

# The Role of Social Support and Positive Affect During Conjugal Bereavement

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Conjugal loss engenders a loss of connectedness that can lead to proliferated stress and the manifestation of depressive symptoms. However, these depressive symptoms and increased stress can be thwarted if one receives support from friends and family to compensate for the lost bond with one's spouse. In addition, social contact and supportive relationships help to generate positive emotions, which are thought to increase well-being. The aim of this study was to investigate the relationship between social support from family and friends and positive affect on daily depression and stress after conjugal loss. The results indicate that family support acts as a buffer against daily stress and depressive symptoms. Further, the results suggest that family support augments the experience of higher daily positive affect. It is noteworthy that the influence of positive affect on depression was evident primarily on days of elevated stress.

One of the most stressful life events that humans can experience is the death of a spouse (Amster & Krauss, 1974; Holmes & Rohe, 1987; Lang & Stein, 2001). Typically, the loss of a spouse is followed by a period of bereavement, which is defined as the emotional and physiological response to such loss (Summers, 1998). During this period, many bereaved spouses experience negative emotions, a decrease in health, and an increase in depressive symptoms (Marz, 1997; Kendig & Wells, 1997). Conjugal loss often produces deleterious effects such as stress, depressive and anxious symptomatology, panic, and increased mortality (Summers, 1998).

Though people take varying approaches to coping with these problems, studies show that across populations, the perceived amount of social support is an important factor in the coping process (Aldridge, 2003). A supportive relationship can activate adaptive coping strategies that initiate the process of remoralization, thereby resulting in an increased sense of hopefulness, well-being, and personal efficacy (Frank & Frank, 1991). Further, social support is essential in countering the bereaved individual's often-held belief that others are hostile to the bereaved person's continued symptoms and lack empathy. In general, social support and the opportunity to express one's grief help mitigate the negative outcomes of bereavement.

## *Types of Social Support*

Social support is a complex bi-directional construct

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referring to interpersonal dynamics between the identified individual and one or more family members or friends. Measurements for social support generally fall into two categories: functional social support (FSS) and structural social support (SSS) (Trunzo & Pinto, 2003; Wills, 1985). SSS focuses on the presence of social support (e.g., friend, family), whereas FSS focuses on the quality of support (e.g., feeling cared for and loved, expressing feelings, and discussing fears). This study investigates the relative influence of quantity of family and friends' support (ie. SSS) on daily stress and depressive symptoms.

## *The Influence of Social Support on Stress & Depression*

In general, social support is associated with superior mental and physical health and can moderate the negative consequences of exposure to stressful life events such as loss of spouse (Cohen & Wills, 1985; Major, Zubek, Cooper, Cozzarelli, & Richards, 1997). Social support and involvement in social activities promote well-being by acting as psychological buffers against stress, anxiety and depression (Mayo, 2003). According to Linville's buffering hypothesis, social support is important when one is exposed to life stress because it helps to reduce undesirable effects on health (Ystgaard, Tambs, & Dalgard, 1999). The theoretical underpinning for the buffering hypothesis is provided by the stress theory, which suggests that high levels of social support protect the individual against the deleterious impact of stress on emotional health (Stroebe, Stroebe, Abakoumkin, & Schut, 1996). Hence, social support has been found to act as a moderator between stress and related depressive symptoms (Chou & Chi, 2001).

Typically, individuals who have greater amounts of social support experience lower levels of depression and psychological distress (Geckova, Van Dijk, Stewart,

Groothoff, & Post, 2003). A paucity of family and friends after a stressful event can contribute to feelings of depression and undermine an individual's self esteem and self-efficacy (Ornish, 1999). Schraedley, Gotlib, and Hayward's (1999) study revealed that levels of depression were higher among individuals who had no one to talk after a stressful life event (e.g. death of a spouse, loss of a friend) compared to those who had a confidant.

