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Effects of marital closeness on the transition from caregiving to widowhood

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Abstract

Objective: To examine the effects of marital closeness on indicators of well-being (depressive symptoms, grief, and relief) as spouses transition from the role of caregiver to that of widowed person.

Methods: 118 spouses of persons with end stage renal disease were interviewed prior to and after the death of the patient. Spouses reported on marital closeness, multiple indicators of pre-death strain as reflected by subjective health, depressive symptoms, caregiving burden, and caregiving satisfaction, as well as post-loss feelings of grief, depression, and relief.

Results: Hierarchical regressions indicated that post-loss grief was predicted by gender ($b = -0.32, p < 0.001$), self-reported health ($b = -0.28, p < 0.01$), marital closeness ($0.22, p < 0.05$), and pre-loss depressive symptoms ($b = 0.19, p < 0.10$). Caregiver burden ($b = 0.28, p < 0.05$) and marital closeness ($b = -0.41, p < 0.001$) before the death, predicted relief from the caregiver role post-loss. Subjective health ($b = -0.21, p < 0.05$) and pre-loss depressive symptoms ($b = 0.47, p < 0.001$) predicted change in depressive symptoms over time.

Conclusion: These data highlight differences in the experiences of grief, relief, and depressive symptoms and suggest that marital closeness plays a central role. Results are interpreted in terms of theory regarding marital quality. Implications for interventions to improve the lives of caregivers and newly widowed spouses are discussed.

Keywords

caregiving; widowhood; grief; relief; marital closeness; end state renal disease

Introduction

The death of a spouse has profound effects on the survivor's well-being. At advanced ages, death of a spouse often follows an extensive period of informal caregiving (Minino & Smith, 2001), which itself typically results in heightened levels of depression and physical health problems (Pinquart & Sorensen, 2003; Taylor, Kuchibhatla, Ostbye, Plassman, & Clipp, 2008). Limited research has connected the caregiving experience with post-death outcomes because caregiving researchers usually do not collect longitudinal data following the death

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and the widowhood researchers typically have access only to retrospective data about pre-death circumstances (Boerner, Schulz, & Horowitz, 2004; Burton, Haley, & Small, 2006). The analyses that follow test two alternative hypotheses that have been suggested to explain mental health outcomes as people transition from caregiving to widowhood. Using prospective data from a sample of older adults whose spouse suffered from end stage renal disease (ESRD) and was on hemodialysis prior to their death, we examine the extent to which marital closeness explains mental health outcomes during the transition from caregiving to widowhood.

Theoretical perspectives

Two alternative hypotheses have been advanced to explain how mental health fares in the transition from caregiving to widowhood (Bass, Bowman, & Noelker, 1991; Schulz, Newsom, Fleissner, deCamp, & Nieboer, 1997). The first, based on the stress and the coping literature, speculates that people who experience greater strain while the spouse is alive will experience greater difficulty following the death. The second hypothesis posits that greater strain during the caregiving period is associated with better post-death outcomes, as surviving spouses experience a sense of relief when their partner dies.

In one of the first studies to examine the transition from the caregiving role, Bass and Bowman (1990) find substantial support for the first hypothesis. More recently Robinson-Whelen, Tada, MacCallum, McGuire, and Kiecolt-Glaser (2001) found that depression, loneliness, and positive affect of caregivers whose relative died did not rebound to levels comparable to those of noncaregivers, and in fact, remained similar to those of current caregivers up to 3 years after the caregiving role ended.

There is also considerable empirical support for the second hypothesis, as Bennett and Vidal-Hall's (2000) found that the end of caregiving provides a relief, especially when it marks the end of a stressful caregiving situation. Schulz et al. (2003) demonstrated the remarkable resilience of caregivers as they found that within 3 months following the death of a family member, caregivers had clinically significant declines in the level of depressive symptoms, and that within 1 year of the death the levels of symptom levels were substantially lower than those reported prior to the death. Similarly Taylor et al. (2008) report that although depressive symptoms sharply increase following death of a spouse, they returned to pre-death levels within 15 months of the death. Prokos and Keene (2005) and Keene and Prokos (2008) using longitudinal data from the CLOC study found that higher levels of caregiver stress were associated with lower levels of depression during widowhood, suggesting that well-being improves when the death of the spouse relieves survivors from the stresses of the caregiving role.

In addition to these studies is research finding that caregiving stress is not related to outcomes following death (e.g., Burton et al., 2006). Such conflicting findings suggest that because there is considerable variability regarding the ways in which caregivers adapt to their loss, greater attention must be paid to the way in which pre-death strain affects the transition from caregiving to widowhood.

The role of marital closeness

A variable that has received limited attention in the empirical literature, yet one that most likely plays a critical role as spouses transition from caregiving to widowhood is the quality of the marital relationship prior to death. The loss of a close and loving relationship should be more devastating than the loss of a less valued relationship. Hinting at the importance of marital closeness, Prokos and Keene (2005) find that for survivors of taxing marriages the death reduces distress and grief. A major factor limiting understanding of the role played by marital closeness in the transition to widowhood is lack of data regarding the pre-death perception of marital closeness (Van Doorn, Kasl, Berry, Jacobs, & Prigerson, 1998). Reliance on retrospective data for affectively laden experiences is 'more construction than reproduction' (Fulton, Madden, & Minichiello, 1996, p. 1354) and the tendency for positive bias in recall most likely reflects a sanctification or idealization of the lost marriage rather than a realistic recollection (Van Doorn et al., 1998).

