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Marital Quality and Psychological Adjustment to Widowhood Among Older Adults: A Longitudinal Analysis

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Objectives. This study examined whether psychological adjustment to widowhood is affected by three aspects of marital quality—warmth, conflict, and instrumental dependence—assessed prior to the loss.

Methods. The Changing Lives of Older Couples (CLOC) is a prospective study of a two-stage area probability sample of 1,532 married individuals aged 65 and older. The CLOC includes baseline data on marital quality and mental health and data on grief, anxiety, and depression collected 6, 18, and 48 months after spousal loss.

Results. Widowhood was associated with elevated anxiety among those who were highly dependent on their spouses and lower levels of anxiety among those who were not dependent on their spouses. Levels of yearning were lower for widowed persons whose relationships were conflicted at baseline and higher for those reporting high levels of marital closeness and dependence on their spouses. Women who relied on their husbands for instrumental support had significantly higher levels of yearning than men who depended on their wives.

Discussion. The findings contradict the widespread belief that grief is more severe if the marriage was conflicted and suggest a more complex relationship between bereavement and characteristics of the marriage.

WIDOWHOOD is characterized as one of the most distressing of all life events (Holmes & Rahe, 1967). Because the modern nuclear family is expected to be socially and economically autonomous, spouses may have few alternative sources of social, emotional, or instrumental support (Lopata, 1973; Volkart & Michael, 1957). Consequently, when a spouse dies, the survivor must not only adjust to the loss of a close relationship, but also manage the daily decisions and responsibilities that were once shared by both spouses (Carey, 1979–80; Wortman, Kessler, & Umberson, 1992). In this study we examined whether psychological adjustment to widowhood is affected by three dimensions of the marital relationship (warmth–closeness, conflict, and instrumental dependence, assessed at baseline) in a representative community sample of widows and matched controls. Using data from the Changing Lives of Older Couples (CLOC) survey, we addressed three questions: (a) Does the effect of widowhood on depression and anxiety differ as a function of the quality of the marriage? (b) How does marital quality before spousal death influence grief? and (c) Do the effects observed under (a) and (b) vary by gender?

Theoretical Issues

Despite widespread belief that widowhood is the most stressful of all life events (Holmes & Rahe, 1967), most studies concur that only 15–30% experience clinically significant depression in the year following their spouse's death (Jacobs, Hansen, Berkman, Kasl, & Ostfeld, 1989; Lund et al., 1985–86; Stroebe, Stroebe, & Hanson, 1993; Wortman & Silver, 1989; Zisook & Schucter, 1991). Three explanations are generally offered for the inconsistent link between widowhood and adjustment. First, the mental health effects of widowhood attenuate over time, and studies that focus on relatively long time horizons may underestimate the short-term emotional consequences (Bruce, Kim, Leaf, & Jacobs, 1990; Ferraro, 1984; Futterman, Gallagher, Thompson, Lovett, & Gilewski, 1990; Lund, Caserta, Dimond, & Shapper, 1989; Mendes de Leon, Kasl, & Jacobs, 1994). Second, different aspects of mental health may follow different trajectories (Jacobs et al., 1987–88, p. 48), and analyses that focus only on a broad grief scale or a global measure of mental health, such as depression, may mask patterns among more specific symptoms such as anxiety (Prigerson et al., 1996; Zisook, Schucter, & Lyons, 1987) or yearning, a preoccupation with and pining for the deceased (Archer, 1999, p. 24; Bowlby, 1980). To address these concerns, we focused on three indicators of psychological well being: depression, anxiety, and yearning, assessed 6 months after the loss.

A third explanation for the relatively weak relationship between widowhood and psychological adjustment is that emotional responses to loss vary widely on the basis of personal resources, contextual factors, and personality. Personal resources such as education (Lopata, 1975), income (Arens, 1982), good health (Norris & Murrell, 1987), and social sup-

port (Krause, 1986; Lepore, Silver, Wortman, & Wayment, 1996; Norris & Murrell, 1990) may protect against severe depression, anxiety, or grief. Contextual factors, such as the type or duration of illness experienced by spouse prior to death, may also account for variation in widowed adults' psychological adjustment (George & Gwyther, 1984; Norris & Murrell, 1987; Parkes & Weiss, 1983; Vachon et al., 1982). Personality factors, such as an insecure attachment style or a tendency to ruminate, also may make some particularly vulnerable to grief (Fraley & Shaver, 1999; Nolen-Hoeksema, Parker, & Larson, 1994; Van Doorn, Kasl, Beery, Jacobs, & Priegerson, 1998).

A fourth factor—the quality and nature of one's marriage—also may influence psychological reactions to widowhood. The loss of marriages providing the highest levels of warmth and support may be most distressing to survivors. The link between relationship closeness and grief is a central theme of attachment theory (Bowlby, 1980). Attachment theory holds that when a close emotional bond is severed—whether through death or separation—the grief process follows (Bowlby, 1980). The grief process may involve feelings of sorrow or sadness and anxiety, as well as yearning for the deceased (Parkes, 1985).

Bowlby's (1980) formulation of the grief process has two important implications for the study of adjustment to widowhood. First, the model suggests that all losses should not be equally distressing; the dissolution of emotionally and socially significant ties may elicit the strongest psychological reactions. A second implication of attachment theory is that individuals display a series of diverse reactions to loss, including depression, anxiety (or "active distress"), or yearning for the deceased—an emotional reaction unique to loss. We examined whether three emotional responses to spousal death (depression, anxiety, and yearning) were influenced by three aspects of the marital relationship (closeness, conflict, and instrumental dependence).

