American Indians and Spiritual Needs During Hospitalization: Developing a Model of Spiritual Care

David R. Hodge, PhD, Robert J. Wolosin, PhD
American Indians and Spiritual Needs During Hospitalization: Developing a Model of Spiritual Care

David R. Hodge, PhD,*1,2 and Robert J. Wolosin, PhD3

1School of Social Work, Arizona State University, Phoenix.
2Program for Research on Religion and Urban Civil Society, University of Pennsylvania, Philadelphia.

*Address correspondence to David R. Hodge, PhD, School of Social Work, CoPP, Mail Code 3920, 411 N. Central Avenue, Suite 800, Phoenix, AZ 85004-0689. E-mail: davidhodge@asu.edu

Received January 15, 2013; Accepted April 5, 2013

Decision Editor: Rachel Pruchno, PhD

Purpose: Although spirituality is typically intertwined with health in Native cultures, little research has examined the relationship between American Indians’ spiritual needs and overall satisfaction with service provision during hospitalization. This study examined this relationship, in tandem with the effects of 8 potential mediators, to develop a model of spiritual care for older hospitalized American Indians. Design and Methods: Structural equation modeling was used with a sample of American Indians (N = 860), aged 50 and older, who were consecutively discharged from hospitals across the United States over a 12-month period. Results: As posited, addressing spiritual needs was positively associated with overall satisfaction with service provision. The relationship between spiritual needs and satisfaction was fully mediated by 4 variables: nursing staff, the discharge process, physicians, and visitors. Implications: As the first study to develop and test a model of spiritual care for older hospitalized American Indians, this study provides practitioners with the information to provide more effective, culturally relevant services to older American Indians.

Key Words: Spirituality, American Indians, Spiritual needs, Native Americans, Religion

It is widely recognized that spiritual needs emerge during hospitalization and that practitioners should address these needs to optimize service provision (Koren & Papamiditriou, 2013). Among the groups that should benefit from this emerging consensus are American Indians, a population for whom spirituality is especially salient (Hodge, Limb, & Cross, 2009). Yet, little if any research exists on the process of addressing the spiritual needs of hospitalized American Indians (Koenig, 2007; Williams, Meltzer, Arora, Chung, & Curlin, 2011), despite the presence of persistent health disparities that can engender disproportionate levels of hospitalization among members of this population (Gone & Trimble, 2012; Holman et al., 2011). To address this gap in the literature, the present study develops and tests a model of spiritual care for use in hospitals. Identifying the pathways through which spiritual needs impact overall satisfaction assists practitioners provide more effective, culturally relevant services to older American Indians. Subsequently, the distinctive nature of American Indian spirituality is briefly reviewed, along with the literature on spiritual needs and satisfaction. We conclude the section by delineating three hypotheses, which form the basis for the model of spiritual care tested in this study.

Literature Review

American Indian Spirituality

Great diversity exists among the hundreds of indigenous North American tribal groups, which...
are collectively referred to as American Indians or Native Americans in the United States (Mitchell, 2012). One of the central values that serve to demarcate American Indians as a distinctive set of groups is spirituality (Cross, 2002). Although spirituality is expressed differently in various tribal cultures, a sacred dimension is widely affirmed across tribes (Gone, 2007).

Native understandings of spirituality tend to differ from those commonly affirmed in mainstream discourse (Napoli, 1999). For instance, the spiritual/secular dichotomization commonly affirmed in the dominant culture is foreign to Native cultures (Cross, 2002). Rather than being compartmentalized into one area of life, spirituality permeates all aspects of existence (Cross, Earle, & Simmons, 2000). For many American Indians, the spiritual cannot be separated from the mental and physical dimensions. All aspects of creation—including healing—have a spiritual dimension (Hodge et al., 2009).

More specifically, spirituality tends to play a critical role in fostering health and wellness among American Indians (Kulis, Hodge, Ayers, Brown, & Marsiglia, 2012). Health is typically perceived to be intrinsically linked with spirituality (Stone, Whitbeck, Chen, & Johnson, 2005). Physical, emotional, and spiritual health are intertwined (Cross, 2002). To foster healing, the spiritual dimension must be addressed (Weaver, 2005). Put differently, physical and mental healing is contingent upon incorporating spirituality into treatment.

This suggests that addressing the culturally unique spiritual needs of Native patients represents an instrumental component of service provision. From an American Indian perspective, spirituality aids both coping and healing (Hodge et al., 2009). To be effective and culturally relevant, hospital personnel must address American Indians’ spiritual needs (Gesino, 2001). Accordingly, addressing these needs during hospitalization is likely to play an important role in patients’ perceptions of overall satisfaction with the services they receive during their stay.

