

**LIFE EXPERIENCE WITH DEATH:  
RELATION TO DEATH ATTITUDES AND TO  
THE USE OF DEATH-RELATED MEMORIES**

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*The study examines the relation of death experience to death attitudes and to autobiographical memory use. Participants (N = 52) completed standard death attitude measures and wrote narratives about a death-related autobiographical memory and (for comparison) a memory of a low point. Self-ratings of the memory narratives were used to assess their functional use. Results show that higher levels of experience with death were related to lower levels of death anxiety and avoidance. Participants with higher levels of death experience also more frequently used their death-related memories to serve adaptive functions.*

Having life experience with a dying person involves encounters that may be significant for the individual who lives on (Callanan & Kelley, 1992). For example, Kübler-Ross (1975) stated, “I am convinced that these experiences with the reality of death have enriched my life more than any other experiences I have had” (p. 125). The current study examined hospice volunteers as examples of people who gain experience with death by playing an intimate role in helping dying persons. These individuals repeatedly

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experience the psychosocial impact of death and dying (Brazil & Thomas, 1995; Hospice Foundation of America, n.d.), but little research has examined positive effects that might accrue from such experience. If there are positive effects in response to life experience with death, hospice volunteers may be particularly likely to show them and, in fact, some studies have found positive changes in death attitudes in hospice volunteers (Amenta, 1984) at least in the short term (Kelly & Corriveau, 1995). Other studies, however, found mixed effects (Hayslip & Walling, 1985; Lafer, 1989).

The negative effects of experience with death in volunteer and professional caregivers have been repeatedly noted (e.g., Hulbert, 2006; Keidel, 2002; see also Vachon, 1995, for a review). The current research, however, focuses on whether individuals who have greater experience with death (a) show more positive attitudes toward death, and (b) have death-related memories that serve as an adaptive resource in their lives (Pillemer, 1998). The article reviews correlates of death attitudes with an emphasis on the relation of experience with death to positive attitudes. The review also addresses a novel contribution of the current research, an examination of the functional uses of specific autobiographical memories of death-related experiences. Death-related autobiographical memories are a way to story death experience (Neimeyer, 2001). They are rich combinations of imagery and narrative that allow personal experience to be brought forward in time (Singer & Bluck, 2001). Death-related memories may be meaningful in guiding individuals' behavior, and play a role in shaping their life story (McAdams, 1998). Thus, the article examines both standard self-report and narrative understandings of death (Neimeyer, Moser, & Wittkowski, 2003)

### **Correlates of Death Attitudes**

Death attitudes have been operationalized in multiple ways, although many studies focus solely on death anxiety and fear (Neimeyer, 1994; Neimeyer & Hogan, 2001). Studies often find older people to be less afraid of death than their younger counterparts (e.g., Thorson & Powell, 2000; Tomer, Eliason, & Smith, 2000), and men to report less death anxiety than women (e.g., Thorson & Powell, 1994; cf. Dattel & Neimeyer, 1990). High religiosity and purpose in life have also been associated with lower

anxiety (Ardelt, 2003; Cicirelli, 2002). In sum, age, gender, and religiosity have been related to death anxiety. Such person characteristics fail, however, to examine processes that may affect death attitudes.

Experience with death is one such process. Several studies suggest a link between death experience and lower levels of death anxiety (e.g., Meshot & Leitner, 1994) but others find no relation (Denes-Raj & Ehrlichman, 1991; Franke & Durlak, 1990) or find higher anxiety (Florian & Mikulincer, 1997). The link between personal death experience and anxiety may depend on context (Franke & Durlak, 1990). For example, people who experience death in an environment where emotional support and open communication occur (e.g., hospice) may be likely to experience reduced anxiety. A less personal forum for experience with death is through death education courses. The effects of death education on death anxiety are mixed (e.g., Knight & Elfenbein, 1993). This disparity may reflect the type of learning the courses emphasize: A focus on the personal meaning of death tends to decrease anxiety whereas a focus on factual learning tends to increase anxiety (Durlak & Riesenber, 1991). To positively affect death attitudes, death experiences need to have personal impact. This again suggests experience in a hospice setting, working one-on-one with the dying, is likely to positively influence attitudes. Beyond personal and educational experience, some people encounter death occupationally. Studies show lower death anxiety occurs in occupations where exposure to death is frequent such as in palliative care workers (e.g., Carr & Merriman, 1995), medical students, and physicians (Dickinson, 1992; Viswanathan, 1996), but others do not (Neimeyer & Dingemans, 1980; Robbins, 1992). This discrepancy may stem from differences between occupations high in death risk (e.g., law enforcement; high anxiety), and occupations high in death exposure (e.g., care workers; low anxiety; Neimeyer & Van Brunt, 1995).

Taken together, research on personal loss, death education, and occupational exposure suggests that experience with death can have positive effects on death attitudes, particularly decreasing death anxiety. For death experience to be related to lower levels of anxiety it appears that such experiences need to (a) occur in a supportive context, (b) allow personal involvement, and (c) expose one to the dying process but without feelings of personal risk. All of these parameters exist in hospice settings.

