

# NIH Public Access

Author Manuscript

*Issues Ment Health Nurs*. Author manuscript; available in PMC 2014 April 08.

Published in final edited form as:

Issues Ment Health Nurs. 2006; 27(2): 185–198. doi:10.1080/01612840500436958.

## SPIRITUALITY, MENTAL HEALTH, PHYSICAL HEALTH, AND HEALTH-RELATED QUALITY OF LIFE AMONG WOMEN WITH HIV/AIDS: INTEGRATING SPIRITUALITY INTO MENTAL HEALTH CARE

## Safiya George Dalmida, MSN

Emory University, Nell Hodgson Woodruff School of Nursing, Atlanta, Georgia, USA

## Abstract

HIV-positive women have used spirituality as a resource to enhance their psychological wellbeing and health-related quality of life (HRQOL). The purpose of this article is to review the literature about depression among HIV-positive women and to describe the positive associations reported among spirituality, mental health, and HRQOL. This article also advocates the development and use of interventions integrated with spirituality. The incorporation of spirituality into traditional mental health practices can optimize healthcare for HIV-positive women who are diagnosed with depression. A case example is presented and spiritual implications are discussed.

> The prevalence of the Human Immunodeficiency Virus (HIV), Acquired Immune Deficiency Syndrome (AIDS), and depression among women underscores the need for attention and intervention regarding the mental health of HIV-positive women. HIV is a significant psychological (Nott, Vedhara, & Spickett, 1995) and physiological stressor (Robinson, Matthews, & Witek-Janusek, 1999), and there are many factors that influence specific health outcomes of interest among women with HIV. During HIV illness, many women face the dual challenge of being a patient and a family caregiver (Hackl, Somlai, Kelley, & Kalichman, 1997). Living with HIV, a major life stressor, along with caregiving responsibilities, may lead to depression. Women with HIV have substantially higher rates of depression than HIV-positive men (Ickovics et al., 2001). Caregiver role strain and depression experienced by HIV-positive women has often led to engaging in spiritual activities (Hackl et al., 1997). As a result, a greater sense of meaning and purpose has been observed (Hackl et al., 1997).

> Spirituality has been used as an individual resource for dealing with illness or psychological and emotional distress (Sowell et al., 2000) and for adjusting to uncertainties, especially in cases where usual coping resources are exhausted (Simoni, Martone, & Kerwin, 2002). For many HIV-positive women, spirituality becomes an important buffer against HIV-associated stressors (McCormick, Holder, Wetsel, & Cawthon, 2001; Powell, Shahabi, & Thoresen, 2003; Sowell et al., 2000).

## **BACKGROUND AND PURPOSE**

The purpose of this article is to review the literature about the associations reported among spirituality, mental health, and health-related quality of life for HIV-positive women who are diagnosed with depression. This article also discusses the relationship between spiritual

Copyright © Taylor & Francis Group, LLC

Address correspondence to: Safiya George Dalmida, 1520 Clifton Rd., Atlanta, GA 30322. sageorg@emory.edu.

Depression is a major concern within the HIV population because it has been correlated with HIV disease progression (Ickovics et al., 2001; Morrison et al., 2002; Vedhara et al., 1997) and reports of decreased health-related quality of life (Sarna, van Servellen, Padilla, & Brecht, 1999). Spirituality has been observed to improve psychological well-being and health-related quality of life in persons living with HIV/AIDS (Fryback & Reinhart, 1999; Sowell et al., 2000; Tate & Forchheimer, 2002; Tuck, McCain, & Elswick, 2001). Therefore, incorporating spiritual resources into mental health care for HIV-positive women may be beneficial. Spiritual activities could be used to complement traditional strategies used to treat depression. Somlai and colleagues (1996) purported that integration of spiritual traditions and mental health approaches are necessary for buffering psychiatric morbidities among HIV-infected women. Hence, alternative therapies and spirituality are now embraced more frequently by health care professionals (Friedmann et al., 2002).

