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The Role of Religion for Hospice Patients and Relatively Healthy Older Adults

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As older adults approach the end of life, they frequently experience death anxiety and a decline in subjective well-being that are not always alleviated by increased religious participation. One possible explanation is the differential influences of intrinsic and extrinsic religiosity. The present study examined the effects of religious orientation and spiritual activities on subjective well-being and death attitudes among 103 relatively healthy older adults and 19 hospice patients (aged 61 and older). The results of path analyses showed that a sense of purpose in life rather than religiosity had a direct positive effect on subjective well-being and a direct negative effect on death fear after controlling for physical health and demographic characteristics. Intrinsic religiosity had an indirect positive effect on subjective well-being and a strong direct positive effect on approach acceptance of death. Extrinsic religiosity, however, was positively related to death anxiety and, for hospice patients, negatively related to approach acceptance of death.

Keywords: *intrinsic religious orientation; extrinsic religious orientation; purpose in life; subjective well-being; death anxiety; approach acceptance of death; hospice patients*

It is a not an uncommon finding that many adults experience some anxiety about death and dying, especially as they approach the ends of their lives (Tomer and Eliason 2000a). This anxiety often includes concern about unknown physical changes, dread of possible pain and stress associated with dying, fear of separation from loved ones, and uncertainty about what will occur following death (Kastenbaum 2000). One potential response to this anxiety over end-of-life issues is to seek solace and hope through private and

formal religious activities. Although most investigations of formal religious activity across the life span have been cross-sectional, the data consistently reveal greater levels of participation by older adults than younger adults up to about age 75 or 80, after which formal religious participation tends to decline again (Cox and Hammonds 1988). Distinctly different is participation in private religious activities, such as prayer and meditation, which continues to increase in importance with age (Atchley 2000). In fact, a longitudinal study by Idler, Kasl, and Hays (2001) demonstrated that feelings of religiousness and the strength and comfort that older adults obtain from their religion might even slightly increase during the last months of people's lives.

A person's religious or spiritual commitment might be crucial to coping with the prospect of death and dying because each provides a sense of meaning for suffering and loss, particularly at the end of life. Moreover, religious people are assumed to be less afraid of death because they often believe that they will be rewarded for their religious behavior in the afterlife. Thus, according to Carl Jung (1969), most religions can be considered "complicated systems of preparation for death" (p. 408). The importance of shared religious activities is indicated by the fact that older people retain church memberships longer than memberships in other community organizations, and they perceive significant social and psychological benefits to religious participation (Peiper 1981). For example, Peiper (1981) found that more than half of older adults stated that the primary benefits they derived from continued participation in religious activities were a sense of meaning in life and the opportunity for continued growth in faith. In addition, Mookherjee (1994) and Francis and Kaldor (2002) showed that belief in God, the frequency of church attendance and prayer, Bible reading, and devotional intensity were positively associated with perceived well-being.

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Yet participation in religious activities does not always have a significant positive effect on well-being in old age (Koenig, McCullough, and Larson 2001). For example, Walls and Zarit (1991) discovered that well-being was positively associated with family and church support but not with participation in religious activities or spiritual aspects of religion. Relatedly, Koenig et al. (1997) found that only some religious activities, such as church attendance, were negatively associated with depression, whereas others, such as religious TV or radio listening, were positively associated with depression. A possible explanation for this result is that depression might lead some people to turn to religious programs for solace and comfort, but it is unlikely that all those people will have strong religious commitments that are expressed, for example, through frequent church attendance. Hence, it is important to distinguish between an intrinsic and an extrinsic religious orientation when examining the association between religiosity, death attitudes, and subjective well-being (Atkinson and Malony 1994; Chamberlain and Zika 1992; McFadden 1999).

Intrinsic and Extrinsic Religious Orientation

Religious orientation was originally conceptualized by Allport and Ross (1967) to be a single construct that varied along a bipolar continuum between intrinsic and extrinsic sentiments (later determined to be two distinct constructs). According to Allport and Ross, individuals who are extrinsically oriented "use religion to their own ends" and find it a useful way to attain security, social status, solace, and social interaction (p. 434). The beliefs of an extrinsic individual's religion might be only moderately adopted or possibly even modified to meet more primary needs. For example, extrinsically religious persons might give less importance to church attendance and Bible study than to the social gatherings that are offered by a church. In Allport and Ross's words, "the extrinsic type turns to God, but without turning away from the self" (p. 434). Donahue (1985) described extrinsic religiosity as a "religion of comfort and social convention, a self-serving, instrumental approach shaped to suit oneself" (p. 400).

In contrast, intrinsic religiosity has been described as "a meaning-endowing framework in terms of which all of life is understood" (Donahue 1985:400). An intrinsic individual might have other needs in life, but these are deemed less important or brought into harmony with religious beliefs. Intrinsically religious people have dedicated their lives to God or a higher power. For example, an intrinsically religious person would probably prefer to join a Bible study group rather than a social fellowship church group. Allport and

Ross (1967) best summarized the differences between extrinsic and religious orientations by stating that "the extrinsically motivated person *uses* his religion, whereas the intrinsically motivated *lives* his religion" (p. 434). Hence, an intrinsic religious orientation is more likely to lead to a sense of meaning and purpose in life than an extrinsic religious orientation because intrinsic orientation, by definition, provides an individual with a "master motive" for living (Allport and Ross 1967:434). For example, Bolt (1975) found that intrinsically but not extrinsically oriented undergraduates reported a stronger sense of purpose in life, and Tomer and Eliason (2000b) discovered a positive correlation between religious devotion and a sense of meaning in life among older adults.

Religiosity, Sense of Meaning, and Well-Being at the End of Life

There is evidence that the role of religion in an individual's life increases in importance with age and is associated with a number of physical and psychological benefits. Blazer and Palmore (1976), for example, found positive associations between religion and happiness, feelings of usefulness, and adjustment that increased with age. Similarly, several researchers have determined that religiosity and religious activity among the elderly are positively related to general well-being, functional ability, health, and life satisfaction and negatively related to depression (Beit-Hallahmi and Argyle 1997; Cutler 1976; Ellison et al. 2001; Guy 1982; Idler 1987; Idler and Kasl 1992; Koenig, George, and Titus 2004; Koenig et al. 1997, 2001; Levin 1994; Levin, Chatters, and Taylor 1995; Markides 1983; Morris 1991; Witter et al. 1985).