Factors that may contribute to lower levels of death anxiety certainly deserve attention. Note, however, that low death anxiety is not a truly positive gain but a reduction in a negative state. Research suggests that individuals who lose a loved one may experience various positive effects beyond the amelioration of death anxiety (Lehman et al., 1993; Park, Cohen, & Murch, 1996). For example, experience with death can increase people's death competency (e.g., Paradis & Usui, 1987), defined as "human skills and capabilities in dealing with death" (Robbins, 1994, p. 160). Tedeschi and Calhoun (2004), in their research on post-traumatic growth, categorize positive changes as occurring in the self, in social relationships, and in life philosophy. In sum, death experience may not only be related to lower levels of anxiety but may also be related to other outcomes.

Experiences with death may be influential for various reasons. One reason is that individuals remember and reflect on these experiences in order to make sense of them. Thus, particular experiences with death may result in long-standing, meaningful, autobiographical memories of specific aspects of one's experience. Meaningful memories of such events may serve as an adaptive resource in one's current life, and more broadly, provide landmarks in an individual's life story (McAdams, 1998). The current research is the first that we are aware of to examine how specific death memories serve such functions.

### **Uses of Autobiographical Memory**

The functional approach to autobiographical memory highlights how humans use autobiographical memory as a resource (Bluck, 2003). A memory's function is defined as the purposes for which that memory is used. One of the core uses of autobiographical memory is as a directive (Bluck & Alea, 2002; Pillemer, 1992). For example, autobiographical memory can aid in current problem-solving, allowing individuals to ask new questions of old information (e.g., Baddeley, 1988). The functional approach to memory is not focused on accuracy, but instead on how individuals recall, reconstruct, and share memories to serve meaningful purposes in their lives (see Neimeyer & Levitt, 2001, for external truth in narratives).

Note that the functions that memories serve may depend on whether they are intentionally retrieved or are involuntary memories that “spring to mind” unbidden (Berntsen, 1998). The focus of the current study is on death-related autobiographical memories that individuals intentionally retrieved and shared in the context of the study. Thus any reference to death-related memories or autobiographical memories in the current article refers to ones that were, in this instance, intentionally retrieved. The key element of functional memory use is that people reflect on the past to direct them in the present. Individuals have thousands of latent memories but for a memory to be retrieved for use, there must be a life situation-memory fit. That is, one’s current life context influences which memories are needed, and thus recalled. Regarding memories of death experiences, people who are in situations that expose them to death (such as hospice volunteers) should more frequently recall death-related memories for use in their current context.

Several studies provide empirical evidence for the functional use of autobiographical memory (e.g., Bluck, 2003; Wilson & Ross, 2003), though none have focused on death-related memories. A related literature on grief resolution, however, does note the importance of death-related memories. Recalling and thinking about a death experience was once thought of as a sign of unhealthy attachment to a lost loved one (e.g., Freud, 1917). Current models, however, suggest that healthy grieving may involve maintaining continuing bonds with the deceased (e.g., Silverman & Klass, 1996) through inner representations that include thematic, emotional memories (Marwit & Klass, 1995).

Based on growing evidence that memory serves various functions (e.g., Webster, 1993; Wong & Watt, 1991), researchers constructed the Thinking About Life Experiences (TALE) questionnaire (Bluck, Alea, Habermas, & Rubin, 2005). The TALE assesses the frequency with which people think back about their lives to serve a variety of functions (i.e., directive, self, social uses of memory). Factor analysis shows that each of the three functions forms a separate factor. All subscales have good inter-item consistency and convergent validity with related scales. In addition, Pillemer (1998) has extended conceptualization of the use of autobiographical memory. He suggested that memories may not just serve as directives in a specific life situation, but may also serve more broadly by acting as landmarks in one’s life story

(Bluck & Habermas, 2001; McAdams, 1998). People with more death experience may be more likely to have specific death-related memories that act as important landmarks in their life story that they use to maintain goals and values.

### **The Current Study**

The study examines the effects of varying levels of life experience with dying individuals on attitudes and on autobiographical memory use. The design allows for the operationalization of levels of death experience: Participants are hospice volunteers who recently joined the organization (i.e., novices) or who have spent extended time working with dying persons (i.e., experienced volunteers). Attitudes toward death are assessed using a multi-measure approach: measures of death anxiety and fear as well as death attitudes more generally (e.g., acceptance, avoidance) are used. A novel contribution of the current work is the examination of the effect of death experience on the functional use of death-related memories. Participants shared an autobiographical narrative of a remembered experience with death and dying and, for comparison, a narrative of a non-death-related low point in their life (McAdams, 1998). The study addressed two questions:

- (a) Is experience with death related to more positive death attitudes? Experienced hospice volunteers are expected to show lower fear of death and lower death anxiety than those with less death experience. Relations of death experience to other death attitudes were explored.
- (b) Is experience with death related to more frequent use of death-related autobiographical memories? Experienced hospice volunteers were expected to more frequently (than novices) report that their death-related memories serve directive functions at both a specific situational and a life story level. This effect should not hold for the low-point memory narrative.