#### **Depression and HIV in Women**

Living with HIV places profound demands on psychological resources. This can overwhelm the HIV-positive person, resulting in depression (Orlando, Tucker, Sherbourne, & Burnam, 2005). Researchers identified a linkage between HIV symptomatology and depression and found that HIV symptoms significantly predicted negative psychological well-being (Coleman & Holzemer, 1999). In earlier literature, depression was identified as a risk factor for disease and was reported to be associated with a decline in immune functioning (Herbert & Cohen, 1993). Earlier pioneers, exploring the relationship between mental health and immune functioning, reported that depressed moods altered neuropeptide receptor expression on lymphocytes and led to decreased proliferation of CD4 cell counts (Ader, Felton, & Cohen, 1991). Additionally, it was discovered that depressive symptoms among HIV-positive women were associated with a decline in CD4 cell count (Ickovics et al., 2001). It is, therefore evident that depression propagates the negative consequences of living with HIV. Consequently, there may be benefits to the incorporation of spiritual practices as an additional means of intervention into traditional mental health care to facilitate psychological wellness and coping among women with HIV/AIDS.

#### The Concept of Spirituality

Spirituality has been defined by several authors within nursing and other disciplines. Some of the defining characteristics of spirituality that have been identified by nurse writers include unfolding mystery, inner strengths, and harmonious interconnectedness (Barnum, 1996). Spirituality is associated with well-intentioned forces and relates to the experiences of soul growth and a connection with a higher power (Barnum, 1996). Spirituality is a personal concept involving one's attitudes and beliefs related to God (O'Brien, 2003). Nurse theorist Betty Neuman (Neuman & Fawcett, 2002) described spirituality as an innate part of a client's basic structure that may not be developed or recognized and is awakened from a dormant state by some environmental catalyst. According to Neuman and Fawcett (2002), an awareness of one's spiritual self is related to optimal wellness. Therefore, consideration of spirituality is seen as necessary to appreciate a truly holistic perspective of the client or client system (Neuman & Fawcett, 2002).

As a result of reflection on one's spirituality, an individual can progress toward spiritual well-being (Relf, 1997). In order to achieve spiritual well-being, an HIV-infected person must explore the significance and meaning of HIV or AIDS relative to hope, faith, spirituality, and purpose and meaning in life (Relf, 1997).

Spiritual well-being is a concept relative to spirituality that describes or quantifies an individual's level of spiritual wellness across a continuum. Spiritual well-being has been described as the affirmation of life in a relationship with God, self, community, and environment that nurtures and celebrates wholeness (Ellison, 1983). It is a sense of well-being in relation to God and a sense of life purpose with no specific religious reference (Ellison & Paloutzian, 1982). Spiritual well-being has two subconcepts: existential well-being (EWB) and religious well-being (RWB). Existential well-being is the subconcept or dimension of spiritual well-being that pertains to relationships with others and purpose in life (Ellison, 1983). Religious well-being is the dimension of spiritual well-being that pertains to a personal relationship with God (Ellison, 1983).

#### **Distinctions Between Spirituality and Religion**

Spirituality is a broader concept than religion (Goldberg, 1998; McSherry & Draper, 1998; Mueller, Plevak, & Rummans, 2001; Seeman, Dubin, & Seeman, 2003) and may or may not be rooted in or related to religion (Miller & Thoresen, 2003). Spirituality refers to a quest in life for that which is holy or sacred (Kliewer, 2004), a transcendent relationship with God or a higher power (Kliewer, 2004; Reed, 1992), and is focused on the immaterial (Miller & Thoresen, 2003). On the other hand, religion focuses on more prescribed beliefs, practices, rituals, and social institutional factors (Kliewer, 2004; Miller & Thoresen, 2003). The type of belief inherent to spirituality is different from that of religiosity, which refers to an individual's beliefs and behaviors associated with a specific religious tradition (O'Brien, 2003). That which is spiritual transcends personal and scientific boundaries (Reed, 1992) and also physical boundaries, whereas religion is defined by boundaries (Miller & Thoresen, 2003). Both spirituality and religion are latent constructs because they are not directly observable, however, they can be measured or observed indirectly by their subcomponents (Miller & Thoresen, 2003).

