

Recent Parental Death and Relationship Qualities Between Midlife Adults and Their Grown
Children

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ABSTRACT

Objective: The death of a parent is considered a normative event in midlife, but little is known about how this loss could affect the relationship between bereaved middle-aged adults and their grown children.

Background: Family systems theory postulates that the death of a family member can have a significant impact on the individual and other family members. The death of a parent is one of the most common types of loss in adulthood, which may signal a final transition into adulthood. The death of an older parent may lead to a reevaluation of one's own relationships with grown children.

Method: By using prospective data from the two waves of the *Family Exchanges Study*, the authors examined middle-aged adults' experience of recent parental death and its impact on relationship qualities (i.e., negative, positive, ambivalent) with each one of their grown children.

Results: Compared to the non-bereaved, bereaved participants who experienced the death of the last living parent reported increased positive relationship qualities with grown children. Among the bereaved participants, having more positive memories of the deceased parent was associated with decreased ambivalent relationship qualities with grown children.

Conclusion: The findings suggest that the death of an older parent is a significant turning point in the life course and highlights the role of positive reflection in the context of intergenerational ties.

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Keywords: bereavement, family systems, intergenerational, midlife, parental death

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The death of an older parent is one of the most common and influential types of loss in midlife. For many people, the loss becomes a major turning point in life, signifying both a final transition into adulthood and an awareness of one's own mortality (Umberson, 2003). Middle-aged adults show a wide range of responses following the death of a parent. On the one hand, reactions to the death include varying degrees of psychological distress and decline in physical health (Leopold & Lechner, 2015; Marks, Jun, & Song, 2007). On the other hand, the death of a parent can also trigger an increased sense of maturity, purpose and meaning, through which personal transformation is achieved (Pope, 2005; Scharlach & Fredriksen, 1993). Bereaved middle-aged adults may also reassess and prioritize social relations, leading to a permanent change in the entire family structure (Bowen, 1978; Scharlach & Fredriksen, 1993; Umberson, 2003). Yet, impact of an older parent's death on the family is an understudied topic compared to that of spousal or child death.

Using prospective data from the two waves of the *Family Exchanges Study*, we examined middle-aged adults' experience of parental death and its impact on relationship qualities with their grown children. Middle-aged participants who had at least one living parent *and* one grown child at baseline were followed longitudinally over a 5-year period, during which some participants experienced the death of a parent. We first examined whether experiencing parental death was associated with changes in relationship qualities with grown children across the waves. We then assessed how different bereavement responses (i.e., grief reactions and positive memories) were independently associated with changes in relationship qualities.

Parental Death and Family Relations

Family systems theory postulates that a family constitutes a network of interdependence, in which the members share emotional and behavioral responses to major family events (e.g., birth, illness, or death). Death of a family member could disrupt the existing relationships among the surviving family members (Ha & Ingersoll-Dayton, 2008; Hogerbrugge & Silverstein, 2014; Walsh & McGoldrick, 2004). According to Bowen (2004), individuals' responses to a family member's death reverberate as an "emotional shock wave" throughout the family network; for instance, the death of a mother may trigger a series of grief reactions in the daughter, who then transmits her distress to her son even though he had never been close to his grandmother (Bowen, 2004, p.52). Likewise, the death of a parent has been associated with changes in individuals' relationships with other family members such as spouse (Barner & Rosenblatt, 2008; Stokes, 2016) and siblings (Fuller-Thomson, 2000; Khodyakov & Carr, 2009).

In this light, the death of an older parent may present an occasion for middle-aged adults to reevaluate relationships to their grown children. The complexity of middle-aged adults' relationships with grown children is well-known (Connidis, 2015; Sutor, Gilligan, & Pillemer, 2011). Decades of shared history contribute to an array of feelings toward family members that range from positive (e.g., a sense of support and closeness) to negative (e.g., criticism and excessive demand; Connidis, 2015; Fingerman, Sechrist, & Birditt, 2013). Another important aspect of parent-adult child ties is the coexistence of contradictory or ambivalent feelings

(Lendon & Silverstein, 2014; Sutor, Gilligan, & Pillemer, 2011). Although most parent-child ties are based on the family members' general affection toward one another, the ambivalence model takes into an account the presence of tension and conflict as well as positive feelings (Connidis, 2015; Fingerman, Hay, & Birditt, 2004). In the framework of family systems theory, the death of an older parent may serve as an opportunity for the family members to offer practical and emotional support to each other, and the middle-aged adults' feelings toward grown children may become less ambivalent.

Following the death of an older parent, themes of maturity and reconstruction of family relationships emerge in the bereaved middle-aged adults' dialogue (Scharlach & Fredriksen, 1993). Bereaved middle-aged adults may also become more aware of their own mortality, viewing the conditions of the deceased parent as a potential portrayal of their future health status (Umberson, 2003). Importantly, individuals who perceive their future time horizon to be limited tend to prioritize emotionally meaningful social contacts (Lang & Carstensen, 2002). A large body of literature documents the significance of intergenerational relationships in later life; as parents experience transitions in their life course, their grown children become a primary source of contact and support (Fingerman et al., 2013; Sutor, Giligan, & Pillemer, 2016). Taken together, it is thus possible that the death of a parent catalyzes reevaluations of individuals' relationships with grown children.

Moreover, the impact of parental death on intergenerational relations may be more noticeable in the case of the death of a person's last living parent. Bereaved middle-aged adults

who have lost both parents report a realization of becoming one of the senior members in the family and express an increased responsibility for preserving family interactions (Pope, 2005; Scharlach & Fredricksen, 1993; Umberson, 2003). The death of the last living parent leaves the middle-aged adults psychologically orphaned; through elimination of a parent generation, the middle-aged adults confront a final transition into adulthood (Pope, 2005). Given the gender gap in mortality, the death of the last living parent is also more likely to be the death of a mother. Historically, the relationship between mothers and their children has been more salient than the one between fathers and their children, and studies show that adult children report more psychological distress following the death of a mother than that of a father (Stokes, 2016; Umberson & Chen, 1994). Consequently, the ‘orphaned’ middle-aged adults may show a strong sense of responsibility toward upholding familial values, such as passing down stories of the family history and caring for other family members (Pope, 2005; Umberson, 2002). In this way, the death of the last living parent may enable middle-aged adults to improve their relationships to the grown children.

