Confronting Suffering and Death at the End of Life: The Impact of Religiosity, Psychosocial Factors, and Life Regret Among Hospice Patients

Robert A. Neimeyer, Joseph M. Currier, Rachel Coleman, Adrian Tomer & Emily Samuel

Department of Psychology, University of Memphis, Memphis, Tennessee, USA
Department of Clinical Psychology, Fuller Theological Seminary, Pasadena, California, USA
Department of Psychology, Shippensburg University, Shippensburg, Pennsylvania, USA
Methodist Alliance Hospice, Memphis, Tennessee, USA

Available online: 28 Sep 2011

To cite this article: Robert A. Neimeyer, Joseph M. Currier, Rachel Coleman, Adrian Tomer & Emily Samuel (2011): Confronting Suffering and Death at the End of Life: The Impact of Religiosity, Psychosocial Factors, and Life Regret Among Hospice Patients, Death Studies, 35:9, 777-800

To link to this article: http://dx.doi.org/10.1080/07481187.2011.583200

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: http://www.tandfonline.com/page/terms-and-conditions
Although the role of spiritual, psychological, and social factors is receiving increasing attention in the end of life (EOL) context, we know far less than we need to about how these factors shape attitudes toward life and death in the face of looming loss. The present study begins to remedy these limitations by examining the relative impact of demographic characteristics, religious and psychosocial factors, and life regret on death attitudes and psychological well-being for a diverse group of 153 hospice patients. In addition to relying on
well-validated quantitative assessments, qualitative interviews were conducted with participants to further illustrate the role of study factors in shaping various dimensions of death anxiety or acceptance and quality of life. In general, results showed that factors assessed in this investigation were significantly correlated with death attitudes and emotional health. When study factors were examined simultaneously, gender, ethnicity, intrinsic religiosity, social support, and future-related regret each were shown to have a unique impact on various aspects of EOL adjustment and distress. The article concludes by offering direction to researchers interested in integrating and extending the empirical study of the attitudes of adults facing serious illness, and underscoring the clinical implications of these findings for professionals offering psychosocial and spiritual care at the end of life.

You know, the older I get, what sounds better than anything I hear, is that good old hymn number 123, *Amazing Grace*. I mean you could be the worst scoundrel in the world, and there have been times when I’ve been a big time sinner. I’m not proud of it. I wish I hadn’t done it. But I’ve asked God’s forgiveness for it. I really stepped off the path that I was brought up to walk. I committed adultery and some other things that don’t fit with His teaching. But I believe there’s not anything that He won’t forgive if you’re sincere, and you’re pleading. And I look...I look forward to death. (Mr. C., 78-year-old hospice patient)

As the above statement suggests, the confluence of advancing age and life-threatening illness can raise ultimate questions for many persons, prompting serious life review, sobering self-reflection, and hopeful recourse to deeply held religious or spiritual beliefs at the end of life (EOL). As the percentage of the U.S. population over the age of 65 is expected to increase from 12% in 2010 to over 20% in 2040 (U.S. Census Bureau, 2008), it becomes increasingly important to understand factors that shape the attitudes of this cohort toward mortality, especially for those confronting illnesses that make the inevitability of death salient. Our goal in undertaking the present study was to contribute to such understanding by investigating several factors theoretically associated with quality of life and attitudes toward personal death in one such cohort: an ethnically diverse sample of patients in a midsized home-based hospice program.

Research on psychosocial issues relevant to the study of death, dying, and bereavement has burgeoned over the past 20 years, producing a substantial empirical literature numbering over 4,000 publications (Balk, 2007; Neimeyer, 2004). Ironically,
however, the majority of these studies concentrate on the death attitudes of young adults in good health, rather than on groups of people for whom such attitudes have critical urgency (Neimeyer, Wittkowski, & Moser, 2004). Even when behavioral scientists have focused on the death concerns of older adults, they have tended to only concentrate on the “young-old” (ages 65–75), relegating the experiences of the “old-old” (85 years and over) to relative neglect in the empirical literature (Niederehe, Cooley, & Teri, 1995). Compounding the problem, much of the published literature relies upon measures that have dubious reliability and validity, thereby undermining the confidence that can be placed in the conclusions that are drawn (Neimeyer, Moser, & Wittkowski, 2003). As such, two of the goals of this study were to sample a number of “old-old” persons and to use psychometrically strong instruments to assess study factors.