**Spiritual Needs and Overall Satisfaction**

Overall satisfaction with service provision is a particularly salient outcome (Chandra et al., 2011). This variable is widely used as a proxy for the quality of care provided during hospitalization (Jackson, Chamberlin, & Kroenke, 2001; Shea et al., 2008). Patients’ perceptions of overall satisfaction is associated with a number of important variables including: less likelihood of filing professional malpractice suits, greater profitability, increased loyalty toward service providers, greater client follow through, and perhaps most importantly, better clinical outcomes (Kaldenberg, 2001; Kessler & Mylod, 2011; Moscato et al., 2007; Press, 2002). Moreover, providing services that satisfy patients is widely seen as an ethical necessity (Astrow, Wexler, Texeira, He, & Sulmasy, 2007). Consequently, the overall quality of services provided in hospitals, as well as many other health care settings, is commonly assessed with measures of overall satisfaction (Chandra et al., 2011; Gribble & Haupt, 2005; Press, 2002).

No prior research appears to have examined the relationship between addressing patients’ spiritual needs and overall satisfaction using American Indian samples. This relationship has, however, been examined using non-Native samples. As might be expected, these studies reveal that addressing patient spirituality is associated with overall satisfaction (Astrow et al., 2007; Clark, Drain, & Malone, 2003; Williams et al., 2011). For example, among a primarily African American sample of hospital inpatients in Chicago (N = 3,141), respondents who discussed their spiritual concerns reported higher levels of overall satisfaction (Williams et al., 2011). This finding is consistent with other studies that have linked addressing spiritual needs with increased spiritual meaning and peace (Pearce, Coan, Herndon, Koenig, & Abernethy, 2012), quality of life (Balboni et al., 2007, 2010; Kang et al., 2012), and quality of care (Astrow et al., 2007), as well as lower levels of depression (Ganatra, Zafar, Qidwai, & Rozi, 2008; Pearce et al., 2012) and medical costs (Balboni et al., 2011).

Although none of the earlier studies have been conducted with American Indian samples, it seems plausible that addressing older American Indians’ spiritual needs will be positively associated with overall satisfaction. As noted earlier, Native cultures typically believe that the promotion of health is contingent upon incorporating spirituality into treatment (Hodge et al., 2009). Given the salience of spirituality in Native culture, it seems reasonable to hypothesize that satisfaction with hospital staff’s efforts to address older American Indians’ spiritual needs will be associated with higher levels of overall satisfaction with service provision.

**Potential Mediators**

Prior research has documented a positive relationship between spiritual needs and overall satisfaction (Coan, Herndon, Koenig, & Abernethy, 2012). This variable is widely used as a proxy for the quality of care provided during hospitalization (Jackson, Chamberlin, & Kroenke, 2001; Shea et al., 2008). Patients’ perceptions of overall satisfaction is associated with a number of important variables including: less likelihood of filing professional malpractice suits, greater profitability, increased loyalty toward service providers, greater client follow through, and perhaps most importantly, better clinical outcomes (Kaldenberg, 2001; Kessler & Mylod, 2011; Moscato et al., 2007; Press, 2002). Moreover, providing services that satisfy patients is widely seen as an ethical necessity (Astrow, Wexler, Texeira, He, & Sulmasy, 2007). Consequently, the overall quality of services provided in hospitals, as well as many other health care settings, is commonly assessed with measures of overall satisfaction (Chandra et al., 2011; Gribble & Haupt, 2005; Press, 2002).

No prior research appears to have examined the relationship between addressing patients’ spiritual needs and overall satisfaction using American Indian samples. This relationship has, however, been examined using non-Native samples. As might be expected, these studies reveal that addressing patient spirituality is associated with overall satisfaction (Astrow et al., 2007; Clark, Drain, & Malone, 2003; Williams et al., 2011). For example, among a primarily African American sample of hospital inpatients in Chicago (N = 3,141), respondents who discussed their spiritual concerns reported higher levels of overall satisfaction (Williams et al., 2011). This finding is consistent with other studies that have linked addressing spiritual needs with increased spiritual meaning and peace (Pearce, Coan, Herndon, Koenig, & Abernethy, 2012), quality of life (Balboni et al., 2007, 2010; Kang et al., 2012), and quality of care (Astrow et al., 2007), as well as lower levels of depression (Ganatra, Zafar, Qidwai, & Rozi, 2008; Pearce et al., 2012) and medical costs (Balboni et al., 2011).

Although none of the earlier studies have been conducted with American Indian samples, it seems plausible that addressing older American Indians’ spiritual needs will be positively associated with overall satisfaction. As noted earlier, Native cultures typically believe that the promotion of health is contingent upon incorporating spirituality into treatment (Hodge et al., 2009). Given the salience of spirituality in Native culture, it seems reasonable to hypothesize that satisfaction with hospital staff’s efforts to address older American Indians’ spiritual needs will be associated with higher levels of overall satisfaction with service provision.