## SPIRITUALITY AND HEALTH

There is a growing amount of research available on the relationship between spirituality and health (Simoni, Martone, & Kerwin, 2002). Overall, people with HIV/AIDS describe spirituality as an important factor in their health and well-being (Fryback & Reinhart, 1999). According to Rabin (1999), spiritual or religious practices, such as prayer, can have positive influence on health. One possible mechanism by which participation in religious or spiritual activities fosters a beneficial health effect is the relaxation of the sympathetic nervous system (SNS) and enhancement of immune function (Rabin, 1999). Spirituality may be related to immune system functioning and its effect on health by enhancing one's ability to cope with stress, resulting in better health practices, increased social interaction, and a greater satisfaction with and quality of life (Rabin, 1999). Another explanation for the linkage between spirituality and mental health could include a placebo response, in which mere belief in the effectiveness of a practice often produces an unanticipated beneficial response. The perceived health benefit gained through spiritual belief systems may be experienced by those engaging in spiritual or religious activities (Rabin, 1999).

Research examining the patterns of spirituality in women with HIV has suggested that the spirit is able to shape a more positive perception and interpretation of the state of the mind and body (Hall, 1998). A strong association of spiritual dimensions with mental health, psychological adjustment, and coping has been demonstrated among persons with HIV/AIDS (Somlai et al., 1996). Furthermore, researchers have identified the existence of a strong positive relationship between spirituality (Coleman & Holzemer, 1999; Nelson, Rosenfeld, Breitbart, & Galietta, 2002), and effective coping strategies, resulting in decreased stress and psychological distress and improved emotional coping among HIV/AIDS patients (Tuck, McCain, & Elswick, 2001). Spiritual activities may alleviate

depression by enhancing feelings of happiness and increasing greater satisfaction with life, resulting in fewer negative psychosocial stressors (Rabin, 1999). Belief in God may provide emotional assurances that produce favorable autonomic responses, including a decrease in stress-induced catecholamines (neurotransmitters) and mental relaxation (Rabin, 1999).

## SPIRITUALITY, MENTAL HEALTH, AND HEALTH-RELATED QUALITY OF LIFE

Several researchers have examined the health-related quality of life of persons with HIV and other chronic illnesses as it relates to spirituality (Fryback & Reinhart, 1999; Sowell et al., 2000; Tate & Forchheimer, 2002; Tuck et al., 2000) and psychological health (Nannis et al., 1997; Sarna et al., 1999). Disruptions in quality of life among HIV-positive women have been linked to poorer quality of life (Sarna et al., 1999). Conversely, positive associations between spirituality and quality of life have been observed in persons with HIV/AIDS (Sowell et al., 2000; Tuck et al., 2000). For example, Fryback and Reinhart (1999) found that study participants who had potentially fatal diseases viewed spirituality as a bridge between hopelessness and meaning in life. Subjective improvements in quality of life were reported among those who found meaning in their illness. Additionally, in a population of cancer and rehabilitation patients, spiritual well-being was reported to be positively associated with quality of life and life satisfaction (Tate & Forchheimer, 2002).

Several positive associations between spirituality and mental health (Coleman & Holzemer, 1999; Nelson et al., 2002; Somlai et al., 1996; Tuck, McCain, & Elswick, 2001) and between spirituality or religiosity and immune system function have been reported among terminally ill and HIV/AIDS patients (Ironson et al., 2002; Koenig et al., 1997; Sephton, Koopman, Schaal, Thoresen, & Spiegel, 2001; Woods, Antoni, Ironson, & Kling, 1999).

## DISCUSSION

Based on this review of literature, a collaborative and holistic plan of care is necessary to address the comprehensive mental health needs of HIV-positive women. Due to the multiple factors associated with depression and distress within this population, holistic interventions in addition to anti-depressive medications may be a more effective therapeutic approach. Adjunct therapy that includes spiritual and psychological counseling might yield better mental health outcomes among HIV positive women. Significant positive associations between spiritual and psychological well-being and health-related quality of life provide support for the possibility of offering integrated interventions to optimize care for women who are HIV seropositive.