These limitations notwithstanding, a growing body of research has attempted to shed light on the objective and subjective factors associated with death anxiety and acceptance, complementing a predominant medical concern with the control of physical pain at the EOL. In part, this broader focus follows from the recognition that suffering is a more complex, multidimensional human experience than is captured by pain assessments alone (Doka, 2010), and that it is psychosocial factors such as perceived control, isolation, and quality of life that are likely to determine EOL decision making (Wineberg & Werth, 2003). Moreover, although little evidence suggests that atheist or agnostic patients with serious illness turn to religion to deal with the challenges posed by their mortality, it does seem that existing beliefs among those with a spiritual orientation function as a critical resource for both the dying (Bivens, Neimeyer, Kirchberg, & Moore, 1994; McGrath, 2003) and the bereaved (Klass, 1999; Wortmann & Park, 2008). This conclusion is reinforced by the Oxford Handbook of Religion and Health (Koenig, McCullough, & Larson, 2001), which offers a critical analysis of more than 1,200 studies and 400 reviews examining the relation between spiritual and religious beliefs and many physical and mental health conditions. Among the intriguing but less well-studied associations is a link between a developed spiritual perspective and equanimity in the face of ill health and impending death. A brief overview of research on several specific personal, relational, and spiritual factors affecting quality of life and attitudes toward death at EOL follows.
Although it is tempting to assume that aging persons experience greater fear of personal mortality, empirical research has for the most part failed to confirm this assumption (Neimeyer et al., 2004), suggesting that such anxiety may be highest in middle adulthood (Gesser, Wong, & Reker, 1987; Kalish, 1977; Neimeyer et al., 2004). However, a meta-analytic review failed to find evidence of a decline in death fear within an elderly cohort (ages 65–90; Fortner & Neimeyer, 1999). Nor is gender a reliable predictor of death attitudes for this population, perhaps reflecting an increase in androgyny of men and women as they age (Fortner, Neimeyer, & Rybarczeck, 2000). However, research on older adults does suggest a link between physical health and death attitudes, with those who are more ill expressing more anxiety about death (Fortner & Neimeyer, 1999). Thus, although simple demographic designations have not been shown to be consistent predictors of death concerns in older cohorts, serious illness may prompt anxieties that then mobilize attempts to mitigate the “terror” of personal extinction by calling on psychological processes that buffer the impact of this harsh reality (Pyszcznski, Solomon, & Greenberg, 2003).

Although individuals express a wide range of responses to loss and use various mechanisms to help them cope, religion and spirituality have long served as a mainstay in adjusting to various crises (Hill & Pargament, 2008). In one of the few studies of spiritual coping in hospice patients, those who reported greater spirituality had less death anxiety than patients who rated themselves as less spiritual (Ita, 1995). Another investigation with medically ill hospitalized older patients demonstrated that positive religious coping was associated with less depression and better quality of life across a 2-year span (Koenig, Pargament, & Nielsen, 1998). For older individuals facing life-threatening illness, it appears that religion can aid in the adjustment process by evoking comforting emotions, offering strength, facilitating meaning making and acceptance of the illness, and reducing feelings of self-blame (Siegel & Schrimshaw, 2002). However, the lack of a reliable link between religiosity and death anxiety in the broader literature makes it clear that the former does not always influence attitudes toward dying (Fortner & Neimeyer, 1999). These inconsistent findings may reflect range restriction in religious beliefs among the samples of older Americans studied to date. In addition, research by
Pargament and his colleagues has outlined mechanisms by which religion may exacerbate as well as ameliorate death fears (e.g., by contributing to guilt and fear of punishment versus the hope of forgiveness; Pargament, Koenig, & Perez, 2000).

The empirical literature on older adults indicates that there are strong links between psychological distress, on the one hand, and fears of personal death, on the other (Fortner & Neimeyer, 1999). Conversely, as predicted by lifespan developmental theory (Erikson, 1982), fuller attainment of ego integrity (a sense of generativity, satisfaction, and purpose in life) is associated with lower fear about death (Fortner et al., 2000). Moreover, an extensive program of research in terror management theory suggests that engaging in behaviors that boost one’s sense of self-esteem mitigates personal death fears in the presence of stimuli that cue thoughts of mortality (Pyszcznski et al., 2003). It therefore seems likely that processes that challenge one’s sense of self-worth may leave one more vulnerable to a sense of dread when confronted by the prospect of life’s ending.

There is ample evidence that having a reliable social support network throughout the life span, especially in times of increased suffering or crisis, carries positive implications for both physical and psychological functioning (Uchino, 2006; Uchino, Cacioppo, & Kiecolt-Glaser, 1996). Considering the psychological well-being of aging persons in particular, research suggests that deficits in social support place individuals at greater risk for experiencing loneliness and depression at the EOL (Prince, Harwood, Blizard, & Thomas, 1997). Aside from studies of the generally positive impact of practical and emotional support for other adult populations, less is known about its role at the EOL. Ita’s (1995) study of hospice patients suggested a link between religiosity and perceived social support, although whether the latter reflected a higher level of commitment from family members to the patient’s care or the involvement of others from the faith community with the patient was not clarified in this study. Theoretically, social support can help with the maintenance of self-esteem, which along with companionship and instrumental aid, could buffer the stress associated with dying and facing one’s death (Hill & Pargament, 2003). Although members of one’s support network come and go across the life span, religious support could be perceived as being significantly more stable, such that dying persons are assured of
help from like-minded individuals who will not abandon them in their time of need.

Previous research with a young adult sample suggests that regret may also have implications for shaping attitudes toward death and personal well-being (Tomer & Eliason, 2005). In conjunction with other psychological, spiritual, and social factors, fear and dread related to the increased salience of mortality at the EOL may vary according to past- and future-related regrets about one’s life. Regrets are a mixture of cognitive and emotional reactions that people feel when they consider their past and its possible sins of omission or commission (e.g., acts of wrongdoing or life mistakes) or when they consider their future and the probability of not achieving goals that matter to them before they die (e.g., living up to their potential or reconciling with loved ones). Links between past and future regrets have not yet been examined at the EOL.