**Potential Mediators**

Prior research has documented a positive relationship between spiritual needs and overall satisfaction (Coan, Herndon, Koenig, & Abernethy, 2012). This variable is widely used as a proxy for the quality of care provided during hospitalization (Jackson, Chamberlin, & Kroenke, 2001; Shea et al., 2008). Patients’ perceptions of overall satisfaction is associated with a number of important variables including: less likelihood of filing professional malpractice suits, greater profitability, increased loyalty toward service providers, greater client follow through, and perhaps most importantly, better clinical outcomes (Kaldenberg, 2001; Kessler & Mylod, 2011; Moscato et al., 2007; Press, 2002). Moreover, providing services that satisfy patients is widely seen as an ethical necessity (Astrow, Wexler, Texeira, He, & Sulmasy, 2007). Consequently, the overall quality of services provided in hospitals, as well as many other health care settings, is commonly assessed with measures of overall satisfaction (Chandra et al., 2011; Gribble & Haupt, 2005; Press, 2002).

No prior research appears to have examined the relationship between addressing patients’ spiritual needs and overall satisfaction using American Indian samples. This relationship has, however, been examined using non-Native samples. As might be expected, these studies reveal that addressing patient spirituality is associated with overall satisfaction (Astrow et al., 2007; Clark, Drain, & Malone, 2003; Williams et al., 2011). For example, among a primarily African American sample of hospital inpatients in Chicago (N = 3,141), respondents who discussed their spiritual concerns reported higher levels of overall satisfaction (Williams et al., 2011). This finding is consistent with other studies that have linked addressing spiritual needs with increased spiritual meaning and peace (Pearce, Coan, Herndon, Koenig, & Abernethy, 2012), quality of life (Balboni et al., 2007, 2010; Kang et al., 2012), and quality of care (Astrow et al., 2007), as well as lower levels of depression (Ganatra, Zafar, Qidwai, & Rozi, 2008; Pearce et al., 2012) and medical costs (Balboni et al., 2011).

Although none of the earlier studies have been conducted with American Indian samples, it seems plausible that addressing older American Indians’ spiritual needs will be positively associated with overall satisfaction. As noted earlier, Native cultures typically believe that the promotion of health is contingent upon incorporating spirituality into treatment (Hodge et al., 2009). Given the salience of spirituality in Native culture, it seems reasonable to hypothesize that satisfaction with hospital staff’s efforts to address older American Indians’ spiritual needs will be associated with higher levels of overall satisfaction with service provision.
satisfaction, but no quantitative research appears to have identified variables that mediate this relationship. As alluded to earlier, this represents a significant gap in the literature because, by necessity, certain variables must mediate the relationship between spiritual needs and overall satisfaction. In other words, no research appears to have explored possible mediating variables that may explain the relationship between spiritual needs and satisfaction. Ascertaining the variables that explain the relationship between spiritual needs and satisfaction is critical because identifying such variables equips hospital personnel with the knowledge required to tailor services more effectively.

The primary areas of service provision during hospitalization include the following eight domains: admissions, room quality, food service, nurses, tests and treatments, visitors and family, physicians, and discharge (Kaldenberg, 2001). These eight areas capture the central domains of service provision articulated in both the service quality literature and the National Library of Health Care Indicators (Kaldenberg, 2001).

Prior research with non-Native samples suggests that services in each domain may potentially mediate the relationship between spiritual needs and overall satisfaction (Baron & Kenny, 1986). In addition to being related to overall satisfaction, the extant literature suggests that spiritual needs can emerge in each domain. For example, patients may express a spiritual need for reassurance in the face of fear of the unknown during the admission process (Jang et al., 2004; McBrien, 2010), a quiet, peaceful room in which to pray or meditate (Hermann, 2001), spiritually appropriate food—for example, kosher or halal (Davidson, Boyer, Casey, Matzel, & Walden, 2008), nurses to listen to their spiritual concerns (Nixon & Narayanasamy, 2010), accurate information about tests and treatments communicated in a caring, courteous manner (Hodge & Horvath, 2011), visits from friends, family, and clergy (Conner & Eller, 2004), physicians who encourage a spiritual perspective in the face of a difficult prognosis (Galanter, Dermatis, Talbot, McMahon, & Alexander, 2011), and discharge plans to process the existential sense of loss that emerges during hospitalization (Koenig, 2012; Meert, Thurston, & Briller, 2005). Further, across the arc of hospitalization, patients often report a spiritual need for staff to be courteous, caring, and supportive of their spirituality (Anderson, Anderson, & Felsenthal, 1993; Hodge & Horvath, 2011; Tanyi, Recine, Werner, & Sperstad, 2006).

Of these eight domains, the most empirical work may have been conducted in nursing (Conner & Eller, 2004; Koren & Papamiditriou, 2013; Nixon & Narayanasamy, 2010; Tanyi et al., 2006). This qualitative research suggests that patients look to nurses to address their spiritual needs and concerns. For example, African Americans, another population for whom spirituality is especially salient, report that nurses often play an important role in addressing their spiritual needs (Conner & Eller, 2004; Tanyi et al., 2006).