Focus on outcomes

While the majority of research regarding the transition has focused on depressive symptoms (Aneshensel, Botticello, & Yamamoto-Mitani, 2004; Li, 2005; Prokos & Keene, 2005; Schulz, Hebert, & Boerner, 2008), grief and relief are also important outcomes (e.g., Boerner et al., 2004). Depressive symptoms include sadness, feelings of guilt, and worthlessness, feelings of helplessness and hopelessness, psychomotor retardation, loss of appetite, and sleep disturbance (Radloff, 1977). Grief is feeling upset, difficulty accepting the death, being preoccupied with thoughts about the person who died, and missing the deceased very much (Faschingbauer, 1981). Marwit and Meuser (2002) differentiate between grief which they posit is an affective state that is reactive to the specific loss situation, and depression which is more pervasive, has a genetic component, and is more responsive to pharmacological intervention. Relief is important as it refers both to feeling of relief from caregiving responsibilities and freed from watching a loved one suffer.

Limited research has examined how these outcomes relate to one another. Meuser and Marwit (2001) found that death following dementia caregiving results in mixed feelings of relief as well as intensified grief for the caregiver. Aneshensel et al. (2004) suggest that grief may be accompanied by relief among family members who have been providing care prior to the death. They contend that although death ends caregiving activities, the emotional impact of these intense experiences does not necessarily cease. In this vein, while death may provide some caregivers with stress relief and improved emotional well-being, they still may experience grief as a result of their loss. Moss, Moss, Rubinstein, and Resch (1993) found differential effects for depression and grief suggesting that these constructs are over-lapping, yet conceptually distinct.

From caregiving to widowhood

As we examine how marital closeness affects the transition from caregiving to widowhood, we suggest that it is important to account for multiple indicators of pre-death strain, as reflected by subjective health, depressive symptoms, caregiving burden, and caregiving

satisfaction. Spouses who experienced compromised physical and mental health before the death of their partner are more likely to experience difficulty adapting to the widowed role (Aneshensel et al., 2004; Boerner et al., 2004; Li, 2005; Schulz, Boerner, Shear, Zhang, & Gitlin, 2006; Schulz et al., 2001). Subjective caregiver burden plays a prominent role in predicting concurrent as well as subsequent depression (Cleiren, Van der Wal, & Diekstra, 1988; McHorney & Mor, 1988; Wilson-Genderson, Pruchno, & Cartwright, in press). Li (2005) reports that caregivers who felt more burdened prior to the death of a spouse experienced higher levels of depression following the death, and Schulz et al. (2006) report that caregivers with high levels of pre-death burden were more likely to report clinical levels of post-death complicated grief. Although less studied, there is evidence that caregiving satisfaction plays a significant role in understanding caregiver well-being. Caregivers report that they experience fulfillment, enjoyment, and personal meaning as a result of their role (Boerner et al., 2004; Cohen, Colantonio, & Vernich, 2002; Lawton, Kleban, Moss, Rovine, & Glicksman, 1989). Research by Boerner et al. (2004) revealed that caregivers who had experienced greater benefits from their role prior to the death of their relative also experienced higher levels of post-loss depression and grief, even after controlling for caregiver demographics, contextual factors, and burden.

Our analyses control for gender, age, the time passed since the death, and the extent to which the death is perceived by the survivor as being expected *versus* sudden because these variables have known relationships with both caregiving stress and widowhood.

There is good evidence that gender plays an important and complex role in both the caregiving and widowed experiences. Because of demographics as well as cultural and societal values, the caregiving role is more typically embraced by women than men. Findings from Carr and Utz (2002) reveal that while men yearn for deceased spouses if their wives died after a prolonged illness, wives yearn more if their spouse died suddenly. Tweedy and Guarnaccia (2007–2008) found that while both male and female caregivers report an increase in depression following the death of their spouse, over time depression decreased for the widowed husbands but increased for the widowed wives.

The effects regarding age are unclear, with some studies finding that younger caregivers are at a higher risk for depression than older caregivers (Bernard & Guarnaccia, 2003; McHorney & Mor, 1988), while others find that older caregivers are at higher risk for depression (Bernard & Guarnaccia, 2003; Cleiren et al., 1988). Still other studies (Boerner et al., 2004; Keene & Prokos, 2008) find that age is not associated with depressive symptoms and grief once other demographic and contextual variables are controlled.

There are mixed conclusions regarding the importance of time since death. While many studies find that recently widowed caregivers had higher levels of depression than those who were widowed for longer than 6 months (e.g., Tweedy & Guarnaccia, 2007–2008), Bodnar and Kiecolt-Glaser (1994) and Bass and Bowman (1990) found that time since death was not a significant factor explaining depression among former caregivers.

