Correlates of spirituality and well-being in a community sample of people living with HIV disease

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ABSTRACT While the past several years have witnessed an increase in the amount of research examining the spiritual perspectives of people living with HIV/AIDS, this literature is still insufficient to guide the conceptualization and development of spiritually based interventions to improve the life quality of people living with HIV illness. The present study assessed a community sample of 275 persons living with HIV disease to examine relationships among their spirituality, quality of life, perceptions of social support, and coping and adjustment efforts. This study found relationships between social support, active problem solving, life satisfaction, and gender and race with higher levels of spirituality among people living with HIV/AIDS. Mental health providers may need to routinely include assessments of spirituality and religious practices. Caregivers, faith communities, and mental health providers will need to assist in developing supportive environments that enhance the spiritual life and social well-being of people living with HIV infection. Additionally, caregiver training programs will need to focus on spiritual practices as a means of establishing a support system that increases the psychosocial well-being of people living with HIV/AIDS.

Chronic illness places unique stressors on one’s mental health by affecting such psychosocial factors as coping, social support, and overall health status. The extent to which one has adjusted to these difficulties may be best assessed by their self-reported quality of life. Religious coping as an important mediator of coping and adjustment needed to experience greater life satisfaction and is an important construct as people with HIV infection and AIDS are living longer than ever before.

The life quality of people living with HIV/AIDS is an area of burgeoning interest to many health science researchers and practitioners. Early research examining the quality of life of people living with HIV illness focused predominantly on assessment-related issues, while later research sought to identify relationships between life quality and psychosocial variables such as coping, social support, and health status (Cleary et al., 1993; Kaplan et al., 1989). As early as 1984 Lazarus and
Folkman indicated that quality of life improvement programs for persons living with HIV disease should not only incorporate coping skills training, but also help participants develop a deeper spirituality.

One psychosocial domain that has remained largely overlooked during the investigation of life quality among persons living with HIV/AIDS is spirituality/religiosity. Previous research examining people living with chronic illness has typically investigated religion, spirituality, and religious coping efforts in relation to significant negative life events and life stressors (Pargament et al., 1990; Ellison, 1994; Maton & Wells, 1995). In a review of studies investigating religious factors and health status, Mathews et al. (1998) found that religious commitment improved one’s ability to cope with mental and physical illness. This review concluded that religiosity is an effective support mechanism in coping with psychosocial stressors; that religious coping efforts are multidimensional and often involve a search for spiritual meaning and personal support; that faith congregations provide important social networks and support that facilitate personal coping and adjustment efforts; and that these congregations provide an array of instrumental, informational, and emotional support resources (e.g. economic assistance, spiritual assistance, etc.).

Recent research has identified moderate relationships between spiritual dimensions and mental health, psychological adjustment, and coping in people living with HIV disease. Somlai et al. (1996) found that persons living with HIV/AIDS were more likely to participate in prayer practices and formal religions than their non-infected counterparts. This is consistent with previous research (e.g. Carson et al., 1990) which found spiritual activities such as meditation, imaging, and prayer were intricately linked to perceptions of well-being among long-term survivors of AIDS. Additional research found that long-term survivors of AIDS who displayed an ability to overcome negative life stressors also demonstrated a positive spiritual health through participation in prayer and meditation (Carson, 1995). Hall (1998) suggested that three major spirituality themes have appeared among people living with HIV: (1) the emergence of new spiritual meanings; (2) incorporating their illness into their self-concept of spiritual being; and (3) a spiritual understanding of their life. Finally, Kendall (1994) identified ‘wellness spirituality’ as a possible factor in the process of successful adjustment with HIV infection in homosexual men. This ‘doing well’ relationship has even extended to end-of-life decisions, in which the adjustment efforts of HIV-positive people were facilitated by a belief that God is forgiving and refusal to believe that HIV infection is a punishment (Kaldjian et al., 1998).

