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Stress-Related Growth Among the Recently Bereaved

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Abstract

Although stress-related growth (SRG), or a personal transformation beyond adaptation, can be an outcome for some individuals after a traumatic life experience like spouse or partner loss, it is often assumed that some time needs to pass before this happens. This study reports on early experiences of SRG relatively soon after the loss of a spouse or partner in mid and later life. Self-administered questionnaires were completed by 292 recently bereaved (2–6 months) partners, aged 50+, as part of the *Living After Loss* study conducted in Salt Lake City and San Francisco. Substantial variability in SRG was observed where 21% scored ≥ 1 SD above and approximately 18% scored ≥ 1 SD below the sample mean of 17.2 (SD = 7.0). Regression analyses revealed that SRG was more likely for those who expected their partners' deaths, who were more religious, who engaged in loss- and restoration-oriented coping processes, and was independent of grief levels. Findings suggest that some individuals drew upon their religious beliefs as a way to find meaning and make sense of what happened as they rebuilt their "assumptive world." Also, those who anticipated their partners' deaths could have had more opportunity to cognitively process the loss, address the challenges of widowed life, and learn new skills and discover previously unrecognized strengths.

Keywords

Partner loss; loss- and restoration-oriented coping; cognitive processing; anticipated loss; religiosity

Introduction

Stressful and potentially traumatic life-changing experiences like spousal/partner loss often result in a disruption of one's "assumptive world" [Parkes (1971) cited in Tedeschi & Calhoun (2004)] where much that the individual has counted on as being reliable, predictable, and even controllable is no longer the case. If this world is gradually modified or reconstructed, the individual eventually returns to a more effective level of functioning. Some individuals who struggle but rebuild their lives can emerge with a new-found sense of strength, a renewed appreciation for relationships with others, and a reassessment of priorities. This new result is typically referred to as stress-related growth (SRG), often used interchangeably with posttraumatic growth (Calhoun & Tedeschi, 2006; Park, Cohen, &

Murch, 1996; Tedeschi & Calhoun, 2004, 2008). SRG, therefore, suggests a transformation on the part of the individual that goes beyond adaptation or "...not simply a return to baseline" (Tedeschi & Calhoun, 2004, p. 4)

The literature is replete with reports of several factors that predispose one to SRG when faced with a variety of crises or traumatic experiences, including bereavement. For the purposes of this report, we organize these factors into four categories: resources, sociodemographic characteristics, situational factors associated with the death of one's spouse or partner, and bereavement-related coping processes.

Resources typically associated with SRG are self-esteem, religiosity, and social support. Self-esteem has been found to be correlated with perceived positive changes reported by widows and widowers and is related to greater adaptation as an indirect pathway to growth (Lund, 1989; Schaefer & Moos, 2001). Those with greater self-esteem tend to be more motivated and more confident in their ability to take control of their lives even if it requires substantial effort (Lund, Caserta, & Dimond, 1993). Religiosity could be a coping resource in that it may involve a search for meaning as the assumptive world is reconstructed (Matthews & Marwit, 2006; Park, 2004, 2005; Park et al., 1996); religiosity "...may foster life-changing transformations of goals and priorities" (Pargament, Desai, & McConnell, 2006, p. 123) and promote a more insightful understanding of one's purpose in life (Tedeschi & Calhoun, 2008). Social support could potentially help the bereaved address the challenges of stressful circumstances and consequently, evoke a greater appreciation for interpersonal relationships (Riley, LaMontagne, Hepworth, & Murphy, 2007), especially if the support is perceived as effective (Hogan & Schmidt, 2002; Park et al., 1996). Tedeschi and Calhoun (2004) suggest the support of others allows individuals the opportunity to disclose their thoughts and feelings and obtain feedback as they come to grips with the transformed reality in which they find themselves.

Sociodemographic characteristics that have received much attention in the growth literature are gender, race/ethnicity, and age. Wortman (2004) suggested that widows were more likely than widowers to experience growth largely because bereavement tends to be more challenging for men compared to women. She cited one study where widows were more likely to report becoming stronger due to the bereavement experience (Wortman, Silver, & Kessler, 1993) and another where self-esteem of widowed men was lower than their married counterparts whereas the opposite was true for women (Bonanno et al., 2002). Alternatively, if adaptation is conceived as a pathway to growth (Hogan & Schmidt, 2002) the literature does not consistently agree that bereaved men experience more difficulty than women. Some studies report women experiencing more difficulty whereas others have reported no gender differences [see Stroebe, Stroebe, & Schut (2001) for a review].