The available literature provides only a limited perspective on how the death of an older parent might affect a middle-aged adults’ relationships with children and other relatives. Studies suggest that the death of a parent can put sibling and spousal relationships to the test. For example, parents often act as the primary kin keeper among older siblings, and disagreements surrounding a parent’s end-of-life conditions or inheritance have been associated with increases in sibling conflict after the parent’s death (Fuller-Thompson, 2000; Khodakov & Carr, 2009).

The death of a parent could also disrupt spousal relationships. Following the death of a parent, couples rely on each other for emotional support and companionship, and marriage could compensate for the loss of a salient intergenerational relationship (Rosenblatt & Barner, 2006; Stokes, 2016). In this regard, little is known about whether the absence of a parent would lead to similar, discernable changes in the relationships between midlife adults and their grown children.

Thus, the first aim was to examine whether middle-aged adults' experience of a recent parent death (i.e., death of a first parent or the last living parent in the past 5 years) is associated with improvements in relationship qualities with children. Given the reports of desire to preserve and rebalance family interactions following the death of a parent in midlife, the death of an older parent may lead to a positive change in middle-aged adults' relationships with their grown children.

Bereavement Responses to Death of an Older Parent

Another possibility for the impact of parental death on family relationships is that the familial consequences of the death depend on the individual's specific bereavement experiences. For example, death of an older parent has been linked with both negative and positive outcomes that range from binge drinking to a sense of peace (Marks et al., 2007; Moss & Moss, 2013).

Grief reactions. The most commonly assessed outcome in parental death research is the sense of grief. As parent-child relationships represent lifelong bonds, parental death is often considered a major stressor – a distressing event that can challenge people's adaptive capacities (Pearlin, 2010; Umberson, 2003). Following the death of a parent, individuals report thoughts

and emotions associated with grief (e.g., existential loss, guilt/blame/anger, preoccupation with thoughts of the deceased; Carver, Hayslip, Gilley, & Watts, 2014), symptoms of anxiety and depression (Hayslip, Pruett, & Caballero, 2015), a decrease in life satisfaction (Leopold & Lechner, 2015), and a decline in self-esteem (Marks et al., 2007).

Such grief reactions also have social consequences that can lead to an increase in family conflicts, loss of roles and support (Murray, Toth, & Clinkinbeard, 2005; Pearlin, 2010; Umberson, 1995). Intense grief reactions that lead to a sense of emotional isolation can particularly strain family relationships. For instance, Rosenblatt and Barner (2006) found that marital quality suffered for up to a year when a partner offered misguided, hurtful, or trouble-making support to a grieving spouse following the death of a parent. In some cases, couples reported substantial interpersonal distance when both spouses experienced intense grief, because they could not offer each other adequate support (Rosenblatt & Barner, 2006). In this context, grief reactions of an individual may be associated with additional strain in their relationship with grown children. Parentally bereaved midlife adults may find that their grown children do not fully share their emotional distress, or that their grown children do not reciprocate their changed social roles and desires.

Positive memories. Another common bereavement response is that individuals attempt to maintain their bond via deconstructing, constructing, and recalling the mental representations of the deceased person (Boerner & Heckhausen, 2003). People typically hold deceased loved ones in a positive light, and the memories of deceased parents are often passed down in forms of

shared meanings or legacies (Murray et al., 2005; Pope, 2005). In addition, when a parent's death is on-time from a life course perspective (Neugarten, 1979), the middle-aged person may be more psychologically prepared and able to draw upon positive memories that ameliorate the subsequent impact of the loss (Boerner & Heckhausen, 2003; Leopold & Lechner, 2015; Scharlach, 1991).

Having positive memories of the deceased parent may in turn improve other family relationships. Positive memories of the deceased can serve as an important coping strategy that allows the bereaved to adapt to life without the deceased (Mancini, Sinan, & Bonanno, 2015; Stroebe, Schut, & Boerner, 2010). Moss and Moss (1984) suggested that the “the positive aspects of the parental tie can be owned and can enable the child in turn to be a better parent and family member to those remaining in his or her life” (p.73). Pope (2005) also reported that many bereaved middle-aged children identify symbols or objects that carry the memory of the deceased parent, and which signify familial connection and love that is passed down through the generations.

The second aim of this study was to assess the association between different types of bereavement responses and changes in relationship qualities with grown children. We expected higher levels of grief to be associated with poorer relationship qualities with grown children. In addition, we expected middle-aged adults' positive memories of the deceased parent to be associated with improved relationship qualities with their grown children.

Other Factors Associated With Intergenerational Relationship Quality

Research has identified other factors that influence middle-aged adults' relationship with grown children. The quality of the intergenerational relationship tends to be better with children who are female, older, married, better educated, and successful (e.g., fewer health problem, fewer drinking or drug problem; Fingerman, Cheng, Birditt, & Zarit, 2012; Suiitor et al., 2016). A key predictor of intergenerational ambivalence is the disruption in the existing status of dependency through changes in roles and expectations (Fingerman et al., 2013; Hogerbrugge & Silverstein, 2014). Other factors that may influence parent-child relationship quality following the death of a parent include each individual's personality, relationships to the deceased, duration of time since the loss, and race. Individuals who have a more neurotic personality tend to report more negative and ambivalent relationship qualities with their grown children (Birditt, Hartnett, Fingerman, Zarit, & Antonucci, 2015; Fingerman et al., 2008). The impact of the loss tends to be greater if the relationships to the deceased were emotionally significant (Bowen, 2004; Hayslip et al., 2015; Stokes, 2016). Furthermore, the negative effects of parental death on individuals' subjective well-being tend to mitigate over time (Leopold & Lechner, 2015). Studies also show that grief experiences may be qualitatively different across racial and ethnic groups, including the chance of experiencing family death at an earlier age (Laurie & Neimeyer, 2008; Umberson, 2017).

The Present Study

Based on prospective data collected from both bereaved and non-bereaved middle-aged adults, we examined the changes in middle-aged adults' relationship with their grown children over a 5-year study period.

Research Question 1: Do bereaved middle-aged adults report better relationship quality with their grown children than the non-bereaved? Compared to the non-bereaved, we hypothesized that experiencing parental death (i.e., death of a first parent, death of the last living parent) would be associated with better relationship quality (i.e., increased positive, decreased negative and ambivalent; *Hypothesis 1*).

Research Question 2: Are different types of bereavement responses linked to changes in relationship qualities with grown children? Among the bereaved participants, we hypothesized higher levels of grief to be associated with worse relationship quality (i.e., decreased positive, increased negative and ambivalent; *Hypothesis 2a*). We also expected more reports of positive memories to be associated with better relationship quality (*Hypothesis 2b*).