Among researchers who study the effects of stressful life events, a dominant perspective is that deficits in social support increase risk for depression (Monroe, 1983; Stice, Ragan, & Randall, 2004; Windle, 1992). Murphy and colleagues (2000) found that social support and adaptive coping methods were associated with both lower levels of depression and positive affect. In Bertera's (2001) study, lack of social support was associated with negative emotions in participants.

### *Positive Affect and Depression*

Interaction with others is one important route to experiencing positive emotions (King, 2000). Social contact, especially close and supportive relationships with friends and family, helps generate positive emotions (Bertera, 2001; Fredrickson, 2000). Positive emotions help individuals mature, take positive action, solve problems, improve the quality of relationships, and increase emotional well-being (Sharma, 2001).

Durable social resources (e.g. family and friends) help build positive emotions during stressful life events (Fredrickson, 2001) and provide pathways out of traumas (Keltner & Haidt, 1999). For example, for a bereaved individual, positive emotions help develop meaning and lead to positive transformation (Keltner & Haidt, 1999). During bereavement, individuals with positive emotions tend to adapt more quick to loss, set new life goals, reconnect to survivors, and form new relationships (Sharma, 2001).

As noted earlier, after the occurrence of a traumatic event, individuals often experience an increase in depressive symptoms. Positive emotions are particularly suited for preventing and treating problems rooted in negative emotions, such as depression and stress-related health problems (Fredrickson, 2000). Over time, positive emotions decrease depressive-related symptoms and trigger upward spirals to increase well-being (Fredrickson, 2001). During bereavement, an increased number of positive emotions coincide with lower levels of depression (Keltner and Haidt, 1999) and attenuate both daily stress and depressive symptoms (Ong, Bergeman, & Bisconti, in press).

### *Overview of the research*

Previous research has found that social support and positive affect play strong roles in helping to determine, reduce, and alleviate stress and depression symptoms after a traumatic life event. However, there have been relatively

few studies that have examined the link between these variables and their effect on individual levels of depression and stress after conjugal loss. Thus, the purpose of this study was to investigate the relationship between social support and positive affect on daily depression and stress after conjugal loss. It was hypothesized that greater quantity of social support (i.e. family and friends) immediately following conjugal loss would be associated with higher daily positive affect and lower daily stress and depressive symptoms. It was predicted that the "undoing effects" of positive emotions on depressive symptoms would be evident primarily on days of elevated stress. It was also predicted that positive affect would be especially important to the well-being of widows low in quantity of social ties.

## Method

### *Participants*

Thirty-four elderly widows from the Northern Indiana/Southwestern Michigan area participated in the study. Participants ranged from 61 to 83 years of age (mean=71.9, SD=6.11). All participants were European American females. The majority of participants had at least a high school education (41.2%). Additionally, thirteen completed some vocational training or college courses (38.3%), four attained a college degree (11.8%), and two earned advanced degrees (5.8%). Most of the participants reported an income between \$15,000 and \$24,999 a year (46.2%). Five of the participants reported an income between \$7,500 to \$14,999 (19.2%), seven reported an income of \$25,000 to \$40,000 (26.9%), and two reported an income over \$40,000 (7.7%). The vast majority of participants indicated that they lived alone (91.2%), and three indicated that they lived with their children (8.8%).

### *Measures*

The questionnaire assessed several demographic characteristics: Gender, Marital Status, Date of Birth, Level of Education, Race/Ethnicity, Household Income, and Living Arrangements. Social Support was measured using a subscale of the Interview Schedule for Social Interaction (Henderson, Duncan-Jones, & Bryne, 1980). The subscale consists of sixteen items that measure two constructs: family support and friend support. An equal number of items assessed both types of support. Examples of the items are "How many people do you meet or talk to on the telephone in a typical week?" and "How many people can you share your innermost feelings with and confide in?" Participants used a static checklist to indicate their answers (e.g. nobody, 1-2, 3-5, 6-10, and 11 or more).