Increased age could predispose one to SRG due to a greater propensity to learn from prior life experiences (Aldwin & Levenson, 2004; Schaefer & Moos, 2001) as well as to be more optimistic during stressful situations and to "look at the bright side" of things (Diehl, Coyle, & Labouvie-Vief, 1996; Lockenhoff, Costa, & Lane, 2008). An alternative point of view, however (e. g., Bonanno, 2005), posits that surviving past challenges, including previous losses, could render those in mid and later life more resilient, minimizing the disruptive effects of the present loss. Growth is less likely to occur in the resilient because the traumatic impact of the loss is not as strongly experienced so the struggle to rebuild is not as difficult. This line of thinking is consistent with the view that younger individuals tend to find traumatic events more stressful, requiring a greater effort to adapt, which in turn could allow for a greater likelihood that growth could occur (Helgeson, Reynolds, & Tomich, 2006).

A meta-analysis of 77 studies examining correlates of personal growth and its relationship to health outcomes concluded that nonwhites are more likely than whites to experience growth as a result of stressful or traumatic experiences, the reasons for which are not entirely clear (Helgeson et al., 2006). Stanton, Bower, and Low (2006), however, suspect that racial/ethnic differences in growth among women diagnosed with breast cancer could be associated with cultural differences pertaining to religiosity and spirituality, with a greater tendency among some nonwhite populations to use religion as a coping resource and a mechanism to search for meaning within their situation. Although a cancer diagnosis and partner loss are both arguably traumatic occurrences, the nature of the relationship between race/ethnicity and SRG in these two instances might not be equivalent.

Perhaps the most salient indicator of the level of distress associated with partner loss is the experience of grief. Hogan, Greenfield, & Schmidt (2001) reported growth to be inversely correlated with grief; Calhoun and Tedeschi (2006), however, suggested that growth and lower distress are independent constructs. Although she did not specifically examine growth, Folkman (1997) reported the simultaneous presence of both negative and positive psychological states among bereaved caregivers of partners who had died due to AIDS. Within their intense grief experiences, many of these caregivers discovered a greater appreciation for their relationship with their dying partner and felt a greater sense of control as they successfully addressed new responsibilities and challenges they were facing. As mentioned earlier, some have maintained that substantial distress needs to occur for growth to emerge as an outcome because growth does not tend to happen for the resilient and the hardy (Bonanno, 2005; Matthews & Servaty-Seib, 2007; Znoj, 2006). Yet others argue that the resilient could be more likely to recognize positive outcomes resulting in a growth experience (Aldwin & Levenson, 2004). Also, if the death is anticipated, the grief experience can begin prior to the actual loss, providing an opportunity to process the situation sooner and potentially begin to reconstruct the assumptive world (Schaefer & Moos, 2001). A death that is sudden may require more time for the survivor to make sense of what happened (Rodger, Sherwood, O'Connor, & Leslie, 2006).

Tedeschi and Calhoun (2004; Calhoun & Tedeschi, 2006) suggest that the “rebuilding” that occurs involves a cognitive process of “rumination” or persistent thinking and going over in one’s mind the circumstances in which the bereaved person now finds him/her self and a continual attempt to make sense of a radically changed reality. At times, especially early, these thoughts are intrusive while at other times the process is more deliberate. Eventually if growth has occurred, the individual has discovered new found strengths and is better prepared to face future challenges. These concepts of cognitive processing and rumination as well as mastering ways to function in a changed world can be understood within Stroebe and Schut’s (1999) dual process model (DPM) of coping with bereavement. This model holds that the most effective adaptation to loss involves oscillating between loss-oriented coping in which the bereaved address those stressors directly associated with the loss itself and restoration-orientation where the bereaved individual must cope with those new secondary stressors that result as an outcome of their new status as one who has lost their partner. A key feature of loss-orientation involves much of what is considered “grief work” – going over circumstances surrounding the death, reminiscing about life before the loss, and in general going over in one’s mind thoughts about the deceased and the impact of the loss on all aspects of one’s daily life. Alternatively, restoration-orientation encompasses taking on new challenges, learning new skills to address unfamiliar demands as well as taking time away from grief itself, whether to purposely avoid (if only temporarily) the experience of grief or to turn attention to a more pressing matter (e.g., household management or financial issues) at hand.