The causal directions of these relationships, however, are not fully understood. It is possible that physically disabled older adults are simply less likely to attend religious functions and are also more likely to be depressed (Ainlay, Singleton, and Swigert 1992; Levin and Markides 1986; Steinitz 1980). In addition, other variables associated with religious activity might be responsible for these statistical relationships. For example, a number of social benefits derived from institutional religious participation are readily brought to mind, such as regular interaction with others, opportunities to provide service to others, and an organizational structure that might serve as a focal point for both social integration and activity. Emotional support and a positive influence on lifestyle might also be reasons for the positive association between religion and physical and psychological well-being (Dull and Skokan 1995; Imamoglu 1999; Koenig et al. 2001; Peiper 1981). A longitudinal study by Wink and Dillon (2003) revealed the stability of the positive

effects of religious activity by showing that religiousness in early and middle adulthood was positively related to well-being in late adulthood that was derived from "positive relations with others, involvement in social and community service life tasks, and generativity" (p. 922).

One potential reason that religion increases in importance in old age and is associated with so many positive outcomes might be that as individuals approach the end of the life course, they begin to seek a deeper, more existential meaning for their lives, their losses, and the challenges of the dying process, which most religious systems are able to provide (Berger 1969). There is widespread consensus that achieving a sense of meaning and purpose in life is essential for successful aging (Birren 1964; Butler 1974; Erikson 1963; Novak 1985; Schulz 1986; Wong 2000). A sense of meaning is positively associated with a variety of outcomes that include happiness, life satisfaction, general psychological well-being, and recovery from grief following bereavement (Debats 2000; Edmonds and Hooker 1992; Harlow, Newcomb, and Bentler 1987; Shek 1992; Ulmer, Range, and Smith 1991; Zika and Chamberlain 1992). Some have even suggested that "the common thread of . . . successful agers is that they have a zest for life and a clear sense of meaning and purpose" that might be derived from purposeful, altruistic activities that are meaningful and transcend self-interest (Wong 2000:26). Perhaps more important, Wong (2000) found that successful agers had positive attitudes not only toward life but also toward death and dying.

Indeed, past evidence suggests that, paradoxically, those elders who have found meaning and purpose in life are also more ready to let go at the end of life (Nicholson 1980). Moody (1986) helped clarify this finding through his distinctions between individual, collective, and cosmic meaning in life. He argued that the search for meaning in late life necessitates a shift from a focus on the individual to an emphasis on the collective or even cosmic meaning in life, which needs to be accompanied by a shift from activity to contemplation. Similarly, Yalom (1980, as cited in Chamberlain and Zika 1992) suggested that meaning can be divided into two classifications: cosmic and terrestrial. Cosmic meaning "implies some design existing outside of and superior to the person and invariably refers to some magical or spiritual ordering of the universe" (p. 423). In contrast, terrestrial meaning is more personal and is rooted in secular views. For example, terrestrial meaning might be found in personal achievement, leaving a legacy, creative activities, financial security, and material needs (Reker 2000). Yet religiosity and particularly an intrinsic religious orientation might serve as the vehicle to a deeper cosmic meaning at a time when many terrestrial meaning-making activities valued by secular culture—active engagement, productivity, and

interpersonal relationships—decline substantially or even cease (McFadden 2000). Because religion answers some of the most fundamental questions of life concerning where we came from, where we are going, and what the meaning of life is, it provides order to the world even in the presence of physical decline, social losses, suffering, and impending death and offers an existential meaning that provides a sense of peace and a recognition of one's place in the broader cosmic context (Berger 1969; Chamberlain and Zika 1992; McFadden 2000; Moody 1986; Pargament 1997; Weber 1973). For example, a study of older adults by Krause (2003) showed that a sense of meaning derived from religion was positively associated with life satisfaction, self-esteem, and optimism, particularly among African Americans.

The path to meaning in life via religious activities might be most successful for people with intrinsic rather than extrinsic religious orientations. Because extrinsic religiosity is mostly self oriented rather than other oriented, transcending one's life to understand the ultimate meaning of life within a greater cosmic reality might be beyond the reach of extrinsically oriented individuals. In fact, in a meta-analysis of the literature on religion and spirituality, Donahue (1985) found a positive association between intrinsic religious orientation and a sense of purpose in life. Because of its ability to provide a sense of cosmic meaning (Moody 1986), intrinsic religiosity might be particularly salient as one approaches the end of life.

Religiosity and Death Attitudes

It is a widely held belief that intrinsic religiosity ameliorates fears associated with death and dying. Why would this relationship exist? It has been established that religion is a source of comfort when individuals are experiencing negative life events (Pargament 1997). In addition, particularly for those holding Christian views, religious beliefs offer the hope of life after death and a possible reunion with family and friends, which Wong, Reker, and Gesser (1994) described as approach acceptance of death. Perhaps even more important, religion provides meaning for an individual's life and death (McFadden 2000). A sense of purpose in life in turn has been found to be negatively related to death anxiety among college students (Bolt 1978; Rasmussen and Johnson 1994) and older adults (Rappaport et al. 1993; Tomer and Eliason 2000b).

Yet investigations of the relationship between death anxiety and religiosity have been mixed concerning the ameliorating influence of intrinsic religiosity on death anxiety. For example, studies reported by Rasmussen and Johnson

(1994), Thorson and Powell (1989), and Thorson et al. (1997) revealed no relationship between religiosity and death anxiety in diverse populations (American undergraduate and graduate students, older adults, and Kuwaiti university students, respectively). In contrast, Alvarado et al. (1995), Wittkowski (1988), and Cohen et al. (2005) found a negative relationship between religiosity and death anxiety among samples of adults from the general population, middle-aged women, and young Catholics and Protestants. Other studies have shown a negative effect of religiosity and spirituality on death anxiety and a positive effect on death acceptance in terminally ill patients and older adults (Cicirelli 1999, 2002; Falkenhain and Handal 2003; Hinton 1999; Ita 1995; Koenig 1988), whereas Wink and Scott (2005) and Downey (1984) identified a reverse-U-shaped curvilinear relationship between religiosity and fear of death among older adults and middle-aged men.

Fortner and Neimeyer (1999) suggested that the instruments used to measure religiosity might partially explain the mixed findings. For example, Leming's (1979-1980) analysis of 23 studies showed that only 10 religious factors reduced death anxiety. In a quantitative review of 49 studies, Fortner, Neimeyer, and Rybarczyk (2000:103) found that studies measuring religiosity as a function of a set of beliefs (e.g., faith in God, belief in life after death) better predict death anxiety than those combining measures of religious belief with measures of religious behavior (e.g., Bible reading and prayer). Another consideration in evaluating the mixed results is that measures of death anxiety also vary in whether they focus on the dying process (i.e., possible pain and suffering), death (i.e., the end of existence), or both. Wink and Scott (2005) offered another explanation for the mixed findings over the years. They found that the highest levels of death anxiety were reported when there was an inconsistency between an individual's beliefs concerning life after death and his or her religious practices. In other words, those individuals who reported high levels of belief in a rewarding afterlife but low levels of religiousness (as measured by beliefs and practices) were the most afraid of death. Although Wink and Scott did not distinguish between extrinsic and intrinsic religiosity, their findings replicated previous research results that extrinsically religious individuals (i.e., those who were judged by raters in Wink and Scott's study to give only some importance to religious beliefs and practices in their lives) tend to report greater death anxiety than those who are either deeply nonreligious or deeply religious (Kalish 1985; Thorson and Powell 1990).