This literature raises the possibility that satisfaction with the nursing staff will mediate the relationship between spiritual needs and satisfaction among older American Indians. Perhaps no other individuals interact with patients more frequently than nurses during hospitalization. Accordingly, it seems reasonable to posit that nursing may function as a mediator.

As implied earlier, it is likely that other variables also mediate the relationship between spiritual needs and satisfaction. For example, some research suggests physicians may play an important role in addressing patients’ spiritual needs (Astrow et al., 2007; Ellis & Campbell, 2004; Hodge & Horvath, 2011). It is questionable, however, if the state of the extant research rises to the level where firm hypotheses can be advanced. Indeed, none of the research reviewed earlier has been conducted with Native samples, a fact that underscores the tentative nature of the study’s hypotheses and the need for research using American Indian respondents.

To recap, three hypotheses were posited earlier. First, we expect that satisfaction with hospital staff’s efforts to address older American Indians’ spiritual needs will be associated with higher levels of overall satisfaction with service provision. Second, we expect that satisfaction with nursing will mediate the relationship between spiritual needs and overall satisfaction. Third, we expect that satisfaction with some of the other seven domains (e.g., physicians) will also mediate the relationship between spiritual needs and overall satisfaction.

Methods

To test these hypotheses, a secondary data analysis of hospital inpatient satisfaction data was conducted. The data were obtained from Press Ganey Associates, Inc., a health care consulting firm that specializes in patient satisfaction measurement and management. Hospitals typically measure patient

Vol. 54, No. 4, 2014 685
satisfaction as a means to assess service quality (Chandra et al., 2011). This task is frequently contracted out to other organizations, of which Press Ganey is the largest in the United States (Press Ganey Associates, 2011).

Surveys are mailed to former inpatients soon after completion of the discharge process. Thus, individuals complete the survey in the privacy of their own homes without concerns their responses will affect service provision. The self-administered mailed survey methodology tends to produce relatively accurate information about sensitive issues, such as spirituality (Babbie, 2010).

De-identified data were provided for the present study, which was conducted with the approval of a university institutional review board.

Sample

The sample consisted of 860 American Indians, aged 50 and older who were consecutively discharged over a 12-month period from hospitals in four geographic regions. Some 52.8% \((n = 454)\) of respondents were female participants. In terms of age, 49.1% \((n = 422)\) were between 50 and 64 years old, 39.0% \((n = 325)\) were between 65 and 79 years old, and 12.0% \((n = 103)\) were 80 and older. Regarding geographic location, 20.6% \((n = 177)\) of respondents were from the Northeast, 8.1% \((n = 70)\) from the Southeast, 35.1% \((n = 310)\) from the Midwest, and 36.0% \((n = 310)\) from the Western region of the United States. Compared with the American Indian population in the United States, disproportionately more respondents appeared to be from the Northeast and Midwest (U.S. Census Bureau, 2012).

Measures

Spiritual Needs. Older American Indians’ perceptions of how well hospital staff addressed their spiritual needs was operationalized with a single item. Specifically, respondents were asked to indicate the “degree to which hospital staff addressed your spiritual needs” on a 5-point, Likert-type response key that ranged from 1 (very poor) to 5 (very good). For the purposes of the present study, this exogenous variable was assumed to be measured without error.

The use of a single-item measure to assess spiritual needs is consistent with prior research on the topic (Astrow et al., 2007; Balboni et al., 2010; Clark et al., 2003; Kang et al., 2012). Nevertheless, it should be noted that this concept is more accurately conceptualized as a latent construct. The use of a single-item measure in this context represents a limitation.

Overall Satisfaction. The latent construct of overall satisfaction with the services provided during hospitalization was measured with three items listed in Table 1. The 5-point, Likert-type response key described earlier was used with these items. A Cronbach’s alpha of .93 was obtained in this study. This alpha is similar to the level of reliability recorded in previous research using this scale (Kaldenberg, 2001).

Potential Mediators. The study included eight variables that potentially mediate the relationship between spiritual needs and overall satisfaction. These variables were developed by Press Ganey to assess the major aspects of service provision across the hospitalization experience. As noted earlier, these areas capture the key areas of service provision articulated in both the service quality literature and the National Library of Health Care Indicators (Kaldenberg, 2001).

The indicators for these eight latent constructs are listed in Table 1. Each indicator was paired with the 5-point, Likert-type response key described earlier. The alphas obtained in this study for each scale are listed as follows: admission process \((\alpha = .78)\), room quality \((\alpha = .85)\), meal service \((\alpha = .84)\), nursing staff \((\alpha = .94)\), tests and treatments administration \((\alpha = .86)\), visitors and family \((\alpha = .83)\), physicians \((\alpha = .94)\), and the discharge process \((\alpha = .83)\). These values are similar to the reliability coefficients recorded in previous research using these scales (Kaldenberg, 2001).