#### The Spirit-Mind-Body Framework

The author has proposed a descriptive framework to support the development of spiritualityintegrated mental health interventions for addressing the mental health needs of HIVpositive women. The Spirit-Mind-Body framework is derived from the findings of research studies that identify associations between spirituality, depression, health-related quality of life, and HIV disease progression. The framework is also based on Spirit-Mind-Body literature that discusses relationships among spirituality, psychological variables (Coleman & Holzemer, 1999; Nelson et al., 2002; Simoni, Martone, & Kerwin, 2002; Somlai et al., 1996; Tuck, McCain, & Elswick, 2001) and the immune system (Ironson et al., 2002; Koenig et al., 1997; Sephton et al., 2001; Woods et al., 1999).

The Spirit-Mind-Body framework has at its core the psychoneuroimmunology (PNI) framework, originally developed by Ader (1981), and on the findings of PNI-based research (Nott, Vedhara, & Spickett, 1995; Robinson, Matthews, & Witek-Janusek, 1999; Zeller,

McCain, McCann, Swanson, & Colletti, 1996; Zeller, McCain, & Swanson, 1996). PNI examines the relationships among stress, physiological dysregulation, and health outcomes (Robinson et al., 1999). Psychoneuroimmunology (PNI) is described as the study of the interrelationships among behavior, neural and endocrine function, and the immune status (Ader, 1981; Robinson et al., 1999), psychological factors, the central nervous system (CNS) and the immune system (Ader, 1981; Cohen & Herbert, 1996; Nott et al., 1995).

Within the Spirit-Mind-Body framework, the concept of "living with HIV" is identified as the common stressor faced by HIV-positive women. The stress of "living with HIV" may encompass the stigma, anger, guilt, shame, or emotional distress that may be associated with being HIV-positive, the strain of fulfilling multiple roles, and the financial strain that may result from disability or the costs of HIV health care. HIV-positive women also may report the distress and frustration associated with the need to make difficult lifestyle adjustments such as adhering to daily medication regimens and engaging in HIV risk reduction behaviors. Disclosure of their HIV-positive status to children, family members, partners, and others also may be another source of stress. The stress of "living with HIV" also may include the physiologic stress of experiencing medication side effects.

The presence of acute or chronic stressors is central to the PNI framework (Robinson et al., 1999). It is hypothesized that relationships exist among stress, immune function, and HIV disease progression, however the exact relationships are not understood (Robinson et al., 1999). Multiple stressors and causes of distress are associated with HIV disease that could potentially suppress the compromised immune system even further (Robinson et al., 1999). Both acute and chronic stress have similar potential to negatively affect the immune system, as a greater amount of stress is often associated with less antibody production and lower cellular immune competence (Cohen & Herbert, 1996).

Stress may contribute to the existence of depression among HIV-positive women. According to the PNI framework, psychoneurological phenomena, such as stress and depression, can influence immune system functioning through neuroendocrine pathways (Cohen & Herbert, 1996; Robinson et al., 1999; Zeller, McCain, McCann et al., 1996; Zeller, McCain, & Swanson, 1996). According to Cohen and Herbert, psychological variables, namely stress, negative affect, and clinical depression, can influence both cellular and humoral indicators of immune status and function through direct innervation of the CNS or through hormonal pathways. Another pathway between stress and immune function, specifically relevant to HIV disease progression, involves the autonomic nervous system (ANS) (Ader, 2000; Robinson et al., 1999), which is sensitive to psychological threat and changes in mood and affect (Robinson et al., 1999).

Researchers have demonstrated that depression is associated with alterations in immune function, specifically CD4 cell count (Ickovics et al., 2001) and CDS T cells (Evans et al., 2002) among women with HIV (Evans et al., 2002). Depressed moods may alter neuropeptide receptor expression on lymphocytes and, thus high levels of depressed mood may contribute to HIV activity, HIV disease progression, and declines in CD4 cell counts (Ader et al., 1991). Furthermore, the relationship between psychological and immunological variables may be mediated by behavior changes, such as medication adherence and risky behaviors that might include sexual risk-taking or needle-sharing (Cohen & Herbert, 1996).