It is not clear, however, if this holds true for older people at the very end of life. If an extrinsic religious orientation does more harm than good with regard to fear of death and does nothing to improve a dying person's subjective well-being, it might be harmful rather than helpful to engage in discus-

sions about religion and spirituality as a means of providing solace and divine comfort to an older person with a life-threatening illness. If the reason a person turns to religion remains extrinsic (i.e., as a mean to a different end such as solace and comfort) and does not turn into an intrinsic commitment to a spiritual or religious life, religion in itself might not improve subjective well-being and reduce death anxiety at the end of life.

The Present Study

The purpose of the present study was to more fully examine the importance of intrinsic and extrinsic religiosity for older people at the end of life by comparing the effects of religious orientation and purpose in life on subjective well-being and attitudes toward death between relatively healthy community-dwelling older adults (Ardelt 2003) and a small sample of 19 older hospice patients with a life expectancy of six months or less. Very little research has been conducted with hospice patients concerning religiosity and feelings about death, especially in the context of purpose in life and subjective well-being. By including these individuals in this study, we hoped to extend our understanding of these complex variables in a subset of the population for whom death might be particularly salient.

On the basis of the literature review and the results of previous analyses with the community sample in this study (Ardelt 2003), we developed a general theoretical model, as depicted in Figure 1. The hypotheses derived from this model are as follows:

Hypothesis 1: Intrinsic religious orientation has a positive effect on shared spiritual activities and the frequency of prayer, whereas extrinsic religious orientation has no independent effect on both spiritual activities. That is, older adults who have committed their lives to God or a higher power (high scores on intrinsic religious orientation) are expected to engage more in spiritual activities than those who score low on intrinsic religious orientation. Individuals with high scores on extrinsic religious orientation, however, are not predicted to differ significantly in their spiritual activities from individuals with low scores on extrinsic religiosity.

Hypothesis 2: Shared spiritual activities are positively related to prayer activities. We predict a unidirectional relationship between these variables because shared spiritual activities (e.g., Bible study, Sunday school, prayer groups) often involve prayer. In contrast, prayer can be a solitary activity that does not need to be done in the context of shared spiritual activities.

Hypothesis 3: Spiritual activities are positively related to a sense of purpose in life. Engaging in spiritual activities alone or with others on a regular basis is likely to confirm or even increase one's sense of purpose in life. An intrinsic religious

orientation by itself, however, is also expected to have a direct positive effect on a sense of purpose in life and an indirect effect on purpose in life mediated by spiritual activities. Extrinsic religious orientation is not predicted to be significantly related to purpose in life.

Hypothesis 4: Purpose in life has a direct positive effect on subjective well-being in old age. Intrinsic religious orientation is indirectly related to subjective well-being mediated by purpose in life and spiritual activities. Extrinsic religious orientation is expected to be unrelated to subjective well-being.

Hypothesis 5: Purpose in life is negatively and extrinsic religiosity is positively related to fear of death. Intrinsic religiosity has an indirect negative effect on fear of death mediated by purpose in life and spiritual activities.

Hypothesis 6: Only intrinsic religious orientation has a direct positive effect on approach acceptance of death (i.e., the expectance of a blissful existence in a heavenly afterlife and a reunion with deceased loved ones). Extrinsic religious orientation and purpose in life are unrelated to approach acceptance of death.

Control variables were hospice patient status, subjective health, socioeconomic status (SES), gender, and race. In addition, interaction effects of hospice patient status with all independent variables were created to test if the effects of the independent variables differed significantly for hospice patients and relatively healthy older adults.[1]

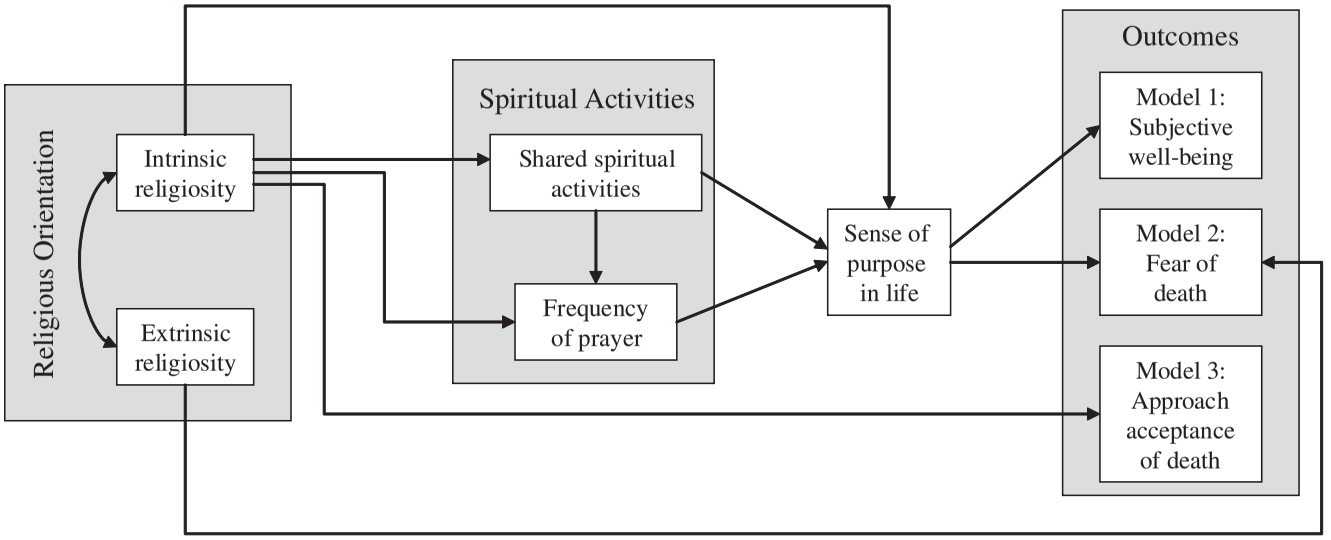
Methods

Procedure

Relatively healthy community-dwelling older adults. In the first wave of data collection between December 1997 and June 1998, community-dwelling older residents living in north central Florida were recruited from 18 close-knit social groups. After volunteering to participate in a "personality and aging well study," individual group members received home visits from a member of the research team, who delivered and explained a self-administered questionnaire. Although all individuals were provided the opportunity to have the research team member assist with completing the survey, only 10 respondents accepted this offer. The remaining 170 respondents returned their questionnaires by mail in stamped, preaddressed envelopes.