Marital Quality and Bereavement

The proposition that relationship quality is linked to different grief reactions can be traced back to psychoanalytic theory. Psychoanalytic theories of grief hold that the loss of a conflicted relationship is associated with prolonged or "pathological" grief (Abraham, 1924/1927; Freud, 1917/1959). Survivors who had ambivalent or difficult relationships with their spouses are believed to have both anger toward and a strong attachment to the deceased. These conflicting feelings make it difficult for survivors to let go of their lost loved one, yet survivors simultaneously are angry at the deceased for abandoning them (Freud, 1917/1959). This argument is supported by Parkes and Weiss (1983), who obtained retrospective assessments of marital quality among a sample of bereaved adults. Widowed persons who reported high levels of marital conflict showed relatively little distress and higher levels of social participation 6 weeks after their spouse's death. Yet by 13 months after the death, those reporting highly conflicted marriages were significantly less likely to have returned to effective functioning and after 24–48 months had higher levels of anxiety, guilt, and depression than did the low-conflict group.

An important methodological issue weakens the conclusion of Parkes and Weiss (1983), however. Retrospective assessments of marital relationships were obtained after the spouse died and thus may be biased positively (Futterman et al., 1990) or negatively (Hirschfield et al., 1989). Widowed persons often display a bias toward selective positive recall when describing their deceased spouses and may "purify" the memory of the deceased (Lopata, 1973; Parkes & Weiss, 1983). Conversely, those who are most depressed after the loss may offer the most negative retrospective accounts of their marriages (Bonanno, Notarius, Gunzerath, Keltner, & Horowitz, 1998). Depressed individuals evaluate themselves and their relationships more negatively than do nondepressed persons (Abramson, Seligman, & Teasdale, 1978; Beck, 1967; Hirschfield et al., 1989) and are more likely to recall negative information about past experiences (Teasdale, Taylor, & Fogarty, 1980).

An important longitudinal study of life transitions poses an alternative to the psychoanalytic theory of prolonged grief: Wheaton (1990) countered that exiting a stressful role may enhance well-being. Although traditional theories of stress posit that all life transitions (such as spousal deaths or job losses) are stressful (Holmes & Rahe, 1967), Wheaton (1990) argued that the impact of an event varies according to the context in which the transition occurs. Specifically, in Wheaton's (1990) analysis, bereaved spouses who reported marital problems at a baseline interview went on to experience significantly lower levels of distress at follow-up, compared with those reporting fewer marital problems. We have built upon the work of Wheaton (1990) in two ways; we had a larger sample of widowed adults and considered three distinct aspects of the marital relationship: closeness, conflict, and instrumental dependence (i.e., reliance on one's spouse for performing daily tasks). Although the loss of warm, nonconflictual relationships may be linked to elevated grief and depression, the loss of a marriage providing high levels of instrumental support may be linked to elevated anxiety among widowed persons. If families are arranged so that one's spouse is the primary—or only—helpmate, then the loss of this source of instrumental support may be distressing (Lopata, 1973; Volkart & Michael, 1957). Drawing from the research and theory discussed thus far, we proposed the following hypothesis regarding the mental health of widowed persons and matched controls:

> H1: The effect of widowhood on both depression and anxiety will increase as levels of marital warmth and instrumental dependence increase and will decrease as levels of marital conflict increase. That is, the psychological toll of widowhood will be most severe for those who experienced low levels of conflict, high levels of warmth, and high levels of instrumental dependence in their marriages at baseline.

We posited the following hypothesis regarding variation in yearning, a core component of grief, among a sample of widowed persons only:

> H2: Yearning (at 6-month follow-up) will be negatively associated with conflict and positively associated with warmth–closeness and instrumental dependence (at baseline).

We also explored whether these patterns differ for husbands and wives. The protective effects of marriage are stronger for men than for women (see Waite, 1995, for a review). Wives are more likely than husbands to have alternate sources of emotional and social support (Antonucci, 1990; Bock & Webber, 1972; Fischer & Phillips, 1982; Powers & Bultena, 1976; Stroebe & Stroebe, 1983; Stroebe, Stroebe, & Schut 1997). Women also provide more emotional support to their spouses than do men (Gove, 1973; Lee, 1988). Men who are in particularly warm and loving relationships may be more inclined to depend exclusively on their spouses for support, whereas men in conflicted relationships may be forced to seek other sources of emotional intimacy and social support. Thus, high levels of closeness and low levels of conflict may be stronger predictors of poor adjustment among widowers than among widows.

Instrumental dependence might also have different effects on widows' and widowers' adjustment. In current cohorts of older adults, men receive substantially more instrumental advantages from marriage than do women, generally in the form of household tasks (Hartman, 1981; Miller & Garrison, 1982). After his wife dies, a widower may be particularly ill equipped to handle the daily tasks of maintaining a household (Berardo, 1970). Yet widowers also have two distinct advantages not typically available to widows: greater economic resources and a larger pool of potential spousal replacements (Lopata, 1973). Over the life course, men earn substantially more than women and thus may have the resources to purchase homemaking services (see Bianchi, 1995, for a review). Moreover, because of men's mortality disadvantage, women aged 65 and older outnumber men aged 65 and older by roughly 1.5 to 1 (U.S. Bureau of the Census, 1996). Widowers may easily find companions to assist with the household tasks previously performed by their wives (Bengston, Rosenthal, & Burton, 1990). Thus, we hypothesized that:

H3: Marital warmth–closeness will be a stronger positive predictor of yearning, anxiety, and depression among men (relative to women).