The extent to which the death is expected has received significant attention (Carr, House, Wortman, Nesse, & Kessler, 2001). Burton et al. (2006) found that deaths characterized as

‘unexpected’ were associated with marked increases in depression, while those characterized as ‘expected’ were associated with stable depressive symptoms. Similarly, Van Baarsen, Smit, Snijders, and Knipscheer (1999) report that spouses who viewed their partner’s death as unexpected, experienced higher levels of loneliness following the death. Carr and Utz (2002) report that widows and widowers who did not anticipate the death of their spouse reported more intrusive thoughts about their spouse shortly after the death than those who did anticipate the death.

The context of ESRD

ESRD provides an ideal context for chronicling the transition from caregiving to widowhood among spouses. Each year in the United States over 300,000 people with ESRD are treated with hemodialysis, a life-sustaining invasive treatment in which waste materials are removed from the blood through a machine, compensating for a loss of kidney function. Among ESRD patients age 65 and older, mortality rates are six times greater than in the general population. Couples in which one member has ESRD and is on hemodialysis must accommodate to an illness with intrusive treatment demands and crises that are often unpredictable. Furthermore, because this is a population with increased mortality, post-death outcomes can be examined. Thus, it provides an opportunity to chronicle the nature of both caregiving and widowhood.

Method

Sample

Opinions and Preferences for Treatment in Older Nephrology patients and their Spouses (OPTIONS), a prospective, longitudinal study of 315 couples, was designed to gain better understanding of the preferences for end of life treatment within the contexts of the marital dyad and chronic disease. Couples were recruited primarily through advertisements in newspapers and newsletters, referral from staff at dialysis centers, and a one-time mailing to a random sample of patients receiving financial assistance for dialysis treatment from the Centers for Medicare and Medicaid Services. More detailed information regarding recruitment is available in Feild, Pruchno, Bewley, Lemay, and Levinsky (2006). Inclusion criteria stipulated that the patient was at least 55 years old, had been diagnosed with ESRD and treated with hemodialysis for at least 6 months, and was cohabiting with a spouse or partner for at least 5 years. All respondents were English speaking and free of cognitive, hearing, and speech impairments that would preclude their ability to answer questions on the telephone. The research protocol was approved by the institutional review board of Boston College and UMDNJ. Written informed consent was obtained from both the spouse and the patient.

Each patient and their spouse participated in a baseline interview. They were contacted annually and invited to participate in follow-up telephone interviews 12, 24, and 36 months after the initial interview. If the patient died during the course of the study, the spouse was invited to complete a final, widowed interview in lieu of the regular interview. The baseline interview was completed by 315 patients and their spouses. Between baseline and the 12 month follow-up, 69 patients died and 52 spouses completed the widowed interview.

Between the 12 month follow-up and the 24 month follow-up, 45 patients died and 41 spouses completed the widowed interview. Between the 24 month follow-up and the 36 month follow-up, 39 patients had died and 25 spouses completed the widowed interview. Together, of the 153 patients who died throughout the study, 118 (77.1%) spouses completed widowed interviews. Reasons that spouses did not complete the widowed interview include: unable to be reached, not interested, deceased, and too sick.

Because the deaths occurred throughout the study, the time between the date of death and the widowed interview varied with the average difference being 6.39 months [standard deviation (SD) = 3.36, range 2 weeks to 15.1 months]. The average difference between the widowed interview and the previous annual interview was 13.7 months (SD = 3.23, 3 weeks to 23.3 months).

The mean age of the 118 respondents who completed the widowed interview at baseline was 68.9 years (SD = 8.7; range 43–87). The majority (75%) were women. They had a mean of 14.4 years of education (SD = 2.4) and reported annual incomes ranging from \$13,750 to \$110,000 (M = \$45,775, SD = \$24,649). The average length of time that the patient had been undergoing hemodialysis reported at baseline was 68.2 months (SD = 64.2; range 7 months to 34.8 years). Patients and spouses had been married for a mean of 42.6 years (SD = 11.9; range from 2 years to 64 years). The majority of spouses (92.4%) were White; 4.2% of spouses were African Americans; the remaining 3.4% were either Asian or mixed races. Medicare funded hemodialysis for all participating patients.

Procedures

A synthetic cohort was created from data collected directly prior to and following the patient's death. Synthetic panels afford the opportunity to examine changes that are relatively infrequent by creating a larger sample of respondents experiencing common transitions (Campbell & Hudson, 1985). Along with the usual limitations inherent to panels, synthetic samples rest on the assumption that historic changes during the study period do not affect the nature of the transition studied. Because patients died at different points in the study, the synthetic panel was built such that the pre-death data for each respondent treated the baseline, 12-month, or 24-month data as pre-death and data collected at the subsequent period (either 12 months, 24 months, or 36 months) as post-death data.

Measures

Questionnaire content prior to the death of the patient included demographics and questions about physical and mental health of the spouse, the spouse burden and satisfaction, and the closeness of the marital relationship.

Subjective physical health was measured with the question 'In general, would you say your health is: excellent (5), very good (4), good (3), fair (2), or poor (1)?'

Depressive symptoms were measured using the 20-item Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977). Respondents rated the extent to which they had experienced each symptom during the past week using a 4-point Likert scale that ranged from 0 (rarely or none of the time) to 3 (most or all of the time).