Recent research has extended beyond investigations of coping at the individual level to the effects of spiritual support provided by faith congregations and one’s ethnic/cultural heritage and traditions. Significant differences have been found among faith congregation’s responses to the spiritual needs of people living with HIV/AIDS, (Somlai et al., 1997). This research revealed that African Americans living with HIV/AIDS appeared to endorse more traditional Christian beliefs and practices (Somlai et al., submitted). This finding suggests that clergy need to take specific steps to influence their congregation to provide spiritual support and care to persons living with HIV disease.
HIV-infected persons living with a chronic and potentially life-threatening disease almost invariably report concerns regarding the quality of their lives. Rizzi et al. (1994) suggested that in the chronic condition of living with HIV disease, and the distinct possibility of a shortened life, quality of life (QOL) is crucial in the development of health care delivery systems. The significance of these QOL issues was reviewed by Heckman et al. (1996), who reported that concerns regarding physical and neurological deterioration, loss of financial resources, the prospect of an early death, significant changes in social relationships, disruption of existing relationships, and barriers to the formation of new social ties are of paramount concern to persons living with HIV/AIDS (Chuang et al., 1989; Kalichman & Sikkema, 1994; Kelly & St. Lawrence, 1989; Kalichman, 1995; Turner et al., 1993). Given these findings, and as the life expectancy of HIV-infected persons continues to increase, there is a growing need to conceptualize and evaluate strategies that can improve the life quality of long-term survivors living with HIV illness. While previous research has found that QOL is related to social support and coping efforts, the links between spirituality and psychosocial well-being of people living with HIV/AIDS is less certain (Friedland et al., 1996). For example, religiosity may mediate a positive reinterpretation of living with HIV; psychological outcomes may include positive adjustments to stressful life events or an increased commitment to improve one’s coping. These religious coping strategies may be intrinsic (internalized) or extrinsic (intercessory) in seeking comfort and well-being in the the adjustment to the uncertainty of living with HIV/AIDS.

Previous research has attempted to develop theoretically-based studies of spirituality as it relates to social support (Krause, 1992, 1998; Krause & Wray, 1991); coping (Bickel et al., 1998; Jenkins & Pargament, 1995; Koenig et al., 1998; Pargament et al., 1998a, b; Pargament & Park, 1977); quality of life (Richards & Folkman, 1997); and adjustment (Helminiak, 1995, 1997). However, very few studies have systematically investigated links among quality of life and spirituality among people living with HIV/AIDS. While there continues to be intensive dialogue regarding the relationship between religion, spirituality, and health related factors/outcomes (Dossey, 1999; Sloan et al., 1999) there is a lack of specificity to the critical issues faced by people living with HIV/AIDS. This may be related to the multidimensional factors (e.g. isolation from faith communities, lack of social support, and the use of complementary or alternative medicine) that appear especially unique to individuals living with HIV/AIDS. The research field has not developed clear theoretical paradigms for the study of relationships among spirituality and living with HIV/AIDS. For example, Greene et al. (1999) investigated the most frequently used ‘alternative and complementary therapies’ in a sample of over 1000 HIV/AIDS patients. They found prayer (56%), meditation (46%), breathing exercises (33%), and spiritual activities (33%) as the most common activities positively influencing the mental health of participants. While numerous research activities are just now beginning to investigate the relationships between chronic illness, coping and spirituality these findings are beginning to provide a framework for further investigation. Jenkins (1995) provided some useful direction for research on the relationship between religion/spirituality and coping.
with HIV. He suggested that there were ‘long-lived’ spiritual influences on religious coping among African-Americans and women, as well as, variability in the use of religion for specific problems. This work has been particularly helpful in framing the focus of future research on other influences (i.e. QOL) on the spiritual practice of people living with HIV/AIDS.

Because AIDS-related quality of life research has, by and large, ignored spirituality and its association with quality of life, we conducted a study to investigate: 1) the relationship between the quality of life and spiritual practices of people living with HIV/AIDS, and 2) the relationship of support with the spiritual practices and quality of life of people living with HIV/AIDS. For this study, mental health was conceptualized as the coherence and functional ability to cope with the chronicity of HIV/AIDS as measured by the quality of one’s life. It was hypothesized that multidimensional aspects of spirituality (i.e. prayer, alternative practices, formal religions, spiritual beliefs, and punishment) would be associated with increased quality of life indicators and social support. Findings from the present study can be used to develop supportive environments that enhance the well-being of people living with HIV infection.