H4: Conflict will be a stronger negative predictor of yearning, anxiety, and depression among men (relative to women).

H5A: Instrumental dependence for male-typed tasks will be a stronger positive predictor of yearning, anxiety, and depression among women (relative to men).

H5B: Instrumental dependence for female-typed tasks will be a stronger positive predictor of yearning, anxiety, and depression among men (relative to women).

Other Influences on Marital Quality and Adjustment to Spousal Loss

Our analysis included indicators of three other potential influences on bereavement. First, we controlled mental health prior to loss to help distinguish one's affective state before the death and change in affective state that occurred following the death (Jacobs, 1993; Zisook & Schucter, 1991). Although most studies have examined prior depression as the sole indicator of prior mental health, we also considered anxiety at baseline. Second, the extent to which a presumed stressor, such as widowhood, affects the individual is linked to his or her other resources and vulnerabilities. Consequently, we included controls for socioeconomic status (education, income, and home ownership) at baseline. Finally, we controlled both spouse's and respondent's physical health at baseline, because physical health may influence marital quality at baseline and mental health at 6-month follow-up (Booth & Johnson, 1994; Wickrama, Lorenz, & Conger, 1997).

METHODS

Sample

The Changing Lives of Older Couples (CLOC) study is a prospective study of a two-stage area probability sample of 1,532 married individuals from the Detroit Standard Metropolitan Statistical Area (SMSA). To be eligible for the study, respondents had to be English-speaking members of a married couple in which the husband was aged 65 or older. All sample members were not institutionalized and were capable of participating in a 2-hour interview. Approximately 65% of those contacted for an interview participated, which is consistent with the response rate from other Detroit area studies. Baseline face-to-face interviews were conducted from June 1987 through April 1988.

CLOC researchers monitored spousal loss by reading the daily obituaries in three Detroit-area newspapers and by using monthly death record tapes provided by the State of Michigan. The National Death Index (NDI) was used to confirm deaths and obtain causes of death. Of the 319 respondents who lost a spouse during the study, 86% (n = 276) participated in at least one of the three follow-up interviews, which were conducted 6 months (Wave 1), 18 months (Wave 2), and 48 months (Wave 3) after the death. The primary reasons for nonresponse were refusal to participate (38%) and ill health or death at follow-up (42%). Controls from the original sample of 1,545 were selected to match the widowed persons along the dimensions of age, race, and sex. The matched controls were reinterviewed at the three follow-up interviews at roughly the same time as their corresponding widowed persons.

We used two analytic samples in this study. The first included 290 persons (75 men and 215 women) who were interviewed at the 6-month follow-up and comprised 203 widowed persons and 87 matched controls. (Controls were not available for all bereaved subjects at the 6-month follow-up because funding for the control sample was cut from the proposed budget and was reinstated halfway through the data collection for the 6-month follow-up). The second sample included the 203 bereaved persons (53 men and 150 women) interviewed at the 6-month followup, or roughly 64% of the 319 respondents who lost a spouse.

Measures

Dependent variables.—In the first part of the analysis, which contrasted the widowed and matched controls, we focused on two dimensions of mental health at the 6-month

follow-up: depression and anxiety. Depression (α = .83) was assessed with a subset of 9 negative items from the 20-item Center for Epidemiologic Studies Depression (CES-D) scale (Radloff, 1977). Respondents were asked to indicate how often they experienced each of nine symptoms in the week prior to interview. Response categories were "hardly ever," "some of the time," or "most of the time." The nine symptoms were (a) "I felt depressed"; (b) "I felt that everything I did was an effort"; (c) "My sleep was restless"; (d) "I felt lonely"; (e) "People were unfriendly"; (f) "I did not feel like eating. My appetite was poor"; (g) "I felt sad"; (h) "I felt that people disliked me"; and (i) "I could not 'get going.'"

Anxiety (α = .86) was assessed with 10 items from the Symptom Checklist 90 Revised (Derogatis & Cleary, 1977). Respondents were asked to indicate how often they experienced each of 10 symptoms in the week prior to interview. Response categories were "not at all," "a little bit," "moderately," "quite a bit," and "extremely." Symptoms included (a) "nervousness or shakiness"; (b) "trembling"; (c) "feeling suddenly scared for no reason"; (d) "feeling fearful"; (e) "heart pounding or racing"; (f) "feeling tense and keyed up"; (g) "spells of terror and panic"; (h) "feeling so restless you couldn't sit still"; (i) "feeling that something bad is going to happen to you"; and (j) "thoughts and images of a frightening nature." For ease of interpretation, depression and anxiety scores were standardized and thus had a mean of 0 and a standard deviation of 1.

In the second part of the analysis we focused on widowed persons only and examined the correlates of yearning, considered a "core" symptom of grief (Bowlby, 1980; Parkes, 1985). Attachment theory holds that the essential dimension of grief that distinguishes bereavement from other forms of emotional distress is the act of pining for the lost person. Yearning reflects an intermittent, recurrent, and obtrusive wish or need to recover the person who has died. Yearning (α = .75) was assessed with four questions: "In the last month (a) have you found yourself longing to have your spouse with you; (b) have you had painful waves of missing your spouse; (c) have you experienced feelings of intense pain or grief over the loss of your spouse; and (d) have you experienced feelings of grief, loneliness, or missing your spouse?" Response categories were "no, never"; "yes, but rarely"; "yes, sometimes"; and "yes, often." Items were drawn from widely used grief scales including the Bereavement Index (Jacobs, Kasl, & Ostfeld, 1986), Present Feelings About Loss (Singh & Raphael, 1981), and Texas Revised Inventory of Grief (Zisook, DeVaul, & Click, 1982).