Data Analysis

Structural equation modeling was performed with Analysis of Movement Structures 20.0. Across the data set, 8.11% of values were missing. For the categorical variables, the geographic region variable was missing one value. In this instance, the missing value was allocated with members of the reference group when dummy coding. Although most continuous variables had a minimal number of missing values (Kline, 2011), four items were missing more than 6% of their values (12.3% for Ad2, 6.9% for Vi2, 6.3% for Rm3, and 6.2% for Me3). For the continuous items, missing data were imputed using the expectation–maximization algorithm procedure (Schafer & Graham, 2002).
Although the variables were transformed to improve their normality, resulting in skew and kurtosis values less than 1.4 across variables, Mardia’s test of multivariate normality was not supported. Maximum likelihood (ML) estimation is, however, considered to be relatively robust (Schumacker & Lomax, 2010). Under conditions of moderate nonnormality (i.e., skew < 2, kurtosis < 7), Finney and DiStefano (2006) recommend using ML estimation while noting that this procedure may attenuate the parameter estimates.

To assess model fit, the following indices were used: the comparative fit index (CFI), the root mean square error of approximation (RMSEA) with 90% confidence intervals, and the standardized root mean square residual (SRMR). The indices are widely recommended and represent three modally different approaches of assessing fit (i.e., incremental, parsimonious, and absolute, respectively) (Byrne, 2010; Garson, 2012; Mueller & Hancock, 2008; West, Taylor, & Wu, 2012). The models also adjusted for the effects of

<table>
<thead>
<tr>
<th>Latent and observed variables</th>
<th>λ</th>
<th>( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Admission</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ad1. Speed of admission process</td>
<td>.78</td>
<td>.60</td>
</tr>
<tr>
<td>Ad2. Courtesy of the person who admitted you</td>
<td>.88</td>
<td>.78</td>
</tr>
<tr>
<td><strong>Room</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rm1. Pleasantness of room décor</td>
<td>.80</td>
<td>.64</td>
</tr>
<tr>
<td>Rm2. Room cleanliness</td>
<td>.83</td>
<td>.69</td>
</tr>
<tr>
<td>Rm3. Courtesy of the person who cleaned your room</td>
<td>.74</td>
<td>.55</td>
</tr>
<tr>
<td>Rm4. Room temperature</td>
<td>.68</td>
<td>.46</td>
</tr>
<tr>
<td>Rm5. Noise level in and around room</td>
<td>.69</td>
<td>.48</td>
</tr>
<tr>
<td><strong>Meals</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Me1. Temperature of the food</td>
<td>.90</td>
<td>.80</td>
</tr>
<tr>
<td>Me2. Quality of the food</td>
<td>.83</td>
<td>.68</td>
</tr>
<tr>
<td>Me3. Courtesy of the person who served your food</td>
<td>.71</td>
<td>.50</td>
</tr>
<tr>
<td><strong>Nurses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nr1. Friendliness/courtesy of the nurses</td>
<td>.87</td>
<td>.75</td>
</tr>
<tr>
<td>Nr2. Promptness in responding to the call button</td>
<td>.82</td>
<td>.67</td>
</tr>
<tr>
<td>Nr3. Nurses attitude toward your requests</td>
<td>.91</td>
<td>.82</td>
</tr>
<tr>
<td>Nr4. Amount of attention paid to your special or personal needs</td>
<td>.88</td>
<td>.78</td>
</tr>
<tr>
<td>Nr5. How well nurses kept you informed</td>
<td>.87</td>
<td>.75</td>
</tr>
<tr>
<td>Nr6. Skill of the nurses</td>
<td>.85</td>
<td>.72</td>
</tr>
<tr>
<td><strong>Tests</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Te1. Waiting time for tests or treatments</td>
<td>.76</td>
<td>.58</td>
</tr>
<tr>
<td>Te2. Explanations about what would happen during tests/treatments</td>
<td>.86</td>
<td>.73</td>
</tr>
<tr>
<td>Te3.Courtesy of the person who took your blood</td>
<td>.76</td>
<td>.57</td>
</tr>
<tr>
<td>Te4. Courtesy of the person who started your IV</td>
<td>.77</td>
<td>.59</td>
</tr>
<tr>
<td><strong>Visitors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vi1. Accommodation and comfort for visitors</td>
<td>.82</td>
<td>.67</td>
</tr>
<tr>
<td>Vi2. Staff attitude toward your visitors</td>
<td>.88</td>
<td>.78</td>
</tr>
<tr>
<td><strong>Physicians</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ph1. Time physician spent with you</td>
<td>.85</td>
<td>.73</td>
</tr>
<tr>
<td>Ph2. Physician’s concern for your questions and worries</td>
<td>.93</td>
<td>.86</td>
</tr>
<tr>
<td>Ph3. How well physician kept you informed</td>
<td>.93</td>
<td>.87</td>
</tr>
<tr>
<td>Ph4. Friendliness/courtesy of physician</td>
<td>.89</td>
<td>.78</td>
</tr>
<tr>
<td>Ph5. Skill of physician</td>
<td>.81</td>
<td>.65</td>
</tr>
<tr>
<td><strong>Discharge</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Di1. Extent to which you felt ready to be discharged</td>
<td>.75</td>
<td>.56</td>
</tr>
<tr>
<td>Di2. Speed of the discharge process</td>
<td>.79</td>
<td>.62</td>
</tr>
<tr>
<td>Di3. Instructions given about how to care for yourself at home</td>
<td>.82</td>
<td>.67</td>
</tr>
<tr>
<td><strong>Satisfaction (with overall services)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>So1. How well staff worked together to care for you</td>
<td>.90</td>
<td>.81</td>
</tr>
<tr>
<td>So2. Likelihood of your recommending this hospital to others</td>
<td>.90</td>
<td>.80</td>
</tr>
<tr>
<td>So3. Overall rating of care given at the hospital</td>
<td>.92</td>
<td>.84</td>
</tr>
</tbody>
</table>