Hogan and Schmidt (2002) reported that posttraumatic growth among bereaved parents involved both processes where grief intruded into many aspects of their daily lives (a feature of loss-orientation) but they also made deliberate efforts to avoid grief itself (an element of restoration-orientation). [They did acknowledge that it is uncertain if this would similarly apply to partner loss.] Wortman (2004), however, has questioned whether rumination in particular would be necessary for growth to occur. She cited several instances where the cognitive processing that Tedeschi and Calhoun (2004; Calhoun & Tedeschi, 2006) discuss was associated with no improvement in bereavement adjustments and in some cases people worsened. She pointed out, however, that these studies did not specifically feature measures of posttraumatic growth (Wortman & Silver, 2001). In contrast, as new tasks are mastered successfully as part of restoration-orientated coping processes, a sense of personal growth could be an outcome (Caserta & Lund, 2007; Hogan & Schmidt, 2002; Richardson, 2007; Wortman, 2004). Tedeschi and Calhoun (2004) suggest that new circumstances (like partner loss) require new approaches to dealing with life. Restoration-orientation is a process by which this could eventually be made possible.

It also has been argued that stress-related or posttraumatic growth occurs only after a somewhat lengthy period of time has passed (Tedeschi & Calhoun, 2004), but evidence from samples who have experienced a variety of stressful and traumatic occurrences suggests that growth could emerge sooner for those who are so predisposed (Davis, Wortman, Lehman, & Silver, 2000; Frazier, Conlon, & Glaser, 2001; McMillen, Smith, & Fisher, 1997). Furthermore, the meta-analysis reported earlier by Helgeson et al (2006) found notable variability but no relationship between growth and the amount of time that passed since the trauma or crisis. Given evidence of varied bereavement trajectories ranging from exceptional difficulty to resilience (Boerner, Wortman, & Bonanno, 2005; Bonanno, 2004, 2005), it is not entirely clear to what extent bereaved persons would be more prone to experience growth as an outcome of partner loss and it might be equally uncertain as to how much time needs to pass before growth emerges, if at all (Cohen, Hettler, & Pane, 1998). Consequently, there is merit as Schaefer and Moos (2001) suggested to better understand the timing and the factors associated with growth among bereaved individuals.

This report, therefore, addresses the following research questions using a sample of 292 recently bereaved adults in Salt Lake City and San Francisco:

1. To what extent does SRG occur among recently widowed adults in mid and later life (age 50+) in early bereavement (2 – 6 months after the death of their spouse or partner)?
2. What resources, sociodemographic characteristics, situational factors, and bereavement-related coping processes are associated with SRG among the recently widowed in mid and later life?

Methods

The data for this investigation come from the *Living After Loss* [LAL] project, an ongoing study of recently widowed persons designed primarily to test the effectiveness of an intervention based on the dual process model of coping with bereavement (Stroebe & Schut, 1999). [See Lund, Caserta, de Vries & Wright (2004) for a more detailed discussion.] While the final intervention outcome measures will not be completed until spring, 2009, there is considerable relevant data available from the 292 bereaved spouses who already have completed the baseline assessments prior to the intervention. Therefore, we can address the questions about the presence of SRG among these bereaved persons prior to any intervention effects.

Procedures

Recently bereaved spouses/life partners were identified in Salt Lake City and San Francisco through the use of official county death records and other recruitment strategies. The Salt Lake sample was generated almost entirely through the use of computerized death records made available at low cost. In San Francisco, data so generated were supplemented by a review of local newspaper obituaries given that official death records required a much more costly personal inspection to identify eligibility than the exclusive and more streamlined electronic records available in Salt Lake City. In both sites, very few participants came to the project by way of referral and/or outreach. The surviving spouses/partners had to be living with the deceased person at the time of death, be at least age 50, able to read and speak English, hear well enough to participate in group meetings, widowed 2–6 months at the time of the baseline assessment immediately prior to the intervention, able to attend 14 weekly small group (6–12 persons per group) intervention sessions, and willing to complete four self-administered questionnaires over a period of time up to 14–16 months bereaved. This paper reports on data from the baseline assessment.

Letters of explanation and invitation to participate in the project were mailed to prospective respondents. Within a few days, a research project staff person followed up with a phone call to answer questions, provide further details, verify that eligibility criteria were met, and to solicit their willingness to participate. If they agreed, a trained research assistant made an appointment to conduct a home visit to personally meet each participant, screen again to confirm eligibility, obtain their signed consent and review with them the baseline self-administered questionnaire¹. Each participant was asked to complete the questionnaire and return it within 3–5 days in a self-addressed, stamped envelope. If questionnaires were not returned within this timeframe or were incomplete, a research assistant called to offer additional assistance or clarification.