Independent variables.—Widowhood was a dummy variable set equal to 1 indicating those who were widowed between the baseline interview and the 6-month follow-up. Three dimensions of the marital relationship were considered: warmth–closeness, instrumental dependence (for both male- and female-typed tasks), and conflict. These three dimensions were chosen because they capture two of the most important functions of marriage for older adults: intimacy and interdependence (Atchley, 1985). A fourth dimension, emotional dependence, was considered, but it was not significantly related to psychological adjustment in the multivariate analysis and was thus dropped from the study.

Questions assessing each of the marital domains were drawn from a modified version of the Dyadic Adjustment Scale (Spanier, 1976). Respondents were asked to assess the frequency with which they experienced a given condition (response categories were "almost always," "often," sometimes," "rarely," and "never") or how true a given statement was in characterizing their marital relationship (response categories were "very true," "somewhat true," "a little true," and "not at all true"). Total scores equalled the scale-specific average (standardized) across items. Italicized items (see next paragraph) were reverse-coded.

Warmth–closeness (α = .88) was assessed with a seven-item scale with the following questions: (a) "How much does your spouse make you feel loved and cared for"; (b) "How much is your spouse willing to listen when you need to talk about your worries and problems?"; (c) *"There are some serious difficulties in our marriage"*; (d) "Thinking about your marriage as a whole, how often do you feel happy about it?"; (e) "Taking all things together, how satisfied are you with your marriage?"; (f) *"How often do you feel bothered or upset by your marriage?"*; (g) *"My spouse doesn't treat me as well as I deserve to be treated."*

Conflict (alpha = .64) was assessed with a two-item scale comprising the items (a) "How often would you say you and your spouse typically have unpleasant disagreements and conflicts?" and (b) "In some marriages there are times when you feel very close, but other times when you can get more upset with that person than with anyone else. How much does this sound like the relationship you have with your spouse?"

Instrumental dependence was measured with the following questions. "Husbands and wives often depend on one another to handle different responsibilities. At the present time, how much do you depend on your spouse to handle or help with: (a) home maintenance and minor repairs; (b) keeping up with checking and savings accounts and paying bills; (c) making major financial and legal decisions; and (d) preparing meals and doing general housework and laundry." Response categories were "a lot," "some," "a little," and "not at all." Factor analyses yielded one three-item subscale (α = .54), which tapped male-typed tasks (Items 1–3), and a single-item measure that tapped female-typed tasks (Item 4).

Confounding factors.—Spousal health at baseline was assessed with the question "Has your [spouse] had a serious illness, injury, surgery, or accident in the past 12 months?" Depression and anxiety at baseline were measured exactly the same way as the 6-month follow-up measures (Derogatis & Cleary, 1977; Radloff, 1977). Respondents' physical health at baseline was assessed with the question "How satisfied are you with your health?" Responses were "completely satisfied," "very satisfied," "somewhat satisfied," "not very satisfied," and "not at all satisfied." A dummy variable was set equal to 1 for those who said they were "not very satisfied" or "not at all satisfied" with their health.

Other potential predictors of psychological adjustment to loss, including race, marital duration, social support from friends, social support from relatives, religiosity, self-esteem, and provision of care to spouse prior to death, were included in preliminary analyses but were dropped because they were

not significant predictors of the psychological adjustment ($p \leq .05$) and because inclusion of these variables did not alter the effects of marital quality on psychological adjustment.

Control variables.—Control variables included: age, sex (where 1 = "female"), home ownership at baseline (a dichotomous variable where 1 = "owns home"), total household income at baseline (natural log of income), and education (a continuous measure ranging from 3 to 17 years of completed schooling). The total household income variable was originally measured by asking respondents to indicate which of 10 income categories most accurately characterized their economic status. A continuous measure of income was derived by taking the midpoint of each of the 10 income categories. The natural log of income was used in this analysis because the respondents' income distribution was heavily skewed toward the lower income categories.

RESULTS

Sample Characteristics

Descriptive statistics and *t* tests comparing means for the widowed and matched controls are presented in Table 1. Zero-order correlations among the dependent variables, marital quality indicators, and baseline mental health measures are displayed in Table 2. Table 1 shows that widowed persons had significantly higher depression levels at the 6-month follow-up, yet they did not differ from matched controls in terms of anxiety. The spouses of widowed persons were significantly more likely to have had a serious illness at baseline, and widowed persons reported significantly lower levels of dependence on their spouses for male- and female-typed instrumental tasks at baseline. Widowed persons and controls did not differ significantly in terms of marital warmth or conflict. The widowed also had slightly lower incomes and were less likely to own their own homes. These differences likely reflect effects of the spouse's declining health before death.

The zero-order correlations displayed in Table 2 were largely as expected. Depression and anxiety were positively and significantly correlated, although this relationship was stronger at the 6-month follow-up (.626) than at baseline (.477). Among the marital quality indicators, conflict and warmth were strongly and negatively correlated (−.587), although conflict was not significantly related to instrumental dependence. Baseline depression and anxiety were significantly correlated with only two dimensions of baseline marital quality: warmth and conflict. Yearning at the 6-month follow-up was significantly correlated with concurrent depression (.492) and anxiety (.238), yet these values suggest that the three dimensions of mental health are conceptually and statistically distinct.