Notes: IV = intravenous; \( \lambda \) = standardized factor loading of the observed variable on the latent construct.
the demographic variables by incorporating them directly into the model by allowing them to covary as exogenous predictors (Mueller & Hancock, 2010). Accordingly, the subsequent structural models controlled for the effects of gender, age, and geographic region.

Results

To proceed with the first hypothesis, a measurement model was constructed consisting of the latent construct overall satisfaction and its three indicators. Standardized factor loadings and squared multiple correlations ($R^2$ values) were calculated for each of the indicators. The factor loadings function as validity coefficients, indicating how accurately the indicator measures the latent construct. Coefficients greater than .70 indicate relatively high loadings (Kline, 2011). The $R^2$ values provide an assessment of the reliability of each observed variable with respect to its underlying latent construct (Joreskog & Sorbom, 1993). Ideally, the $R^2$ values should be greater than .50 for each indicator in a confirmatory factor analysis (Kline, 2011). For this initial model, factor loadings ranged from .88 to .94 and the $R^2$ values ranged from .77 to .88.

To test the first hypothesis, a structural model was constructed consisting of the observed variable, spiritual needs, and the latent construct overall satisfaction. Model fit was assessed using the three fit indices mentioned earlier (i.e., CFI, RMSEA, and SRMR). For the CFI, values greater than 0.90 indicate a marginal fit, whereas values greater than 0.95 indicate a good fit (Byrne, 2010). For the RMSEA, values less than 0.08 represent a reasonable fit and values less than 0.05 represent a good fit (Byrne, 2010), with values greater than 0.10 indicating a poor fit (Garson, 2012). For the SRMR, values less than 0.09 represent a good fit between the proposed model and the data (Mueller & Hancock, 2008). The values for the present model suggested the model fit the data well: $\chi^2 = 22.696 (df = 14, p = .065)$, $CFI = 0.997$, $RMSEA = 0.027 (90\% CI, 0.000–0.046)$, and SRMR = 0.008.

Accordingly, the first hypothesis was supported—satisfaction with hospital staff’s efforts to address older American Indians’ spiritual needs was directly related to higher levels of overall satisfaction with service provision. The relationship between spiritual needs and overall satisfaction was significant ($p < .001$), with a standardized path coefficient of .62. Spiritual needs accounted for 39% of the variance in overall satisfaction.

To proceed with the second hypothesis, a measurement model was constructed consisting of the two latent constructs, nursing and overall satisfaction, and their corresponding indicators. For this model, the factor loadings ranged from .85 to .92 and the $R^2$ values ranged from .67 to .85. An examination of the fit indices suggested the model fit was acceptable: $\chi^2 = 152.375 (df = 26, p < .001)$, $CFI = 0.984$, $RMSEA = 0.075 (90\% CI, 0.064–0.087)$, and SRMR = 0.025.

To test the second hypothesis, a structural model was constructed in which the nursing variable mediated the relationship between spiritual needs and satisfaction. An examination of the fit indices suggested the model fit was acceptable: $\chi^2 = 215.4189 (df = 75, p < .001)$, $CFI = 0.984$, $RMSEA = 0.047 (90\% CI, 0.039–0.054)$, and SRMR = 0.018. Thus, the second hypothesis was supported—the relationship between spiritual needs and overall satisfaction was mediated by perceptions of satisfaction with the nursing staff. The relationship between spiritual needs and overall satisfaction remained significant ($p < .001$), and the value of the standardized path coefficient decreased from .62 to .17. The standardized coefficient from spiritual needs to nursing was .61 and the coefficient from nursing to satisfaction was .74. This model accounted for 72% of the variance in overall satisfaction.