Caregiver burden was assessed using the 9-item caregiving burden scale developed by Lawton, Moss, Kleban, Glicksman, and Rovine (1991). It assessed the negative feelings (e.g., trapped, do not have enough time to yourself, social life has suffered, tired) that caregivers may experience resulting from the patient's illness, thus representing the emotional costs associated with having a spouse with a chronic disability. Each item was rated on a 5-point Likert scale ranging from never (1) to nearly always (5). Items were averaged with higher scores indicating greater caregiver burden.

Caregiver satisfaction was measured using the 6-item caregiving satisfaction scale developed by Lawton et al. (1991). It measured the positive feelings associated with the caregiving role, including a sense of satisfaction from helping the care recipient, enhanced self-esteem associated with helping, and the feeling that helping gives meaning to life. Each item was rated on a 5-point Likert scale ranging from never (1) to nearly always (5). Items were averaged with higher scores indicating greater caregiving satisfaction.

Marital closeness was measured using the following four items developed for this project: (a) 'Overall, would you say the quality of your current relationship with your spouse is excellent (4), good (3), fair (2), or poor (1)?' (b) 'Taking everything into consideration, how close do you feel the relationship is between you and your spouse?' Responses included extremely close (4), very close (3), somewhat close (2), and not at all close (1). (c) 'Generally would you say that you and your spouse get along extremely well (4), very well (3), somewhat well (2), or not well at all (1)?' and (d) How easy is it for you and your spouse to talk about things that really concern you? Responses included extremely easy (4), very easy (3), somewhat easy (2), and not easy at all (1). Responses were averaged with higher scores indicating a higher degree of marital closeness.

The widowed interview included questions about the extent to which the death was sudden *versus* expected, and the extent to which the spouse experienced depressive symptoms, grief and relief experienced following the death.

The extent to which the spouse perceived the patient's death as sudden or gradual was assessed with the question 'Would you describe [patient's] death as sudden or unexpected, or would you say that his/her death was a slow, gradual process?' Slightly more than half the sample (56.8%) indicated that the death was gradual; 43.2% described it as sudden. For purposes of analyses 'sudden' was coded as '1'; 'gradual' as '0'.

Relief was measured using the following single item developed for this project: 'It is a relief that I no longer have to provide the care that [patient] needed?' Respondents used a 5-point Likert scale ranging from completely true (5) to completely false (1).

Grief was measured using Part II (Present Feelings) of the Texas Revised Instrument of Grief (TRIG; Faschingbauer, Zisook, & DeVaul, 1987). This 13-item scale was designed to measure the intensity of grief emotions (e.g., crying, getting upset, unable to accept death, preoccupied with thoughts, miss very much). Items are rated on a 5-point Likert scale ranging from completely true (5) to completely false (1). Ratings were summed, with higher scores indicating more intense grief responses. Depressive symptoms were measured using the CES-D described above.

Analysis plan

Descriptive statistics for all variables as well as bivariate correlations were examined. Stepwise hierarchical regression analyses were used to examine the relationship between demographic characteristics, pre-death, and post-death variables. Separate analyses treated post-death depressive symptoms, grief, and relief as outcome variables. For each analysis, demographic data (gender, age, time since death) was entered at step 1, onset was added at step 2, subjective health and depressive symptoms at step 3, caregiver burden and satisfaction at step 4, and marital closeness at step 5. Because of known correlations in these data amongst some of the independent variables (e.g., burden and depressive symptoms, see Pruchno, Wilson-Genderson, & Cartwright, 2009), collinearity statistics were examined for each regression equation with tolerances closer to 1.0 desirable and tolerances less than 0.2 cause for additional diagnostics. For each analysis collinearity diagnostics revealed that tolerance estimates were in the acceptable range (0.58–0.93).

Results

Information regarding the means, SDs, ranges, and reliability for all study variables may be found in Table 1. Depressive symptoms (the sole indicator of strain measured pre- and post-death) were significantly higher following the death than before it ($t = 3.22$, $d.f. = 116$, $p = 0.002$).

Bivariate correlations among all variables are presented in Table 2. Pre-death marital closeness had significant negative relationships with pre-death depressive symptoms and caregiver burden. It was highly correlated (positive) with caregiving satisfaction. People reporting higher levels of marital closeness were more likely to perceive the death as unexpected when compared with people having lower levels of marital closeness. Despite these pre-death relationships, marital closeness was not significantly correlated with depressive symptoms following the death. However, marital closeness did have significant relationships with post-death grief (positive) and relief (negative). The pattern of relationships between caregiving satisfaction and the pre-death outcomes was similar to that characterizing marital closeness, yet the sole significant relationship that caregiving satisfaction had on the outcome variables was with grief. The pattern for caregiving burden suggested that it was significantly associated with pre-death depressive symptoms, and subjective health, as well as with post-death depressive symptoms and relief. Burden was not correlated with grief. As expected grief was positively correlated with depressive symptoms and negatively correlated with relief. Interestingly, relief and post-death depressive symptoms were not significantly correlated. These differential relationships both among marital closeness, caregiving satisfaction, caregiving burden, and the post-death outcomes as well as the relationships among grief, relief, and depressive symptoms highlight the importance of examining multiple outcome measures.