Table 1. Means and Standard Deviations for Widows and Matched Controls, Changing Lives of Older Couples Study, 1987–1993

	Widows (n = 203)		Controls (n = 87)	
Measures	*M* or %	*SD*	*M* or %	*SD*
Dependent Variables				
Depression, 6-month follow-up	0.408	1.22	−.143	0.985***
Anxiety, 6-month follow-up	0.048	1.02	−.113	0.958
Yearning, 6-month follow-up	2.83	0.82		
Independent Variables				
Marital quality indicators				
Warmth–closeness, baseline	−0.025	0.806	0.084	0.667
Conflict, baseline	−0.087	1.04	−0.139	0.913
Instrumental dependence, male-typed tasks, baseline	−0.139	0.71	0.314	0.654***
Instrumental dependence, female-typed tasks, baseline	−.134	0.969	0.315	1.04***
Baseline well being				
Depression, baseline	0.049	0.963	−.017	1.1
Anxiety, baseline	0.055	1.00	−.129	0.971
Poor health, baseline	0.148	0.356	0.12	0.327
Spouse had serious illness, baseline	0.440	0.498	0.238	0.428***
Demographic characteristics				
Sex (1 = female)	0.735	0.442	0.754	0.433
Race (1 = non-White)	0.16	0.367	0.139	0.348
Age	73.59	6.88	74	6.18
Years of education	11.18	2.90	11.68	2.79
Own home, baseline	0.914	0.281	0.967	0.179+
Income, baseline	20,721	16,395	23,303	16,920
Income (natural log), baseline	1.31	0.514	1.43	0.463*

Notes: *t* tests were used to assess significant differences between means. *N*s are weighted. Standardized variables have a mean of 0 and a standard deviation of 1. Standardized values presented for ease of interpretation.

+$p \leq .10$; *$p \leq .05$; **$p \leq .01$; ***$p \leq .001$.

Influence of Marital Quality on Mental Health of the Widowed and Nonwidowed

Our main objective in this analysis was to explore whether the mental health consequences of widowhood (i.e., depression and anxiety at a 6-month follow-up) were related to marital quality, assessed at baseline. Table 3 presents ordinary least squares (OLS) regression models for the total sample (i.e., both widows and matched controls). Model 1 showed the effect of widowhood on depression, and Model 2 estimated the effect of widowhood on anxiety, before controlling marital quality. Models 1 and 2 revealed that widowhood was associated with poorer psychological well being (net of demographic and contextual factors). Before marital quality was controlled, widowhood was associated with a .729 standard deviation increase in depression and a .116 standard deviation increase in anxiety scores. The effect of widowhood on depression did not change appreciably after marital quality variables were added to the model as moderators. However, the effect of widowhood on anxiety was no longer significant when instrumental dependence was incorporated into the analysis, suggesting that the anxiety may be due to the loss of practical assistance with daily demands.

We then expanded each model to include two-way interactions between widowhood status and each of the marital quality indicators. A significant interaction term suggests that the consequences of widowhood vary on the basis of

Table 2. Zero-Order Correlations Among Dependent Variables, Marital Quality, and Baseline Anxiety and Depression, Changing Lives of Older Couples (CLOC) Study, 1987–1993

	Depression, Baseline	Anxiety, Baseline	Yearning, Wave 1	Depression, Wave 1	Anxiety, Wave 1	Warmth, Baseline	Conflict, Baseline	Instrumental Dependence, Male-typed Task, Baseline	Instrumental Dependence, Female-typed Task, Baseline
Depression, baseline	1.00								
Anxiety, baseline	.477**	1.00							
Yearning, Wave 1	0.08	.140*	1.00						
Depression, Wave 1	.323**	.168**	.492**	1.00					
Anxiety, Wave 1	.340**	.205**	.238**	.626**	1.00				
Warmth, baseline	−.394**	−.191**	.209**	−.085	−.189**	1.00			
Conflict, baseline	.127*	.164**	−.158*	0.04	.151*	−.587**	1.00		
Instrumental dependence, male-typed tasks, baseline	−.120	0.034	.182*	−.033	−.066	−.177**	0.029	1.00	
Instrumental dependence, female-typed tasks, baseline	0.113	0.01	0.11	−.049	0.006	.185*	−.013	.258**	1.00

Note: Asterisks signify the *p* value for the significance level of a *t* test (two tailed). Sample size is 290 widows and controls of CLOC data set; yearning only is limited to 203 widowed persons.

*$p < .05$; **$p < .01$.

marital quality. Of the eight two-way interaction terms, only one was statistically significant at the $p \leq .05$ level: Instrumental dependence for male-typed tasks moderated the effect of widowhood on anxiety (see Model 3). We added a three-way interaction term to Model 3 to assess whether the widowhood status by instrumental dependence effect differed for men and women; the three-way interaction was not statistically significant at the $p \leq .05$ level. The statistically significant interaction effect (net of independent variables presented in Table 3, with all independent variables set equal to sample mean) is plotted in Figure 1.

Model 3 and Figure 1 show that widowhood was associated with higher levels of anxiety among those who reported average or higher levels of dependence on their spouse for performing male-typed instrumental tasks. Widowhood was actually associated with slightly lower levels of anxiety (compared with controls) among those who had low levels of dependence on their spouse at baseline.