Perceived stress was assessed using the fourteen-item Perceived Stress Scale (Cohen, Kamarch, & Mermelstein, 1983). This scale is widely used in studies of both mental and physical health (Cohen, Doyle, & Skoner, 1999; Cohen, Tyrrell, & Smith, 1993; Ong, Bergeman, & Bisconti, in

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press). The Perceived Stress Scale was designed to assess the degree to which individuals appraise the situations in their lives as stressful and has a Cronbach's  $\alpha$  of .86. A sample item is, "In the last month, how often have you been upset because of something that happened unexpectedly?" Participants respond on a four-point scale (from 1, never to 4, always).

The measure used to assess daily positive emotions, anxiety, and depressive symptoms was the Mental Health Inventory (MHI; Veit & Ware, 1983). MHI is one of the most widely used mental health assessment inventories and is sensitive to intra-individual change (for reviews, see McHorney, Ware, Rogers, Anastasia, & Lu, 1992; Ong, Bergeman, & Bisconti, in press; Ware & Gandek, 1994). Participants were asked to indicate, on a four-point (from 1, not at all true to 4, completely true) scale, the extent to which they experienced positive emotions and depression/anxiety symptoms on a daily basis. Positive emotions were assessed using the eleven-item subscale of the MHI. A sample item is "Today I felt relaxed and free of tension." Anxiety and depressive symptoms were measured using the nine-item anxiety and four-item depression subscales of the MHI (Veit & Ware, 1983). Sample items include the following: anxiety—"Today, I felt lonely," and depression—"Today, I felt downhearted and blue."

### Procedure

Initially, 266 recently widowed women were identified from the obituary sections of Northern Indiana and surrounding areas newspapers. The criterion for participation in the study was having recently lost a spouse who was at least sixty years of age. Approximately seven days following the death of their spouses, the women were sent a letter describing the purpose of the study. After the letter was sent the women received a telephone call from the research interviewer. Of the 266 women, 217 responded. Seventy one widows expressed an interest in the study, however, eleven cancelled before the initial interview. The remaining 60 women participated in the interview, 18 to 42 days following their spouse's death (mean=28.6 days, SD=6.41). Of the 60 women, five had too much missing data for inclusion and 21 did not take part in the daily assessments; therefore, their data was not included in the present study. Data on the remaining 34 participants was analyzed.

One month following the death of their spouses, participants received a battery of self-report questionnaires. Also, all kept a daily diary of their emotions and perceived stress. At the initial interview participants received a packet containing the measures and daily diaries, as well as a pre-stamped envelope addressed to the research team. The participants received a phone call every three weeks as a reminder to mail the assessments. Each subsequent batch of daily diaries and measures was dated and mailed to the widows at bi-monthly intervals. In the event that a participant missed a day, they were instructed to leave the

sheet for that day blank. Participants received an incentive of fifty dollars for participation.

## Results

### Overview of Analyses

We tested our hypotheses using hierarchical linear modeling (HLM; Bryk & Raudenbush, 1992). The flexibility of multilevel modeling provided a number of advantages. First, HLM is appropriate for daily diary data. In the current study, the data had a hierarchical structure with 98 daily observations nested within each of 34 participants. Second, HLM does not require that all individuals be measured at all occasions. Thus, we were able to use the responses from participants who had missing data for some of the time points. Finally, a multilevel modeling approach allowed us to estimate person- and day-level effects simultaneously. For example, we examined the separate and independent day-level effects of daily stress and positive affect on depression and then tested whether person-level variables (e.g., family support) moderated these effects.

We developed HLM equations predicting daily depression to test our hypotheses. There were several common elements in each of our HLM analyses. First, following recommendations by Bryk and Raudenbush (1992), all day-level variables were centered on the individuals' means, and all person-level variables were centered on sample means. Second, variables that did not include a meaningful zero in the original scaling (e.g., day of study) were rescaled to include zero.

### Predicting Daily Depression

Day-level depression was estimated by the following equation:

$$\text{Depression}_t = \text{Stress}_t + \text{Positive Affect}_t + (\text{Stress} \times \text{Positive Affect})_t + \text{Day}_t + e_t$$

The equation refers to the intercept (i.e., a widow's depression level on an average day) and represents the maximum likelihood estimates of the population slopes estimating daily depression from daily stress, positive affect, the positive affect by stress interaction, and time (in days) from loss, respectively;  $e_t$  is a random component of depression at time  $t$ .