METHOD

Sample

Data were drawn from the two waves of the *Family Exchanges Study* (Fingerman, Miller, Birditt, & Zarit, 2009), which aimed to assess relationships and support exchanges across generations within families. Individuals were recruited from the Philadelphia Primary Metropolitan Statistical Area (five counties in southeastern Pennsylvania and four counties in

New Jersey) through listed samples supplemented with a random-digit dialing technique, and all interviews were conducted by telephone in the first wave. The original sample consisted of 633 middle-aged “target” adults (aged 40-60) with at least one living parent *and* one living grown child (aged 18 or older) in 2008, and 197 spouses (aged 39-69) were also recruited to the study. In Wave 1, the middle-aged target adults and their spouses independently reported on relationship qualities with 1,251 grown children. For the second wave of data collection, all original respondents were contacted; a total of 490 middle-aged target adults (aged 45-66) and 163 spouses (aged 45-75) from Wave 1 also completed Wave 2 in 2013. In Wave 2, the middle-aged target adults and their spouses independently reported on the relationship qualities with 1,187 grown children. Because each coupled individual reported about his/her own parent and grown child separately, we used a combined sample of middle-aged target adults and their spouses.

Out of the total sample of 653 middle-aged target participants and their spouses, we first excluded 56 who did not report on their parent and/or grown children across the two study waves. The excluded participants ($n = 56$) were older, more likely to be males and non-Hispanic White than our analytic sample. The final analytic sample consisted of 597 individuals ($M_{\text{age}} = 55.89$, $SD = 4.98$), who had at least one parent and grown child in 2008 and answered the relationship quality measures with each grown child ($N = 1,107$) across the two waves. Of 597 participants, 201 (34%) experienced death of at least one parent between 2008 and 2013, but 10 participants refused to answer questions about the experience. Of 191 people who experienced at least one

parental death (deceased parent $n = 202$) during the 5-year period and reported on the two types of bereavement responses (i.e., grief reactions and positive memories), 12 people reported losing both parents between the waves. For those participants with two reports of parental death, we utilized the middle-aged adults' report on the parent with the higher values of grief scores.

Measures

Parental death and bereavement responses. For the participants whose parent(s) were alive in Wave 1, we asked if each parent was still living in Wave 2. If participants reported death of a parent, we asked the month and year when each parent passed away. Participants who experienced the death of a parent between the waves but still had a living parent at Wave 2 were classified as “death of a first parent” (0 = *no*, 1 = *yes*). Participants who experienced the death of a parent between the waves and had no living parent at Wave 2 were classified as “death of the last living parent” (0 = *no*, 1 = *yes*). Participants who did not experience a parent's death between the waves were classified as “non-bereaved” (reference category).

Participants who had lost a parent between waves also reported on the two types of bereavement responses to parent death in the past month: a) grief and b) positive memories. The scale of grief reactions included indicators of common grief (4 items, e.g., “I have experienced feelings of intense pain or grief over the loss of mother/father”; Carr et al., 2000) and complicated grief (4 items, e.g., “I can't help feeling angry about mother/father's death”; Prigerson et al., 1995). Each item was rated on a 5-point scale (1 = *never* to 5 = *always*). The items on both common grief and complicated grief were combined into a single scale and the

mean scores of the items were calculated ($\pm = .90$), with the higher score indicating higher levels of grief ($M = 1.98$; $SD = 0.84$). While participants reported higher levels of common grief than those of complicated grief ($M = 2.36$ for common grief symptoms vs. $M = 1.54$ for complicated grief symptoms; $p < .001$), separate sensitivity analyses on the common and the complicated grief revealed the same findings.

Positive memories about the deceased parent were assessed with two items: “I have remembered mother/father fondly without being upset” and “I enjoyed thinking about good times I shared with mother/father” (Bonanno, Wortman, & Nesse, 2004). Each item was rated on a 5-point scale (1 = *never* to 5 = *always*). The mean of the items was calculated to create a positive memory scale ($\alpha = .43$; Eisinga, Grotenhuis, & Pelzer, 2013), with higher scores indicating higher levels of positive memories ($M = 3.62$; $SD = 0.87$). Grief reactions and positive memories of the parent were not significantly correlated ($r = .12$).

Relationship quality with adult offspring. Participants were asked to rate a) positive quality and b) negative quality of their relationships with each grown child in both Wave 1 and Wave 2 (Birditt, Fingerman, & Zarit, 2010; Umberson, 1992). Positive qualities of the relationship included two items: “Overall, how much does your child love and care for you?” and “How much does your child understand you?” Negative relationship quality items included two items: “How much does your child criticize you?” and “How much does your child make demands on you?” Participants rated the items on a 5-point scale (1 = *not at all* to 5 = *a great deal*). The items were averaged to create positive and negative relationship quality scores, with

higher scores indicating higher level of each. Both dimensions demonstrated adequate reliability in both waves ($\bar{A} = .59-.80$).

Consistent with the literature on intergenerational relationships (e.g., Fingerman, Pitzer, Lefkowitz, Birditt, & Mroczek, 2008), we also computed a score of intergenerational ambivalence from the positive and negative relationship quality scores, using the formula

$$(\text{Positive} + \text{Negative}) / 2 - |\text{Positive} - \text{Negative}| + 1.5$$

Covariates. Regarding the bereavement experience, we considered the middle-aged adults' reports of the time interval in years between a parent's death and the interview, and importance of the deceased parent. Participants provided the ratings on the importance of the deceased parent on a 6-point scale: 1 (*most important person in your life*), 2 (*among the 3 most important*), 3 (*among the 6 most important*), 4 (*among the 10 most important*), 5 (*among the 20 most important*), and 6 (*less important than that*) in Wave 1. The item was reverse-coded so that higher numbers represent greater importance (Fingerman, 2001). Deceased parent's gender (1 = *female*; 0 = *male*) was also controlled.

Middle-aged participants' characteristics included: gender (1 = *female*; 0 = *male*), age, years of education, number of children, and neuroticism. Neuroticism was assessed with four items that asked participants to what extent each of four adjectives (i.e., moody, worrying, nervous, and calm) described them on a scale from 1 (*not at all*) to 5 (*a great deal*). Calm was reverse-coded, and all items were averaged; higher scores indicated greater neuroticism (Lachman & Weaver, 1997; $\pm = .71$).