The average participant completed the baseline questionnaire approximately 4 months (15.6 weeks) after their spouse's or partner's death. Those who refused participation or were ineligible were offered a list of local referral agencies that could provide assistance beyond that of the research project.

We sent invitation letters to 2,669 persons, but were only able to make follow-up calls to about 60% of those persons because we could not locate a working telephone number for them through the white pages or other on-line directory services or because the original invitation letter was returned to us for reasons of insufficient or incorrect address (the latter comprising less than 5% of original invitation letters). Of the 1,629 persons for whom we did have a working phone number, we successfully reached 1,062 (65%) for this follow-up phone call: 129 did not meet the eligibility criteria (e.g. under age of 50, could not speak English) while 637 refused to participate. The most common reasons for refusal were “not interested, too busy, health problems, and unable to attend scheduled meetings.” Altogether, 296 persons agreed to participate but four of them did not complete the first questionnaire; these four persons were added to the non-participant category. Therefore, the overall participation rate was 31% (calculated as the number of participants divided by the number of likely eligible persons we were able to reach, 292/937). Our participation rate is a conservative estimate because many of those who declined to participate did so before we were able to determine whether they met the eligibility criteria (n=246). The 31% participation rate is consistent with the typical response rate of less than 30% as reported in other studies that did not use the assistance of hospitals or other health care facilities in recruitment, made early bereavement contacts, and/or used intervention and longitudinal

¹Those who self-initiated contact with the project went through similar screening procedures.

designs (Bisconti, Bergeman, & Boker, 2004; Lund & Caserta, 1998; Neal, Carder, & Morgan, 1996; Stroebe, Stroebe, & Schut, 2003).

Sample

The 292 bereaved spouses/partners who completed the baseline questionnaire comprised the analytic sample for this investigation. Sixty-one percent of the sample were women ($n=179$) and 39% men ($n=113$), the average age being 69.6 years ($SD=10.5$), ranging from 50 to 93. Participants had been married or partnered for an average of 39.8 years ($SD=17.0$) prior to the death. Our sample was also quite educated: only 15% of the sample had a high school education or less and 45% were college graduates. Thirteen percent of the sample was nonwhite. Fifty-six percent of the participants indicated that their spouse's or partner's death was expected.

Of the 292 bereaved participants, 179 (61%) came from the Salt Lake City site and 113 (39%) from San Francisco. Statistical comparisons between the participants in the two cities showed that they did not differ with respect to age, gender, or socioeconomic status. However, as expected, the participants in San Francisco were more diverse in terms of religious affiliation (e.g. Catholics, Protestants, Jewish and no religious affiliation) and race/ethnicity (e.g. African Americans, Asian American, Latinos and Pacific Islanders).

Measures

Stress-related growth was measured through the 15-item Stress-Related Growth Scale - Short Form (SRGS-SF) (Cohen et al, 1998; Park et al., 1996). We elected to use the short form of the SRG scale versus the 50-item original version because of concerns related to respondent fatigue. The short form was developed through the highest item-total correlations among two samples (Cohen et al., 1998) and it generated an alpha coefficient equal to .91 for the sample used in the present study.

The resource variables used in this investigation consisted of self-esteem, religiosity and social support. *Self-esteem* was measured using the Rosenberg (1965) Self-esteem scale, which consists of 10 Likert-type items that were summed for a possible range of 10 (low) to 40 (high). Although originally designed for adolescent populations, this scale has been shown to be a useful measure for older populations in which a score of 29 or less is indicative of low self-esteem for this age group (Ward, 1977). Robinson and Shaver (1973) and Ward (1977) reported test-retest coefficients equal to .85, and validity coefficients ranging from .59 to .83. The present sample generated an alpha coefficient equal to .86 indicating adequate internal consistency. *Religiosity* was measured by a single Likert-type item that read, "How religious of a person would you describe yourself to be?" The responses ranged from (0) not at all religious to (4) very religious. *Social support* was assessed using items inquiring into frequency and satisfaction with support from both family and friends (each rated on a 5-point Likert scale) (Dimond, Lund, & Caserta, 1987). The scores for both family and friends were summed to get two overall scores for support frequency and satisfaction (both ranging from 2 – 10 with higher scores indicating greater frequency and satisfaction). Participants also were asked if they have had an adequate opportunity to express their thoughts and feelings to others, which was a dichotomous (yes/no) item.