Depression also may be related to underlying spiritual issues, as many symptoms of depression parallel indications of spiritual distress (Hood, 1996). A multi-dimensional approach would therefore represent the best plan of care for addressing depression among

HIV-positive women. Provision of holistic care would require nurses to be familiar with the association of spiritual issues with depression (Hood, 1996).

### **Spirituality-Integrated Mental Health Interventions**

The author posits that spiritual care has the potential to buffer the effects of depressive symptomatology. A potential synergistic effect may be achieved by providing both spiritual and mental health care to HIV-positive women. According to the Spirit-Mind-Body framework, interventions that foster spiritual and psychological well-being are central to dealing with depression. Moreover, as spiritual and mental health needs are addressed, the improvement of immune function and health-related quality of life outcomes is more likely.

Interventions, used within individual or group settings, can provide spiritual and mentally integrated health care via discussions, interviewing, counseling, exercises, storytelling, reading spiritual material, or reflecting on meaning and purpose of life. Spirituality can be incorporated into care by allowing patients to discuss the actual or potential role and impact of spirituality relative to their psychological well-being and health. Meaning and purpose in life and connectedness are major attributes of spirituality (Barnum, 1996; Friedmann, Mouch, & Racey, 2002; Nolan & Crawford, 1997; Simoni, Martone, & Kerwin, 2002). Hence, within a spiritual context HIV infected women can be helped as they search for meaning and purpose in order to establish or strengthen connections with others. Mental health nurses can facilitate individual or group activities that encourage spiritual introspection and reflection. The author suggests that HIV infected women should play a role in determining the degree to which spiritual activities should be included in the plan of care.

It is, therefore, imperative for mental health nurses and providers to begin the mental health plan of care with a thorough assessment of each patient's mental health needs. Spiritual care providers can be included in the plan of care to conduct an assessment of spiritual needs. A history can be obtained about the patient's interest in spirituality or spiritual practice to determine whether he or she has found particular spiritual activities to be beneficial to mental health. The mental health nurse can then address the specific practice identified by the patient and assist in identifying ways to enhance its use. The following case study illustrates how spiritual issues were addressed between an HIV infected woman and her nurse.

#### Case Example

Ms. V was an African-American woman in her mid 50 s. She had been diagnosed with HIV for eight years. She reported a past history of being a "party girl" and not taking time to appreciate the nice and simple things in life, such as family. Ms. V was depressed, her CD4 cell counts were low, and she felt hopeless. She started going to a nurse-led discussion group for women with HIV and became inspired when another lady in the group, Ms. T, shared how she overcame her hopelessness. Ms. T was once depressed and very immunocompromised, but had been encouraged by her nurse to read some spiritual material given to her and to re-connect with her spiritual community. Ms. T followed her nurse's recommendations and reported feeling better about herself.

Ms. V tried to think of things that she could do also to help deal with her own feelings of hopelessness. Ms. V talked to her nurse about her concerns, and her nurse, her pastor, and mental health counselor assisted Ms. V to identify some spiritual activities to consider. Ms. V decided that she would try a few of the suggestions, which included meditating and keeping a prayer journal. She jotted down some of her prayers and some of the things in her life for which she was grateful. Ms. V reported that she continued using her prayer journal

and within about three months she began feeling healthier and better about herself and reported an improved sense of quality of life. Consequently, she also began taking her antiretroviral medicines regularly and avoided engaging in risky sexual behavior. Ms. V reported her CD4 counts had increased by 100 cells/ml and that she continues to engage in those activities that have enhanced her spiritual growth, mental health, and her quality of life, and she encourages other women to do the same.

#### **Ethics of Spiritual-Mental Health Care**

Although engaging patients in discussions about their spiritual beliefs and practices is an acceptable approach, it is not acceptable to give (unwanted) spiritual advice regardless of the reported associations between spirituality and positive health outcomes (Sloan, Bagiella, & Powell, 1999). Giving unwanted, unsolicited spiritual advice should be discouraged as it may involve telling a patient what should be done in terms of their spirituality, rather than using a collaborative approach to assist patients to identify ways to express their spirituality. Patients' spiritual needs can be discussed, but nurses and other health care providers should not make promises or give guarantees about improvement in health outcomes as a result of engaging in spiritual practices. Although research findings support improvements in certain health outcomes, no absolutes should be implied. Instead, patients should assist in generating a short list of spiritual activities they consider to be enjoyable and beneficial.