### **Method**

#### *Participants*

Participants were adults (age range = 20–86 years) recruited from three Florida Hospice organizations. This sampling procedure was used to reflect various locations and hospice organizations. Participants were recruited from the entire volunteer population

at each hospice through lists and recruitment opportunities provided by volunteer coordinators at each organization. Study participation was voluntary. The sample is 94% Caucasian and contains 12 men and 40 women. This gender imbalance represents hospice volunteer groups, which are known to be predominantly women (studies report between 75 and 93% of hospice volunteers are women; e.g., Claxton-Oldfield, Jefferies, Fawcett, Wasyliw, & Claxton-Oldfield, 2004). Recruitment focused on two groups: the experienced group was composed of trained and experienced hospice volunteers (22 women, 5 men). Participants in this group were active volunteers who had served for at least one month and had experienced at least one death of an assigned patient. It was mandatory that participants in the experienced group were working directly with dying persons (not in other volunteer roles) on a weekly basis. The novice group (18 women, 7 men) was composed of participants who had signed up to volunteer with hospice or had undergone initial training. This group also included volunteers who work with hospice in roles that do not involve patient contact (e.g., clerical work). The novice group serves as an appropriate and conservative comparison group (e.g., instead of individuals who are not associated with hospice) because its members are similar to experienced volunteers in that they have interest in hospice, but they differ in that they have not yet gained life experience with death through hospice. As shown in Table 1, the two groups differ in level of experience with death (number of assigned patients who have died, and length of time with hospice). Note that although the two groups differ in hospice experience, there was no

**TABLE 1** Group Differences in Hospice Experience

Variable	Novice			Experienced			Significance
	<i>M</i>	<i>SD</i>	Range	<i>M</i>	<i>SD</i>	Range	
Volunteer time (months)	1.09	1.81	0-6	83.42	87.65	1-276	$t(25.02) = 4.79^{***}$
Number of patients died	0	0	n/a	14.33	15.13	1-50	$t(26.00) = 4.92^{***}$

*Note.* Novices ( $n = 27$ ), Experienced ( $n = 25$ ). *t* test for unequal variances conducted. Groups did not differ by age or by number of personal losses experienced.

$^{***}p < .001$ .

difference between the two groups in number of previous personal losses (i.e., non-hospice deaths), or in age.

### *Procedure*

Administration occurred in groups of 1–5 participants and took about 1.5 hours. To begin, we administered two scales assessing death attitudes and death anxiety in counterbalanced order. Next, participants responded to questions determining the extent of their experience with death and dying. A background questionnaire was used to identify participants' demographic characteristics. The literature indicates that having participants provide memory narratives before completing attitude scales could compromise the scalar data (Keppel, 1982). Thus, the death attitude measures were always completed before participants provided their memory narratives.

Participants recalled a memorable autobiographical experience related to death and dying. Participants were not guided to recall hospice-related deaths because Novices had not experienced such deaths. Excerpts from the narratives are presented in Table 2. As a comparison event, participants also recalled a low point experience in their life (low point/nadir experiences are a standard part of McAdam's, 1998, life story eliciting procedure). Order of recall was counterbalanced. Participants were encouraged to write for 10 minutes about each narrative and were provided three pages of blank paper for each. Instructions for both types of memory were to share a specific experience that occurred at a circumscribed time (i.e., from a moment to a few hours). These instructions were designed to collect specific autobiographical episodes (Levine, Svoboda, Hay, Winocur, & Moscovitch, 2002), or what have been referred to as memorable moments (Pillemer, 1998), as opposed to extended narratives that do not capture a point in time but a script of what happened over several months or years. The instructions to participants were to write about a specific memory as if they were talking to a good friend and to describe what happened, when it happened, and what they were thinking and feeling at the time. Novices and experienced volunteers did not differ in the recency of either the death-related or low point memory that they shared. After the recollection of each memory, participants completed two questionnaires that assessed the uses of the memory.



**TABLE 2** Exemplary Excerpts from the Memory Narratives

Memory type	Excerpt
Death-related	That morning lasted forever, I was in shock. I couldn't believe that he wasn't here anymore. That experience made realize how life can be short and unexpected, and that everything while we are in this world is an uncertainty.
Death-related	And I often feel she was handling her illness much better than I. She didn't want sympathy and felt she had to be the strong one both to me as well as her family. I often ask myself if when that time comes for me, will I be as strong?
Death-related	I was debating whether or not to stay the night... I asked myself how I would feel if I left and he died in the night. Then I remembered what he had said to me 3 days earlier about how he was doing a good job of dying and I had come in and messed it up. I felt he needed me to leave so I went home after I said goodbye.
Low-point	My wife and I received an anonymous letter one Saturday telling us our son was using drugs very heavily.... We were shocked, though started to understand some of the problems our family had been experiencing... I suppose words aren't enough to express the isolation, disappointment and fear I felt at that time.
Low-point	I am walking down the main street of the town to which we have recently moved... I am feeling totally lost and abandoned, I don't know anyone locally to call... I don't know what to do, I've never felt so lost and helpless... I can not even consider the future, the past is a blur, the present is like a big black hole.
Low-point	Departing my family at our home on a cold December morning to travel to an airport and then on to Vietnam.... Just prior to leaving my two young daughters cried and told me "Not to Go Daddy." That particular moment remains with me always.