The current study is an attempt to provide an integrative examination of these potentially crucial factors in contributing to death anxiety and quality of life in an EOL context. Focusing on a group of hospice patients in their final weeks and months of life, we explored how (a) demographic factors, (b) intrinsic religiosity, (c) self-esteem, (d) social support, and (e) past- and future-related regret uniquely contributed to the death attitudes and general emotional functioning among the dying persons in the sample. By simultaneously examining how these factors were related to death attitudes and psychological well-being, we hoped to advance current understanding of what it means to face serious illness and impending death, ultimately contributing to an empirical framework for practical interventions to improve EOL care.

**Method**

**Participants**

Participants were patients enrolled in the Methodist Alliance Hospice program in Memphis, Tennessee. Following institutional approval by the Methodist Healthcare Institutional Review Board and the Fetzer Institute, which funded this project, patients 18 years or older who were able to communicate in an interview format and had a prognosis of at least 3 weeks, but not more than 6 months to live, were contacted by telephone or in person by the
program’s clinical social work staff. One hundred fifty three patients were enrolled over the 2-year study period.

A distinctive feature of Methodist Alliance Hospice is its provision of service to an ethnically diverse population. Accordingly, the patient sample was diverse in terms of race (35% African American, 65% Caucasian), gender (46% men, 54% women), and age (ranging from 39 to 99 years, with fairly even representation across the major decades of later adulthood: <61 [18%], 61–70 [20%], 71–80 [26%], 81–90 [30%], >90 [6%]; $M=73.8$, $SD=12.4$). Most of the patients were married (52%) or widowed (19%) at the time of the interview, with the remainder being single (15%) or divorced (14%). In terms of religious affiliation, the majority of patients described themselves as being Protestant (71%), and a few were Roman Catholic (7%). The remainder of the sample professed no religious affiliation (22%).

Measures

The Death Attitude Profile–Revised (DAP–R; Wong, Reker, & Gesser, 1994) is based on an existential view of death attitudes that posits that the human confrontation with mortality may elicit either fear of death or acceptance, as a function of whether individuals approach the end stage of their lives with despair or integrity. In keeping with a contemporary emphasis on the multidimensionality of death attitudes (Neimeyer et al., 2003), the DAP-R consists of several subscales, one of which measures fear of death (e.g., “The prospect of my own death arouses anxiety in me”). A second subscale used in this study evaluates death avoidance (e.g., “Whenever the thought of death enters my mind I try to push it away”). Other subscales assess positive attitudes toward death, including approach acceptance (“I look forward to a reunion with my loved ones when I die”) and escape acceptance (“I view death as a relief from earthly suffering”). Psychometric properties of the DAP-R have been shown to be favorable in a study of a large and heterogeneous sample of young, middle-aged, and older adults. Test–retest reliabilities were shown to range from .61 to .95 over a

---

1We thank Renee Dillard, LCSW, for her role in recruitment efforts and consenting and interviewing in the early phase of the project, after which these responsibilities were assumed by Emily Samuel, LCSW.
1-month period, and the subscales were correlated in theoretically consistent ways with independent assessments of death attitudes (Wong et al., 1994). Internal consistencies for the DAP-R subscales ranged from .84 to .92 in this study.

Subscales from the World Health Organization’s Quality of Life Scale (WHOQOL Group, 1998) were used to assess social support and psychological well-being. The WHOQOL was developed simultaneously in 15 countries to provide a comprehensive assessment of life quality among adults who vary in their level of physical and emotional health. The WHOQOL has demonstrated good internal consistency and validity in distinguishing depressed and nondepressed individuals (Power, Harper, Bullinger, & The WHOQOL Group, 1999; Skevington & Wright, 2001; WHOQOL Group, 1998), as well as patients suffering a variety of physical illnesses (Darikarnon, 1998; Pibernik-Okanovic, Szabo, & Metelko, 1998; Skevington, 1998). In the present study we used items measuring patients’ quality of social support and personal relationships (α = .71). In addition, we used items comprising the psychological domain of the WHOQOL to assess psychological well-being in the sample. Internal consistencies were .91 and .72 for these two subscales, respectively.

Future-related regret was assessed with a composite of items from the Multidimensional Fear of Death Scale (MFODS; Hoelter, 1979) and the Goals in Life Scale (GILS; Tomer & Eliason, 2005). Specifically, the MFODS includes a subscale concerned with fear of premature death, which with minor modification of some items permitted an assessment of future-related regret. Internal consistency estimates of this subscale have ranged between .72 and .80, with test–retest reliability of .73 over a 3-week period. In addition to correlating with other measures of death attitudes, this subscale discriminates between individuals who have worked out a satisfying philosophy of life and death and those who have not (Neimeyer & Moore, 1994). Tomer and Eliason (2005) devised the GILS on the basis of research on the structure of human values.

---

2Only two MFODS items required rewording to be appropriate to the present hospice sample. Item 12, “I am afraid that I will not live long enough to enjoy my retirement,” was rephrased as “I am afraid that I will not live long enough to enjoy the future I had hoped for,” in view of the frequency with which hospice patients have already been retired for several years. Likewise, item 41, “I am afraid I may never see my children grow up,” was reworded as “I regret that I may never see my children, grandchildren, or loved ones grow up,” in view of the advanced age of many of the patients.
This 12-item scale prompts the respondent to consider several possible life goals (e.g., “Taking care of my family and enjoying time with my family members”) and rate how upset he or she would be if unable to attain it. The composite future-related regret measure used in this study had strong consistency as well ($\alpha = 81$).

