regardless of their personal opinions and possible disdain for the lifestyle of their patients; however, coming to terms with one's own biases is part of the healing process of spirituality.

Although this was not an intervention study, the implications of benefits to those living with AIDS holds tremendous potential. Spirituality is within each of us. It is a

powerful phenomenon that can greatly benefit those suffering in despair. All have access to it, some will need to be taught how; however the power is there. The medical profession has begun to see the benefits of prayer from an empirical standpoint, as well as the benefits of church attendance, spiritual support groups, and meditation. This tool called spirituality is within our grasp and costs only the reliance on something higher them ourselves.

If spirituality can lower hypertension, anxiety, depression, and promote a sense of well-being, we have yet to unlock its full potential. There is meaning in all of our comings and goings, and in our living and dying. Illnesses like AIDS have connected human beings and, at the same time, have served to ignite the prejudices and biases already existing in some individuals. Spirituality can be that force that extinguishes these biases and prejudices by allowing individuals to transcend the barriers they have created. We must help others living with AIDS and other terminal illnesses to begin or rediscover that spiritual journey and thereby facilitate their healing.

The major strength of this study is that important questions were raised concerning the significance of spirituality and its effects in this sample of HIV-infected African-Americans. The regression analysis supported the contention that SWB would be a strong predictor of anxiety, depression, health, and hope in this sample. In each run, EWB, as a component of SWB, was a significant predictor. The mean scores of this sample were close to the normative samples. This finding also demonstrates that spirituality provides African-Americans with a framework for life satisfaction and purpose. That contention is supported by the fact that the majority of the sample were affiliated with a religious entity of some kind. The number and extent of HIV symptoms were significant for this sample; individuals endorsed over 50% of the 41 symptoms. This provides rationale for future researchers to consider assessing symptoms, along with other variables, in HIV-infected individuals.

Over 50% of the sample indicated their church was the most influential spiritual environment, followed by their home (31.6%). This finding is significant for churches in

understanding their role in the lives of African-Americans living with HIV infection, particularly in cases where churches have neglected to provide support to members within this population. If others living with HIV infection view the church with similar importance, what would happen to these individuals if churches provide them no support? In this study, discrimination of churches was not empirically evident; however, for those experiencing such a travesty, the results on mental and physical health could be devastating. Over 31% of the sample indicated their homes were influential to their spiritual development. This finding indicates the vital role that the home life plays in this area. In homes where spiritual discord exists, individuals striving to develop a greater sense of spirituality will experience distress.

Another significant finding was that the sample indicated their mother was the most significant individual in their spiritual development, followed by Jesus Christ, minister, and other. This would indicate the importance of a mother's presence on individual spirituality. The majority of the sample (83.8%) expressed that religion was important before becoming HIV positive, and that religion was equally important as a child, teen, and adult. For this sample, the expression of religion was highly valued. Imagine the impact of not being able to express spiritual beliefs in this sample of HIV-infected individuals. The correlational analysis revealed the relationship of SWB to all the dependent variables in this sample and clearly indicated that, when investigating African-Americans with HIV infection, spirituality must be assessed due to its importance in their ability to buffer stress caused by depression, anxiety, low hope, and poor health.

Study Limitations

The sample of 117 African-Americans was selected by convenience rather than random sampling procedures. The question of differences between African-Americans low on SWB and those who measure moderate to high cannot be answered. The sample was homogenous on this measure, as well as other measures assessing depression, anxiety,

hope, and health status. In an attempt to assess differences, cross-tabulations and *t* tests were conducted; however, no significant differences were statistically evident. An obvious limitation is the number of women in the study. Due to the small number, it was difficult to test the significance of gender, in which empirical evidence is lacking.

An additional limitation may be the instruments, which offered fixed responses enabling the respondent to endorse only those provided. A greater number of open-ended questions may have elicited more untapped, relevant data. The questionnaires took an average of 45 minutes to one hour to complete, hence fatigue may have been a factor in uncompleted questions. Additionally, those severely ill were unable to participate due to the concentration required.