The second wave of data collection was initiated 10 months later by sending all respondents with known addresses a follow-up survey containing questions on religiosity and death attitudes. A member of the research team contacted individuals by phone and offered to provide assistance in filling out the questionnaire if participants failed to return the second questionnaire

Figure 1
General Theoretical Model



within two to three weeks. This two-tiered approach resulted in approximately 70% of the initial sample with known addresses (123 respondents) returning the follow-up survey. Respondents in the follow-up survey did not differ at the .05 level of significance from respondents who filled out only the initial survey in age, gender, education, marital status, SES, and subjective health. However, the proportion of African Americans who participated in only the first survey (43%) was significantly higher than the proportion of African Americans who completed both questionnaires (20%). It should be noted that 6 community-dwelling respondents younger than age 61 were subsequently excluded from data analyses to facilitate age-range matching to the sample of hospice patients described next. An additional 14 respondents were excluded because of missing data on some of the variables in the study. With the exception of demographic variables, all data for the remaining 103 relatively healthy older adults were taken from the follow-up survey.

Hospice patients. Between August 1999 and September 2001, 19 older hospice patients, who were recruited through the local hospice organization, participated in a study on "aging and dying well" that consisted of standardized face-to-face interviews equivalent to the survey used in the second wave of data collection for the relatively healthy community-dwelling older adults. The residential circumstances of the participants varied in that 9 lived in the community, 7 in the hospice care center (a residential facility operated by the hospice), and 3 in assisted-living residences.

Sample

The complete sample of 122 White and African American older adults ranged in age from 61 to 98 years, with a mean and median age of 74 years. The respondents were primarily White (79%) and female (66%), and 53% reported that they were married. In addition, a substantial majority (89%) indicated that they were affiliated with religious groups. Eighty-nine percent of the respondents had at least a high school diploma, and 30% had also obtained graduate degrees. The relatively healthy community-dwelling respondents were significantly more likely than the hospice patients to be younger, female, and married. Moreover, the community sample tended to have more years of schooling than the hospice sample.

Measures

To construct each scale described below, the mean of all items with valid values on a scale was calculated. This procedure was deemed most appropri-

ate given the relatively small sample size and the recognition that a listwise deletion of cases would have reduced the sample size even further.

Subjective well-being. Subscales from the National Center for Health Statistics (NCHS) General Well-Being Schedule (Fazio 1977) were used to measure subjective well-being.[2] These included the 2 items of the Life Satisfaction subscale (e.g., "How happy, satisfied, or pleased have you been with your personal life during the past month?" ranging from 1 = *very dissatisfied* to 6 = *extremely happy*) and the 4 items of the Cheerfulness subscale (e.g., "How have you been feeling in general during the past month?" ranging from 1 = *in very low spirits* to 6 = *in excellent spirits*). Because 5 of the 6 items were assessed on 6-point scales and one item was measured on an interval scale ranging from 0 to 10, both scales were transformed into scales ranging from 0 to 5. In addition, the scales of the negatively worded items were reversed before the average of all six items was calculated. The reliability coefficient (Cronbach's α) was .89.

Attitudes toward death. The Death Attitude Profile–Revised (Wong et al. 1994) was selected to measure fear of death and approach acceptance of death. Fear of death was derived from the average of 7 items (e.g., "I have an intense fear of death," "Death is no doubt a grim experience"), with an α value of .82. Approach acceptance of death was calculated as the average of 10 items (e.g., "I believe that I will be in heaven after I die," "I look forward to life after death"), with an α value of .97. All items were assessed on 5-point scales ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Religious orientation. Allport and Ross's (1967) Intrinsic and Extrinsic Religious Orientation Scale measures intrinsic and extrinsic religiosity. Across both scales, items range from 1 (*strongly disagree*) to 5 (*strongly agree*). Intrinsic religiosity was averaged on 9 items (e.g., "I try hard to carry my religion over into all my other dealings in life"), with an α value of .89, and extrinsic religiosity was calculated as the mean of 11 items (e.g., "A primary reason for my interest in religion is that my church is a congenial social activity"), with an α value of .83.

Spiritual activities. Shared spiritual activities ("During the last MONTH, how often did you participate in spiritual activities with at least one other person?" ranging from 1 = *0 times* to 5 = *more than 15 times*) and the frequency of prayer ("During the last WEEK, how often did you pray?" ranging from 1 = *0 times* to 5 = *10 or more times*) were two single items from the Spiritual Involvement and Beliefs Scale (Hatch et al. 1998).

Purpose in life. To assess respondents' sense of purpose and meaning in life, three "pure" meaning items from Crumbaugh and Maholick's (1964) Purpose in Life Test (King and Hunt 1975) were used ("I have discovered satisfying goals and a clear purpose in life"; "If I should die today, I would feel that my life has been worthwhile"; and "My personal existence often seems meaningless and without purpose").[3] The values on this 5-point scale ranged from 1 (*not true of myself*) to 5 (*definitely true of myself*). The scale of the negatively worded item was reversed before the average of all three items was taken, resulting in an α value of .62.

Control variables. Being a hospice patient was assessed as a dichotomous variables (1 = yes). *Subjective physical health*, measured by another subscale of the NCHS General Well-Being Schedule (Fazio 1977), assessed health concern, worries, or distress ("Have you been bothered by any illness, bodily disorder, pains, or fears about your health?" ranging from 1 = *all the time* to 6 = *none of the time* and "How concerned or worried about your health have you been?" ranging from 0 = *not concerned at all* to 10 = *very concerned*). Both items were transformed into scales ranging from 0 to 5, and the scale of the second item was reversed before the average of the two items was computed. Cronbach's α was .78 for the two items.[4] SES was calculated as the average of longest held occupation and educational degree. Three raters coded longest held occupation according to Hollingshead's Index of Occupations (O'Rand 1982) on a scale ranging from 1 (farm laborers, mental service workers) to 9 (higher executive, large business owner, major professional). The codes for occupations that were not self-evident were decided jointly by at least two raters. The 5-point scale of educational degree, ranging from 0 (no high school) to 4 (graduate degree), was first transformed into a 9-point scale before it was averaged with occupation. SES for respondents without an occupation was represented by their educational degree. Gender and race were coded as dichotomous variables. In addition, several interaction terms were created to test if the effects of the independent variables differed for hospice patients and relatively healthy older adults.

Analysis

A *t* test was used to determine if the community sample was significantly different from the hospice sample with regard to the variables in the model. Bivariate correlation analyses were performed for all dependent, independent, and control variables in the model. Several steps were taken to test the hypotheses in Figure 1. First, individual regression analyses were conducted that included the hypothesized paths plus a control variable for being a hos-

pice patient. If the effects of other independent variables, control variables, or interaction terms were significant, they were included in the model in a stepwise analysis procedure and all insignificant effects were removed.