The Regret Scale (RS) was derived from research by Tomer and Eliason (2005) on the association of regret to death anxiety. Respondents make Likert ratings of items such as “I regret that I have wasted too much time on things that are unimportant.” The internal consistency of the RS has been shown to be acceptable in prior work (Cronbach’s $\alpha = 86$). Total scores from the RS were used as an assessment of past-related regret in this study. The RS was again shown to have adequate internal consistency in this sample ($\alpha = 80$).

Self-esteem was assessed with selected items from Rosenberg’s Self-Esteem Scale (RSE; Rosenberg, 1965). The RSE is a widely used and well-established self-report instrument using a Likert-type scale. Items for the current study included “On the whole, I am satisfied with myself,” “I feel that I have a number of good qualities,” and “I feel that I am a person of worth.” Internal consistency for selected RSE items was .92 in the current sample.

Intrinsic religiosity was assessed by the widely used Religious Orientation Scale (Allport & Ross, 1967), which focuses on the extent to which an individual has internalized religion as a master motive in life, as opposed to considering it an instrumental means to other ends, such as status-seeking or self-justification. In its revised and improved form (Genia, 1993), the subscale measuring the intrinsic orientation consists of several items (e.g., “My religious beliefs are what really lie behind my whole approach to life”) to which the respondent indicates agreement on a Likert scale. The scale shows good internal consistency and applicability to both Christian and non-Christian faiths. The intrinsic religiosity subscale also demonstrated excellent internal consistency in this sample ($\alpha = .94$).

Procedure

All hospice families enrolled in Methodist Alliance Hospice over the 2-year period following approval of the project were initially
evaluated by nursing staff for their suitability for participation in the study, with primary consideration given to the patient’s mental status and ability to respond to an oral interview. Those meeting these minimal criteria and having a prognosis of at least 3 weeks to live were contacted by the hospice social worker who invited their participation in a study of their “attitudes and quality of life while in hospice” and secured informed consent from those who expressed interest. Individual interviews were then arranged with each. Length of time required to complete the interviews ranged from approximately 45 min to 2 hr, with breaks taken when patients showed signs of fatigue. Responses to the interview items were recorded by the interviewer both in the form of quantitative ratings on each of the scales and in an audiorecording of the entire session. In addition to the quantitative items, patients were given an opportunity to share their personal responses to the open-ended question, “How are things going for you at this time, the good and the bad of it?” This was followed simply with nondirective encouragement (e.g., “Can you say more about that? What else is important to note?”). However, rather than analyzing these responses in a rigorous qualitative analysis, these open-ended responses were only used to illustrate in the voices of the patients themselves the findings derived from the objective questionnaires used in the current study.

Plan of Analysis

In a few cases, participants failed to complete all of the items on the study questionnaire. However, in all of these instances only one or two items on a given measure were omitted. In view of the small number of omissions and good consistency shown for each of the instruments in this sample, the number of missing cases was reduced by using the means of the completed items as the participants’ overall scores. A series of univariate analyses was performed as a way of assessing the initial association between study variables. Associations were tested with bivariate Pearson correlations. In addition to examining these simple associations, we wanted to discover which study factors accounted for unique variance in participants’ attitudes toward death and their general emotional health. Hence, a series of five hierarchical regression analyses were performed in which the religious, psychological,
and social factors assessed in the study were used as independent variables to predict death attitudes and psychological well-being.

Results

Bivariate Associations

Table 1 presents the bivariate correlations for study factors. Older participants indicated greater psychological well-being, and men reported significantly greater fear and avoidance of death and less approach acceptance compared to women. In addition, African American participants displayed higher death avoidance and escape acceptance than Caucasian patients. As hypothesized, intrinsic religiosity correlated with each of the death attitudes and participants’ reported levels of emotional health. Similarly, self-esteem yielded associations with the fear of death, approach acceptance, and psychological well-being in the anticipated directions. Social support was also shown to correlate negatively with fear of death and positively relate to approach acceptance and emotional health. Patients’ degree of regret about the past was significantly correlated with all outcomes except for escape acceptance. Future-related regret also demonstrated significant correlations with fear of death, approach avoidance, and psychological well-being. In keeping with results for past-related regret, those persons reporting greater concern about the future struggled more in their confrontation with death.