Table 3. Ordinary Least Squares Regression Predicting Effect of Widowhood and Marital Quality on Depression and Anxiety at 6-Month Follow-Up, Changing Lives of Older Couples Study, 1987–1993

	Depression	Anxiety	
	Model 1	Model 2	Model 3
Widowhood			
Marital quality indicators	.729***	.116*	0.061
Instrumental dependence, male-typed tasks, baseline			−.133*
Instrumental dependence, male-typed tasks, widows			.148*
Instrumental dependence, female-typed tasks, baseline			−.018
Instrumental dependence, female-typed tasks, widows			0.049
Baseline well being			
Depression, baseline	.344***	.102***	.102***
Anxiety, baseline	−.015	0.017	0.023
Poor health, baseline	0.153	.188**	.196**
Spouse had serious illness, baseline	.241+	0.004	0.001
Demographic characteristics			
Sex (1 = female)	0.057	−.034	−.015
Age	0.012	−.005	−.004
Years of education	0.006	0.011	0.009
Own home, baseline	0.392	.154+	.138+
Income (natural log), baseline	−.111	−.022	−.021
Constant	−2.02	1.17	1.25
Adjusted R^2	0.152	0.142	0.152
n	290	290	290

+$p \leq .10$; *$p \leq .05$; **$p \leq .01$; ***$p \leq .001$.

Influence of Marital Quality on Bereavement

Next, we assessed whether yearning for one's spouse (at the 6-month follow-up) was affected by the quality of one's marriage, assessed at baseline. Table 4 presents OLS regression models estimating the effects of marital quality on widowed persons' yearning. Model 1 was the baseline model, which included demographic, health, and control variables

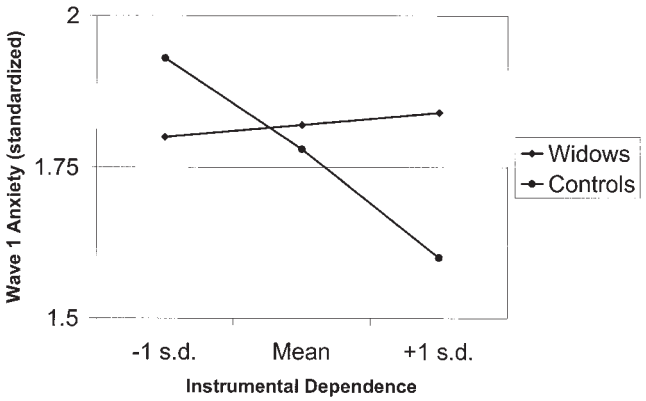

Figure 1. Anxiety (Wave 1) among widows and controls by instrumental dependence for male-typed tasks. Note: All other independent variables controlled.

Table 4. Ordinary Least Squares Regression Predicting Effect of Marital Quality on Widows' Yearning at 6-Month Follow-Up, Changing Lives of Older Couples Study, 1987–1993

	Model 1	Model 2	Model 3	Model 4	Model 5
Marital quality indicators					
Warmth–closeness, baseline		.281***			.163^{+}
Conflict, baseline			−.169**		−.115^{+}
Instrumental dependence, male-typed tasks, baseline				.270**	.251**
Instrumental dependence, female-typed tasks, baseline				0.015	0.026
Baseline well being					
Depression, baseline	0.03	0.096	0.028	0.063	0.099
Anxiety, baseline	0.105	.119^{+}	.157*	0.092	.136*
Poor health, baseline	0.069	0.133	0.119	0.125	0.191
Spouse had serious illness, baseline	0.003	0.018	−.008	0.106	0.103
Demographic characteristics					
Sex (1 = female)	−.135	−.107	−.162	−.250	−.233
Age	0.012	0.004	0.004	0.013	0.003
Years of education	−.003	−.008	−.012	−.005	−.014
Own home, baseline	.359^{+}	.426*	.359^{+}	0.291	.332**
Income (natural log), baseline	0.197	0.152	.197^{+}	.190^{+}	0.167
Constant	1.51	2.21	2.16	1.56	2.33
Adjusted R^2	0.025	0.082	0.059	0.064	0.116
n	203	203	203	203	203

$^{+}p \leq .10$; $*p \leq .05$; $**p \leq .01$; $***p \leq .001$.

but no marital quality indicators. Model 2 incorporated marital warmth–closeness; Model 3 adjusted for marital conflict; Model 4 assessed the influence of instrumental dependence, and Model 5 included the baseline model plus all marital quality indicators. Marital quality played an important role in explaining variability in widowed persons' yearning. Although Model 1 accounted for only 3% of the variance in yearning, the inclusion of individual marital quality items increased the adjusted R^2 to anywhere from 6 to 8%, depending on the specific marital domain. The final model, which included the three measures of marital quality, explained 12% of the variance in yearning.

As hypothesized, adjustment to widowhood was most difficult for those who experienced the highest levels of emotional warmth and instrumental dependence in their marriages. Each standard deviation increase in warmth–closeness was associated with a .28 standard deviation increase in levels of widowed persons' yearning ($p \leq .001$). Those who suffered conflicted marriages evidenced lower levels of yearning; each standard deviation increase in the level of conflict in one's marriage decreased yearning levels by .17 standard deviation units ($p \leq .01$). To assess the claim that the loss of a conflicted relationship is associated with delayed grief (Freud, 1917/1959), we also estimated Model 3 for yearning at Wave 2 (18-month follow-up) and Wave 3 (48-month follow-up). In these additional models (data not shown), the effects of baseline marital conflict on Wave 2 and Wave 3 yearning were virtually identical to the effects found for Wave 1 yearning, suggesting that those in conflicted marriages did not experience delayed yearning; rather, they experienced better adjustment in both the long and the short term following widowhood.