**Method**

**Participants and procedures**

This study was conducted in Wisconsin, a state with approximately 3828 cumulative AIDS cases and in which 6099 persons have tested positive for HIV (Wisconsin AIDS/HIV Update, 1998). Nine AIDS service organizations (ASOs) in the state provide life-care services to a large number of both urban and rural persons living with HIV. The methodology employed in the present study was developed in collaboration with these ASOs. After developing a protocol assuring participant confidentiality all nine state ASOs (100%) agreed to participate in the study using the protocol described below.

The study institution sent survey packets to each ASO based on their most current total caseload of clients with HIV/AIDS. Each packet contained a 17-page survey; cover letters from the ASO’s life-care director and the study investigator describing the study and assuring confidentiality; and a stamped, self-addressed envelope in which the survey was returned to the study institution. Participants were offered $15 for completing and returning the survey. ASOs distributed survey packets to clients either through mail or by delivering them directly to the client during home visits. Seven of the nine ASOs distributed surveys to all of their clients, while the two largest ASOs selected a random subset of potential participants. Through this process a total of 600 surveys were distributed to people living with HIV/AIDS.
Assessment instruments

The study’s self-administered assessment instrument required approximately 45 minutes to complete and included the following measures:

Demographic characteristics. Participants provided their age, education, ethnicity, employment status, annual income, HIV status (HIV positive/asymptomatic, HIV positive/asymptomatic but not diagnosed with AIDS, presently have AIDS), and current living arrangement.

Spirituality and Religion Survey. Each participant completed a 21-item Spirituality and Religion Survey measure consisting of five subscales: Prayer Practices, Alternative Practices, Formal Religions, Spiritual Beliefs, and Punishment (Somlai et al., 1996). The Appendix shows the 21-item Spirituality and Religion Survey with a breakdown of the five scales by items. The two-item Prayer Practices subscale (sample item: ‘How often do you pray to God, Goddess, or a divine being?’) used a five-point Likert scale (1 = ‘never’ to 5 = ‘every day’; alpha = 0.96) to assess the frequency that participants pray to a higher power or object of worship. The four-item Alternative Practices subscale (sample item: ‘Use alternative body therapies’) used a five-point Likert scale (1 = ‘never’ to 5 = ‘every day’) to assess how often participants engaged in personal practices that focus on immediate outcomes, usually health-related, and practices typically considered outside traditional or formal practices (alpha = 0.71). Three other subscales assessed participants’ attitudes toward formal religions, their spiritual beliefs, and their perceptions of AIDS as a punishment. The seven-item Formal Religions subscale (sample item: ‘Most formal religions provide me with a sense of hope’) assessed participants’ experiences with a particular system of faith and worship and its impact on one’s own personal spirituality. The subscale demonstrated excellent internal consistency (alpha = 0.92). The five-item Spiritual Beliefs subscale (sample item: ‘There is life after death’) assessed participants’ direct experience and/or relationship with a divine being or higher power (alpha = 0.86). Finally, the three-item Punishment subscale (sample item: ‘AIDS is the result of sinful behavior’) assessed respondents’ beliefs that illness and AIDS were interpreted as divine penalties for inappropriate behavior (alpha = 0.80). For the Formal Religions, Spiritual Beliefs, and Punishment subscales, participants provided their level of agreement to each item using a five-point Likert scale (1 = ‘strongly disagree’ to 5 = ‘strongly agree’).

Sexual behavior. Participants responded to a series of questions assessing their sexual behavior during the past six months. Respondents reported on their number of male sexual partners, number of female sexual partners, and frequency of condom use. Condom use was assessed using a six-point Likert scale (1 = ‘I always use condoms,’ 2 = ‘I use condoms most of the time,’ 3 = ‘I use condoms some of the time,’ 4 = ‘I rarely use condoms,’ 5 = ‘I never use condoms,’ 6 = ‘I have not had penetrative intercourse in the past six months.’).
**Functional Assessment of HIV Infection (FAHI) Scale.** Respondents completed the Functional Assessment of HIV Infection Scale (McCain & Cella, 1995), a self-report measure assessing health-related quality of life. The FAHI consists of 28-items grouped into five subscales: Physical Well-Being, seven items, alpha = 0.90, test–retest = 0.88 (sample item: ‘I have a lack of energy’); Social/Family Well-Being, six items, alpha = 0.73 (sample item: ‘I feel distant from my friends’); Relationship with Doctor, two items, alpha = 0.93, test–retest = 0.83 (sample item: ‘I have confidence in my doctors’ abilities’); Emotional Well-Being, six items, alpha = 0.75, test–retest = 0.83 (sample item: ‘I felt sad’); and Functional Well-Being, seven items, alpha = 0.86, test–retest = 0.84 (sample item: ‘I am enjoying the things I usually do for fun’). Cronbach alphas for FAHI subscales are based on data from the present study, while test–retest reliability coefficients are based on previous research using the FAHI (Cella, 1992). Each item asks respondents to indicate how true each statement was for them over the past seven days using a five-point Likert scale (0 = ‘not at all’ to 4 = ‘very much’). Higher scores on the FAHI are indicative of increased health-related quality of life.