Regression Analyses

We next conducted five three-step hierarchical regression analyses to examine the ability of (a) demographic factors; (b) religious, psychological, and social factors; and (c) regrets to explain differences in death attitudes and psychological well-being among the hospice patients. In the first step of each analysis, age, gender, and ethnicity were entered in the model. On the second step, we then entered intrinsic religiosity, self-esteem, and social support. Finally, past- and future-related regret were added in the regression equation in the third model. This analytic procedure allowed us to assess how much each of the theoretically relevant factors added to
### TABLE 1 Bivariate Correlations Between Study Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age</td>
<td></td>
<td>.15</td>
<td>-.13</td>
<td>.07</td>
<td>.24</td>
<td>.40</td>
<td>-.26</td>
<td>-.42</td>
<td>-.15</td>
<td>.10</td>
<td>.01</td>
<td>-.07</td>
<td>.21</td>
</tr>
<tr>
<td>2. Gender</td>
<td></td>
<td>-.04</td>
<td>.17</td>
<td>.07</td>
<td>.07</td>
<td>-.26</td>
<td>-.18</td>
<td>-.23</td>
<td>.21</td>
<td>-.22</td>
<td>.07</td>
<td>.09</td>
<td></td>
</tr>
<tr>
<td>3. Ethnicity</td>
<td></td>
<td>.20</td>
<td>.10</td>
<td>-.15</td>
<td>.05</td>
<td>-.18</td>
<td>.01</td>
<td>-.01</td>
<td>.29</td>
<td>.37</td>
<td>.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Intrinsic religiosity</td>
<td></td>
<td></td>
<td>.45</td>
<td>.16</td>
<td>-.19</td>
<td>-.22</td>
<td>-.22</td>
<td>.76</td>
<td>-.20</td>
<td>.24</td>
<td>.23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Self-esteem</td>
<td></td>
<td></td>
<td></td>
<td>.38</td>
<td>-.31</td>
<td>-.47</td>
<td>-.22</td>
<td>.35</td>
<td>-.13</td>
<td>.13</td>
<td>.30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Social support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.33</td>
<td>-.40</td>
<td>-.23</td>
<td>.19</td>
<td>-.11</td>
<td>.00</td>
<td>.41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Past-related regret</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.60</td>
<td>.38</td>
<td>-.17</td>
<td>.20</td>
<td>.13</td>
<td>-.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Future-related regret</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.47</td>
<td>-.20</td>
<td>.05</td>
<td>-.03</td>
<td>-.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Fear of death</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.18</td>
<td>.33</td>
<td>.00</td>
<td>-.31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Approach acceptance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.18</td>
<td>.19</td>
<td>.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Death avoidance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.20</td>
<td>-.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Escape acceptance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Psychological well-being</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05.
the explained variance in death attitudes and psychological well-being in this sample.

In the first analysis, approach acceptance was used as the dependent variable (see Table 2). When considered as a whole, demographic characteristics failed to generate a significant explanatory model, $R^2 = .05, F(3, 141) = 2.17, p = .1$. In the second step, entry of psychosocial and spiritual factors significantly increased the explained variance, $\Delta R^2 = .56, F_{\text{change}}(3, 135) = 62.93, p < .001$. The regret variables did not improve the regression model on the third step, $\Delta R^2 = .00, F_{\text{change}}(2, 133) = 0.53, p = .59$. Ethnicity and intrinsic religiosity were the only individual predictors uniquely associated with approach acceptance in the overall model. When controlling for the other predictor variables, Caucasian patients and those with a greater intrinsic religious orientation reported more comfort approaching death.

The three demographic factors accounted for a significant portion of the variance, $R^2 = .06, F(3, 138) = 3.09, p = .03$, in predicting DAP-R Fear of Death subscale scores (see Table 2). The entry of psychosocial and religious factors added to the explained variance in the second model, $\Delta R^2 = .07, F_{\text{change}}(3, 135) = 3.45, p = .02$, as did the entry of past- and future-related regret in Model 3, $\Delta R^2 = .14, F_{\text{change}}(2, 133) = 12.92, p < .001$. In the final model, future-related regret was the only variable that uniquely explained differences in patients’ levels of death anxiety. As hypothesized, patients with a greater sense of regret about the future reported more discomfort about death.