### *Measures*

#### BACKGROUND MEASURES: DEMOGRAPHICS AND DEATH-RELATED EXPERIENCE

A standard demographics questionnaire was given to assess age, gender, ethnicity, education, occupation, and overall physical and mental health. The Death Experience Questionnaire was a brief measure we designed to assess participants' experience with

death and dying and the length of time they had been involved with hospice.

#### DEATH ATTITUDES

The Death Attitude Profile—Revised (Wong, Reker, & Gesser, 1994) is a widely used scale assessing death attitudes, including fear of death. Participants respond to a set of 32 items using: 1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly Disagree. The scale is scored in subscales including fear of death (Cronbach's  $\alpha$  in current sample = .80), death avoidance (Cronbach's  $\alpha$  = .86), neutral acceptance (Cronbach's  $\alpha$  = .58), approach acceptance (Cronbach's  $\alpha$  = .94), and escape acceptance (Cronbach's  $\alpha$  = .87). Note that high mean scores indicate low levels of fear, avoidance, and acceptance.

The Templer-McMordie Death Anxiety Scale (DAS; McMordie, 1979) is a 15-item measure that uses Likert-type scales on which individuals respond using: 1 = very strongly disagree, 4 = neutral, and 7 = very strongly agree. An example item is, "I am very much afraid to die." The higher the scale score, the greater the anxiety about death and dying. Cronbach's  $\alpha$  = .72 for the current sample.

#### USES OF AUTOBIOGRAPHICAL MEMORIES

The TALE questionnaire was administered to assess the extent to which each of the shared memories is used to serve a function. The 30-item measure uses a five-point Likert-type scale and can be represented as a total score, or broken down for each of the three subscales (Directive, Social, and Self). Participants respond to the stem, "I think back over or talk about this memory..." with 1 = almost never, 2 = seldom, 3 = occasionally, 4 = often, 5 = very frequently. Item completions represent directive (e.g., "when I am searching for a solution to a current life difficulty"), social (e.g., "when I want to help someone by telling them about my own past experience"), and self functions (e.g., "when I am concerned about whether my values have changed over time."). Scale reliability was conducted separately for the TALE Low Point and the TALE death questionnaire subscales. For the TALE Low Point questionnaire, Cronbach's  $\alpha$ : Directive = .96, Social = .89, Self = .93. For the TALE Death questionnaire, Cronbach's  $\alpha$ : Directive = .95, Social = .92, Self = .91.

As a second measure of the directive use of memory, participants answered a series of questions that were developed for the study based on Pillemer's (1998) categorization of types of memory directives. The Directive Memory Questionnaire (DMQ) consists of brief descriptions of the four types of directive memories that serve as landmarks in one's life story. The four types of directives are originating events that mark starting points in life, anchoring events that provide lasting reminders of values and goals, turning points that mark times of significant change in values and goals, and analogous events that link similar events in the past and present. As an example, the originating event item reads, "The memory of an originating event is one that marks some kind of a starting point in life. It is the kind of memory you recall when you think, 'I remember this as the time when I started thinking, feeling, or acting in a new way.' To what extent does your death or dying-related memory (or low point memory) represent an originating event?" On a 5-point Likert-type scale, 1 = not at all, 2 = a little, 3 = somewhat, 4 = quite a bit, and 5 = extremely, participants indicate the extent to which they use their specific memory as a directive in each of these ways.

### Results

The research questions focus on how life experience with death (i.e., novice vs. experienced hospice volunteer) (a) is related to death attitudes and (b) is related to the use of specific autobiographical death-related memories. Each research question was followed up to examine whether particular aspects of death experience (i.e., length of time with hospice, number of deaths experienced in hospice) appear to be driving obtained group effects. Given the small sample size, available data was retained by applying pairwise deletion of missing values in all analyses. This results in different sample sizes (i.e., *N* ranges from 49 to 52) in reported results. None of the major study variables were related to gender, age, or number of personal deaths experienced. None of these variables were, thus, included in further analyses. Note that the size and distribution of the sample prevented more sophisticated testing of the relation of age or gender to obtained effects.

*The Relation of Experience with Death to Death Attitudes*

To examine differences in death anxiety between individuals with low and high levels of death experience, the data were analyzed using a between groups (Death experience: novice, experienced) analysis of variance (ANOVA) with the DAS score as the dependent variable. Experienced volunteers ( $M = 48.81$ ,  $SD = 11.50$ ) reported lower levels of death anxiety than did Novice hospice volunteers ( $M = 55.00$ ,  $SD = 11.13$ ),  $F(1, 50) = 3.87$ ,  $p = .05$ ,  $\eta^2 = .07$ .