To proceed with the third hypothesis, a measurement model was constructed consisting of the eight mediators, overall satisfaction, and their corresponding indicators. As can be seen in Table 1, the factor loadings and $R^2$ values for each of the indicators were typically acceptable. Although the model fit values could be considered acceptable ($\chi^2 = 1803.584 (df = 459, p < .001)$, $CFI = 0.944$, $RMSEA = 0.058 [90\% CI, 0.056–0.061]$, and SRMR = 0.040), an examination of the modification indices suggested adding a measurement error covariance between Te3 and Te4. This recommendation may stem from the use of the same language in these two items—“courtesy of the person who...,” which can cause a method effect (Byrne, 2010). The addition of the error covariance resulted in an improved, and acceptable, model fit ($\chi^2 = 1630.624 [df = 458, p < .001]$, $CFI = 0.951$, $RMSEA = 0.055 [90\% CI, 0.052–0.057]$, and SRMR = 0.040).

To test the third hypothesis, a structural model was constructed in which the eight areas of service provision mediated the relationship between spiritual needs and satisfaction. An examination of the
fit indices suggested the model fit was acceptable: \( \chi^2 = 1792.630 \ (df = 626, \ p < .001), \ \text{CFI} = 0.953, \ \text{RMSEA} = 0.047 \ (90\% \ CI, 0.044–0.049), \ \text{and SRMR} = 0.034. \) Thus, the third hypothesis was supported. Nursing staff, visitors and family, physicians, and the discharge process mediated the relationship between spiritual needs and overall satisfaction.

To obtain the most parsimonious model, the nonsignificant mediators were eliminated. The resulting model fit the data well (\( \chi^2 = 724.711 \ [df = 240, \ p < .001], \ \text{CFI} = 0.971, \ \text{RMSEA} = 0.048 \ [90\% \ CI, 0.044–0.053], \ \text{and SRMR} = 0.022 \) and accounted for 79% of the variance in overall satisfaction. As can be seen in Figure 1, the four mediators—nursing staff, visitors and family, physicians, and the discharge process—fully mediated the relationship between spiritual needs and satisfaction among older American Indians. An examination of the path coefficients indicated that nurses played the most prominent role in explaining the relationship between spiritual needs and overall satisfaction, followed by the discharge process, physicians, and visitors.

**Discussion**

Persistent health disparities engender disproportionate levels of hospitalization among American Indians in many areas (Gone & Trimble, 2012; Holman et al., 2011). Although it is widely acknowledged that addressing patients’ spiritual needs is an important component of service provision, little is known about the relationship between American Indians’ spiritual needs and overall satisfaction with service provision during hospitalization, despite the importance of spirituality in promoting health in Native cultures. To address this gap in the literature, this study sought to develop and test a model of spiritual care for older hospitalized American Indians.

As hypothesized, addressing older American Indians’ spiritual needs was associated with higher levels of overall satisfaction with service provision. In terms of an effect size, the magnitude of the relationship between spiritual needs and satisfaction is commonly considered large (Cohen, 1988). This finding is consistent with prior research that has documented a similar relationship between spiritual needs and overall satisfaction (Astrow et al., 2007; Clark et al., 2003; Williams et al., 2011). The present study replicates this finding and extends it to older American Indians.

It was also hypothesized that the relationship between spiritual needs and satisfaction would be mediated by nursing and possibly other variables as well. This hypothesis was confirmed. Indeed, of the four significant mediators that emerged in this study, nursing played the most prominent role in accounting for the positive relationship between spiritual needs and satisfaction. Other variables that explained the relationship were the discharge process, physicians, and visitors. Together, these four variables fully mediated the relationship between spiritual needs and satisfaction. The resulting model of spiritual care has important implications for research and practice with older hospitalized American Indians, perhaps especially for nurses, social workers and other discharge personnel, and physicians.

**Figure 1.** Model of spiritual care for American Indians. Model controls for the effects of gender, age, and geographic region. **\( p < .01 \), ***\( p < .001 \).**
Implications for Research

The present study suggests that nurses, social workers, and physicians play an important role in addressing American Indians’ spiritual needs, but it does not reveal how these practitioners addressed needs in practice. The design and methods used in the study cannot shed light on such vital “how” questions. Using non-Native samples, a substantial body of work describes both the nature of patients’ spiritual needs and the actions through which practitioners can address those needs (Conner & Eller, 2004; Nixon & Narayanasamy, 2010; Tanyi et al., 2006). However, the distinctive spirituality typically affirmed by American Indians suggests the possibility that their spiritual needs are different, as are the processes whereby practitioners address those needs (Cross, 2002; Napoli, 1999).

To optimize service provision, further empirical work is needed on these topics using different tribal samples. For instance, research is needed to describe the specific needs American Indians commonly experience in hospitals. Given the number of tribes that exist in the United States—each with a different worldview—it is important to examine how spiritual needs manifest among different tribal groups. Quantitative instruments that assess specific expressions of various spiritual needs might be validated for use with American Indians (Galek, Flannelly, Vane, & Galek, 2005). Similarly, research might be conducted to understand the specific actions that nurses, social workers, and physicians can take to address spiritual needs among various tribal groups.