The Texas Revised Inventory of Grief—Present Feelings (TRIG - Faschingbauer, 1981) was used to measure *grief*. This scale consists of 13 Likert-type items that when added together, produce a score ranging from 13 (low grief) to 65 (high grief). Faschingbauer, Zisook, and DeVaul (1987) established construct validity using a variety of discriminations according to age, sex, and relationship to deceased. They also reported a split-half reliability coefficient

equal to .88 and an alpha coefficient equal to .86. The alpha coefficient for the present sample was .90. Although other scales have been recently developed, the TRIG continues to be the most widely used grief measure in bereavement studies (Neimeyer & Hogan, 2001).

Loss- and restoration-orientation features of the dual process model (Stroebe & Schut, 1999) was measured by the Inventory of Daily Widowed Life (IDWL - Caserta & Lund, 2007), which consists of 22 Likert-format items that inquire into how much time during the past week the respondents spent on loss-orientation (e.g., “Thinking about how much I miss my spouse;” “Feeling a bond with my spouse”) and restoration-oriented coping activities (e. g., “Finding ways to keep busy or occupied;” “Took some time away from grieving for my spouse”). Eleven loss-orientation items (LO subscale, $\alpha = .90$) and 11 restoration-orientation items (RO subscale, $\alpha = .79$) were created largely from Stroebe and Schut’s description of the types of instances that would fall into each category. Total LO and RO subscale scores are summed (each ranging from 11 to 44). Construct validity was established for both subscales as indicated by significant correlations with grief, depression, bereavement coping self-efficacy, loneliness, and self-care and daily living skills (Caserta & Lund, 2007).

Analytic Plan

We conducted three types of analyses: The first used basic descriptive statistics to describe the presence of SRG among the recently bereaved. The second analysis utilized a series of open-ended responses in which the newly bereaved commented on whether they had “experienced anything positive” since the death of their spouse. The retelling of these positive experiences provided specific examples of one’s growth. Finally, the third analysis is based on the results of multivariate regression techniques that explored the relationship between SRG and the four hypothesized sets of predictors (resources, sociodemographic characteristics, situational factors, and coping processes related to bereavement). The regression analyses looked first at each block of independent variables separately, then at the combined effect of all four blocks of independent variables together. Collectively, these three analyses provided insight regarding how common SRG is during the earliest phases of spousal bereavement, and for whom it was most likely.

Results

Prevalence of Stress-Related Growth

The first research question addressed to what extent SRG exists among those who experienced spousal/partner loss as early as 2 – 6 months after the death. The data in Table 1 show that the study participants reported SRGS-SF scores that were normally distributed (skewness = -0.02) over the full range of the scale (0–30). The sample mean (17.2; SD = 7.0) was slightly above the scale midpoint (15). This mean is higher than one from a sample of adults (M Age = 48 years) equal to 12.8 (SD = 7.7) (Hettler, 1997) and from a sample of college students (M Age = 19.5 years) equal to 13.4 (SD = 7.8) (Park & Blumberg, 2002). The former group did not report loss-related stressors whereas 32% of the student sample reported the death of a family member or friend as the most stressful event of their life. The SRGS-SF mean in our sample, however, is comparable to unpublished data (M = 16.2; SD = 7.5) on 140 college students (M Age = 18.7 years) six months after a significant loss, 35% of which were due to the death of someone close (C. Park, personal communication, August 28, 2008).

No cut-offs have been established for the SRGS-SF that clearly indicate the presence of little, moderate or high levels of growth (Calhoun & Tedeschi, 2006). However, in this sample, 21% ($n = 58$) had SRGS-SF scores ≥ 1 SD unit above the sample mean (SRGS-SF