Four child characteristics included: gender (1 = *female*; 0 = *male*), age, years of education, marital status (1 = *married*; 0 = *non-married*), and number of life problems at Wave 2. Life problems were assessed with an 10-item scale in which participants indicated how many of the following problems each child had experienced in the past two years: developmental delay or disability, physical disability, health problem or injury, emotional or psychological problem, drinking or drug problem, financial problem, law or police problem, victim of a crime, serious problems in relationships with other people, and the death of someone close to them (Birditt et al., 2010).

Analytic Strategy

First, descriptive statistics for sample characteristics were calculated to detect bivariate differences between the bereaved and the non-bereaved participants, including paired *t*-tests (for continuous variables) or chi-square tests (for categorical variables).

To explore whether parental death (i.e., death of a first parent, death of the last living parent) is associated with changes in relationship (i.e., positive, negative, ambivalent) with each grown child, multilevel models were estimated (SAS PROC MIXED; Littell, Milliken, Stroup, & Wolfinger, 1996); thus, the outcomes were relationship qualities with each grown child (Level 1) nested within participants (Level 2). Given that some coupled participants ($n = 212$) were included, we also considered 3-level models (family level), but the model fit did not improve significantly (not shown). Thus, all analyses were conducted using more parsimonious 2-level multilevel models. **To address the changes in relationship qualities with grown children between**

two waves, we used a residualized change approach by regressing the three indicators of relationship quality at Wave 2 (i.e., positive, negative, ambivalent) on the same indicators at Wave 1. The three indicators of relationship quality were treated as separate outcomes in three models. We also included participant characteristics (i.e., gender, age, race/ethnicity, education, number of children, and neuroticism) and offspring characteristics (i.e., gender, age, education, marital status, and life problems) as control variables.

Next, among the bereaved participants, we examined different bereavement responses (i.e., grief reactions and positive memories) as main predictors to see whether different types of bereavement responses are linked to changes in relationship qualities with grown children. In addition to the same set of control variables as the previous model, we added three variables related to the experience of parental death (i.e., parent gender, time since death, whether the deceased parent was the last living parent, and importance of the deceased parent).

RESULTS

The non-bereaved ($n = 396$) and bereaved ($n = 201$) participants in the study sample were compared in their background characteristics (Table 1). On average, the bereaved were slightly older ($t = -3.03, p < .01$), had fewer children ($t = 1.97, p < .05$), and were more likely to be non-Hispanic Whites ($\chi^2 = 6.19, p < .05$) – compared to the non-bereaved. Regarding offspring characteristics, children of the bereaved sample had more life problems than those of the non-bereaved sample ($t = -5.29, p < .001$). There were no significant differences in bereaved vs. non-bereaved participants' reports of positive, negative, and ambivalent relationship quality with

their grown children at each wave. On a scale that ranged from 1 to 5, the bereaved participants in our study reported low to moderate levels of grief ($M = 1.96$) and relatively high levels of positive memories ($M = 3.64$). The mean time between a parent's death and the interview at Wave 2 was 2.39 years for the bereaved participants.

To examine whether the death of a parent is associated with improvements in relationship quality with grown children, we considered the death of a first parent (1 = *yes*; 0 = *no*) and the death of the last living parent (1 = *yes*; 0 = *no*) as dichotomous variables in the model along with other covariates (Table 2). Compared to the non-bereaved, the first parental loss was not significantly associated with any of the types of relationship quality, but the death of the last living parent was associated with an increased positive relationships quality ($B = 0.12, p < .05$) with grown children (*Hypothesis 1*).

Next, we examined the association between different bereavement responses (i.e., grief reactions, positive memories) and the three indicators of intergenerational relationship quality among the bereaved sample (Table 3). Higher levels of grief were not associated with changes in relationship quality (*Hypothesis 2a*). However, having more positive memories of the deceased parent was associated with changes in ambivalent relationship quality with grown children (*Hypothesis 2b*); higher positive memory scores were linked with a decrease in ambivalent relationship quality ($B = -0.21, p < .01$).

Background characteristics also were associated with changes in relationship quality. Among the bereaved sample, experiencing the death of the last living parent was associated with

a decrease in ambivalent relationship quality ($B = -0.26, p < .05$), and higher importance of the deceased parent was associated with a decrease in positive relationship quality ($B = -0.12, p < .05$). Having more children was associated with a decrease in positive relationship quality ($B = -0.06, p < .05$); being a racial/ethnic minority was associated with an increase in negative ($B = 0.44, p < .001$) and ambivalent ($B = 0.45, p < .05$) relationship quality; higher levels of neuroticism were associated with an increase in ambivalent ($B = 0.16, p < .05$) relationship quality. Regarding offspring characteristics, being a female was associated with an increase in negative ($B = 0.16, p < .05$) and ambivalent ($B = 0.25, p < .05$) relationship quality; each additional year of offspring's age was associated with a decrease in negative relationship quality ($B = -0.02, p < .05$); the offspring's life problems were significantly associated with increase in negative ($B = 0.10, p < .001$) and ambivalent ($B = 0.11, p < .05$) relationship quality.

Post-Hoc Tests

To assure stability of findings, we conducted several post-hoc analyses. First, we tested whether the death of the last living parent was a broad proxy for a mother's death. Our data reflected the relative longevity of mothers (first death $n = 22$; second death $n = 92$) over fathers (first death $n = 42$; second death $n = 46$). While we lacked the power to detect any statistical significance between non-bereaved and bereaved participants when taking both gender and order of parental death into account, we replaced the order of death (i.e., death of first parent, death of last living parent; Table 2) with the gender of a parent (i.e., mother's death, father's death). Yet,

the gender of parents was not significantly associated with changes in relationship quality (not shown).

We also estimated a series of nested models that predicted changes in parent-child relationship quality among the bereaved participants (Supplementary Tables 1-3). First, we estimated models with only the bereavement responses (i.e., grief and positive memories), controlling for the relationship quality at baseline (i.e., Model 1; unadjusted models). Results showed that levels of grief and positive memories were not associated with changes in positive relationship quality; levels of grief and positive memories were associated with increased and decreased negative relationship quality, respectively; and level of positive memories was associated with decreased ambivalent relationship quality. Then when we added participants' own characteristics to the models (Model 2), the results did not change for the positive, negative, and ambivalent relationship quality. Next, when we added the characteristics of the deceased older parents (Model 3), levels of grief and positive memories were no longer associated with changes in negative relationship quality. Finally, in our final model, we added the characteristics of the grown children (Model 4). Thus, these models showed that, among our sample of bereaved participants, different bereavement responses (e.g., grief, positive memories) were individually associated with changes in relationship quality with grown children. The nested models also accentuated the difference between negative and ambivalent relationship qualities as outcomes.