To further evaluate death attitudes, we conducted separate between-groups (death experience: novice, experienced) ANOVAs to estimate the relationship between death experience and each of the subscales on the Death Attitude Profile. There were no significant differences between the groups on fear of death, death avoidance or on any of the acceptance subscales (neutral acceptance, approach acceptance, escape acceptance). In sum, experienced hospice volunteers showed lower levels of anxiety toward death than novices.

As a follow up, linear regression analyses were performed to investigate two characteristics of experience with death that might be responsible for the differences in death anxiety between novice and experienced volunteers. The attitude scale that showed group differences, death anxiety, served as the criterion variable and hospice experience characteristics (number of deaths experienced, length of time volunteering for hospice) were predictors. Death anxiety was significantly predicted by the number of deaths volunteers had experienced with hospice,  $\beta = -.63$ ,  $p < .05$ . The more deaths volunteers had experienced, the lower their death anxiety (see Table 3).

Beyond group comparisons, the correlation of the two hospice experience variables with the DAS and each of the DAP subscales was also examined. As expected from the regression results just reported, number of deaths experienced in hospice was related to lower death anxiety,  $r(52) = -.27$ ,  $p = .05$ . In addition, DAP Death Avoidance was related to number of deaths experienced in hospice,  $r(52) = .34$ ,  $p = .01$ . Note that high scores denote low death avoidance. Those with more hospice experience showed lower death avoidance.

**TABLE 3** What Aspect of Hospice Experience Predicts Death Anxiety?

Predictor	DAS
# of hospice deaths	-.63*
Time as volunteer	.43
<i>N</i>	.49
Cumulative <i>R</i> <sup>2</sup>	.11
Model <i>F</i>	2.87
Model significance	.07

*Note.* Standardized regression coefficients result from a linear regression analysis of the Death Anxiety Scale (DAS).

\**p* < .05.

### *The Relation of Experience with Death to the Use of Death-Related Memories*

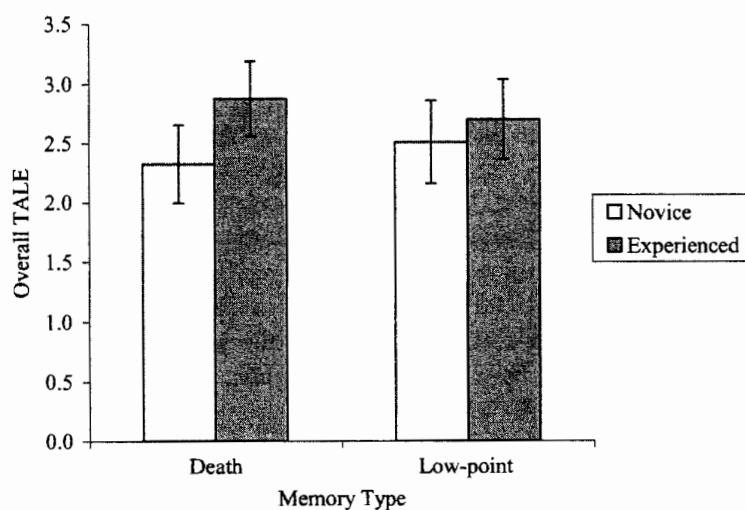
Separate 2 (death experience: novice, experienced) × 2 (memory type: low point memory, death memory) repeated measures ANOVAs were conducted, with memory type as the repeated measure. Dependent variables were the overall TALE score, and the subscales of the TALE (Directive, Social, Self Functions). The literature (e.g., Huberty & Morris, 1989) on the appropriate use of multivariate analysis of variance (MANOVA) and ANOVA suggests that multiple univariate ANOVAs are sufficient (instead of MANOVA) when there are a low number of dependent variables and when there are small design cell frequencies, as in the current study. Note that all follow-up tests reported below were automatically adjusted to avoid family-wise alpha error inflation using Bonferroni corrections. That is, reported alphas for follow-ups were adjusted during analysis.

For the overall TALE score, (indicating the frequency of one's use of a particular memory to serve overall psychosocial functions) a Memory Type × Death Experience interaction was identified, Wilks's  $\Lambda = .92$ ,  $F(1, 50) = 4.35$ ,  $p < .05$ ,  $\eta^2 = .08$ . As predicted, follow-up tests,  $F(1, 50) = 5.87$ ,  $p = .05$ ,  $\eta^2 = .11$ , showed that experienced volunteers ( $M = 2.88$ ,  $SD = .79$ ) reported more frequent use of their death-related memory to serve a psychosocial function than did novices ( $M = 2.33$ ,  $SD = .85$ ), but that the groups

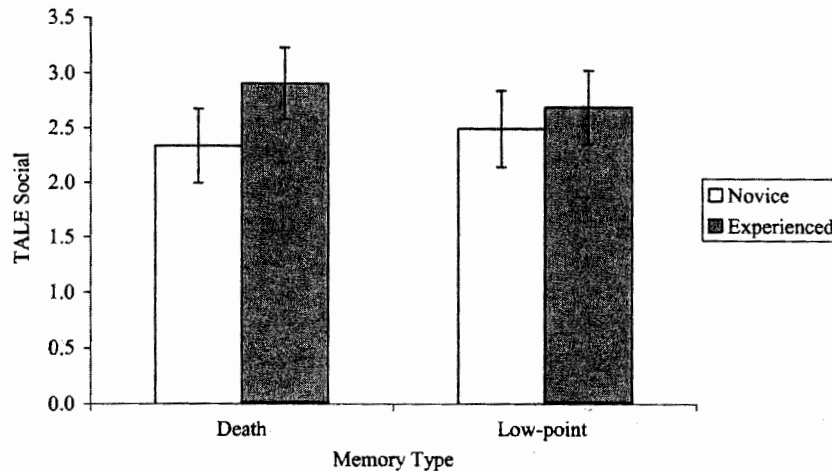
did not differ on use of the low point memory (see Figure 1). Type of memory use did not differ within either group.