> 23), which could suggest moderate to high growth, whereas 18% ($n = 51$) scored ≥ 1 SD unit below the mean ($\text{SRGS-SF} < 11$), suggesting very little or no growth for these individuals. We compared the responses of individuals in these two groups to an open-ended question that asked if they had experienced anything positive since the death of their spouse or partner while adapting to the loss. We did this primarily to see if those in the moderate to high SRG group were more likely to identify instances of growth among the positive experiences they mentioned compared to the experiences of those who scored the lowest. We were also interested in knowing more about what types examples might reflect their growth experiences. This item appeared early in the questionnaire and not as part of or near the SRG scale, which appeared at the end so the respondents were free to mention anything at all they perceived to be a positive experience. Two of the investigators (MC & DL) first examined the responses to this item independent of the SRGS-SF scores. (Four individuals did not answer the question and were not included in the content analysis.) A response was classified into one of four categories that emerged by unanimous agreement between the two investigators: 1) The respondent explicitly identified nothing positive, 2) the response suggested an instance of growth (examples are described below), 3) the respondent identified that they had experienced support and kindness from others, or 4) a variety of other positive experiences (accounting for about 1/3 of the responses in both groups) that did not fall into the above categories. The responses in this fourth category were quite varied but examples included expressions of feelings of relief or comfort, having more time to do other things, feeling confident they had done all they can for their dying spouse or partner, or they simply said “yes” but provided no details. If a response was mixed but included what was agreed to be an expression of growth, it was included in that category; this only occurred once. A chi-square analysis revealed a significant relationship between how these responses were distributed between those with low versus moderate to high SRGS-SF scores (chi-square = 13.59, $p < .01$).

Thirteen percent ($n = 7$) of those with higher SRGS-SF scores and 22% ($n = 11$) of those with the lowest scores were unable to identify anything positive. Alternatively, 26% ($n = 14$) of the responses from those in the moderate to high growth group were more likely to identify what could be described as a positive growth experience compared to only 1 response from the group with the lower scores. For example, some in the high growth group mentioned a stronger appreciation for the relationships they had with others in new or existing social networks.

“Realizing the friendship and concerns of coworkers and the true, true friendship of close friends.”

“I have a closer relationship with my sister.”

They also revealed a discovery or realization about a new-found strength or optimism that they did not have before.

“I have come to believe I am stronger than I thought.”

“I can stand proud and know I can handle whatever comes along in my life.”

“Each day I found a way to become stronger.”

“Thinking positive about the future.”

Other comments represented a feeling of greater mastery and feeling more self-sufficient than they had been prior to the death.

“Yea – Learning how to do some ‘men things.’ Being totally responsible for myself (and) finances – buying my first car by myself!”

“I have become more self-sufficient – cooking meals, washing clothes, paying bills...”

“Desire to become capable of handling my own affairs.”

“More independent than before.”

The largest category of responses ($n = 21$; 42%) for those respondents with the lowest SRGS-SF scores described instances where these individuals were the beneficiaries of the kindness and support of others; in contrast such examples comprised about one-quarter (26%; $n = 14$) of the responses among those in the moderate to high growth group.

“Remarkable kindness from people I barely know. My children have been very supportive.”

“Yes, love and kindness of my family and my late husband’s granddaughters and great grandchildren.”

“Neighbors and friends have been so kind and helpful.”

“Friends phone and our children keep in touch and grocery shop sometimes.”

“Friends have been checking up on me and including me in their lives.”

The overall distribution of the SRGS-SF scores within the sample as well as the types and pattern of the open-ended responses from those with higher versus lower scores provide evidence that stress-related growth did occur for many, although not all study participants at 2–6 months of bereavement.

Factors Related to Growth

The second research question focused on assessing the relationships between SRG and resources, sociodemographic characteristics, situational factors, and coping processes related to bereavement. The bivariate correlations presented in Table 2 show that SRG, as expected, was associated with greater levels of religiosity ($p < .001$), self-esteem ($p < .01$), support satisfaction ($p < .05$), and the opportunity for one to express their thoughts and feelings to others ($p < .01$). Nonwhites ($p < .05$) as well as those for whom the death of their spouse or partner was expected ($p < .01$) had higher SRG scores than white participants and those whose partner’s death was unanticipated. No significant bivariate correlations, however, were found between SRG and age, gender, the amount of time that passed since the death occurred, grief levels, or the frequency of support from family and friends. Finally, although restoration-oriented coping as described in Stroebe and Schut’s (1999) dual process model was significantly correlated with growth ($p < .001$), loss-orientation was not. The two strongest associations with SRG were found among those using restoration-oriented coping ($r = .30$) and with higher religiosity scores ($r = .23$).

As shown in Table 3, we ran a series of ordinary least squares (OLS) regression models to further identify the factors related to SRG. Models 1 through 4 each include a set of variables related to the four theoretically important predictors discussed earlier: 1) resources, 2) demographic characteristics, 3) situational factors, and 4) bereavement-related coping processes. Model 5 includes all four sets of variables in a full model².