In order to respect the autonomy of patients, it is important for nurses to avoid imposing their own spiritual beliefs and practices on patients. Nurses and mental health providers should not integrate spirituality into mental health care within the context of any particular religion, but patients should be allowed to express and discuss their spirituality within their own religious frame of reference. The focus of care should be encouraging patients to identify the role that their spirituality may play in addressing their mental health needs. Nurses and mental health providers may lack the expertise to address the spiritual concerns of participants in-depth, therefore, health care providers should be willing and able to refer participants for pastoral care as appropriate (Astrow, Puchalski, & Sulmasy, 2001).

## CONCLUSION

HIV-positive women are disproportionately affected by depression when compared to their male counterparts (Ickovics et al., 2001 Morrison et al., 2002), and depression has had negative effects on quality of life, disease progression (Ader et al., 1991; Ickovics et al., 2001; Morrison et al., 2002; Vedhara et al., 1997), and survival (Ickovics et al., 2001; Morrison et al., 2002). Some HIV-positive women report using spirituality as a means to cope with living with HIV (Sowell et al., 2000). However, spirituality has not been traditionally incorporated into mental health care.

## SPIRITUAL IMPLICATIONS

Nurses and mental health providers should assess whether HIV-positive women rely on spiritual resources as coping strategies, or use traditional mental health approaches in treating depression. Professionals can assist women who would like to include their spiritual practice into their mental health care plan. HIV-positive women who are diagnosed with depression can be empowered to become active participants in their overall plan of care and to realize the spiritual support and free, internal spiritual resources that are available to them. Use of non-traditional interventions may help to maximize mental health services, mental health, and health-related quality of life outcomes among HIV-positive women.