Given the lack of research using Native samples, caution is warranted when drawing implications for practice. With this caveat in mind, the following section posits some general implications in the four key areas identified in the present study. More specifically, implications are discussed for nurses, social workers, physicians, and visitors.

Implications for Practice

Perhaps no one spends more time with patients than the nursing staff. Consequently, they play a particularly important role in addressing patients’ spiritual needs (Conner & Eller, 2004; Nixon & Narayanasamy, 2010). To ensure that the American Indians’ spiritual needs are adequately addressed, nurses can ensure that a spiritual assessment is conducted to identify patients’ spiritual needs, and pertinent results shared with key members of the health care team. To provide more culturally relevant services, they might also familiarize themselves with expressions of spirituality among the tribes that frequent their hospital, and advocate for policies that proactively address common concerns (Weaver, 2005).

The discharge process is commonly administered by social workers (Kadushin & Kulys, 1993). During discharge, social workers tend to perform a complex array of tasks including assessment, counseling, and the coordination of posthospitalization services. As part of this process, practitioners might explore the possibility of developing a “spiritual care discharge plan” to ensure that Native patients’ spiritual needs are fully addressed (Koenig, 2012). As the length of hospitalization has decreased (often to 2–4 days), the importance of efforts to address patients’ spiritual needs during the discharge process has increased. Spiritual needs and concerns that emerge during hospitalization may not be adequately processed during such brief hospitalizations. By collaborating with patients, social workers can ensure that the post-discharge services include a plan to operationalize spiritual assets that Native patients deem instrumental in fostering health and wellness.

Physicians should also be aware that Native patients may have spiritual beliefs that intersect with service provision (Hampton et al., 2010). For example, in some cases, healing is perceived to be contingent upon the performance of sacred ceremonies that must be conducted by tribal elders in a private location. Physicians should ensure they are acquainted with patients’ needs in this area and, to the extent possible, adapt medical proscriptions to harmonize with Native values. Addressing patients’ spiritual needs in this manner helps to ensure that medical interventions are viewed as relevant, resulting in higher levels of compliance and better outcomes (Gone & Trimble, 2012; Sue & Sue, 2008; Wolf, 1978).

As alluded to earlier, tribal elders, family members, and other visitors are often instrumental in addressing the spiritual needs of American Indians (Cross, 2002). Due to the spiritually animated, culturally unique value systems affirmed by many tribes, visitors can play a critical role in offering patients support and encouragement during hospitalization. Such visitors may serve as a transcendent source of strength that fosters healing and wellness (Weaver, 2005). Accordingly, hospital personnel should ensure that no barriers exist that inhibit patients’ access to family, friends, and other significant visitors.
**Limitations**

The study’s limitations include the use of a single-item measure to assess spiritual needs, the utilization of self-report measures, the cross-sectional nature of the data, and the possibility of various types of response set bias. For instance, regarding the latter point, it is possible that individuals who completed and returned the survey were generally satisfied with the services they received across all areas of service provision. Similarly, it should also be noted that the question about spiritual needs must be requested by hospitals. It is possible institutions that requested the inclusion of this item may be particularly committed to addressing patients’ spiritual needs relative to hospitals that did not request its inclusion.

Previous studies on spiritual needs have been conducted with samples drawn from hospitals in a single geographic area, a procedure that can bias study samples (Pearce et al., 2012; Williams et al., 2011). The geographically diverse sample used in the present study may help to mitigate such regional biases. Nevertheless, the use of a nonprobability sampling design precludes generalizing the resulting model to other samples of hospitalized older American Indians. In short, this study provides an initial understanding of the relationship between spiritual needs and overall satisfaction and the variables that mediate this relationship. Further research is needed, however, with other samples of American Indians to replicate the results obtained in this study.

**Conclusions**

This is likely the first study to develop and test a model of spiritual care for older hospitalized American Indians with a national sample of Native patients. Members of this population can experience disproportionate levels of hospitalization and frequently have culturally unique spiritual needs (Gone & Trimble, 2012; Holman et al., 2011). Accordingly, this study fills a crucial gap in the literature by providing practitioners with the information needed to offer more effective, culturally relevant services to older American Indians.

The results suggest that addressing the spiritual needs of American Indians is positively related to overall satisfaction with service provision. In addition, the services provided by nurses, social workers, and physicians play a substantial role in explaining this positive relationship. Thus, although all hospital personnel can play a part in addressing the spiritual needs of this population, these practitioners play a crucial role in addressing the spiritual needs of older American Indians. In turn, such efforts help foster positive outcomes among members of this population.

**Funding**

Preparation of this article was supported by a grant from the John A. Hartford Foundation.

**References**


Vol. 54, No. 4, 2014 691