To further examine this effect, individual subscales of the TALE were analyzed. A Memory Type  $\times$  Death Experience interaction was identified for the Social subscale, Wilks's  $\Lambda = .92$ ,  $F(1, 50) = 4.26$ ,  $p < .05$ ,  $\eta^2 = .08$ . Follow-up tests,  $F(1, 50) = 5.92$ ,  $p = .05$ ,  $\eta^2 = .11$  showed that experienced volunteers ( $M = 2.91$ ,  $SD = .90$ ) reported greater use of their death-related memory to serve social functions than did novices ( $M = 2.34$ ,  $SD = .78$ ), but that the groups did not differ in use of the low point memory (see Figure 2). Type of memory use did not differ within either group. No significant effects were found for the TALE Directive or Self subscales. The Directive subscale showed the same pattern but did not reach significance.

The study used both the TALE and the DMQ to tap the use of autobiographical memories. To further investigate the directive use of death-related memories, separate 2 (death experience: novice, experienced)  $\times$  2 (memory type: low point memory, death memory) repeated measures analyses of covariance (ANCOVAs) were conducted with memory type as the repeated measure. Year of the death for the recalled death memory was used as a covariate in this



**FIGURE 1** Mean overall TALE (Thinking About Life Experiences questionnaire) score by death experience and memory type. Estimated marginal means are reported. Error bars represent standard errors. Scale ranges from 1 to 5.

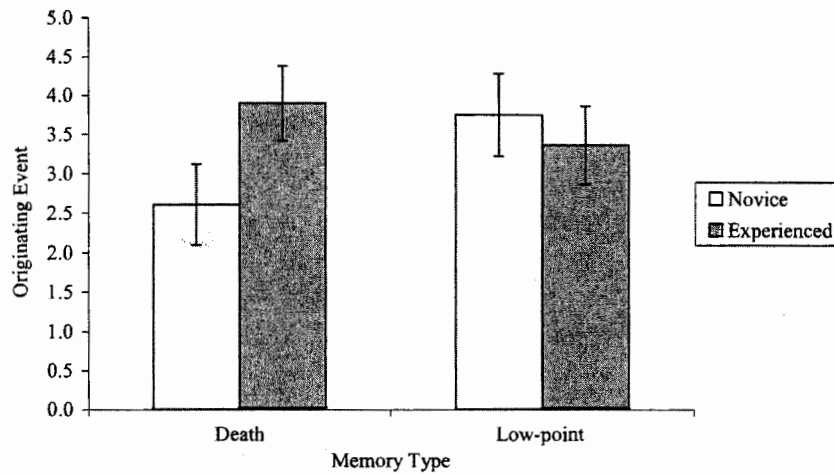


**FIGURE 2** Mean TALE (Thinking About Life Experiences questionnaire) social function score by death experience and memory type. Estimated marginal means are reported. Error bars represent standard errors. Scale ranges from 1 to 5.

analysis because preliminary analyses showed that it was related to the dependent variables only in this model. Dependent variables were the DMQ ratings of the extent to which the memory represents one of the directive memory categories: originating event, turning point, analogous event, and anchoring event.

A significant Memory Type  $\times$  Death Experience interaction was identified for use of one's memory as an Originating event, Wilks's  $\Lambda = .75$ ,  $F(1, 48) = 15.65$ ,  $p < .01$ ,  $\eta^2 = .25$ . Follow-up tests showed that for the death memory,  $F(1, 48) = 13.67$ ,  $p < .01$ ,  $\eta^2 = .22$ , but not the low point, experienced volunteers identified their memory more strongly as an originating event ( $M = 3.99$ ,  $SD = 1.16$ ) than did the novices ( $M = 2.63$ ,  $SD = 1.44$ ; see Figure 3). No other differences were significant.

Two main effects also appeared. Experienced volunteers ( $M = 3.87$ ,  $SD = 1.23$ ) identified their memories, regardless of whether they were death-related or low-points, more strongly as an analogous event,  $F(1, 48) = 12.94$ ,  $p < .01$ ,  $\eta^2 = .21$  than did the novices ( $M = 3.06$ ,  $SD = 1.37$ ). A similar effect was found for anchoring events. Experienced volunteers ( $M = 4.12$ ,  $SD = 0.85$ ) identified their memories, regardless of whether they were death-related or low-points, more strongly as serving as an anchoring



**FIGURE 3** Mean originating event score by death experience and memory type. Estimated marginal means are reported. Error bars represent standard errors. Covariate in model: year of death memory. Scale ranges from 1 to 5.

event,  $F(1, 45) = 9.76, p < .01, \eta^2 = .18$ , than did novices ( $M = 3.39, SD = 1.25$ ).