Results of the hierarchical regression analyses at each step are presented in Table 3. The analysis predicting grief had an R^2 of 0.35. Significant predictors included: gender (with men experiencing more grief), poorer subjective health prior to the death and higher levels of marital closeness prior to the death. While an unexpected death was related to more intense grief when it was initially entered into the analysis, with all other variables in the

model the beta weight became nonsignificant. Similarly, while caregiver satisfaction had a significant negative association with grief when it was entered, once marital closeness was entered into the equation, its beta weight reduced to nonsignificance.

In the analysis predicting relief, the final R^2 was 0.31. Although perceiving the death as gradual was associated with greater relief, with all other variables entered, onset of death became not significant as was the case for grief. Also although pre-death depressive symptoms were significant predictors of relief when entered, once caregiving burden and satisfaction were entered, this relationship became nonsignificant. Significant predictors of relief in the final analysis included higher levels of caregiver burden and lower levels of marital closeness.

Finally, the analysis predicting depressive symptoms following death yielded an R^2 of 0.29. Significant predictors were pre-death subjective health (negative) and depressive symptoms (positive). The effects of marital closeness were marginal and positive ($p < 0.12$).

Discussion

Findings from these analyses suggest that the transition from caregiving to widowhood is a complex one. The increase in depressive symptoms over time suggests that on average this sample experienced higher rates of depressive symptoms following the death than before the death. However, our findings highlight the importance of examining multiple outcomes, as the extent to which caregiving strain affects post-death outcomes varied as a function of the outcome examined. As suggested by Boerner et al. (2004, p. 673), depressive symptoms and grief represent different facets of the post-death experience, with depressive symptoms serving as 'a general indicator of negative mental health' and grief as a reflection of feelings of loss. Relief represents yet another dimension of the post-death experience, suggesting the sense of freedom experienced when the daily demands of caregiving are gone.

We find some support the hypothesis that greater caregiving strain is associated with better post-death outcomes. In our study caregivers who experienced higher levels of caregiving burden experienced greater relief following the death of their spouse.

We also find support for the hypothesis that people who experience greater caregiving strain while the spouse is alive will experience greater difficulty during the post-death period. Our data suggest that people experiencing higher levels of depressive symptoms and poorer subjective health as caregivers were more likely to experience depressive symptoms following the death and that people in poorer subjective health prior to the death experience higher levels of post-death grief.

These analyses highlight the central role played by marital closeness as spouses make the transition from caregiver to widowhood. People reporting closer pre-death marital relationships experience more intense grief and less relief following the death of their spouse. While the salience of this variable was predictable, our study is one of the first to have pre-death ratings of marital closeness, thereby enabling empirical examination of the role played by marital closeness that is not clouded by retrospective reports. The relationships between marital closeness and pre-death depressive symptoms and caregiver

burden are also important as they suggest that feeling close to the care recipient decreases both depressive symptoms and caregiver burden.

These findings are consistent with those reported by Boerner et al. (2004) whose analyses centered on the role of the positive aspects of caregiving. As these authors suggest, finding that caregivers who reported higher levels of caregiving benefit were also more likely to report more depression and grief supports the contention that people who experience more positive caregiving roles would have a more difficult time after the death because, in addition to the primary loss of their spouse, they also lost an important and meaningful role. While they did not have data regarding relationship quality available, they posit that it is likely that caregivers experiencing greater benefit from their role also had better relationships with the person for whom they were providing care. Our analyses extend the work of Boerner et al., as we have data regarding both caregiving benefit (satisfaction) and pre-death relationship. Although caregiving satisfaction and marital closeness are highly correlated, our data suggest that it is the quality of the relationship rather than caregiving satisfaction that predicts post-loss well-being.

We confirm previous findings as the widowed men in our sample experienced more grief than the women. It is not possible to say if this is simply due to gender or if it is gender in combination with the fact that the patient had experienced a prolonged illness (e.g., Carr & Utz, 2002). The possibility that men and women may grieve differently as well as the likelihood that the illness experience itself may affect grief should be considered in future work.

These findings suggest that although marital closeness is a positive force during the caregiving years, as it decreases depressive symptoms and caregiving burden, and increases the level of satisfaction gleaned from the caregiver role, the death of a spouse with whom one has had a close relationship has negative implications in widowhood. The combination of lack of relief and intensified grief associated with higher levels of marital closeness make this an identifiable risk factor that can be used to target interventions. The caregiving role is often one lasting for several years. By developing intervention programs for caregivers who are emotionally close to their spouses and developing resources that more successfully enable them to cope with the death, levels of grief may be decreased and the sense of relief increased.

While these findings make substantial contributions to the literature regarding the transition from caregiving to widowhood, the study is not without limitations that must be acknowledged. Primary is the inclusion of only two times of measurement, thereby restricting our ability to make conclusions about causality. While most measures included in our analyses were comprised of multiple indicators having adequate reliability, our measure of relief was based on a single item. Future research in this area using multiple indicators of this construct is encouraged. Finally, generalization of findings is limited to samples such as ours in which spouses suffered from ESRD. It is not clear how findings would vary as a function of the chronic disorder with which the caregiver was faced, or the relationship between caregiver and patient, but the similarity between our findings and those reported by

Boerner et al. (2004) suggests that findings may generalize to persons providing care to those with dementia.