Interestingly, dependence on one's spouse for performing male-typed tasks increased yearning significantly (β = .270, $p \leq .01$), yet reliance on one's spouse for performing female-typed tasks was not significantly linked to yearning. However, as might be expected, this pattern varied by gender. Model 4 was expanded to include interaction terms for both types of instrumental dependence by sex; the model adjusted R^2 increased from .064 to .089, and results showed that dependence on one's spouse for performing male-typed tasks influenced yearning differently for men and women. Each standard deviation increase in instrumental dependence for male-typed tasks was associated with a .214 decrease in men's yearning but a .385 increase in women's yearning. The interaction term (net of all other independent variables, with values of all independent variables set equal to sample mean) is plotted in Figure 2. None of the other marital quality indicators interacted significantly with sex.

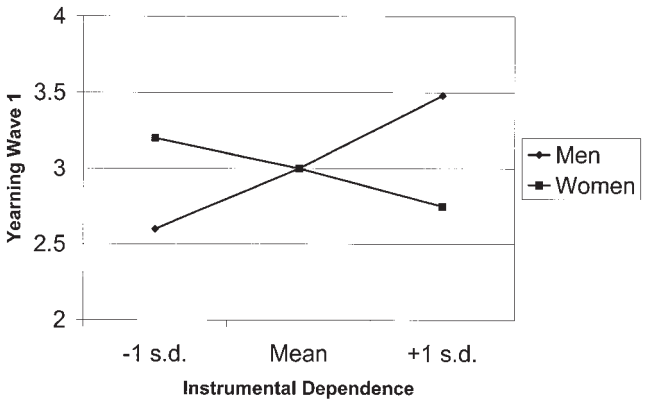

Figure 2. Yearning (Wave 1) by gender and instrumental dependence for male-typed tasks. Note: All other independent variables controlled.

We estimated a final model (Model 5) to assess the effects of the four marital quality indicators simultaneously. Although the coefficients and levels of statistical significance declined somewhat when all four marital quality indicators were controlled, the results nonetheless revealed important linkages between marital quality and yearning. The effects of warmth and conflict each declined by 40 and 30%, respectively, whereas the effect of dependence on spouse for male-typed tasks decreased by 8%. However, given the relatively small sample size ($n = 203$) and a strong correlation between warmth and conflict ($r = -.587$; see Table 2), it is notable that the instrumental dependence (for male-typed tasks) indicator was still significant at the $p \leq .01$ level, and the warmth and conflict indicators approached statistical significance ($p \leq .10$). The strength of these findings is noteworthy, given that potential sources of marital conflict and closeness, including spousal health, socioeconomic indicators, and baseline indicators of negative affect (i.e., anxiety and depression levels), were controlled.

Few other variables were significant predictors of yearning. Anxiety at baseline was associated with elevated levels of yearning at the 6-month follow-up, although baseline depression was unrelated to Wave 1 yearning. Interestingly, greater economic resources at baseline were positively associated with yearning. Those who owned their own home at baseline had significantly higher levels of yearning. Perhaps those who did not own a home experienced greater levels of social integration with neighbors in an apartment complex or retirement community. It is unlikely that homeowners at baseline experienced the loss of their home or relocation following their spouse's death; only 5% of homeowners at baseline were no longer homeowners at Wave 1. Moreover, household income at baseline was positively associated with yearning. This finding is surprising given the vast amount of research documenting an inverse relationship between socioeconomic status and diverse indicators of negative mental health (Dohrenwend, Levav, & Shrout, 1992). It is possible that those with the lowest income at baseline experienced the smallest relative declines in their standard of living following the loss of their spouse (see Holden & Smock, 1991, for a review), and thus may not have had to cope with the combined loss of both spouse and economic status simultaneously.

Discussion

In this study we expanded upon prior research in four ways. First, we used prospective data to examine the effects of marital quality (at baseline) on mental health at a 6-month follow-up; thus, assessments of marital quality were not affected by positive (Futterman et al., 1990; Lopata, 1975) or negative (Abramson et al., 1978; Hirschfield et al., 1989) recall bias. Second, we considered three conceptually and statistically distinct aspects of the marital relationship: closeness, conflict, and instrumental dependence. Third, we focused on both men and women and assessed whether the link between marital quality and psychological adjustment differed significantly for the two sexes. Finally, we included widowed persons and a control group to address an important issue previously neglected in studies of widowhood: Does the effect of widowhood on psychological adjustment vary on the basis of the nature of the marital relationship?

We found that widowhood is a significant predictor of depression and that this large and significant effect does not decline when marital quality indicators are incorporated into the analysis. In contrast, the effect of widowhood on anxiety is no longer statistically significant when levels of instrumental dependence are considered. This finding highlights the importance of considering the unique pathways through which loss influences both "passive depression" and "active distress." Although the loss of one's partner, regardless of relationship quality, may be associated with elevated sadness and depression, anxiety may instead be a reaction to the loss of a partner when accompanied by major changes in daily responsibilities and burdens.