**Revised UCLA Loneliness Scale.** Five items were randomly selected from the Revised UCLA Loneliness Scale and used to assess feelings of loneliness (Russell et al., 1980). Each item (sample item: ‘I feel in tune with the people around me’) asked respondents to use a four-point Likert scale to assess level of agreement to each item (1 = ‘I have never felt this way’ to 4 = ‘I have felt this way often’). The revised scale demonstrated good internal consistency (alpha = 0.87, present study). Higher scores indicate a greater perception of loneliness.

**Provision of Social Relations.** The 15-item Provision of Social Relations (PSR) Scale assessed respondents’ perceived level of social support (Turner et al., 1993). The PSR consists of two subscales: (1) Support from Family Members (sample item: ‘I know my family will always stand by me’) and (2) Support from Friends (sample item: ‘I feel very close to some of my friends’). Participants responded to each of the 15 items using a five-point Likert scale (1 = ‘very much like me’ to 5 = ‘not at all like me’). Both subscales demonstrated very good internal consistency (alphas = 0.88, present study). Higher scores indicate increased perceptions of social support.

**Coping Responses to HIV/AIDS.** A 15-item coping scale was employed to assess participants’ coping responses to their illness. This scale has been used in similar research examining the life circumstances of persons living with HIV/AIDS (Boberg et al., 1995) and consists of three factor analytically derived subscales. Two items formed an Active Problem Solving subscale (sample item: ‘I made a plan of action’) and demonstrated adequate internal consistency (alpha = 0.66). Three items formed a Distancing subscale (sample item: ‘I went to the movies or watched television, to think about it less’) that demonstrated marginally acceptable internal consistency (alpha = 0.57). Finally, two items comprised an Escape/Avoidance subscale (sample item: ‘I refused to believe that the diagnosis had happened’) that
demonstrated adequate internal consistency (alpha = 0.78). All alphas listed are based on data from the current study.

*Satisfaction with Life Scale.* The Satisfaction with Life Scale (SWLS), a five-item scale used to measure participants’ global, cognitive assessment of their life as a whole, assessed participants’ life satisfaction (Diener et al., 1985). Participants indicate their level of agreement with each item (sample item: ‘In most ways my life is close to ideal,’ using a four-point Likert scale (1 = ‘strongly disagree’ to 4 = ‘strongly agree’). The SWLS demonstrated good internal consistency (alpha = 0.86, present study) and has a test–retest reliability coefficient of 0.82 (Diener et al., 1985). Higher scores indicate greater life satisfaction.

**Results**

**Sample characteristics**

Surveys were obtained from 275 people living with HIV, yielding a response rate of 46%. This response rate was not unexpected, given the health status of participants and their reluctance to disclose information about a stigmatized illness to others even in the context of an anonymous questionnaire. Of the 275 respondents, 221 (81%) were men and 53 (19%) were women; one respondent indicated being transgendered. The average participant was 36.8 years of age (SD = 7.8, range = 19–64) and had completed 13.5 years (SD = 2.3, range = 4–17) years of education. Seventy-two per cent of participants were white, 19% African American, 3% Hispanic/Latino, and 6% were of other ethnicities. Forty-one per cent of participants had tested positive for HIV but were asymptomatic, 23% were HIV positive and symptomatic, and 36% had developed AIDS.