In the second portion of the model, person level effects were estimated as follows:

$$\begin{aligned} &= \gamma_{00} + \gamma_{01}\text{Family}_i + \gamma_{02}\text{Friend}_i + u_0 \\ &= \gamma_{10} + \gamma_{11}\text{Family}_i + \gamma_{12}\text{Friend}_i + u_0 \\ &= \gamma_{20} + \gamma_{21}\text{Family}_i + \gamma_{22}\text{Friend}_i + u_0 \\ &= \gamma_{30} + \gamma_{31}\text{Family}_i + \gamma_{32}\text{Friend}_i + u_0 \\ &= \gamma_{40} + \gamma_{41}\text{Family}_i + \gamma_{42}\text{Friend}_i + u_0 \end{aligned}$$

where each person's level 1 intercept and level 1 slopes were predicted by an intercept, family support, friend support, and a random error component.

The results of the HLM analyses predicting daily depression indicate that compared to widows who reported relatively high levels of social support, widows with chronically low levels of family support had higher intercepts ( $b = -8.312$ ,  $SE = .037$ ,  $t = -11.021$ ,  $p < .001$ ), slopes for depressive symptoms ( $b = -.412$ ,  $SE = .044$ ,  $t = -7.281$ ,  $p < .01$ ), and stronger daily stress-depression relationships ( $b = .405$ ,  $SE = .030$ ,  $t = 8.285$ ,  $p < .05$ ).

A similar pattern, albeit weaker, emerged for support from friends. Importantly, higher levels of daily positive emotions were associated with lower symptom levels of depression ( $b = -.281$ ,  $SE = .041$ ,  $t = -12.394$ ,  $p < .001$ ). Further, the relationship was strongest among those low in family support ( $b = .284$ ,  $SE = .104$ ,  $t = 6.125$ ,  $p < .05$ ). This interaction is depicted in Figure 1.

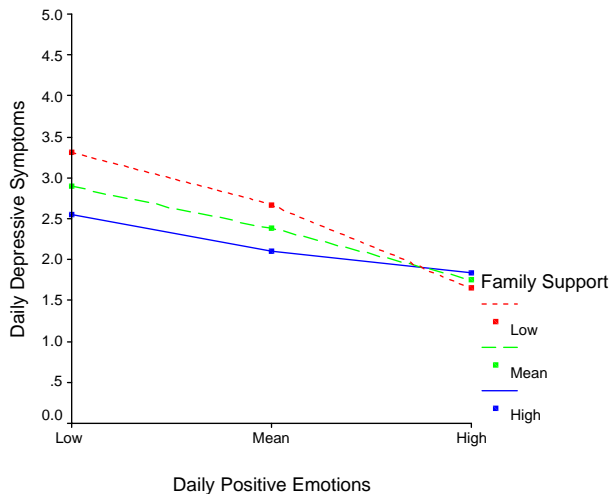


Figure 1

For those high in family support, changes in positive emotions were not associated with changes in depressive symptoms. In contrast, those low in family support showed a strong inverse relationship between changes in positive emotions and depression symptoms. Finally, the interaction between daily stress and positive emotions indicated that in the presence of positive emotions, there was a weaker relationship between daily stress and depressive symptoms ( $b = -.445$ ,  $SE = .028$ ,  $t = -15.618$ ,  $p < .001$ ). This interaction is depicted in Figure 2.

There was a less manifest increase in depressive symptoms on days marked by greater stress when positive emotions were also high. Notably, average positive emotions were not associated with daily depressive symptoms, suggesting that only elevations in positive emotions at the time of stress appear to reduce depression-related symptoms.