DISCUSSION

Family systems theory proposes that families constitute a unit in which similar values, thoughts, feelings, and behaviors are shared. Applied to the death of a family member, family systems theory lays a conceptual ground for viewing the death of a family member as a significant life event that transmits emotional responses and impacts relationships among the surviving family members. While parental death is the most common bereavement experience in midlife, its effect on subsequent parent-child relationships is not well understood. Furthermore, very few studies have prospectively examined changes in familial relationships after the death of an elderly parent (e.g., Stokes, 2016). A prospective study design allowed for the examination of the outcomes of interest over time, thereby reducing the sources of confounds and biases. By using prospective data from the *Family Exchanges Study*, our research adds to the understanding of family systems theory by exploring the link between bereavement, individuals' reactions to parental death, and subsequent changes in relationship qualities with each one of their grown children. The findings partially supported our hypotheses; that is, the death of the last living parent was associated with increased positive relationship quality with grown offspring, and having more positive memories of the deceased parent were associated with diminished ambivalent relationship qualities over time.

Effects of Parental Death on Intergenerational Relations

Our first research question explored whether the death of an older parent is associated with changes in relationship qualities with one's grown children among middle-aged adults.

When parental loss was examined with other covariates, the findings partially supported our hypotheses; there was no statistically significant association between the death of a first parent and the three types of parent-child relationship qualities, but the death of the last living parent was associated with improved relationship quality with grown children over time. The findings compliment prior work that found an association between death of a parent and changes in other family relationship. Contrary to the previous findings on the link between parental death and changes in family relationships (Khodyakov & Carr, 2009; Stokes, 2016), the middle-aged adults' relationship quality with their grown children did not significantly change following the death of a first parent. One possibility is that the bereaved middle-aged children are primarily focused on rebalancing their relationships with the surviving parent (Scharlach & Fredricksen, 1993; Umberson, 2003).

Yet, a symbolic meaning of attaining a final adult status, implied through the death of the last living parent, seems to improve intergenerational relationships. Our finding is in line with the previous reports of individual transformation associated with being orphaned in midlife (Pope, 2005; Scharlach & Fredriksen, 1993). Although middle-aged adults often assume the role of supporting and taking care of their aging parents, one could argue that when an older parent is alive, an adult child literally and symbolically remains a child to the living parent (Silverstein & Giarrusso, 2010; Umberson, 2003). Thus, the death of the last living parent may be a significant developmental transition. In the context of family relations, the death of the last living parent signifies a generational shift, in which the bereaved grown children assume a sense of

responsibility in keeping the family ties close (Petersen & Rafuls, 1998; Pope, 2005). The death of the last living parent could also mean middle-aged adults have additional time and resources to give in support of their own grown children. We ran a post-hoc test to examine bivariate differences between the first parental loss and the second parental loss participants, but there were no significant differences in their bereavement experiences (i.e., grief reactions, positive memories; not shown).

Another possibility is that the death of the last living parent is a broad proxy for maternal death, and its effects on middle-aged adults' relationship quality with grown children reflects the salience of the mother-child relationship that extends to later life. People typically report a stronger emotional attachment to mothers than to fathers (Fingerman, 2001), and the bereavement literature suggests a significant link between the importance of the relationships to the deceased and the impact of the loss (Bowen, 2004; Stokes, 2016). Yet, parents' gender was not significantly associated with changes in relationship quality in our analyses. We also found that after controlling for gender of parents, the death of the last living parent was still associated with decreased ambivalent relationship quality with grown children. In this light, future studies should examine the pathways by which the death of the last living parent is associated with changes in various family relationships, taking both order and gender of parents into an account.

Complexity of bereavement responses. Our findings also indicate that the death of a parent in midlife can be an emotionally complicated experience that may lead to complex psychological responses (Umberson, 2003). It is noteworthy that the existing studies on parental

death tend to focus on physical and psychological symptoms that tend to pathologize bereavement. By considering reports of grief reactions to parental death as well as positive memories of the deceased parent, we were able to capture some of the emotional complexity following the death. The bereaved participants in our study reported low to moderate levels of grief and relatively high levels of positive memories, and the two measures were not correlated. **Furthermore, higher positive memory scores were linked with decreased ambivalent relationship quality, even after controlling for individuals' level of neuroticism that could negatively influence one's views of the relationship quality (Birditt et al., 2015; Fingerman et al., 2008).** These findings correspond to the existing observations of a substantial range in individuals' responses to parental death (e.g., Leopold & Lechner, 2015), and the accounts of persisting ties to the deceased parent (e.g., Rosenblatt & Barner, 2006).

Link to parent-grown children ties. Our findings are also in line with prior research that suggests transmission of intergenerational ties within the multigenerational family system (Bowen, 1978; Birditt, Tighe, Fingerman, & Zarit, 2012). Moreover, our findings on how death of a parent in midlife could influence the ties between surviving family members provide some evidence for the “emotional shock wave” of family systems theory (Bowen, 2004; Umberson, 2003). Existing research on family systems theory tends to accentuate how families constitute a unit in which similar values, thoughts, and behaviors are shared. By using a prospective study design to examine middle-aged adults' relationship quality with each grown child pre- and post-death, we were able to show some of the ways in which that responses to the death of a family

member could restructure existing family ties. It should also be noted that neither grief reactions nor positive memories contributed to the changes in middle-aged adults' positive relationship quality, but positive memories were associated with a decrease in ambivalent relationship quality with one's grown children. It has been argued that being able to have positive inner representations of the deceased is an integral process when coping with bereavement (Stroebe et al., 2010). We thus speculate that having a positive inner representation of the deceased parent may also lead to changes in relationship quality with one's grown children when the relationship has been problematic. Yet, given the 5-year time frame of our study, we do not know whether the observed changes in intergenerational relationships are permanent.