Our analyses showed that the effect of widowhood on anxiety levels varies by how much one depended on one's spouse for performing male-typed tasks, such as home repair and financial management. Compared with the married controls, widowed persons who reported high levels of dependence on their spouse had significantly higher levels of anxiety at follow-up. This is not surprising; those who were not dependent on their spouses presumably are better able to care for themselves and maintain their households successfully following the loss of their spouse. In contrast, among married controls, lack of dependence on one's spouse may signify an uncooperative marriage. Because spouse's health at baseline is controlled, low levels of dependence on one's spouse are not attributable to poor spousal health.

Yearning, considered a core component of grief, is significantly and strongly affected by marital quality. Consistent with attachment theory (Bowlby, 1980), our findings suggest that all losses are not equal; adjustment to widowhood is most difficult for those experiencing high levels of warmth and instrumental dependence and low levels of conflict in their marriages. Our findings support Wheaton's (1990) assertion that role histories must be considered when researchers are examining life transitions. Although classic studies of stressful life events implicitly assume that all life events can overtax individuals' coping resources and leave them emotionally vulnerable (Holmes & Rahe, 1967), our findings suggest that the impact of a stressor depends on the context surrounding the event.

Although studies of divorce demonstrate that those exiting troubled marriages are less susceptible to depression (Aseltine & Kessler, 1993; Kitson & Sussman, 1982), we know of no other prospective studies linking marital conflict to adjustment following widowhood. Moreover, preliminary analyses of the CLOC follow-up data reveal that this relationship holds when yearning is assessed at 18 and 48 months following the loss. Our findings do not support Freud's (1917/1959) claim that the loss of a conflicted relationship leads to delayed grief. However, our analyses did not focus on extreme levels of grief, nor on long-term horizons (beyond 4 years); further analyses are needed to understand linkages between marital conflict and delayed grief.

Although we expected to find that conflict and closeness would have larger effects on men's adjustment, given that marriage has greater protective effects for men (Waite, 1995), we instead found no significant gender difference.

We found support for our hypothesis that dependence on a spouse for male-typed tasks would be a stronger predictor of anxiety for women, although we did not find dependence on one's spouse for female-typed tasks to affect widows and widowers differently. In fact, dependence on one's spouse for performing homemaking tasks was not a significant predictor of yearning.

These findings tell an interesting story about gender, dependence, and socialization in current cohorts of older adults. Current cohorts of older widowers may not need the same amount of informal support as do widows, because of early socialization experiences (Stevens, 1995). The development of personal attributes such as independence and self-reliance may have been imbued in young men, but not young women, of the CLOC cohort. Future generations of older women, who have higher levels of education, more years of work experience, and more egalitarian divisions of labor in their families (Bianchi, 1995), may be less susceptible to dependence on their husbands for home repair and financial management tasks. Under such a scenario, gender differences in widows' and widowers' anxiety levels might be expected to decline among future cohorts of elderly.

Yet, at the same time, our findings suggest that adaptation to spousal loss may become more difficult in future cohorts. The members of the CLOC sample belong to a cohort who experienced relatively low levels of divorce and separation, given both the social stigma accompanying divorce and the dearth of opportunities for women to provide for themselves economically in earlier decades (Cherlin, 1981; Holden & Smock, 1991). Thus, men and women of this cohort may have remained in marriages that provided relatively low levels of warmth and relatively high levels of conflict. If current cohorts of married couples are more likely to dissolve dissatisfying marriages, then those who remain married until late life may have higher levels of marital satisfaction and thus may suffer more following the loss of these close relationships.

Future research on the linkages between marital quality and adjustment to loss should consider whether both spouses share similar assessments of the marriage at baseline and whether psychological adjustment to loss differs on the basis of whose report of the marriage is being considered. Preliminary analyses of the CLOC data reveal quite low correlations between respondents' and spouses' assessments of marital quality (most are less than .3), with the exception of marital conflict. Spouses' assessments of marital conflict are highly correlated (.473), and (the deceased) spouses' baseline reports of marital conflict are a significant negative predictor of their survivors' adjustment to loss. In contrast, survivors' psychological adjustment is not affected by their spouses' reports of dependence or warmth, suggesting that it is a person's own perceptions and feelings about his or her spouse that are related to bereavement.

Our findings are potentially important to the sociological study of life transitions. If all life transitions—especially highly anticipated ones such as widowhood in old age—are viewed as distressing (e.g., Holmes & Rahe, 1967), then rigid normative expectations for the expression of emotion may be imposed on the individual (Averill, 1968). Widowed persons' failure to comply with normative expressions of grief, such as yearning for a deceased spouse, are socially (and subtly) sanctioned: A denial of grief may "entail a rejection of the original assumption that the relationship was meaningful and close. The other alternative would be to consider the lack of response as a sign of actual or potential pathology" (Averill, 1968, p. 732). By considering one's role history prior to spousal death, variations in bereavement may be better understood.

Our findings also have important implications for practitioners. Our data help identify a population at particularly high risk for anxiety—wives who were highly dependent on their spouses for performing instrumental tasks. The provision of instrumental assistance and practical support with daily activities and chores may help to alleviate their anxiety. Our results further suggest that not all bereaved persons experience similar levels of depression, anxiety, and yearning following the loss of a spouse. To the contrary, psychological adjustment to widowhood varies considerably on the basis of the nature of one's marriage. Because the grief process varies in timing, intensity, and difficulty from one person to the next, what helps one person cope with grief may not be helpful to another. Thus, interventions should be tailored to the bereaved person's circumstances and needs.

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