Results from these analyses highlight the importance of examining post-death outcomes in the context of the caregiving experience. Although the roles of caregiver and widow are clearly interwoven, the tendency to study them in isolation has been limiting. Future studies examining the ways in which the demands of caregiving situations affect adaptation to widowhood should include heterogeneous samples of caregivers, diverse mental health outcomes including depressive symptoms, anxiety, loneliness, and positive well-being, and multiple times of measurement.

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References

- Aneshensel CS, Botticello AL, & Yamamoto-Mitani N (2004). When caregiving ends: The course of depressive symptoms after bereavement. *Journal of Health & Social Behavior*, 45, 422–440. [PubMed: 15869114]
- Bass DM, & Bowman K (1990). The transition from caregiving to bereavement: The relationship of care-related strain and adjustment to death. *The Gerontologist*, 30, 35–42. [PubMed: 2311960]
- Bass DM, Bowman K, & Noelker LS (1991). The influence of caregiving and bereavement support on adjusting to an older relative's death. *The Gerontologist*, 31, 32–42. [PubMed: 2007473]
- Bennett KM, & Vidal-Hall S (2000). Narratives of death: A qualitative study of widowhood in later life. *Ageing and Society*, 20, 413–428.
- Bernard LL, & Guarnaccia CA (2003). Two models of caregiver strain and bereavement adjustment: A comparison of husband and daughter caregivers of breast cancer hospice patients. *The Gerontologist*, 43, 808–816. [PubMed: 14704380]
- Bodnar JC, & Kiecolt-Glaser JK (1994). Caregiver depression after bereavement: Chronic stress isn't over when it's over. *Psychology and Aging*, 9, 372–380. [PubMed: 7999322]
- Boerner K, Schulz R, & Horowitz A (2004). Positive aspects of caregiving and adaptation to bereavement. *Psychology and Aging*, 19, 668–675. [PubMed: 15584791]
- Burton AM, Haley WE, & Small BJ (2006). Bereavement after caregiving or unexpected death: Effects on elderly spouses. *Aging & Mental Health*, 10, 319–326. [PubMed: 16777661]
- Campbell RT, & Hudson CM (1985). Synthetic cohorts from panel surveys: An approach to studying rare events. *Research on Aging*, 7, 81–93. [PubMed: 4059632]
- Carr D, & Utz RL (2002). Late-life widowhood in the United States: New directions in research and theory. *Ageing International*, 27(1), 65–88.
- Carr D, House JS, Wortman C, Nesse RM, & Kessler RC (2001). Psychological adjustment to sudden and anticipated spousal loss among older widowed persons. *Journal of Gerontology: Social Sciences*, 56B, S237–S248.
- Cleiren MPhD, Van der Wal J, & Diekstra RFW (1988). Death after a long term disease: Anticipation and outcome in the bereaved. *Pharos International*, 112–114, 136–139.
- Cohen CA, Colantonio A, & Vernich L (2002). Positive aspects of caregiving: Rounding out the caregiver experience. *International Journal of Geriatric Psychiatry*, 17, 184–188. [PubMed: 11813283]
- Faschingbauer TR (1981). *Texas revised inventory of grief manual*. Houston, TX: Honeycomb Publishing Co.
- Faschingbauer TR, Zisook S, & DeVaul RA (1987). The Texas revised inventory of grief In Zisook S (Ed.), *Biopsychosocial aspects of bereavement* (pp. 111–124). Washington, DC: American Psychiatric Association.