Limitations

The current study has several limitations. First, the survey at Wave 2 probed whether middle-aged participants experienced the death of a parent since the completion of Wave 1. To examine the prospective changes in intergenerational relationship quality following the death of a parent in midlife, participants who had the same number of parent alive across the two study waves were treated as 'non-bereaved.' Hence, the findings are limited to a relatively recent experience of parental death, and we did not distinguish between those who had never lost a parent and who had not lost a parent during the study period. Future studies should expand the current research to consider more distant experiences of parental death in order to examine its long-term impact on intergenerational relationships. Second, ending of caregiving responsibilities upon parental death may have been one plausible reason why the death of an

older parent may influence middle-aged adults' family relations. Prior caregiving is an important issue to consider in future research. Third, the relationship quality measures used in this study assessed participants' general perception of children's attitudes and feelings toward them (i.e., child makes too much demand). Additional studies with more elaborate relationship quality measures are needed to confirm whether participants' feelings or attitudes toward their children changed as a result of experiencing parental death. We also want to acknowledge an existing criticism toward the measure of intergenerational ambivalence, which points out that the variability in negative emotions accounts for much of the observed variability in intergenerational ambivalence (Fingerman et al., 2013; Gilligan et al., 2015). Lastly, unlike the 8-item grief reaction scale, positive memories of the deceased parent were assessed with only two items due to data limitations. Although we believe that the measure still contributes to the literature in that positive memory is a particularly essential aspect of bereavement following the death of a parent, additional studies using a more comprehensive memories scale are needed to confirm our findings.

Contributions

This study adds to the literature by examining longitudinal assessments of middle-aged adults' experiences of parental death in the context of relationships with their own grown children. Through our prospective study design, we were able to assess participants' report of the quality of relationships with their grown children both before and after the death. The findings also extend the current understanding of consequences of parental death by examining

the significance of the death of the last living parent and multiple dimensions of bereavement responses in relation to the changes in relationship quality with each grown child. Furthermore, by taking the unit of family into account, this study underscores the complexity of family relationships in bereavement (Stroebe, Schut, & Boerner, 2013). The findings could be informative to healthcare providers who work with middle-aged adults who recently lost a parent. Despite the prevalence of parental death in midlife, our study shows that losing a parent still involves an interplay of emotional distress and positive reflection. **By shedding light on the complexity of the bereavement responses and their potential impact on relationship ties with grown children, our study suggests that the death of a parent may be a pivotal life event that leads midlife adults to rethink and reorganize existing family relationships.**

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Table 1. *Descriptive Statistics of Non-Bereaved and Bereaved Participants*

	Non-bereaved participants (<i>n</i> = 396)			Bereaved participants (<i>n</i> = 201)			<i>t</i> or ζ^2
	<i>M</i>	<i>SD</i>	Range	<i>M</i>	<i>SD</i>	Range	
Participant characteristics							
Female, %	57			60			0.45
Age	55.45	4.84	45–67	56.75	5.15	45–75	-3.03**
Minority ^a , %	32			22			6.19*
Years of education	14.47	2.00	10–17	14.36	2.08	11–17	0.64
Neuroticism ^b	2.59	0.76	1–4.75	2.68	0.78	1–4.5	-1.28
Number of children	2.86	1.46	1–11	2.61	1.43	1–9	1.97*
Importance of parent ^c	4.08	1.01	1–6	4.07	0.92	1–6	0.21
Time since parent death ^d	—	—	—	2.39	1.50	0–5	
Death of last living parent ^e , %	—			67			
Offspring characteristics							
Female, %	48			50			0.44
Age	29.75	5.70	20–50	29.63	5.36	22–47	0.34
Years of education	14.77	1.94	4–17	14.97	2.00	0–17	-1.51
Married or remarried, %	31			33			0.35
Life problems ^f	0.95	1.20	0–6	1.37	1.25	0–7	-5.29***
RQ with offspring (at Wave 1)							
Positive ^g	4.01	0.81	1–5	4.11	0.84	1–5	-1.74
Negative ^g	2.09	0.84	1–5	2.13	0.86	1–4.5	-0.66
Ambivalent ^h	2.55	1.24	0.5–5.8	2.48	1.25	0.5–6	0.67
RQ with offspring (at Wave 2)							
Positive ^g	4.02	0.87	1–5	4.12	0.81	1–5	-1.82
Negative ^g	1.91	0.83	1–4.5	1.95	0.81	1–5	-0.76
Ambivalent ^h	2.26	1.19	0.5–6.0	2.26	1.17	0.5–6.5	-0.25
Responses to parent death							
Grief reactions ⁱ	—	—	—	1.96	0.82	1–5	
Positive memory ^j	—	—	—	3.64	0.88	1–5	

Note: Middle-aged participant *N* = 597; adult offspring *N* = 1,107. RQ = relationship quality.

^a0 = non-Hispanic White, 1 = others. ^bMean of 4 items rated 1 (not at all) to 5 (a great deal).

^cPerceived importance of parent(s) in Wave 1 rated 1 (less than 20 most important person) to 6 (the most important person). ^dTime since parent death in years. ^e0 = first loss, 1 = second loss. ^fNumber of offspring problems with a possible range from 0 to 10. ^gMean of 2 items rated 1 (not at all) to 5 (a great

deal). ^hCalculated from positive and negative relationship quality items with a possible range from 0.5 to 6. ⁱMean of 8 items rated 1 (*never*) to 5 (*always*). ^jMean of 2 items rated 1 (*never*) to 5 (*always*).
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2. *Multilevel Models for Effects of Parent Loss on Changes in Relationship Quality with Each Adult Offspring*

	Positive RQ ^a		Negative RQ ^b		Ambivalent RQ ^c	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Fixed effects						
Intercept	4.04***	0.05	1.91***	0.05	2.25***	0.07
Death of first parent ^d	-0.03	0.08	0.03	0.08	0.11	0.12
Death of last living parent ^d	0.12*	0.06	-0.05	0.06	-0.08	0.19
Control variables						
RQ with offspring (at Wave 1) ^e	0.54***	0.03	0.46***	0.03	0.45***	0.03
<u>Participant characteristics</u>						
Female	-0.02	0.05	0.03	0.05	0.00	0.07
Age	0.00	0.01	0.00	0.01	0.01	0.01
Minority ^f	0.07	0.06	0.13*	0.06	0.10	0.08
Years of education	-0.01	0.01	0.03*	0.01	0.04*	0.02
Number of children	-0.01	0.02	-0.03	0.02	-0.04	0.02
Neuroticism ^g	-0.02	0.03	0.12***	0.03	0.15***	0.05
<u>Offspring characteristics</u>						
Female	0.04	0.04	0.11*	0.04	0.14*	0.06
Age	-0.01*	0.00	-0.01	0.01	-0.01	0.01
Years of education	0.05***	0.01	0.01	0.01	-0.01	0.02
Married	0.03	0.05	-0.07	0.05	-0.20**	0.07
Life problems ^h	-0.06**	0.02	0.10***	0.02	0.09***	0.03
Random effects						
Intercept variance	0.11***	0.02	0.12***	0.02	0.28***	0.05
Residual variance	0.33***	0.02	0.32***	0.02	0.69***	0.05
-2 log likelihood	2,174.9		2,172.2		2,982.6	

Note: Middle-aged participant $N = 597$; adult offspring $N = 1,107$. RQ = relationship quality. All predictors were grand mean centered.