The knowledge of how spirituality, anxiety, depression, hope, and health status correspond to changes over time, along the trajectory of HIV infection, would provide valuable empirical evidence. Further, this would allow researchers to assess which points along the trajectory are critical in comparison to others. Another limitation is that these findings can only be generalized to African-Americans, so the effect of ethnicity on the study variables cannot be determined. Due to the nature of self-report, it is difficult to determine the accuracy of the SP of the sample. It is common for individuals to modify their answers due to the stigma and stereotypes imposed by society.

Summary

Implications for Nursing

The current study, focusing on the effect of spirituality on anxiety, depression, hope, and health status, has important implications for nursing. First, the study is conceptually based on the holistic concepts of nursing practice. Bedside nurses and researchers must investigate the importance of spirituality to patients, along with the assessment of mental and physical health. Throughout history, nurses have carried the torch of holism in their practice; however, technological changes in patient care and societal

pressures have prevented nurses from addressing issues of spiritual care. This was supported by Peteet (1985) who examined the spiritual concerns of patients. Very few nurses addressed these concerns and, subsequently, few patients raised the issues with their health care providers. Nurse researchers must develop ways to help nurses feel comfortable addressing spiritual issues, as well as discover how to create environments enabling patients to feel at ease discussing these concerns as well.

The role of the church was significant to this sample of African-Americans. This finding provides an opportunity for nurses to work in an expanded role with other disciplines among the black community. Churches need to hear from health professionals as to the importance of their contribution in the lives of those living with a terminal illness. There may be some churches that feel they cannot accept the lifestyle of those living with AIDS due to doctrinal concerns; however, this nonacceptance translates into rejection, discrimination, and lack of support. Nurses are in a unique position to demonstrate the art of providing support and services to those with lifestyles differing from our own. Nurses and other health professionals could initiate training programs for churches to use as a framework without feeling they are compromising their religious integrity.

The home and the presence of a mother was found to be a significant factor. Nurses working in the community and hospitals are strategically positioned to help restore broken relationships between mothers and children with HIV infection through educational efforts and support groups. These avenues could be used to help mothers who are struggling with the lifestyle of their children to find a framework to deal with their dilemmas. Additionally, parents could learn through these channels the value their children placed on their spiritual roots and upbringing, even though their lifestyles took a different path. This study supports that HIV-infected African-Americans do indeed value the spiritual foundation built throughout their childhood, teen, and adult years.

Nurses must be alert to the fact that the presence of a high number of HIV symptoms correlates to increased distress. It is rare that people living with HIV infection

are able to communicate the dimension of their suffering. Medical providers tend to target the most severe symptoms and can inadvertently ignore the day-to-day effects terrorizing those with HIV infection. This is not to suggest that patients with fewer symptoms will not experience distress; one must bear severity in mind as well. Nurses must be cognizant of the psychosocial impact of HIV symptoms so they will be able to develop effective interventions aimed to buffer the stress associated with HIV symptoms.

Future Research and Conclusions

Studies focused on the effect of spirituality on health must be designed with diverse samples in mind, as well as incorporate longitudinal designs to assess the effect of HIV symptoms on spirituality over time. This will strengthen the possibility of demonstrating the contribution of spirituality to QOL in those living with the HIV virus. Understanding the role of the African-American church must continue to be assessed. The capability of the black church to reduce the financial burden and stress imposed on their members with HIV infection holds significant potential toward improving the QOL of African-Americans living with HIV infection. The measurement of EWB as a dimension of spirituality and its role in symptom assessment must also continue to be investigated. Intervention studies designed to test the effect of spiritual interventions would help to strengthen the science of nursing and its contribution to individual spirituality. This would also lead to a greater scientific acceptance of the role of spirituality in the practice of nursing and other fields. Few of the previous studies assessing the role of spirituality included African-Americans or other specific minority groups in their sample. This study has demonstrated the importance of spirituality to the African-American community. Nurses need to design their research programs so that they are attractive to minority groups. Research designs historically embraced by nursing may not be the best way to reach these vulnerable populations.

The health and lives of African-Americans and their families are clearly at risk due to the HIV virus and other health disparities. The latest Centers for Disease Control reports

(1995) show that over 1 per 1000 African-Americans are living with the HIV virus. No doubt, the effects of HIV infection will continue to be far reaching into the next century. Continuing research efforts, focused on the health status of minority groups living with HIV, have the potential of improving the QOL for these patients, as well as the quality of care they receive.

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