Second, LISREL 8.72 was used to analyze the three path models in Figure 1. Because of the small number of cases, the three models were estimated separately rather than simultaneously. Because the first part of the three path models (minus the outcome measures) is the same for all three models, this partial model was first analyzed before the three full path models were estimated. For each model, covariance and asymptotic covariance matrices were produced to compute corrected *t* values and chi-square statistics because most variables did not follow a multivariate normal distribution. Because of the relatively small sample size, robust maximum likelihood estimation rather than a weighted least squares estimation procedure was used (Jöreskog et al. 1999) to arrive at the coefficient estimates.

The following steps were taken to estimate each of the path models. We started with the model suggested by the individual regression analyses, removed all insignificant effects, and added significant effects as suggested by large modification indices. Compared with the regression analyses, only one of the equations was changed by substituting one control variable for another.

Results

Bivariate Analyses

A *t* test was used to test if the variable means of relatively healthy community-dwelling older adults differed significantly from the variable means of older hospice patients in this study. There were no significant differences between the community and the hospice sample with regard to attitudes toward death, intrinsic religiosity, frequency of prayer, purpose in life, SES, and race. Not surprisingly, hospice patients tended to have lower scores on subjective well-being ($t = 3.46$, $p = .002$), subjective health ($t = 2.19$, $p = .030$), and shared spiritual activities ($t = 2.66$, $p = .009$) than relatively healthy older adults. Yet even though hospice patients might not be able to participate in as many shared spiritual activities as relatively healthy older adults because of physical limitations (Idler et al. 2001), they did not differ statistically from other older adults with regard to intrinsic religious orientation and frequency of prayer. However, hospice patients tended to score higher on extrinsic religious orientation ($t = –4.31$, $p < .001$) than relatively healthy older adults. In addition and as mentioned above, hospice patients

were more likely than the other adults in the study to be male ($t = 2.38$, $p = .019$).

Table 1 displays the means, standard deviations, and bivariate correlations of the variables in the model. Subjective well-being was negatively related to fear of death and extrinsic religiosity and positively correlated with approach acceptance of death, intrinsic religiosity, shared spiritual activities, and a sense of purpose in life. Fear of death was positively associated with extrinsic religiosity and negatively related to shared spiritual activities and purpose in life. Approach acceptance of death was strongly and positively related to intrinsic religiosity,[5] and both variables were positively associated with shared spiritual activities, frequency of prayer, and purpose in life. Extrinsic religiosity was negatively related to shared spiritual activities. Finally, shared spiritual activities, frequency of prayer, and purpose in life were all positively correlated.

Path Models

Table 2 shows the first part of the model in Figure 1 that is identical for all three path models. Because of the small sample size, all predicted paths with insignificant coefficient estimates were eliminated (denoted as *ns* in Table 2). The fit indices indicated that the model fit the data well. The Satorra-Bentler scaled chi-square, adjusted for nonnormality, was 11.67, with 15 degrees of freedom ($p = .70$). All goodness-of-fit indices were greater than .92, and the critical n was 318, well above the recommended minimum value of 200.

As predicted in Hypothesis 1, intrinsic religious orientation was positively related to shared spiritual activities and frequency of prayer, whereas extrinsic religious orientation was unrelated to frequency of prayer. Contrary to expectations, however, extrinsic religiosity actually had a negative effect on shared spiritual activities, suggesting that extrinsic religious individuals tended to be least engaged in spiritual activities with other people. Hospice patients tended to be more involved in shared spiritual activities than relatively healthy older adults, yet intrinsic religiosity was negatively related to shared spiritual activities for hospice patients. This seemingly contradictory finding can be explained by the fact that both an intrinsic religious orientation and being a hospice patient were relatively strong predictors of shared spiritual activities after controlling for the other variables in the model. However, for intrinsically religious hospice patients, those effects could not simply be added together. The significant interaction term means that the positive unstandardized effect of intrinsic religiosity on shared spiritual activities was reduced from 1.00 for relatively healthy older adults to .43 for hospice patients.

Table 1
Correlation Matrix of Dependent, Independent, and Control Variables (n = 122)

	1	2	3	4	5	6	7	8	9	10	11	12	*M*	*SD*
1. Subjective well-being	—												3.76	0.87
2. Fear of death	–.28**	—											2.43	0.79
3. Approach acceptance of death	.20*	–.03	—										3.93	1.00
4. Instrinsic religiosity	.25**	–.01	.80**	—									3.93	0.80
5. Extrinsic religiosity	–.26**	.48**	–.13	–.16	—								2.92	0.76
6. Shared spiritual activities	.27**	–.24**	.51**	.56**	–.35**	—							2.80	1.37
7. Frequency of prayer	.13	–.03	.63**	.78**	–.17	.54**	—						3.89	1.31
8. Sense of purpose in life	.53**	–.24**	.22*	.28**	–.10	.42**	.26**	—					4.34	0.65
Control variables														
9. Hospice patient (1 = yes)	–.37**	.08	–.04	–.07	+.37**	–.24**	–.01	–.03	—				0.16	0.36
10. Subjective physical health	.54**	–.19*	.17	.26**	–.39**	.25**	.22*	.28**	–.20*	—			3.02	1.35
11. Socioeconomic status	.14	–.19*	–.28**	–.09	–.15	.03	–.18*	+.14	–.13	–.02	—		5.75	2.37
12. Gender (1 = female)	.09	.01	.25**	.29**	–.26**	.31**	.37**	.08	–.21*	.16	–.10	—	0.66	0.48
13. Race (1 = White)	–.10	–.20*	–.12	–.15	–.32**	–.10	–.18*	–.18*	.06	.03	.06	.00	0.79	0.41

**$p < .01$. *$p < .05$ (two-tailed tests).

Table 2
Effects of Older Adults' Religious Orientations and Spiritual Activities on Sense of Purpose in Life

	Dependent Variables: Partial Model for Models 1, 2, and 3 in Table 3									
	Shared Spiritual Activities		Frequency of Prayer				Sense of Purpose in Life			
	Direct Effects		Direct Effects		Indirect Effects		Direct Effects		Indirect Effects	
Independent Variable	Unstandardized	Standardized	Unstandardized	Standardized	Unstandardized	Standardized	Unstandardized	Standardized	Unstandardized	Standardized
Religious orientation										
Intrinsic religiosity	1.00***	0.58	1.08***	0.65	0.13***	0.08	*ns*	*ns*	0.17***	0.21
Extrinsic religiosity	–0.35**	–0.19	—	—	–0.05	–0.03	—	—	–0.06**	–0.07
Spiritual activities										
Shared spiritual activities	—	—	0.13**	0.13	—	—	0.17***	0.35	—	—
Frequency of prayer	—	—	—	—	—	—	*ns*	*ns*	—	—
Control variables										
Hospice patient (1 = yes)	1.70**	0.45	—	—	0.22	0.06	—	—	0.29*	0.16
Subjective physical health	—	—	—	—	—	—	0.10**	0.20	—	—
Socioeconomic status	—	—	–0.06**	–0.11	—	—	0.04*	0.14	—	—
Gender (1 = female)	—	—	0.36**	0.13	—	—	—	—	—	—
Race (1 = White)	—	—	—	—	—	—	–0.25**	–0.16	—	—
Interaction effects										
Hospice × Intrinsic Religiosity	–0.57**	–0.59	—	—	–0.07*	–0.08	—	—	–0.10**	–0.21