As presented in Table 2 as well, demographic factors accounted for a significant portion of the explained variance in death avoidance scores, $R^2 = .15, F(3, 138) = 7.83, p < .001$. Similarly, on the second step, intrinsic religiosity, self-esteem, and social support added to the explained variance in death avoidance in the sample, $\Delta R^2 = .07, F_{\text{change}}(3, 135) = 3.72, p = .01$. Past- and future-related regret failed to contribute to the explanatory power of the model, $\Delta R^2 = .01, F_{\text{change}}(2, 133) = 0.77, p = .47$. In the final regression equation, several factors uniquely accounted for differences in the avoidance of death. On average, men and African American patients indicated more death avoidance. In addition, when controlling for other study variables, persons with greater intrinsic religiosity also reported more avoidance of death.
<table>
<thead>
<tr>
<th>Predictor</th>
<th>Fear of death</th>
<th>Approach acceptance</th>
<th>Death avoidance</th>
<th>Escape acceptance</th>
<th>Psychological well-being</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-0.02</td>
<td>.01</td>
<td>-0.13</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.70</td>
<td>.30</td>
<td>-0.19</td>
<td>0.50</td>
<td>.22</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>0.04</td>
<td>.31</td>
<td>0.01</td>
<td>-0.03</td>
<td>.23</td>
</tr>
<tr>
<td>Model 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-0.01</td>
<td>.01</td>
<td>-0.04</td>
<td>0.00</td>
<td>0.01</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.63</td>
<td>.30</td>
<td>-0.17</td>
<td>0.23</td>
<td>.15</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>0.13</td>
<td>.32</td>
<td>0.04</td>
<td>-0.42</td>
<td>.16</td>
</tr>
<tr>
<td>Intrinsic religiosity</td>
<td>-0.16</td>
<td>.12</td>
<td>-0.13</td>
<td>0.71</td>
<td>.08</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>-0.16</td>
<td>.15</td>
<td>-0.10</td>
<td>-0.03</td>
<td>.06</td>
</tr>
<tr>
<td>Social support</td>
<td>-0.19</td>
<td>.13</td>
<td>-0.14</td>
<td>0.06</td>
<td>.07</td>
</tr>
<tr>
<td>Model 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.01</td>
<td>.01</td>
<td>0.09</td>
<td>0.00</td>
<td>.01</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.42</td>
<td>.28</td>
<td>-0.12</td>
<td>0.23</td>
<td>.15</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>0.44</td>
<td>.31</td>
<td>0.12</td>
<td>-0.48</td>
<td>.16</td>
</tr>
<tr>
<td>Intrinsic religiosity</td>
<td>-0.16</td>
<td>.11</td>
<td>-0.12</td>
<td>0.71</td>
<td>.06</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>0.06</td>
<td>.15</td>
<td>0.04</td>
<td>-0.05</td>
<td>.08</td>
</tr>
<tr>
<td>Social support</td>
<td>-0.06</td>
<td>.13</td>
<td>-0.04</td>
<td>0.05</td>
<td>.07</td>
</tr>
<tr>
<td>Past-related regret</td>
<td>0.15</td>
<td>.15</td>
<td>0.09</td>
<td>0.06</td>
<td>.08</td>
</tr>
<tr>
<td>Future-related regret</td>
<td>0.29</td>
<td>.08</td>
<td>.42</td>
<td>-0.04</td>
<td>.04</td>
</tr>
</tbody>
</table>

**Note.** Gender was coded so as 1 = male and 2 = female. Ethnicity was coded so as 1 = Caucasian and 2 = African American. *p < .05, †p < .1.
Demographic factors again accounted for a significant amount of the variance in escape acceptance related to death, \( R^2 = .15, F(3, 138) = 3.92, p < .001 \) (see Table 2). On the second step, the psychosocial and spiritual factors did not increase the explained variance of the model, \( \Delta R^2 = .04, F_{change}(3, 135) = 2.00, p = .12 \). Entry of the regret variables also did not increase the explanatory power of the regression equation, \( \Delta R^2 = .02, F_{change}(2, 133) = 1.47, p = .24 \). When controlling for other variables, ethnicity accounted for unique variance in patients’ reported levels of escape acceptance. Similar to results for the third analysis, African American patients reported greater recourse to escape acceptance.

As outlined in Table 2, the demographic factors accounted for a significant portion of the variance in psychological well-being, \( R^2 = .08, F(3, 138) = 4.02, p = .01 \). The entry of psychosocial and religious factors added to the explained variance in the second model, \( \Delta R^2 = .15, F_{change}(3, 135) = 8.47, p < .001 \). Both past- and future-related regret also increased explanatory power, \( \Delta R^2 = .07, F_{change}(2, 133) = 6.52, p = .002 \). In the final model, social support and future-related regret each uniquely explained differences in patients’ emotional health. As hypothesized, those patients with more relational connectedness and less regret about the future fared better psychologically.

**Discussion**

Whether engaged by philosophers, theologians, or behavioral scientists, the problems posed by the presence of death as an end to human life admit no simple answers. Death as an ineluctable personal certainty can pose profound existential challenges to patients at the EOL, fostering deep-going life review, necessary conversations with loved ones and trusted care providers, and recourse to sustaining religious beliefs and faith traditions. Our goal in this study was to make an empirical contribution to understanding this process by studying a diverse cohort of adults receiving hospice services in their homes. By definition, participants were in the final weeks or months of their lives. Drawing on the best available measures of several factors linked to death anxiety or acceptance, we attempted to gain a more comprehensive view of the role played by intrinsic religiosity, self-esteem, social support, and life regrets in shaping attitudes toward living and dying in the closing chapter of these patient’s lives.
In general, the psychosocial and spiritual factors assessed in the study received strong support. Results of bivariate analyses demonstrated that patients with an internalized religious worldview reported less emotional suffering and greater acceptance of death. Furthermore, when controlling for other study factors, intrinsic religiosity also predicted approach acceptance of impending death. In addition, multivariate analyses revealed a non-significant trend for more religious persons in the sample to view death as an escape from a burdensome life, as reflected in the following qualitative responses during interviews:

Well, the last couple of years, um, it just seems that the world has [gotten so evil]. I mean, I can’t…it’s just, there’s so much evil in this world. (Mrs. B, age 72)

I see the wonderful hope and future of being resurrected. Sickness, sorrow, pain and death will be eradicated [when that happens]. (Mr. A., age 79)