## References

- Ader, R. Psychoneuroimmunology. New York: Academic; 1981.
- Ader R. On the development of psychoneuroimmunology. European Journal of Pharmacology. 2000; 405:167–176. [PubMed: 11033324]
- Ader, R.; Felton, DL.; Cohen, N., editors. Psychoneuroimmunology. 2. San Diego: Academic; 1991.
- Astrow AB, Puchalski CM, Sulmasy DP. Religion, spirituality, and health care: Social, ethical, and practical considerations. American Journal of Medicine. 2001; 110(4):283–287. [PubMed: 11247596]
- Barnum, BS. Spirituality in nursing: From traditional to new age. New York: Springer; 1996.
- Cohen S, Herbert TB. Health psychology: Psychological factors and physical disease from the perspective of human psychoneuroimmunology. Annual Reviews of Psychology. 1996; 47:113–142.
- Coleman CL, Holzemer WL. Spirituality, psychological well-being, and HIV symptoms for African-Americans living with HIV disease. Journal of the Association of Nurses in AIDS Care. 1999; 10(1):42–50. [PubMed: 9934669]
- Ellison CW. Spiritual well-being: Conceptualization and measurement. Journal of Psychology and Theology. 1983; 11(4):330–340.
- Ellison, CW.; Paloutzian, RF. Loneliness, spiritual well-being and the quality of life. In: Peplau, LA.; Perlman, D., editors. Loneliness: A sourcebook of current theory, research, and therapy. New York: Wiley-Interscience; 1982. p. 224-237.
- Freidmann M, Mouch J, Racey T. Nursing the spirit: The framework of systemic organization. The Journal of Advanced Nursing. 2002; 39:325–332.
- Fryback PB, Reinert BR. Spirituality and people with potentially fatal diagnoses. Nursing Forum. 1999; 34(1):13–22. [PubMed: 10426112]
- Goldberg B. Connection: An exploration of spirituality in nursing care. Journal of Advanced Nursing. 1998; 27(4):836–842. [PubMed: 9578216]
- Hackl KL, Somlai AM, Kelly JA, Kalichman SC. Women living with HIV/AIDS: The dual challenge of being a patient and caregiver. Health and Social Work. 1997; 22:53–62. [PubMed: 9021418]
- Hall BA. Patterns of spirituality in persons with advanced HIV disease. Research in Nursing and Health. 1998; 21:143–153. [PubMed: 9535406]
- Herbert TB, Cohen S. Depression and immunity: A meta-analytic review. Psychological Bulletin. 1993; 113(3):472–486. [PubMed: 8316610]
- Hood LE. A spiritual well-being model: Use with older women who experience depression. Issues in Mental Health Nursing. 1996; 17:439–455. [PubMed: 8920342]
- Ickovics JR, Hamburger ME, Vlahov D, Schoenbaum EE, Schuman P, Boland RJ, Moore J. Mortality, CD4 count decline, and depressive symptoms among HIV-seropositive women: Longitudinal analysis from the HIV epidemiology research study. Journal of the American Medical Association. 2001; 285(11):1466–1474. [PubMed: 11255423]
- Ironson G, Solomon GF, Balbin EG, O'Cleirigh C, George MA, Kumar M, Larson D, Woods TE. The Ironson-Woods spirituality/religiousness index is associated with long survival, health behaviors, less distress, and low cortisol in people with HIV/AIDS. Annals of Behavioral Medicine. 2002; 24(1):34–48. [PubMed: 12008793]
- Kliewer S. Allowing spirituality into the healing process. The Journal of Family Practice. 2004; 53(8): 616–624. [PubMed: 15298831]
- Koenig HG, Cohen HJ, George LK, Hays JC, Larson DB, Blazer DG. Attendance at religious services, interleukin-6, and other biological parameters of immune function in older adults. International Journal of Psychiatry in Medicine. 1997; 27:233–250. [PubMed: 9565726]
- McCormick DP, Holder B, Wetsel MA, Cawthon TA. Spirituality and HIV disease: An integrated perspective. Journal of the Association of Nurses in AIDS Care. 2001; 12(3):58–65. [PubMed: 11387805]
- McSherry W, Draper P. The debates emerging from the literature surrounding the concept of spirituality as applied to nursing. Journal of Advanced Nursing. 1998; 27(4):683–691. [PubMed: 9578196]

Dalmida

- Miller WR, Thoresen CE. Spirituality, religion, and health. American Psychologist. 2003; 58(1):24–35. [PubMed: 12674816]
- Morrison MF, Petitto JM, Ten Have T, Gettes DR, Chiappini MS, Weber AL, Spence PB, Bauer RM, Douglas SD, Evans DL. Depressive and anxiety disorders in women with HIV infection. American Journal of Psychiatry. 2002; 159(5):789–796. [PubMed: 11986133]
- Mueller PS, Plevak DJ, Rummans TA. Religious involvement, spirituality, and medicine: Implications for clinical practice. Mayo Clinic Proceedings. 2001; 76(12):1225–1235. [PubMed: 11761504]

Nannis ED, Patterson TL, Semple SJ. Coping with HIV disease among seropositive women: Psychosocial correlates. Women and Health. 1997; 25(1):1–23. [PubMed: 9253135]