^aMean of 2 items rated 1 (*not at all*) to 5 (*a great deal*) at Wave 2. ^bMean of 2 items rated 1 (*not at all*) to 5 (*a great deal*) at Wave 2. ^cCalculated from positive and negative relationship quality items with a possible range from 0.5 to 6 at Wave 2. ^d1 = *yes*, 0 = *no*; reference category = non-bereaved. ^eSame type of RQ as the outcome at Wave 2. ^f0 = *non-Hispanic White*, 1 = *others*. ^gMean of 4 items rated 1 (*not at all*) to 5 (*a great deal*). ^hNumber of offspring problems with a possible range from 0 to 10. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3. *Multilevel Models for Effects of Parent Loss Reactions on Changes in Relationship Quality with Each Adult Offspring*

	Positive RQ ^a		Negative RQ ^b		Ambivalent RQ ^c	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Fixed effects						
Intercept	3.96***	0.11	1.88***	0.11	2.33***	0.16
Grief reactions ^d	0.06	0.06	0.08	0.06	0.05	0.08
Positive memory ^e	0.09	0.05	-0.09	0.05	-0.21**	0.07
Control variables						
RQ with offspring (at Wave 1) ^f	0.54***	0.05	0.46***	0.05	0.43***	0.05
<u>Parent characteristics</u>						
Female	0.10	0.09	0.04	0.08	0.11	0.12
Time since death ^g	0.01	0.03	0.01	0.03	0.00	0.04
Death of last living parent ^h	0.13	0.09	-0.10	0.09	-0.26*	0.13
Importance of parent ⁱ	-0.12*	0.05	0.00	0.05	0.06	0.07
<u>Participant characteristics</u>						
Female	0.05	0.09	-0.09	0.08	-0.22	0.12
Age	0.00	0.01	0.01	0.01	0.02	0.01
Minority ^j	0.03	0.12	0.44***	0.12	0.44*	0.17
Years of education	0.01	0.02	0.03	0.02	0.06	0.03
Number of children	-0.06*	0.03	-0.03	0.03	-0.02	0.04
Neuroticism ^k	-0.05	0.06	0.10	0.06	0.16*	0.08
<u>Offspring characteristics</u>						
Female	-0.04	0.07	0.16*	0.07	0.25*	0.11
Age	-0.01	0.01	-0.02*	0.01	-0.02	0.01
Years of education	0.00	0.02	-0.02	0.02	-0.01	0.03
Married	0.00	0.08	0.08	0.08	-0.03	0.12
Life problems ^l	-0.05	0.03	0.10***	0.03	0.11*	0.05
Random effects						
Intercept variance	0.10**	0.03	0.07*	0.03	0.12	0.08
Residual variance	0.30***	0.03	0.31***	0.04	0.73***	0.09
-2 log likelihood	660.6		660.2		896.0	

Note: Bereaved middle-aged participant who reported on bereavement experiences $n = 191$; adult offspring $n = 342$. RQ = relationship quality. All predictors were grand mean centered.

^aMean of 2 items rated 1 (*not at all*) to 5 (*a great deal*) at Wave 2. ^bMean of 2 items rated 1 (*not at all*) to 5 (*a great deal*) at Wave 2. ^cCalculated from positive and negative relationship quality items with a possible range from 0.5 to 6 at Wave 2. ^dMean of 8 items rated 1 (*never*) to 5 (*always*). ^eMean of 2 items rated 1 (*never*) to 5 (*always*). ^fSame type of RQ as the outcome at Wave 2. ^gTime since death in

years. ^h0 = *first loss*, 1 = *second loss*. ⁱPerceived importance of the deceased parent at Wave 1 rated 1 (*less than 20 most important*) to 6 (*the most important*). ^j0 = *non-Hispanic White*, 1 = *others*. ^kMean of 4 items rated 1 (*not at all*) to 5 (*a great deal*). ^lNumber of offspring problems with a possible range from 0 to 10.

 Model 1

 Model 2

 Model 3

 Model 4

* $p < .05$. ** $p < .01$. *** $p < .001$.

Supplementary Table 1. *Nested Models for Changes to Positive Relationship Quality with Each Adult*

Offspring

	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Fixed effects								
Intercept	4.15***	0.04	4.09***	0.07	3.95***	0.10	3.96***	0.11
Grief reactions ^a	-0.02	0.05	-0.02	0.05	0.03	0.06	0.05	0.06
Positive memory ^b	0.04	0.05	0.05	0.05	0.09	0.05	0.09	0.05
RQ with offspring (at Wave 1) ^c	0.56***	0.04	0.57***	0.04	0.57***	0.04	0.54***	0.05
Control variables								
<u>Participant characteristics</u>								
Female			0.08	0.09	0.05	0.09	0.05	0.09
Age			-0.01	0.01	-0.01	0.01	0.00	0.01
Minority ^d			-0.07	0.11	-0.02	0.11	0.03	0.12
Years of education			0.02	0.02	0.02	0.02	0.01	0.02
Number of children			-0.07*	0.03	-0.07*	0.03	-0.06*	0.03
Neuroticism ^e			-0.02	0.06	-0.05	0.06	-0.05	0.06
<u>Parent characteristics</u>								
Female					0.09	0.08	0.10	0.09
Time since death ^f					0.01	0.03	0.01	0.03
Death of last living parent ^g					0.15	0.09	0.13	0.09
Importance of parent ^h					-0.12*	0.05	-0.12*	0.05
<u>Offspring characteristics</u>								
Female							-0.04	0.07
Age							-0.01	0.01
Years of education							0.00	0.02
Married							0.00	0.08
Life problems ⁱ							-0.05	0.03
Random effects								
Intercept variance	0.12***	0.03	0.10**	0.03	0.09**	0.03	0.10**	0.03
Residual variance	0.30***	0.03	0.30***	0.03	0.30***	0.03	0.30***	0.03
-2 log likelihood		664.7		651.7		657.0		660.6

Note: Bereaved middle-aged participant who reported on bereavement experiences $n = 191$; adult offspring $n = 342$. RQ = relationship quality. All predictors were grand mean centered.