²Due to multicollinearity problems, the full model could not include both grief and loss-oriented coping simultaneously. The bivariate correlation between these two variables is 0.76 ($p \leq .001$). We reported a model which excludes grief since none of the models we ran (single or full) found a significant relationship between grief and SRG, including when grief was entered in place of loss-orientation in the full model.

In terms of the resource variables, religiosity and self-esteem were the only indicators associated with SRGS-SF scores, with higher religiosity and higher self-esteem being associated with higher SRG ($b_{\text{religiosity}} = 1.29, p \leq .001$ & $b_{\text{selfesteem}} = 0.21, p \leq .05$). In terms of demographic characteristics, older persons and non-whites had higher SRGS-SF scores than younger persons and whites ($b_{\text{age}} = 0.08, p \leq .05$ & $b_{\text{non-white}} = 3.65, p \leq .01$). We found no evidence for differences in SRG by gender. Considering situational factors that describe the nature of the loss, those persons who expected their spouse's death had significantly higher levels of SRG than those who did not expect the death ($b = 2.34, p \leq .01$). However, one's level of SRG was not related to how much grief one expressed. Finally, Model 4 revealed that the restoration-oriented coping process was positively associated with SRG ($b = 0.42, p \leq .001$), but loss-oriented coping was not.

Each set of variables entered into Models 1 through 4 produced a statistically significant regression model, but none accounted for much variation, given that the range of Adjusted R^2 for Models 1 through 4 was 0.03 to 0.09. The full model which simultaneously included all four sets of variable (Model 5) had an Adjusted R^2 of 0.16, which was nearly double that of any previous model. This suggests that SRG among the recently bereaved is the result of a complex interplay of one's resources, demographic characteristics, situational factors associated with spousal loss, as well as the coping processes that one has adopted during the earliest stages of bereavement. When comparing the overall effect sizes associated with each block of variables, one's resources and the type of coping processes used were more strongly associated with SRG (Adjusted $R^2 = 0.09$) than one's demographic characteristics or situational factors (Adjusted $R^2 = 0.03$). The standardized coefficients in the combined regression model, Model 5, largely supported these conclusions.

As shown in Model 5, restoration-oriented coping had the strongest association with SRG ($\beta = 0.22$), followed by religiosity ($\beta = 0.19$), whether the death was expected ($\beta = 0.15$), and how much loss-oriented coping one was using ($\beta = 0.14$). The demographic characteristics that were significant in the earlier models (age and race) and self esteem were no longer significant in the full model, while loss-oriented coping became significant in the full model. Although not explicitly shown in Model 5, due to multicollinearity issues between grief and loss-oriented coping, grief was not associated with SRG. In other words, if SRG was experienced in early bereavement, it was independent of how much the individual was grieving the loss.

Discussion

Did SRG occur after recent partner loss and if so, for whom?

Although not experienced by all, the findings from this investigation provide evidence that stress-related growth did occur early after the loss of one's partner or spouse with some notable variability. At least 20% of the sample was experiencing moderate to high levels of growth (relative to the sample mean) as early as 2 – 6 months of bereavement, suggesting that a significant amount of time since the death is not a prerequisite for SRG.

Low SRGS-SF scores, however, did not necessarily equate to poor adaptation to loss. If this were the case, we would have observed an inverse relationship between growth and grief as Hogan et al (2001) found. The fact that no relationship between these two variables emerged in our data is consistent with Calhoun and Tedeschi's (2006) observation, as well as data from other samples (Taku, Calhoun, Cann, & Tedeschi, 2008; Weinrib, Rothrock, Johnsen, & Lutgendorf, 2006), suggesting that SRG and distress can in fact coexist independently of each other.

One apparent reason for the presence of SRG in this sample is that for some, the death was anticipated. The anticipatory bereavement that occurs when the death of a loved one is imminent could allow for the opportunity to begin the cognitive processing to come to grips with the situation and a world in which basic assumptions are challenged (Schaefer & Moos, 2001). As the death approaches and the bereaved partner begins to accept the loss, he or she might direct more attention to their relationship with the dying person in an attempt to make the most of the time that remains. This could eventually evolve into a greater overall appreciation for relationships with others as well as a re-examination of one's priorities recognizing that "life is short" (Folkman, 1997; Matthews & Servaty-Seib, 2007; Metzger & Gray, 2008).