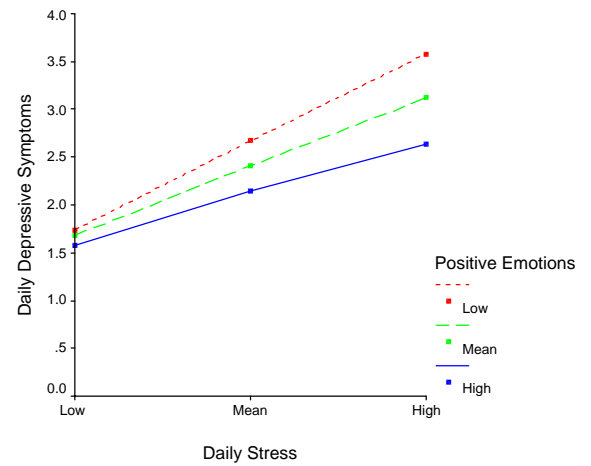


Figure 2

## Discussion

The arc of positive and negative emotional states in later life is surprisingly complex, especially preceding the loss of a loved one. However, a significant proportion of the older adults in the present study managed to maintain positive affect, even through significant life challenge. Positive emotions had beneficial effects on well-being when present during times of stress and depression. The results of the present study indicate that positive emotions reduce both feelings of daily stress and depressive symptoms. For instance, intra-individual analyses revealed that, when positive emotions were high, there was a less apparent increase in depressive symptoms on days marked by greater stress. This result suggests that positive affect maximizes resistance to stress and depression. In general, the results underscore the importance of building positive emotional experiences into our daily lives (Frederickson, 2001).

Further, the results are consistent with the larger literature on positive and negative emotions (Ong, Bergeman, & Bisconti, in press; Watson et al., 1988; Watson & Tellegen, 1985), as well as tripartite models of depression (Clark & Watson, 1991; Watson, Clark, & Carey, 1988; Watson & Kendall, 1989), which suggest that low positive affect is analogous to depression, even though general negative emotionality encompasses both depression and anxiety (Ong, Bergeman, & Bisconti, in press). In the present study, discriminant validity of daily positive emotions is strongly supported. The HLM results indicate that the correlation between stress and depressive symptoms was significantly reduced on days in which positive emotions were high. Thus, positive emotions appear to play a particular role in the regulation of ongoing depression during conjugal bereavement (Ong, Bergeman, & Bisconti, in press). This test revealed that individuals who found a positive meaning during adversity and who ordinarily experienced positive affect may have had a greater ability to cope with adverse circumstances and bounce back quickly from them (Sharma, 2001).

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### *Consanguinity of Positive Affect and Social Support*

In general, bereavement is considered to be a time of instability in which individuals cope with significant life changes. Past research suggests that coping can either manifest in an adverse or positive manner contingent on the perceived amount of support and connectedness with others and the outside world (Gale, 2005). The results from this study suggested that family support contributed to the improved adjustment to conjugal loss. The results also indicated that greater family support helped to maintain an individual's stability throughout the course of the bereavement period. Specifically, the results of this study emphasized the importance of perceived support, especially from family members, in experiencing positive emotions and having a positive outlook on life preceding traumatic life events (Baarsen, 2002). Widows low in social support showed a strong inverse relationship between changes in positive emotions and depression.

### *Limitations and Directions for Future Research*

Possible limitations of this study should be noted. Despite the confidence of the correlations between the variables provided to us by using the daily measurements, causal conclusions cannot be made. Also, since mood may vary during the course of an individual's day, the time of day that the measurements were completed could have confounded the data. Since participants completed the self-report measurement at the end of the day an array of circumstances could have led them to answer in a particular manner.

Second, the participants of the study were all European American women. The findings of the study may not apply to bereaved men or individuals from different racial and age groups. Third, the survey included no filter questions or measures to control for lying or providing answers that seemed to have greater social desirability.

In addition, as implied in the literature, depression and anxiety often co-occur. Thus, discriminating between the two constructs poses a problem (Murphy, Moscicki, Vermund, & Muenz, 2002). Also, clinical diagnoses of participants' depression were not obtained and may have been valuable in this study. Finally, the *quality* of the social support received was not examined. Quality of support might be a better predictor than quantity as it may be more reflective of the received benefits from relationships with family and friends.

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