**Spiritual practices**

Participants demonstrated diverse profiles in regard to their spirituality and religiosity. Forty-six per cent of participants reported praying ‘every day,’ while only 7% said they ‘never’ prayed. Participants appeared to engage less frequently in alternative practices. For example only 1% (n = 3) said they used American Indian rituals ‘every day,’ only 3% (n = 9) used New Age rituals ‘every day,’ and 2% (n = 6) used alternative body therapies ‘every day.’

Participants exhibited substantial variability regarding their involvement with formal religions, their personal spiritual beliefs, and their perceptions of AIDS as punishment. For example, while 35% ‘strongly disagreed’ or ‘disagreed’ that formal religions provide them with a sense of hope, 42% ‘strongly agreed’ or ‘agreed’ with the statement. In addition, when provided the statement ‘Formal religions help people move from a life of fear to a life of love,’ 25% ‘strongly disagreed’ or ‘disagreed’ with the statement, but 40% ‘strongly agreed’ or ‘agreed’ with the statement.
In terms of personal spiritual beliefs, 65% ‘strongly agreed’ or ‘agreed’ that there is life after death, 76% ‘strongly agreed’ or ‘agreed’ that a higher power cares for them, and 66% ‘strongly agreed’ or ‘agreed’ that they believe in miracles. Finally, the majority of participants disagreed with the notion that AIDS was a form of divine retribution; 58% ‘strongly disagreed’ that AIDS is the result of divine retribution; and 57% ‘strongly disagreed’ that AIDS is the result of sinful behavior.

**Multivariate predictors of spirituality**

Because of the multidimensional aspects of spirituality, we conducted a stepwise, multiple regression analysis to produce a simplified model for each of the five spirituality subscales. As shown in Table 1, different predictor variables provided...

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<thead>
<tr>
<th>Predictor</th>
<th>Beta</th>
<th>p</th>
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<tbody>
<tr>
<td><strong>Prayer Practices subscale</strong> (higher values = more prayer)</td>
<td></td>
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</tr>
<tr>
<td>Step 1: no. of male sex partners</td>
<td>−0.211</td>
<td>0.001</td>
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<tr>
<td>Step 2: Adaptive coping</td>
<td>0.170</td>
<td>0.01</td>
</tr>
<tr>
<td>Step 3: Being non-white</td>
<td>0.157</td>
<td>0.02</td>
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<tr>
<td>Step 4: Support from family</td>
<td>0.145</td>
<td>0.03</td>
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<tr>
<td>$R^2$ = 13% of variance accounted for</td>
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<tr>
<td><strong>Alternative Practices subscale</strong> (higher values = more alternative practices)</td>
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<tr>
<td>Step 1: Adaptive coping</td>
<td>0.200</td>
<td>0.002</td>
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<tr>
<td>Step 2: Having HIV-related symptoms</td>
<td>−0.120</td>
<td>0.05</td>
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<tr>
<td>$R^2$ = 6% of variance accounted for</td>
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<tr>
<td><strong>Formal Religions subscale</strong> (higher values = religion is more ‘formalized’)</td>
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<tr>
<td>Step 1: Adaptive coping</td>
<td>0.338</td>
<td>0.001</td>
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<tr>
<td>Step 2: Being non-white</td>
<td>0.169</td>
<td>0.01</td>
</tr>
<tr>
<td>Step 3: Planful problem solving</td>
<td>−0.201</td>
<td>0.05</td>
</tr>
<tr>
<td>Step 4: Support from family</td>
<td>0.113</td>
<td>0.08</td>
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<tr>
<td>$R^2$ = 11% of variance accounted for</td>
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<tr>
<td><strong>Spirituality subscale</strong> (higher values = deeper sense of spirituality)</td>
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<tr>
<td>Step 1: Support from family</td>
<td>0.158</td>
<td>0.02</td>
</tr>
<tr>
<td>Step 2: Adaptive coping</td>
<td>0.167</td>
<td>0.01</td>
</tr>
<tr>
<td>Step 3: Being non-white</td>
<td>0.132</td>
<td>0.02</td>
</tr>
<tr>
<td>Step 4: Being female</td>
<td>0.132</td>
<td>0.05</td>
</tr>
<tr>
<td>Step 5: Good relationship with physician</td>
<td>0.133</td>
<td>0.05</td>
</tr>
<tr>
<td>$R^2$ = 15% of variance accounted for</td>
<td></td>
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<tr>
<td><strong>Non-Punishment subscale</strong> (higher values = AIDS is not a form of punishment)</td>
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</tr>
<tr>
<td>Step 1: More education</td>
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<td>0.02</td>
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<tr>
<td>Step 2: Being white</td>
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<td>Step 3: More support from friends</td>
<td>0.214</td>
<td>0.005</td>
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<td>Step 4: Being male</td>
<td>0.124</td>
<td>0.05</td>
</tr>
<tr>
<td>Step 5: Older age</td>
<td>0.102</td>
<td>0.09</td>
</tr>
<tr>
<td>$R^2$ = 21% of variance accounted for</td>
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significant contributions to each of the spirituality subscales. Participants who engaged more frequently in prayer practices were also more likely to: (1) have fewer male sexual partners (beta = -0.21, p < 0.001), (2) more frequently use adaptive coping methods (beta = 0.17, p < 0.01), (3) be an ethnic minority (beta = 0.16, p < 0.02), and (4) report receiving more support from family members (beta = 0.15, p < 0.03). Higher rates of engaging in alternative practices was associated with: (1) increased use of adaptive coping (beta = 0.20, p < 0.002); and (2) decreased levels of any HIV-related symptoms (beta = -0.12, p < 0.05). Placing a higher value on the use of formal religions as an important asset in one’s life was associated with: (1) more frequent use of adaptive coping strategies (beta = 0.34, p < 0.001); (2) being non-white (beta = 0.17, p < 0.01); (3) using less planful problem solving strategies (beta = -0.20, p < 0.05); and (4) reporting more support from family members (beta = 0.11, p < 0.08). Participants who reported higher levels (a deeper sense) of spirituality were also more likely to: (1) report experiencing greater support from their families (beta = 0.16, p < 0.02); (2) more frequently use adaptive coping strategies (beta = 0.17, p < 0.01); (3) be non-white (beta = 0.13, p < 0.02); (4) be female (beta = 0.13, p < 0.04); and (5) report having a good relationship with their physician (beta = 0.13, p < 0.05). Finally, participants who indicated stronger beliefs that AIDS is not a punishment from God or a divine being were more likely to: (1) be more educated (beta = 0.15, p < 0.02); (2) be white (beta = 0.26, p < 0.001; (3) report receiving more support from friends (beta = 0.21, p < 0.005); (4) be male (beta = 0.12, p < 0.05); and (5) be older (beta = 0.10, p < 0.09).