- Feild L, Pruchno RA, Bewley J, Lemay EP, & Levinsky NG (2006). Using probability vs. non-probability sampling to identify hard-to-access participants for health-related research: Costs and contrasts. *Journal of Aging and Health*, 18, 565–583. [PubMed: 16835390]
- Fulton G, Madden C, & Minichiello V (1996). The social construction of anticipatory grief. *Social Science and Medicine*, 43, 1349–1358. [PubMed: 8913004]
- Keene JR, & Prokos AH (2008). Widowhood and the end of spousal care-giving: Relief or wear and tear? *Aging and Society*, 28, 551–570.
- Lawton MP, Kleban MH, Moss M, Rovine M, & Glicksman A (1989). Measuring caregiving appraisal. *Journal of Gerontology: Psychological Sciences*, 44, P61–P71.
- Lawton MP, Moss M, Kleban MH, Glicksman A, & Rovine M (1991). A two-factor model of caregiving appraisal and psychological well-being. *Journal of Gerontology: Psychological Sciences*, 46, P181–P189.
- Li LW (2005). From caregiving to bereavement: Trajectories of depressive symptoms among wife and daughter caregivers. *Journal of Gerontology: Psychological Sciences*, 60B, P190–P198.
- Marwit SJ, & Meuser TM (2002). Development and initial validation of an inventory to assess grief in caregivers of persons with Alzheimer's disease. *The Gerontologist*, 42, 751–765. [PubMed: 12451156]
- McHorney CA, & Mor V (1998). Predictors of bereavement depression and its health services consequences. *Medical Care*, 26, 882–893.
- Meuser TM, & Marwit SJ (2001). A comprehensive, stage-sensitive model of grief in dementia caregiving. *The Gerontologist*, 41, 658–670. [PubMed: 11574711]
- Minino AM, & Smith BL (2001). Deaths: Preliminary data for 2000. [National Vital Statistics Reports, 49 (12)]. Hyattsville, Maryland: National Center for Health Statistics.
- Moss MS, Moss SZ, Rubinstein R, & Resch N (1993). Impact of elderly mother's death on middle age daughters. *International Journal on Aging and Human Development*, 37, 1–22.
- Pinquant M, & Sorensen S (2003). Associations of stressors and uplifts of caregiving with caregiver burden and depressive mood: A meta-analysis. *Journal of Gerontology: Psychological Sciences*, 58B, P112–P128.
- Prokos AH, & Keene JR (2005). The long-term effects of spousal care giving on survivors' well-being in widowhood. *Social Science Quarterly*, 86, 664–682.
- Pruchno RA, Wilson-Genderson M, & Cartwright FP (2009). Self-rated health and depressive symptoms in patients with end stage renal disease and their spouses: A longitudinal dyadic analysis of late-life marriages. *Journal of Gerontology: Psychological Sciences*, 64B, 212–221.
- Radloff LS (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1, 385–401.
- Robinson-Whelan S, Tada Y, MacCallum RC, McGuire L, & Kiecolt-Glaser JK (2001). Long-term caregiving: What happens when it ends? *Journal of Abnormal Psychology*, 110, 573–584. [PubMed: 11727947]
- Schulz R, Hebert R, & Boerner K (2008). Bereavement after caregiving. *Geriatrics*, 63(1), 20–22.
- Schulz R, Boerner K, Shear K, Zhang S, & Gitlin LN (2006). Predictors of complicated grief among dementia caregivers: A prospective study of bereavement. *American Journal of Geriatric Psychiatry*, 14, 650–658. [PubMed: 16861369]
- Schulz R, Newsom JT, Fleissner K, deCamp AR, & Nieboer AP (1997). The effects of bereavement after family caregiving. *Aging and Mental Health*, 1, 269–282.
- Schulz R, Beach SR, Lind B, Martire LM, Zdaniuk B, Hirsch C, et al. (2001). Involvement in caregiving and adjustment to death of a spouse: Findings from the caregiver health effects study. *JAMA*, 285, 3123–3129. [PubMed: 11427141]
- Schulz R, Mendelsohn AB, Haley WE, Mahoney D, Allen RS, Zhang S, et al. (2003). End of life care and the effects of bereavement on family caregivers of persons with dementia. *The New England Journal of Medicine*, 349, 1936–1942. [PubMed: 14614169]
- Taylor DH, Kuchibhatla M, Ostbye T, Plassman BL, & Clipp EC (2008). The effect of spousal caregiving and bereavement on depressive symptoms. *Aging & Mental Health*, 12, 100–107. [PubMed: 18297484]

- Tweedy MP, & Guarnaccia CA (2007–2008). Change in depression of spousal caregivers of dementia patients following patient's death. *Omega*, 56, 217–228.
- Van Baarsen B, Smit JH, Snijders TAB, & Knipscheer KPM (1999). Do personal conditions and circumstances surrounding partner loss explain loneliness in newly bereaved older adults? *Ageing and Society*, 19, 441–469.
- Van Doorn C, Kasl SV, Beery LC, Jacobs SC, & Prigerson HG (1998). The influence of marital quality and attachment styles on traumatic grief and depressive symptoms. *The Journal of Nervous and Mental Disease*, 186, 566–573. [PubMed: 9741563]
- Wilson-Genderson M, Pruchno RA, & Cartwright FP (in press). Effects of burden and satisfaction on psychological well-being of older ESRD patients and their spouses. *Psychology & Aging*.

Table 1.

Descriptive information.

	Mean (SD)	Range	Coefficient alpha
<i>Post-death</i>			
Grief	41.1 (9.7)	19–65	0.88
Relief	2.4 (1.4)	1–5	N/A
Depressive symptoms	12.7 (9.7)	0–46	0.89
<i>Pre-death</i>			
Subjective health	3.7 (0.9)	1–5	N/A
Depressive symptoms	9.9 (9.1)	0–42	0.89
Caregiving burden	20.6 (7.2)	9–38	0.87
Caregiving satisfaction	22.5 (4.8)	8–30	0.79
Marital closeness	12.4 (2.7)	5–16	0.84

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Table 2.

Correlations between demographic, pre-death, and post-death variables.

	1	2	3	4	5	6	7	8	9	10	11	12
<i>Postdeath</i>												
1. Grief	-	-0.39***	0.52***	0.38***	0.02	0.02	0.17~	-0.36***	0.18~	-0.01	0.19*	0.27**
2. Relief		-	-0.16~	-0.06	-0.14	-0.01	-0.22*	-0.02	0.27**	0.42***	-0.13	-0.47***
3. Depressive symptoms			-	0.01	-0.04	-0.04	0.03	-0.36***	0.46***	0.21*	-0.03	0.07
<i>Demographics</i>												
4. Gender (male)				-	0.28**	-0.07	0.04	-0.16~	-0.09	-0.22*	0.23**	0.16~
5. Age					-	-0.12	-0.04	-0.08	-0.07	-0.16~	0.10	0.09
6. Time since death (months)						-	0.00	0.15	0.10	0.05	-0.05	-0.06
<i>Death onset</i>												
7. Unexpected							-	0.05	-0.04	-0.18~	-0.02	0.24**
<i>Pre-death strain</i>												
8. Subjective health								-	-0.32***	-0.19*	0.11	-0.01
9. Depressive symptoms									-	0.57***	-0.25**	-0.32***
10. Caregiving burden										-	-0.26**	-0.40***
11. Caregiving satisfaction											-	0.55***
12. Marital closeness												-

Note: Listwise $N = 115$ for grief outcome; listwise $N = 114$ for relief outcome; listwise $N = 116$ for depressive symptoms outcome. ***, **, *, ~, are $p < 0.001$, $p < 0.01$, $p < 0.05$, $p < 0.10$, respectively.