However, participants with greater intrinsic religiosity surprisingly were more likely to avoid the topic of death. Interviews similarly suggested the complexity of the role of religion as a means of coping at the EOL. On the one hand, patients like Mrs. P., an 89-year-old Caucasian woman, confessed that, “Well, I don’t know [how close I feel to God]. Sometimes you feel rejected.” In a similar, or perhaps even more embittered vein, Mr. L., an 86-year-old Caucasian patient, complained, “You have religion rammed down your throat for the first, from the age of ten, have it so much rammed down your throat, that it’s enough for the rest of your life.” On the other hand, many patients found personal religion to be a font of strength and peace in the press of terminal illness. Speaking for this subgroup, Mr. P. explained, “Even though I may not get down on my knees and pray and go to a quiet place, my mind, my mind is kind of there. Thinking on spiritual things. God things.” This diversity in the experience of religiosity in the sample underscores Pargament, Smith, Koenig, and Perez’s (1998) distinction between patterns of positive and negative religious coping. Positive religious coping is conceptualized as “an expression of a sense of spirituality, a secure relationship with God, a belief that there is meaning to be found in life, and a sense of spiritual connectedness with others” (Pargament et al., 1998, p. 712). In contrast, negative religious coping reflects an insecure
relationship with God, a tentative and threatening view of the world, spiritual searching, and spiritual struggle. Although the generally positive associations between intrinsic religiosity and positive attitudes toward life and death in our sample suggest that our hospice patients more commonly drew upon their spiritual beliefs in a constructive fashion, the sentiments expressed by a minority also highlight the possibility that some might have struggled with negative religious coping, a factor deserving direct assessment in future research.

As hypothesized, the quality of social relationships also figured prominently in predicting emotional health in the sample. When controlling for demographic, religious, and psychological factors, social support emerged as a unique predictor of psychological well-being. Consistent with these quantitative results, many of the hospice patients gravitated toward discussing the key role of loving support offered by their family and friends in dealing with increasing limitations and suffering in the final weeks and months of life. Consider the comments of Mr. J., a 68-year-old African American man:

I lost part of my manhood. But my daughter and my son and my wife take me to [the bathroom]. And then my church members come by and pray for me. My [elders] come pray for me. It makes me feel good. I haven’t lost my faith.

These findings align with other work on aging persons (Prince et al., 1997; Uchino, 2006), highlighting the practical, emotional, and spiritual support provided by communities of concern in EOL contexts.

The presence of life regrets was also associated with emotional suffering and attitudes toward death in the study. In keeping with Tomer and Eliason’s (2005) findings with young adults, both past- and future-related regret significantly accounted for differences among the hospice patients in how they viewed their impending death. However, of the two types of regret assessed in the study, concerns about the future emerged as being particularly critical in predicting EOL distress. When controlling for other factors assessed in the study, future-related regret uniquely predicted both greater fear of death and psychological difficulties in the sample.

Qualitative responses often illustrated this important role of life regrets. Patients were sometimes consumed by misgivings
about specific sins and shortcomings of their lives, which the short horizon of their future gave them little time to set right. Speaking of this dilemma, Mr. S., an 84-year-old Caucasian man, disclosed:

I used to drink too much. And of course I was in the Army. Four, four and a half years. And you know, I did a lot of bad things there. And . . . well, I’ve done a lot of regret, regretful things.

For other patients, these shortcomings were less dramatic but also less confined to the past, finding worrisome expression in their daily lives—perhaps especially under the duress of advanced illness:

I ask, actually, what I ask for is . . . growing peace towards, helping me stop [my] sharp, needling tongue. That is a sin. I forget which one it is. But that’s not what we’re supposed to do. (Mr. A, 86-year-old Caucasian patient)

The confluence of a sense of regret, fear of death, and diminished quality of life was frequently evident even when patients seemed to be moving toward greater self-acceptance, as when Mr. A. further elaborated on his sense of apprehension:

. . .because I’m always doubtful that I have achieved [that much]—that my confession has achieved peace of mind. . . . I’m, in most cases, I’m at peace with myself. Except I’m not entirely sure that I’ve been good enough.

Under optimal conditions, however, patients exemplified the converse of this link between regret and fear of death, reflecting the contribution that a life well lived can make to facing death with a positive attitude as it draws near. In the words of Mr. W., a 72-year-old African American patient:

I don’t have no regrets. I always took care of my wife and family and I always, we always went on vacation two or three times a year. And I feel good now. I don’t have no regrets.

Perhaps the most surprising findings from the present study pertain to the impact of gender and ethnicity. When compared to women, men reported greater death anxiety and avoidance. African American patients indicated more death avoidance and escape acceptance than Caucasian participants. Importantly, when the effects of intrinsic religiosity and psychosocial factors were controlled, findings still indicated that gender and ethnicity were
robust predictors of death avoidance. In addition, ethnicity of the patient remained a unique predictor of both approach acceptance and escape acceptance, beyond the effects of age, gender, and other study factors. While empirical research provides inconsistent results for the impact of simple demographic factors on death attitudes (Fortner et al., 2000), the present results nonetheless suggest that gender differences and cultural backgrounds of patients should not be ignored at the EOL. One of the strengths of this investigation involves the relatively even distribution of men and women and the large number of African American patients represented in the sample. Future work on this topic would similarly do well to recruit diverse samples and further unpack the role of gender and ethnic differences.