To investigate which characteristics of experience with death might drive the difference in the use of death-related memories between novice and experienced volunteers, follow-up linear regression analyses were conducted. Measures of functional use of memory that showed group differences, (i.e., the TALE overall score, the Social TALE subscale, and the Originating Event scale from the DMQ) served as criterion variables. Hospice experience characteristics (number of patients' deaths experienced, and length of time with hospice) were used as predictors. Neither of these measures of hospice experience significantly explained the group effect for differences in these variables.

### Discussion

The study examines the effects of level of experience with death on attitudes and on autobiographical memory use. Attitudes toward death were assessed using a multi-measure approach encompassing death anxiety as well as other attitudes. In addition, participants shared an autobiographical memory narrative of an experience with death and (as a comparison event) a low point



in their life (McAdams, 1998). To examine the effects of death experience on the use of death-related autobiographical memories, participants rated their memory narratives for frequency of use.

Hypotheses related to both research questions received some support. Experienced volunteers reported lower levels of death anxiety and than did novice volunteers, and specific amount of death experience (number of hospice patients' deaths experienced) was related to avoidance of death. Individuals with higher levels of hospice experience with death also used their death-related memories (but not the comparison event memories) more frequently than did Novice volunteers. The findings are discussed in greater detail below.

#### *The Relation of Experience with Death to Death Attitudes*

Volunteers are an integral part of hospice, providing over 10% of all patient care (National Hospice and Palliative Care Organization, 2004). Unlike medical staff who are often treatment-focused, hospice volunteers aim to be a friend, advocate, and source of emotional support to the dying person and their family (e.g., Chng & Ramsey, 1984). The study examined whether such death experience is related to more positive death attitudes.

As predicted, experienced volunteers reported less death anxiety than those with no hospice death experience. Note that this cannot be explained simply by individuals' willingness to be involved with hospice. That is, a difference between hospice volunteers and non-volunteers might simply mean that those who are willing to volunteer for hospice have lower anxiety than those who would not consider such an activity. The comparison group in the current study, novice hospice volunteers, was chosen particularly to control for that issue. Thus it appears that death experience in the hospice environment is related to lower anxiety.

To follow-up the obtained group effects, analyses examined whether length of time as a volunteer, or number of patients' deaths experienced, were effective predictors of lower anxiety. Lower death anxiety scores were best predicted by number of patients' deaths experienced. This suggests that continuing experience gained by working with many dying individuals may be associated with lower levels of anxiety. Note that although group differences did not show an effect for any of the other death

attitude variables, there was a simple correlation between death avoidance and number of hospice deaths experienced. Greater experience was associated with less avoidance of death.

Experience with death is not always associated with less negative attitudes toward death. Previous literature on differences in death anxiety as related to death experience may have produced mixed results because the context of that experience was not well-defined (e.g., Franke & Durlak, 1990). For example, didactic educational experiences (for a review, see Maglio & Robinson, 1994) and experience with death through high-risk occupations may actually increase death anxiety (Durlak & Reisenberg, 1991; Neimeyer & Van Brunt, 1995). When experience with death comes in a supportive environment (e.g., such as hospice), however, the stage may be set for individuals to encounter death such that they learn to be less avoidant, and to feel that previous anxieties are less founded. This notion that one gains increased expertise in dealing with dying individuals is also suggested in research showing that death competency increases with experience (Robbins, 1994). Although number of deaths experienced was related to more positive death attitudes, note that the simple fact of having experienced more deaths is probably not directly responsible for the effect. This quantitative variable (number of deaths experienced) likely acts as a simple proxy for the myriad qualitative experiences that comprise each of the unique deaths experienced.

Experience with death was related to lower levels of death anxiety and avoidance in the current study. There was, however, no relationship between death experience and any type of death acceptance (DAP; Wong et al., 1994). It may be that such effects are quite small and were not detected in the current sample, or that even when acceptance of death is evident in life situations, it is not always assessed well through self-report measures (Kastenbaum, 2004; Neimeyer et al., 2003). Alternatively, there may be other factors that encourage death acceptance that were unmeasured in the current study (e.g., religious affiliation, cultural beliefs). The finding that anxiety and avoidance were lower in volunteers with greater experience may suggest that affective processing, or emotion regulation (e.g., Gross, 1999), concerning death experiences improves as one gains experience. Differences in acceptance, however, because they focus on thoughts and beliefs about death, may

also require a cognitive shift. For example, death acceptance has been shown to increase in individuals who undergo grief counseling (e.g., Irwin & Melbin-Helberg, 1992). Future research might aim to identify specific process factors that promote acceptance.

*The Relation of Experience with Death to the Use  
of Death-Related Memories*

Experienced hospice volunteers were predicted to report more frequent use than novices of their death-related memories. The use of memories was assessed at both a specific situational and life story level. At both levels, experienced volunteers showed greater use of their death memories than did novices, though at the situational level this was due to greater overall use, and greater use to serve a social function. Use of comparison events did not differ by level of death experience.