Table 3. Multiple regression coefficients of independent variables on post-death grief, relief, and depressive symptoms.

Variable	Grief				Relief				Depressive symptoms					
	B	SE B	B	R ²	B	SE B	B	R ²	B	SE B	B	SE B	B	R ²
<i>Block 1</i>														
Gender (male)	8.84	2.01	0.40***	0.15***	-0.03	0.30	-0.01	0.02	0.26	2.17	0.01			0.01
Age	-0.11	0.11	-0.09		-0.02	0.02	-0.13		-0.06	0.12	-0.05			
Time since death (months)	0.08	0.26	0.03		0.00	0.04	-0.01		-0.17	0.28	-0.06			
<i>Block 2</i>														
Gender (male)	8.70	1.99	0.40***	0.02~	0.00	0.30	0.00	0.05*	0.25	2.19	0.01			0.00
Age	-0.10	0.11	-0.09		-0.02	0.02	-0.14		-0.05	0.12	-0.05			
Time since death (months)	0.08	0.26	0.03		0.00	0.04	-0.01		-0.17	0.28	-0.06			
Onset of death (Unexpected)	2.97	1.69	0.15~		-0.59	0.26	-0.21*		0.31	1.85	0.02			
<i>Block 3</i>														
Gender (male)	7.96	1.90	0.36***	0.11***	0.09	0.30	0.03	0.07*	0.23	1.92	0.01			0.26***
Age	-0.08	0.10	-0.07		-0.02	0.02	-0.12		-0.02	0.10	-0.02			
Time since death (months)	0.21	0.25	0.07		-0.01	0.04	-0.03		-0.13	0.25	-0.05			
Onset of death (Unexpected)	3.35	1.59	0.17*		-0.57	0.25	-0.21*		0.91	1.61	0.05			
Subjective health	-3.25	1.03	-0.28**		0.09	0.16	0.06		-2.50	1.03	-0.22*			
Depressive symptoms	0.13	0.09	0.12		0.04	0.02	0.28**		0.43	0.10	0.40***			
<i>Block 4</i>														
Gender (male)	6.86	1.94	0.31***	0.04~	0.29	0.29	0.09	0.08**	-0.44	1.99	-0.02			0.01
Age	-0.10	0.10	-0.08		-0.01	0.02	-0.09		-0.03	0.10	-0.03			
Time since death (months)	0.22	0.24	0.08		-0.01	0.04	-0.03		-0.13	0.25	-0.05			
Onset of death (Unexpected)	3.42	1.59	0.18*		-0.42	0.24	-0.15~		0.81	1.64	0.04			
Subjective health	-3.49	1.02	-0.31***		0.12	0.16	0.07		-2.62	1.03	-0.23*			
Depressive symptoms	0.18	0.11	0.17		0.01	0.02	0.09		0.48	0.11	0.45***			
Caregiver Burden	-0.03	0.14	-0.02		0.07	0.02	0.36**		-0.08	0.14	-0.06			
Caregiver Satisfaction	0.41	0.17	0.21*		-0.01	0.03	-0.05		0.20	0.18	0.10			
<i>Block 5</i>														
Gender (male)	7.09	1.91	0.32***	0.03*	0.23	0.28	0.08	0.10***	-0.26	1.99	-0.01			0.02

Variable	Grief			Relief			Depressive symptoms		
	B	SE B	R ²	B	SE B	R ²	B	SE B	R ²
Age	-0.10	0.10	-0.09	-0.01	0.01	-0.07	-0.04	0.10	-0.03
Time since death (months)	0.23	0.24	0.08	-0.01	0.04	-0.03	-0.13	0.25	-0.04
Onset of death (Unexpected)	2.56	1.62	0.13	-0.19	0.24	-0.07	0.12	1.69	0.01
Subjective health	-3.21	1.01	-0.28**	0.04	0.15	0.03	-2.39	1.03	-0.21*
Depressive symptoms	0.20	0.11	0.19~	0.01	0.02	0.04	0.50	0.11	0.47***
Caregiver burden	0.03	0.14	0.02	0.05	0.02	0.28*	-0.03	0.15	-0.03
Caregiver satisfaction	0.20	0.20	0.10	0.04	0.03	0.15	0.03	0.21	0.01
Marital closeness	0.80	0.39	0.22*	-0.21	0.06	-0.41***	0.64	0.40	0.17
Total R ²	0.35***			0.31***			0.29***		

Note: ***, **, *, ~p < 0.001, p < 0.01, p < 0.05, p < 0.10, respectively.