Fit indices			
R^2 for structural equations	.41	0.65	.24
Degrees of freedom		15	
Satorra-Bentler scaled ÷^{2}		11.67	
p		0.7	
Goodness-of-fit index		0.98	
Adjusted goodness-of-fit index		0.92	
Incremental fit index		1.01	
Nonnormed fit index		1.03	
Critical *n*		318	

Note: Simultaneous estimation of partial model; LISREL 8.72 robust maximum likelihood coefficient estimates; *t* values and chi-square statistics corrected for nonnormality; $n = 122$; *ns* = path was eliminated because coefficient estimate was not statistically significant.
***t value > 2.58 ($p < .01$); **t value > 1.96 ($p < .05$); *t value > 1.645 ($p < .10$).

As stated in Hypothesis 2, shared spiritual activities were positively related to frequency of prayer. In addition, SES had a negative effect on prayer, whereas older women in this sample tended to pray more than elderly men. The indirect positive effect of intrinsic religiosity on frequency of prayer (mediated by shared spiritual activities) was somewhat smaller for hospice patients than for relatively healthy community respondents.

Contrary to Hypothesis 3, intrinsic religiosity and frequency of prayer were not directly related to a sense of purpose in life. However, and as predicted, shared spiritual activities had a direct positive effect and intrinsic religiosity had an indirect positive effect on purpose in life mediated by shared spiritual activities, although this indirect effect of intrinsic religiosity was somewhat smaller for hospice patients than for relatively healthy community residents. However, being a hospice patient was also indirectly and positively related to purpose in life mediated by shared spiritual activities. Extrinsic religiosity, by contrast, had a negative indirect effect on purpose in life. Among the control variables, subjective health and SES were positively and directly related to purpose in life, whereas Whites tended to have a lower sense of purpose in life than African American elders in this sample. Overall, the variables in this model explained 41% of the variation in shared spiritual activities, 65% of the variation in frequency of prayer, and 24% of the variation in sense of purpose in life.

The partial model in Table 2 was included in the estimation of each of the three full models in Table 3. Because the partial model was identical for all three models in Table 3, the coefficient estimates for the partial model remained the same in each of the three models. Model 1 displays the coefficient estimates for the direct and indirect effects on subjective well-being in old age. As stated in Hypothesis 4, purpose in life had a direct positive effect on subjective well-being, whereas intrinsic religiosity had only an indirect positive effect on well-being mediated by shared spiritual activities and purpose in life. The latter effect was somewhat smaller for hospice patients than for relatively healthy adults. Shared spiritual activities were also indirectly and positively related to subjective well-being. Contrary to expectations, extrinsic religiosity had a weak negative indirect effect on subjective well-being, also mediated by shared spiritual activities and purpose in life. Not surprisingly, being a hospice patient had an overall negative effect on subjective well-being, and subjective health was positively related to well-being in old age. The positive effect of subjective physical health on subjective well-being was significantly stronger for hospice patients than for relatively healthy older adults. In addition, SES had a weak positive indirect effect and being White had a weak negative indirect effect on subjective well-being. Taken together, the variables in the model explained 57% of the variation in

Table 3
Effects of Older Adults' Religious Orientations, Spiritual Activities, and Senses of Purpose in Life on Subjective Well-Being, Fear of Death, and Approach Acceptance of Death

	Dependent Variables: Full Models											
	Model 1: Subjective Well-Being				Model 2: Fear of Death				Model 3: Approach Acceptance of Death			
	Direct Effects		Indirect Effects		Direct Effects		Indirect Effects		Direct Effects		Indirect Effects	
Independent Variable	Unstand-ardized	Stand-ardized	Unstand-ardized	Stand-ardized	Unstand-ardized	Stand-ardized	Unstand-ardized	Stand-ardized	Unstand-ardized	Stand-ardized	Unstand-ardized	Stand-ardized
Religious orientation												
Intrinsic religiosity	—	—	0.10***	0.09	—	—	0.09	0.09	0.88***	0.70	0.09**	0.07
Extrinsic religiosity	—	—	–0.03*	–0.03	0.58***	0.55	0.01	0.01	0.03	0.03	–0.03	–0.02
Spiritual activities												
Shared spiritual activities	—	—	0.10***	0.13	—	—	–0.03	–0.05	0.09**	0.12	—	—
Frequency of prayer	—	—	—	—	0.11**	0.18	—	—	—	—	—	—
Purpose in life												
Sense of purpose in life	0.58***	0.43	—	—	–0.26***	–0.22	—	—	—	—	—	—
Control variables												
Hospice patient (1 = yes)	–1.38***	–0.57	0.17*	0.07	0.99*	0.45	–0.05	–0.02	1.16*	0.42	0.15	0.06
Subjective physical health	0.19***	0.29	0.06**	0.08	—	—	–0.03**	–0.04	—	—	—	—
Socioeconomic status	—	—	0.02*	0.06	—	—	–0.02*	–0.05	–0.10***	–0.23	—	—
Gender (1 = female)	—	—	—	—	—	—	0.04	0.02	—	—	—	—
Race (1 = White)	—	—	–0.15**	–0.07	—	—	0.07**	0.03	—	—	—	—

(continued)

Table 3 (continued)

	Dependent Variables: Full Models											
	Model 1: Subjective Well-Being				Model 2: Fear of Death				Model 3: Approach Acceptance of Death			
	Direct Effects		Indirect Effects		Direct Effects		Indirect Effects		Direct Effects		Indirect Effects	
Independent Variable	Unstandardized	Standardized	Unstandardized	Standardized	Unstandardized	Standardized	Unstandardized	Standardized	Unstandardized	Standardized	Unstandardized	Standardized
Interaction effects												
Hospice × Intrinsic Religiosity	—	—	–0.06**	–0.09	—	—	0.02	0.03	0.38**	0.54	–0.05	–0.07
Hospice × Extrinsic Religiosity	—	—	—	—	—	—	—	—	–0.72***	–0.96	—	—
Hospice × Subjective Physical Health	0.27***	0.32	—	—	—	—	—	—	—	—	—	—
Hospice × Prayer	—	—	—	—	–0.33**	–0.61	—	—	—	—	—	—
Fit indices												
R^2 for structural equations	0.57				0.33				0.71			
Degrees of freedom	26				25				23			
Satorra-Bentler scaled χ^2	21.32				31.29				16.92			
p	0.73				0.18				0.81			
Goodness-of-fit index	0.97				0.96				0.98			
Adjusted goodness-of-fit index	0.90				0.84				0.91			
Incremental fit index	1.01				0.99				1.01			
Nonnormed fit index	1.02				0.97				1.02			
Critical n	260				172				299			

Note: Separate estimates of Models 1, 2, and 3 with the partial model in Table 2 included in each of the models in Table 3; LISREL 8.72 robust maximum likelihood coefficient estimates; t values and chi-square statistics corrected for nonnormality; $n = 122$.

subjective well-being in old age. The overall model fit the data well, with a Satorra-Bentler scaled chi-square of 21.32 and 26 degrees of freedom (p = .73). All goodness-of-fit indices were above .90, and the critical n was 260.