Discussion

Previous research investigating the relationship between health and spirituality/religion have operationalized religion as a unidimensional construct (e.g. attendance at church functions, faith community identification, or participation in specific faith community practices). This study investigated the multidimensional characteristics of spirituality and it’s relationship with factors associated with the quality of life, well-being, and emotional adjustment of people living with HIV infection and AIDS. Several studies have identified key psychosocial variables (e.g. coping and social support) that predict quality of life among persons living with HIV/AIDS (Heckman et al., 1997). However, very few AIDS-care studies have investigated possible links between spirituality and life quality. As the life expectancies of people living with HIV/AIDS increase, the HIV pandemic raises significant questions regarding the psychosocial well-being of persons living with HIV disease and how spirituality relates to their overall well-being. This study assessed the spiritual and religious practices of people living with HIV infection through the use of five scales measuring prayer, alternative practices, formal religions, spiritual beliefs, and issues regarding divine punishment. These findings suggest that spirituality and religiosity are diverse and subject to variation among people living with HIV/AIDS. For a large number of people living with HIV/AIDS, increased levels of prayer, strong beliefs in life after death, believing that a higher power cares for them, the potential
for miracles, and the belief that AIDS is not a divine retribution were found to be an important part of their lives. More importantly, spirituality (i.e. prayer, formal religions, and spiritual beliefs) was found to be related to being female, being non-white, receiving support from family, and engaging in active problem solving.

The ability to cope with HIV disease is a complex issue dependent upon more resources than individual effort. Support from family, and its relationship to increased levels of spiritual beliefs and practices, suggests that people living with HIV seek an environment that is both familiar and accepting of them. Perhaps a supportive environment provides the greatest opportunity for the expression of one’s personal spiritual beliefs and practices. The fact that people who scored higher on spirituality scores were also more likely to develop problem solving strategies, as well as report greater satisfaction with life, suggests that seeking support from family may be an active coping strategy.