^aMean of 8 items rated 1 (*never*) to 5 (*always*). ^bMean of 2 items rated 1 (*never*) to 5 (*always*). ^cSame type of RQ as the outcome at Wave 2. ^d0 = *non-Hispanic White*, 1 = *others*. ^eMean of 4 items rated 1 (*not at all*) to 5 (*a great deal*). ^fTime since death in years. ^g0 = *first loss*, 1 = *second loss*. ^hPerceived importance of the deceased parent at Wave 1 rated 1 (*less than 20 most important*) to 6 (*the most important*). ⁱNumber of offspring problems with a possible range from 0 to 10.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Supplementary Table 2. *Nested Models for Changes to Negative Relationship Quality with Each Adult**Offspring*

	Model 1		Model 2		Model 3		Model 4	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Fixed effects								
Intercept	1.96***	0.04	1.99***	0.07	2.03***	0.10	1.88***	0.11
Grief reactions ^d	0.11*	0.05	0.11*	0.05	0.10	0.06	0.08	0.06
Positive memory ^e	-0.10*	0.04	-0.09*	0.04	-0.09	0.05	-0.09	0.05
RQ with offspring (at Wave 1) ^f	0.54***	0.04	0.54***	0.04	0.53***	0.04	0.46***	0.05
Control variables								
<i>Participant characteristics</i>								
Female			-0.16	0.08	-0.16	0.09	-0.09	0.08
Age			0.00	0.01	0.00	0.01	0.01	0.01
Minority ^j			0.43***	0.10	0.43***	0.11	0.44***	0.12
Years of education			0.03	0.02	0.02	0.02	0.03	0.02
Number of children			-0.04	0.03	-0.03	0.03	-0.03	0.03
Neuroticism ^k			0.11*	0.06	0.11	0.06	0.10	0.06
<i>Parent characteristics</i>								
Female					0.03	0.08	0.04	0.08
Time since death ^g					0.00	0.03	0.01	0.03
Death of last living parent ^h					-0.08	0.09	-0.10	0.09
Importance of parent ⁱ					0.01	0.05	0.00	0.05
<i>Offspring characteristics</i>								
Female							0.16*	0.07
Age							-0.02*	0.01
Years of education							-0.02	0.02
Married							0.08	0.08
Life problems ^l							0.10***	0.03
Random effects								
Intercept variance	0.08*	0.04	0.07*	0.03	0.08*	0.04	0.07*	0.03
Residual variance	0.35***	0.04	0.33***	0.04	0.33***	0.04	0.31***	0.04
-2 log likelihood	679.3		657.4		672.2		660.2	

Note: Bereaved middle-aged participant who reported on bereavement experiences $n = 191$; adult offspring $n = 342$. RQ = relationship quality. All predictors were grand mean centered.

^aMean of 8 items rated 1 (*never*) to 5 (*always*). ^bMean of 2 items rated 1 (*never*) to 5 (*always*). ^cSame type of RQ as the outcome at Wave 2. ^d0 = *non-Hispanic White*, 1 = *others*. ^eMean of 4 items rated 1 (*not at all*) to 5 (*a great deal*). ^fTime since death in years. ^g0 = *first loss*, 1 = *second loss*. ^hPerceived

importance of the deceased parent at Wave 1 rated 1 (*less than 20 most important*) to 6 (*the most important*). ⁱNumber of offspring problems with a possible range from 0 to 10.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Supplementary Table 3. *Nested Models for Changes to Ambivalent Relationship Quality with Grown**Child*

	Model 1		Model 2		Model 3		Model 4	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Fixed effects								
Intercept	2.27***	0.06	2.38***	0.10	2.50***	0.14	2.33***	0.16
Grief reactions ^d	0.11	0.07	0.14	0.08	0.08	0.08	0.05	0.08
Positive memory ^e	-0.19**	0.07	-0.18**	0.07	-0.21**	0.07	-0.21**	0.07
RQ with offspring (at Wave 1) ^f	0.49***	0.04	0.49***	0.04	0.47***	0.04	0.43***	0.05
Control variables								
<i>Participant characteristics</i>								
Female			-0.31*	0.12	-0.30*	0.12	-0.22	0.12
Age			0.00	0.01	0.01	0.01	0.02	0.01
Minority ^j			0.50**	0.15	0.46**	0.16	0.44*	0.17
Years of education			0.06*	0.03	0.05	0.03	0.06	0.03
Number of children			-0.02	0.04	0.00	0.04	-0.02	0.04
Neuroticism ^k			0.17*	0.08	0.19*	0.08	0.16*	0.08
<i>Parent characteristics</i>								
Female					0.09	0.12	0.11	0.12
Time since death ^g					-0.01	0.04	0.00	0.04
Death of last living parent ^h					-0.23	0.13	-0.26*	0.13
Importance of parent ⁱ					0.09	0.07	0.06	0.07
<i>Offspring characteristics</i>								
Female							0.25*	0.11
Age							-0.02	0.01
Years of education							-0.01	0.03
Married							-0.03	0.12
Life problems ^l							0.11*	0.05
Random effects								
Intercept variance	0.18*	0.08	0.14*	0.08	0.13*	0.08	0.12	0.08
Residual variance	0.75***	0.09	0.74***	0.09	0.74***	0.09	0.73***	0.09
-2 log likelihood	942.6		901.5		909.4		896.0	

Note: Bereaved middle-aged participant who reported on bereavement experiences $n = 191$; adult offspring $n = 342$. RQ = relationship quality. All predictors were grand mean centered.

^aMean of 8 items rated 1 (*never*) to 5 (*always*). ^bMean of 2 items rated 1 (*never*) to 5 (*always*). ^cSame type of RQ as the outcome at Wave 2. ^d0 = *non-Hispanic White*, 1 = *others*. ^eMean of 4 items rated 1 (*not at all*) to 5 (*a great deal*). ^fTime since death in years. ^g0 = *first loss*, 1 = *second loss*. ^hPerceived

importance of the deceased parent at Wave 1 rated 1 (*less than 20 most important*) to 6 (*the most important*). ⁱNumber of offspring problems with a possible range from 0 to 10.

* $p < .05$. ** $p < .01$. *** $p < .001$.