As predicted in Hypothesis 5, extrinsic religiosity was positively related and purpose in life was negatively related to fear of death (Model 2). The indirect effect of intrinsic religiosity on fear of death, however, was not statistically significant. Frequency of prayer was positively related to fear of death for healthy older adults, yet it was negatively related for hospice patients. Controlling for the other variables in the model, hospice patients tended to be more afraid of death than relatively healthy older adults. Subjective physical health and SES had a weak negative indirect effect on fear of death, whereas Whites tended to be slightly more afraid of death than African American elders mediated by purpose in life. Thirty-three percent of the variation in fear of death was explained by the variables in the model. The model fit the data, with a nonsignificant Satorra-Bentler scaled chi-square of 31.29 and 25 degrees of freedom (p = .18) and relatively high overall fit indices, although those indices were somewhat lower than the overall fit indices for the other models.

In accordance with Hypothesis 6, intrinsic religiosity had a relatively strong positive effect on approach acceptance of death (Model 3). This effect was even stronger for hospice patients than for relatively healthy older adults. As predicted, purpose in life was unrelated to approach acceptance of death. Extrinsic religiosity was not related to approach acceptance of death for relatively healthy older adults, yet it was negatively related for hospice patients. Shared spiritual activities had an additional direct positive effect on approach acceptance of death, even after controlling for intrinsic religiosity. Being a hospice patient was positively related to approach acceptance of death after controlling for the interaction effects and intrinsic religiosity. Among the control variables, SES was negatively related to approach acceptance of death. The model fit the data extremely well. Seventy-one percent of the variation in approach acceptance of death was explained by the variables in the model, the Satorra-Bentler scaled chi-square of 16.92 with 23 degrees of freedom was not significant (p = .81), and all fit indices were relatively high.

Discussion

The present study examined the effects of religious orientation, spiritual activities, and a sense of purpose in life on subjective well-being and attitudes toward death in two populations: a community sample of 103 relatively

healthy older adults and 19 older hospice patients aged 61 and older. Admittedly, the hospice sample was rather small because of the difficulties of collecting quantitative data from hospice patients. However, and with only a few exceptions, the exploratory analyses indicated that many of the associations between the variables were similar for hospice patients and relatively healthy older adults, although some differences emerged after controlling for the other variables in the multivariate models.

A comparison between the community and hospice samples revealed nonsignificant differences in attitudes toward death, intrinsic religiosity, frequency of prayer, purpose in life, SES, and race. The nonsignificant difference in attitudes toward death was particularly interesting because death should have been more salient among the hospice patients given that designation as a "hospice patient" typically requires a diagnosis of terminal illness and a life expectancy of six months or less. Yet even with the proximity of death, hospice patients, on average, were not more afraid of death than the relatively healthy older adults. This confirms earlier findings that a terminal or severe illness is not necessarily related to higher death anxiety (Devins 1979; Neimeyer and Van Brunt 1995). In addition, hospice patients tended to express as much meaning and purpose in life as the relatively healthy community-dwelling adults. However, hospice patients had higher average scores on extrinsic religiosity ($M = 3.57$) than the other adults in the study ($M = 2.81$). It appears that hospice patients are more likely to be indiscriminately religious than are relatively healthy older adults. Perhaps the closeness of death prompts some older adults with either intrinsic or extrinsic religious orientations to endorse most religious items independent of their specific content.

Most of the hypotheses illustrated in Figure 1 were supported by the analyses of the data. As predicted in Hypotheses 1 and 2, an intrinsic religious orientation was positively related to shared spiritual activities and frequency of prayer, and shared spiritual activities were positively related to frequency of prayer. However, contrary to expectations expressed in Hypothesis 3, even though both intrinsic religiosity and frequency of prayer were significantly correlated with purpose in life in the bivariate correlation matrix in Table 1, those variables were not directly related to a sense of purpose in life (denoted as *ns* in Table 2) after controlling for the other variables in the model. Yet intrinsic religiosity had an indirect positive effect on purpose in life mediated by shared spiritual activities. The results indicate that private prayer might be less effective in eliciting a sense of purpose in life than spiritual activities that are shared with others. This suggests that a sense of purpose in life related to spirituality or religion might not necessarily

emerge in solitude through prayer but might be found primarily through a faith community, which is built around a shared spiritual belief and meaning system.

Extrinsic religiosity was predicted to be unrelated to shared spiritual activities after controlling for the other variables in the model (Hypothesis 1). The analyses showed that extrinsic religiosity was in fact negatively related to shared spiritual activities and, therefore, also had a negative indirect effect on purpose in life mediated by shared spiritual activities. This means, for example, that respondents with high scores on extrinsic religiosity tended to engage less in shared spiritual activities and consequently were more likely to have a lower sense of purpose in life even if they had the same high scores on intrinsic religiosity than respondents with lower scores on extrinsic religiosity. Endorsing an extrinsic religious orientation had an independent negative effect on shared spiritual activities.

It should be noted that the bivariate correlation between hospice patient status and shared spiritual activities was negative, but the direct effect on shared spiritual activities was positive, after controlling for religious orientation and the negative interaction effect between hospice patient status and intrinsic religiosity. This means that hospice patients in this sample actually tended to engage more in shared spiritual activities (and indirectly tended to have a greater sense of purpose in life) than relatively healthy older adults, but not as much as relatively healthy intrinsically religious older adults. Shared spiritual activities consist not only of church attendance but might include, for example, Bible study, praying, meditating, and watching religious programs with others. Hospice patients might be able to participate in all those activities with other people even if they are bed bound.

Hypothesis 4, which predicted that purpose in life but not religiosity would have a direct positive effect on subjective well-being, was supported. After controlling for hospice patient status and subjective physical health, only purpose in life had a significant direct positive effect on subjective well-being, whereas shared spiritual activities and intrinsic religiosity had an indirect positive effect and extrinsic religiosity had an indirect negative effect on subjective well-being. This result supports earlier findings of a positive association between purpose in life and happiness, life satisfaction, general psychological well-being, and recovery from grief following bereavement (Debats 2000; Edmonds and Hooker 1992; Harlow et al. 1987; Krause 2003; Shek 1992; Ulmer et al. 1991; Zika and Chamberlain 1992). Not surprisingly, subjective physical health had a significantly stronger effect on subjective well-being for hospice patients than for the relatively healthy older adults in this sample. Because hospice patients have a severely limited life

expectancy, feeling less concerned, worried, or distressed about one's health might have a more uplifting effect for hospice patients on their subjective well-being than it has for older adults without terminal diagnoses.