The lack of previous research on the life quality of people living with HIV/AIDS may be influenced by preconceived gender and racial biases. Women and minorities already experience significant levels of isolation and discrimination within society. The distress exacerbated by the addition of living with HIV/AIDS suggests the need for interventions that incorporate spiritual approaches, the development of social support networks, and increase active problem solving to pursue a desirable quality of life. Future research will need to address the multiple dimensions and relationships between these factors.

Study findings have significant implications for mental health providers. Clinicians may need to include an in-depth assessment of spiritual and religious practices as a part of their routine in-take of people living with HIV/AIDS. People living with HIV/AIDS who report few attempts to engage in religion, or spiritual practices, may be at greater risk for little social support, poor coping, and unsuccessful adjustment. This would necessitate training mental health professionals in the administration and interpretation of measures assessing spirituality, religiosity, spiritual coping, religious issues, and religious traditions that affect the quality of life and care needs of HIV infected people. Additionally, spiritual counselors and clergy may need to be considered as part of a multidisciplinary mental health team responsible for providing information on religious and cultural opportunities that improve the quality of life of people infected with HIV.

Caregivers, family members, friends, physicians and clergy need to intervene and facilitate change in those facets that influence the life quality of people living with HIV/AIDS. It will be important for them to assist in the development of supportive environments that enhance the spiritual life and social well-being of people living with HIV/AIDS. Faith communities will need to work closely with mental health professionals in providing support groups and therapeutic milieus that support the spiritual, personal, and social growth of HIV affected and infected people. Additionally, it will be necessary to develop training programs that will increase the knowledge of caregivers in traditional spiritual practices as a means of establishing a support system meeting the quality of life needs of people living with HIV/AIDS.
The present research is limited due to findings that rely on correlational relationships. Causal relationships between spirituality dimensions and quality of life cannot be determined from a cross-sectional study. Larger samples will be needed to investigate potential relationships between spiritual practices and constructs of well being and satisfaction with life. Future research will need to focus on the specific aspects of social support, quality of life and spiritual practices. Additionally, this population was recruited specifically from AIDS service organizations, which affects the generalizability of study findings. The sample was drawn from a geographically limited area in the upper midwest. There also was a ‘low’ response rate, under 50%, that posed limitations in analysis and generalization. The response rate was expected, given the health status of participants and their reluctance to disclose information about a stigmatized illness to others even in the context of an anonymous questionnaire. And finally, these findings may be limited to individuals coping with HIV who are more responsive to issues of religion and spirituality while individuals who are not as interested may have been under-represented in the sample.

Despite these limitations, the current study is important because it adds to the current literature by identifying important relationships between social support, active problem solving, life satisfaction, and gender and race with higher levels of spirituality. Interventions that focus on spiritual perspectives may improve life quality for religiously oriented people living with HIV/AIDS. Therapeutically, a person living with HIV infection needs to be considered as a ‘complete person’ where the physical, mental, and spiritual aspects of their lives are considered equally important in the provision of care. It is our hope that findings from the current study can guide future research and the development of programs designed to build on spiritual factors that assist in improving the life quality for people living with HIV.

Acknowledgements

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Appendix

Spirituality and Religion Survey

Items by each subscale

**Prayer Practices**

1. Pray
2. Pray to God, Goddess, or a divine being

**Alternative Practices**

3. Use American Indian rituals
4. Use New Age rituals
5. Use astrology
6. Use alternative body therapies

**Formal Religions**

7. Most formal religions provide me with a sense of justice
8. Most formal religions provide me with a sense of hope
9. I wish to become more involved in a formal religion
10. My spirituality has been deepened by participating in a formal religion
11. Formal religions help people move from a life of fear to a life of love
12. Formal religions help people to clearly see reality
13. I find religious institutions unnecessary

**Spiritual Beliefs**

14. There is life after death
15. A higher power cares for me
16. Praying increases my happiness
17. God communicates with me
18. I believe in miracles

**Punishment**

19. AIDS is the result of divine retribution
20. AIDS is the result of sinful behavior
21. Illness is a divine punishment for sin