The present findings carry important implications for both research and practice. Scientifically, the study extends research on religious coping in advanced illness and underscores the relevance of situating religiousness in the broader context of personal and social resources and liabilities that collectively configure an individual’s response to mortality when it becomes salient. From a clinical standpoint, this research adds to the armamentarium of professionals working with hospice and palliative care populations in general. Beyond demonstrating the relevance of existing scales of intrinsic religiosity, self-esteem, social support, and death attitudes for this population, this study provides strong evidence of the utility of assessing past- and future-related regrets using scales recently developed for this purpose (Tomer & Eliason, 2005). In addition to playing a role in the assessment of quality of life and fear of death, such scales (or interviews that probe similar content) could prove valuable in identifying patient concerns that complicate the goal of self-determined life closure in the hospice setting. By eliciting relevant regrets in the past or looming in a foreshortened future, psychosocial or spiritual caregivers could provide counsel and perspective, or use these instruments as points of entry into well-developed “dignity enhancing” (Chochinov, Hack, & Hassard, 2004) or “meaning-oriented” (Breitbart, Gibson, & Poppito, 2004) interventions for patients with life-threatening illness. Similarly, in the context of bereavement aftercare services, “meaning reconstruction” procedures (Neimeyer, 2001; Neimeyer & Sands, 2011) that help integrate the patient’s ultimate death into survivors’ life stories in an affirming way can be helpful, even when
the patient’s life, death, or relationship with family members was less than optimal.

Despite its strength in drawing on reliable and validated assessments of the study factors, this study is not without its limitations. Among these considerations is our reliance on patient self-report. While patients completed study questionnaires with the aid of clinical social workers and other project staff, additional sources of data would strengthen the conclusions that can be drawn from this study. Perhaps more critically, study findings should not be taken to provide documentation of causal links implied between the constructs, something that could only be ensured by experimental studies manipulating one or more of the variables to evaluate their impact on other constructs. Although ethical research of this kind could be daunting, it is not beyond the pale of possibility. For example, interventions that attempt to improve patient self-worth or assuage corrosive life regrets through meaningful life review (Butler, 1963), to affirm sources of spiritual meaning (Breitbart et al., 2004), or to forgive self and others (Enright & Fitzgibbons, 2000) could lessen regrets and enable researchers to test more rigorously the role of doing so in reducing death anxiety.

In addition to this general constraint, our selection of study measures omitted some potentially critical processes. For example, although our measure of intrinsic religiosity was psychometrically sound and has a venerable tradition of use in the psychology of religion, more recent measures of positive and negative religious coping (e.g., Pargament et al., 2000) might have revealed how patients were using their faith adaptively or maladaptively at the EOL. Longitudinal research on such factors could also be valuable in clarifying the relation between spiritual coping and measures of death-related distress, inasmuch as work with bereaved persons suggests that exacerbations in such distress may engender subsequent spiritual struggles that could then become the focus of clinical and pastoral intervention (Burke, Neimeyer, McDevitt-Murphy, Ippolito, & Roberts, in press). However, it is worth emphasizing that the advantages of ambitious multidimensional and longitudinal research designs need to be counterbalanced with the reality of hospice patients’ limited energy and time, which are appropriately concentrated on personal and family needs in the final months of life.
In closing, although the problem of death has given impetus to countless attempts across the millennia to grapple with its meaning in cultural, philosophical, and spiritual terms, it is only in recent decades that it has become the subject of serious psychological research (Neimeyer et al., 2004). The present project makes a contribution to this effort by drawing on the wisdom and worries of a diverse cohort of hospice patients to clarify the existential encounter with personal mortality. We hope that this study offers a heuristic contribution to future research in palliative care, and that it encourages clinical efforts to address the psychosocial and spiritual needs of patients in hospice settings.

References


doi:10.1080/07481180490461179

geropsychology. The Clinical Psychologist, 48, 37–44.


Pargament, K., Smith, B., Koenig, H., & Perez, L. (1998). Patterns of positive and
negative religious coping with major life stressors. Journal for the Scientific
Study of Religion, 37, 710–724.

change in diabetes therapy. Parmacoenomics, 14, 201–207. doi:10.1186/1477-
7525-5-57

World Health Organization WHOQOL-100: Tests of the universality of
quality of life in 15 different cultural groups worldwide. Health Psychology,
18, 495–505. doi:10.1037//0278–6133.18.5.495

deficits, loneliness, and life events as risk factors for depression in old age:
The Gospel Oak Project VI. Psychological Medicine, 27, 323–332.

Pyszcznski, T., Solomon, S., & Greenberg, J. (2003). In the wake of 9/11: The

University Press.

Siegel, K., & Schrimshaw, E. W. (2002). The perceived benefits of religious
00103

Skevington, S. M. (1998). Investigating the relationship between pain and dis-
doi:10.1016/S0304-3959(98)00072-4

receiving antidepressant medication in primary care: Validation of
bjp.178.3.261

Tomer, A., & Eliason, G. (2005). Life regrets and death attitudes in college stu-
B22C-CFFA-216 G-R2PN

Uchino, B. N. (2006). Social support and health: A review of physiological pro-
cesses potentially underlying links to disease outcomes. Journal of Behavioral

between social support and physiological processes: A review with emphasis
on underlying mechanisms and implications for health. Psychological Bulletin,
119, 488–531. doi:10.1037/0033-2909.119.3.488

www.census.gov/population/www/projections/summarytables.html