Hypothesis 5 was partially supported. As expected, purpose in life was negatively and extrinsic religiosity was positively related to fear of death, but intrinsic religiosity and shared spiritual activities did not have a significant indirect effect on fear of death. It appears that for the relatively healthy older adults in the sample, only a sense of purpose in life but not religiosity or spiritual activities had the power to decrease their death anxiety. Frequency of prayer seemed only to be effective in reducing fear of death for hospice patients. In fact, frequency of prayer had opposite effects for hospice patients and relatively healthy older adults, which explains the insignificant bivariate association between frequency of prayer and fear of death in Table 1. Prayer was positively related to fear of death for relatively healthy older adults but negatively for hospice patients. In spite of the positive coefficient, it is unlikely that prayer tends to increase fear of death among relatively healthy older adults. Rather, the direction of the effect is probably reversed. Relatively healthy elders who are afraid of death might turn to prayer to alleviate their fears, just as some people might turn to religious programming on TV and the radio to find comfort in their depression (Koenig et al. 1997).

Even though the bivariate association between hospice patient status and fear of death was not significant in Table 1, Model 2 suggests that hospice patients tended to have greater fear of death than the relatively healthy older adults in the sample, after controlling for the other variables in the model. It appears that being a hospice patient might indeed increase a person's fear of death if it is not counterbalanced by hope or solace received through prayer or an existential sense of purpose in life. Hospice patients who have successfully searched for and found existential meaning in their lives might be less afraid of death because they might be able to incorporate the necessity of death into a broader cosmic purpose that includes physical decline and the finality of life on earth (Moody 1986).

As predicted by Hypothesis 6, intrinsic religiosity had a strong positive effect on approach acceptance of death. This effect was even stronger for hospice patients than it was for relatively healthy older adults. This is not surprising given the fact that approach acceptance of death measures the belief in a heavenly afterlife including a reunion with deceased loved ones (Wong et al. 1994). The finding is consistent with a recent study by Falkenhain and Handal (2003), who reported a strong positive correlation between intrinsic religiosity and belief in the afterlife in a sample of 71 older adults between 65 and 87 years of age. Moreover, for hospice patients but not for relatively healthy older adults, extrinsic religiosity was negatively related to approach

acceptance of death if the other variables in the model were held constant. This result reveals the negative effect of an extrinsic religious orientation on approach acceptance of death for hospice patients if it is not counterbalanced by an intrinsic religious orientation. Extrinsically religious persons are likely to be exposed to the doctrines and teachings of their church, but if they have not committed their lives to God or a power greater than themselves, they might be more aware of the fact that their lives are not morally perfect than nonreligious individuals. Hence, their extrinsic religious orientation might do more harm than good by increasing their fear of punishment after death and decreasing their approach acceptance of death (Wink and Scott 2005). Even though there has been an emphasis among palliative caregivers to provide spiritual caregiving (e.g., Kirkham et al. 2004), the different influences of extrinsic religiosity (which might increase death anxiety and decrease death acceptance) and intrinsic religiosity (which might increase acceptance of death) suggest that the blanket adoption of a spiritual- or religious-focused caregiving might ignore complicated relationships (McGrath 2003; Wink and Scott 2005). As a consequence, informal and formal caregivers need to be mindful of the fact that discussing religious and spiritual issues with dying persons might increase fear in those individuals who are uncertain about, or uncommitted to, any specific religious ideologies.

Shared spiritual activities and being a hospice patient had additional positive effects on approach acceptance of death after controlling for the other variables in the model, although the bivariate correlation between hospice patient status and approach acceptance of death was insignificant. Sharing spiritual activities with others that include the affirmation of a heavenly afterlife is likely to increase a person's belief in the possibility of a blissful existence after death. Similarly, after controlling for religiosity, the closeness of death by itself might increase approach acceptance of death as a positive coping mechanism. If the imminence of death cannot be denied, looking forward to a blissful afterlife might be the best available alternative.

The present study provided an opportunity to examine how impending death might differentially affect the effects of intrinsic and extrinsic religiosity, spiritual activities, and purpose in life on subjective well-being and attitudes toward death by comparing hospice patients with relatively healthy older adults. The results and their implications for the role of religion at the end of life should be considered exploratory given the relatively small regional samples of older hospice patients and relatively healthy older adults and the cross-sectional nature of the data. Although we referred to direct and indirect effects when describing the results of the path analyses models, one should keep in mind that the causal direction of the effects cannot be determined in cross-sectional research. Thus, future longitudinal research with a

more nationally representative data set should help clarify the generalizability of the identified relationships and establish the causal direction of the hypothesized effects.

Notes

1. Age and marital status were also originally included as control variables but were not related to any of the dependent variables and were therefore excluded from the analyses because of the small overall sample size.

2. In contrast to a previous study on the role of religion on aging well (Ardelt 2003), subjective well-being was not measured as the average of this indicator and the Center for Epidemiologic Studies Depression Scale, which contains a number of somatic items (e.g., "I could not get going," "I did not feel like eating; my appetite was poor") that hospice patients might experience without being depressed.

3. Other items of the original Purpose in Life Test measure subjective well-being or a sense of control rather than meaning and purpose in life.

4. This measure also differed from a previous study (Ardelt 2003), because asking hospice patients about their health compared with that of other people their age and compared with their health one year ago seemed untactful.

5. Because the correlation between approach acceptance of death and intrinsic religious orientation was .80, an exploratory factor analysis was performed to examine whether approach acceptance of death might be a component of intrinsic religiosity. The principal component exploratory factor analysis with varimax rotation yielded two separate factors. All of the items that belonged to the approach acceptance of death scale loaded on the first factor. However, three of the nine items that were used to measure intrinsic religious orientation had higher loadings on the first factor than on the second factor. For two of the items ("Religion is especially important to me because it answers many questions about the meaning of life" and "Quite often I have been keenly aware of the presence of God or the Divine Being"), the factor loadings differed only slightly (.64 vs. .55 and .61 vs. .59, respectively), but one item ("If I were to join a church group I would prefer to join a Bible study group rather than a social fellowship") had a factor loading of .62 on the first factor and a factor loading of only .09 on the second factor. Although the three items had higher loadings on the first factor than on the second, none of those items referred to life after death. Hence, it makes sense to treat the two scales as separate constructs that were empirically highly correlated with each other.

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