Experienced volunteers reported using their death-related memory more than novices for a variety of psychosocial uses. That is, individuals who have higher levels of experience with death and are currently in an ongoing role as a hospice volunteer (where use of such memories may be adaptive), draw on that death-related memory more frequently in general (Although only the Social subscale showed a significant effect, the Directive subscale showed a trend in the same direction. Thus, the general effect for the overall TALE did not rely only on the Social subscale.) They do this more frequently than novices, and specifically with their death-related memory (no significant finding differences between experienced and novice volunteers for the comparison event). This effect alone shows that highly specific, meaningful, death-related memories, that are months and even years old (as were those in the current study), continue to be used (i.e., serve functions; Pillemer, 1998). Although the majority of autobiographical memories fade, or are completely forgotten, specific episodes of particular moments persist in memory and are called forward to serve adaptive uses in one's current life (Bluck & Levine, 1998).

To follow up this general effect, the Directive, Social, and Self TALE subscales were examined individually. The hypothesized effect, that the directive use of death-related memories would be higher in experienced than novice volunteers, did not quite reach the standard level of statistical significance. The greater use of the

death-related memory was significant, however, in the social domain. Those with higher levels of death experience used their death-related memory more frequently to serve social functions. That is, they reported more frequently thinking and talking about this memory in order, for example, to get to know others better, to share their life experience, to develop intimacy, or to show empathy (e.g., TALE Social items). Individuals share their own meaningful memories with others when they believe that by doing so they are passing on important lessons and values (Pratt, Norris, Arnold, & Filyer, 1999). Experienced hospice volunteers may think that by sharing their experiences with death, such memories can serve an important function not just for themselves, but in teaching others.

In sum, it appears that individuals with high levels of death experience more frequently remember important, meaningful, specific death-related episodes that can be used in their current life. Individuals with greater death experience who are working in a context where death-related memories can serve adaptive uses draw on such memories more frequently in general. Specifically, they report using their death-related memory to encourage social bonds with others. The fact that low point memories (the comparison event) did not differ between novice and experienced volunteers shows that this effect is specific to the use of memories that are useful to the individual given their current life situation. These findings support theoretical claims in the memory literature that individuals' autobiographical memories are retrieved to fulfill needs that they face in a particular context (Conway & Pleydell-Pearce, 2000; Neisser, 1978).

A second measure of the directive use of autobiographical memory was also employed. Pillemer (1998) suggested that particular memories might be used as markers in one's life story (McAdams, 1998). Engaging in integrative reminiscence in which one meaningfully interprets life experiences has been related to well-being (Wong & Watt, 1991). That is, when one thinks back about the life lived, certain events may play important roles as life story landmarks. Experienced volunteers more frequently endorsed both death and low-point memories as representing directives (e.g., anchoring and analogous events) at the life story level. More interestingly, however, the death-related memories shared by experienced hospice volunteers (but not novices)

represented originating events for those individuals. That is, the death-related memory (but not the low point) shared by the experienced volunteers was seen as representing a landmark for a time at which they started living or thinking in a new way. Individuals often report having learned life lessons from experiences with death (Kinnier, Tribbensee, & Rose, 2001). Similarly, experience with death has been related to changing one's life goals (Edmonds & Hooker, 1992; Tedeschi & Calhoun, 2004). It may be that specific death-related memories act as originating events that are recalled over time in order to sustain such changes in the months and years after the death.

### *Study Limitations*

Some study limitations have been mentioned above (e.g., age distribution of the sample, lack of measures of religiosity). The study has several other limitations. The scarcity of men who act as hospice volunteers did not allow recruitment of large enough numbers of men to test for gender effects. By drawing the sample from three different hospice locations, however, an attempt was made to provide a somewhat representative sample of hospice volunteers. Another issue is that the measures used to assess attitudes and to assess the use of memories as directives were all self-report. These measures rely on individuals' own insight and candid reporting. Although self-report measures are very common in the literature, additional measures of both death attitudes and memory uses that combine self-report with behavioral indicators would strengthen these results, and help to move the field forward. Finally, an alternative hypothesis for the results comparing death attitudes of novices to experienced hospice volunteers exists. That is, people who have death experiences in hospice and find that such experiences make them more anxious may quit their volunteer work. The current result that a particular experiential factor (number of deaths experienced) was related to lower anxiety makes this alternative hypothesis less of a concern.

### **Conclusion**

We began with Kubler-Ross' (1975) statement: "I am convinced that these experiences with the reality of death have enriched

my life more than any other experiences I have had" (p. 125). The results suggest that such experiences are related to lower levels of anxiety about, and avoidance of, death. In addition, individuals form personally significant memories about death experiences that they draw on in current life situations. Such memories also serve as originating events. They mark and reinforce a time at which the individual started living or thinking in a new way. Although dealing with death and loss are likely to present coping challenges, it appears that they also present opportunities for positive attitude formation and adaptive memory use.

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