- Nelson CJ, Rosenfeld B, Breitbart W, Galietta M. Spirituality, religion, and depression in the terminally ill. Psychosomatics. 2002; 43(3):213–220. [PubMed: 12075036]
- Neuman, B.; Fawcett, J. The Neuman systems model. 4. New Jersey: Prentice Hall; 2002.
- Nolan P, Crawford P. Towards a rhetoric of spirituality in mental health care. Journal of Advanced Nursing. 1997; 26:289–294. [PubMed: 9292362]
- Nott KH, Vedhara K, Spickett GP. Psychology, immunology, and HIV. Psychoneuroendocrinology. 1995; 20:451–474. [PubMed: 7675931]
- O'Brien, ME. Spirituality in nursing: Standing on holy ground. 2. Boston: Jones and Bartlett; 2003.
- Orlando M, Tucker JS, Sherbourne CD, Burnam MA. A cross-lagged model of psychiatric problems and health related quality of life among a national sample of HIV positive adults. Medical Care. 2005; 43(1):21–27. [PubMed: 15626930]
- Powell LH, Shahabi L, Thoresen CE. Religion and spirituality: Linkages to physical health. American Psychologist. 2003; 58(1):36–52. [PubMed: 12674817]
- Rabin, B-S. Stress, immune function, and health: The connection. New York: Wiley-Liss; 1999.
- Reed P. An emerging paradigm for the investigation of spirituality in nursing. Research in Nursing and Health. 1992; 15:349–357. [PubMed: 1529119]
- Relf MV. Illuminating meaning and transforming issues of spirituality in HIV disease and AIDS: An application of Parse's theory of human becoming. Holistic Nursing Practice. 1997; 12(1):1–8. [PubMed: 9384065]
- Robinson FP, Matthews HL, Witek-Janusek L. Stress and HIV disease progression: Psychoneuroimmunology framework. Journal of the Association of Nurses in AIDS Care. 1999; 10(1):21–31. [PubMed: 9934667]
- Sarna L, van Servellen G, Padilla G, Brecht ML. Quality of life in women with symptomatic HIV/ AIDS. Journal of Advanced Nursing. 1999; 30(3):597–605. [PubMed: 10499216]
- Seeman TE, Dubin FL, Seeman M. Religiosity/spirituality and health: A critical review of the evidence for biological pathways. American Psychologist. 2003; 58(1):53–63. [PubMed: 12674818]
- Sephton SE, Koopman C, Schaal M, Thoresen C, Spiegel D. Spiritual expression and immune status in women with metastatic breast cancer: An exploratory study. The Breast Journal. 2001; 7:345–353. [PubMed: 11906445]
- Simoni JM, Martone MG, Kerwin JF. Spirituality and psychosocial adaptation among women with HIV/AIDS: Implications for counseling. Journal of Counseling Psychology. 2002; 49:139–147.
- Sloan RP, Bagiella E, Powell T. Religion, spirituality, and medicine. The Lancet. 1999; 353(9153): 664–667.
- Somlai AM, Kelly JA, Kalichman SC, Mulry G, Sikkema KJ, McAuliffe T, Multhauf K, Davantes B. An empirical investigation of the relationship between spirituality, coping, and emotional distress in people living with HIV infection and AIDS. Journal of Pastoral Care. 1996; 50(2):181–191. [PubMed: 10158099]
- Sowell R, Moneyham L, Hennessy M, Guillory J, Demi A, Seals B. Spiritual activities as a resistance resource for women with human immunodeficiency virus. Nursing Research. 2000; 49:73–82. [PubMed: 10768583]
- Tate DG, Forchheimer M. Quality of life, life satisfaction, and spirituality: Comparing outcomes between rehabilitation and cancer patients. American Journal of Physical Medicine and Rehabilitation. 2002; 81(6):400–410. [PubMed: 12023595]

- Tuck I, McCain NL, Elswick RK Jr. Spirituality and psychosocial factors in persons living with HIV. Journal of Advanced Nursing. 2001; 33:776–783. [PubMed: 11298215]
- Vedhara K, Nott KH, Bradbeer CS, Davidson AF, Ong ELC, Snow MH, Palmer D, Nayagam AT. Greater emotional distress is associated with accelerated CD4+ cell decline in HIV infection. Journal of Psychosomatic Research. 1997; 42(4):379–390. [PubMed: 9160277]
- Woods TE, Antoni MH, Ironson GH, Kling DW. Religiosity is associated with affective immune status in symptomatic HIV-infected gay men. Journal of Psychosomatic Research. 1999; 46(2): 165–176. [PubMed: 10098825]
- Zeller JM, McCain NL, McCann JJ, Swanson B, Colletti MA. Methodological issues in psychoneuroimmunology research. Nursing Research. 1996; 45:314–318. [PubMed: 8831661]
- Zeller JM, McCain NL, Swanson B. Psychoneuroimmunology: An emerging framework for nursing research. Journal of Advanced Nursing. 1996; 2:657–664. [PubMed: 8675880]