Besides the expectedness of the death, two other factors produced persistent relationships with SRG in each of the models we analyzed. Consistent with previous reports (Matthews & Marwit, 2006; Pargament et al, 2006; Park, 2004, 2005; Park et al, 1996) religiosity emerged as a strong resource variable, suggesting that finding meaning and restructuring the assumptive world in partner loss appears to be similar to what it would be for other stressful or traumatic experiences. Religious forms of coping can facilitate SRG if the search for meaning leads one to a reordered sense one's purpose and of what is important, a renewed appreciation for those still in one's life, as well as how life can change in an instant and should not be taken for granted.

The restoration-oriented feature of the dual process coping model (Stroebe & Schut, 1999) also had a consistent direct association with the presence of SRG in this sample. As some of the open-ended comments demonstrated, learning new skills to successfully master new tasks and responsibilities could precipitate growth due to a feeling of confidence that one can meet life's future challenges (Arbuckle & de Vries, 1995; Carr, 2004; Lund & Caserta, 2002; Richardson, 2007) and a recognition that one can address present circumstances using new approaches (Tedeschi & Calhoun, 2004). When those who have experienced the loss of a spouse or partner become aware of their improved ability to meet daily challenges it might also enhance their motivation to venture further into what at the time could be considered "unfamiliar territory." For example, a bereaved spouse or partner might over time and with a concerted effort successfully master a new responsibility (for example, managing the household budget) that was primarily handled before that time by the decedent. The feeling of accomplishment, although itself gratifying, might produce a new sense of optimism about their ability to cope with anything the future might present as well as provide the impetus to explore new opportunities. The bereaved person could begin a process of self-discovery (Attig, 1991), learning new things they did not recognize before about themselves that might not have occurred otherwise. Therefore, while Stroebe and Schut (1999) stress the importance of deliberate coping efforts to adapt effectively to loss, positive changes that result for some can stimulate continued deliberate efforts that lead to an outcome beyond adaptation, which is the essence of personal growth (Tedeschi & Calhoun, 2004).

Loss-orientation emerged as a significant factor in the full model as other factors were controlled: greater engagement in loss-orientation was associated with higher levels of growth. The significance of this relationship might suggest that a certain amount of cognitive processing or rumination is taking place but the cross-sectional nature of the data did not allow us to determine how much of this occurred in the time prior to the baseline measurement. Furthermore, rumination is only one aspect of loss-orientation, which also involves experiencing and acknowledging the profound sadness associated with the loss, reminiscing about and pining for the one who has died, and re-examining and transforming the nature of a continuing bond with the deceased (Stroebe & Schut, 1999). Notwithstanding Wortman's (2004) view that rumination does not need to occur for SRG to emerge, these data suggest that loss-orientation as an entire process, which might or might not involve

rumination, as well as restoration-orientation both can be important coping factors related to SRG.

There were several factors that the growth literature would have posited to have explanatory roles in SRG among the recently bereaved for which either no relationship emerged or their roles were limited. The aspects of social support we examined had virtually no relationship with SRG with the exception of weak (although statistically significant) bivariate correlations between growth and support satisfaction and the opportunity to express thoughts and feelings to others. These two factors dropped from significance once the influence of other resource variables was controlled. Support was experienced in a variety of ways by many of the bereaved independent of what their SRGS-SF score was and therefore, could have attenuated any relationship with growth. The open-ended comments about positive experiences demonstrated that there were several instances of positive interactions with others as they were the recipients of help and kindness.

Although self-esteem emerged as an important resource in both a bivariate relationship with SRG and in Model 1, it dropped from significance once the full model including demographic, situational and coping factors was analyzed. Self-esteem has been a salient predictor of positive bereavement outcomes in other studies (Lund, 1989; Lund et al, 1993; Schaefer & Moos, 2001) but its relationship with growth in this study could have more likely been the result of a shared relationship with restoration-orientation ($r = .33, p < .001$). Once restoration-orientation was accounted for in the full model, the role of self-esteem as an independent resource associated with SRG decreased in importance. As Lund et al (1993) suggested, successfully addressing restoration-oriented changes could either increase feelings of self-worth or conversely, those with higher self-esteem could be more motivated to attend to these matters. In either case, it appears that growth could be an outcome of meeting new challenges that were not faced previously by the bereaved prior to the loss, wherein an enhanced self-esteem simply might be a byproduct.

The relationships between demographic factors and SRG were not always straightforward. Consistent with the results of Helgeson and colleagues' (2006) meta-analysis, nonwhites were more likely than whites to exhibit SRG when assessed as a bivariate association as well as when we controlled for age and gender (Model 2). Again, this effect dropped from statistical significance in the full model. This, however, was not due to the influence of religiosity as Stanton et al (2006) had suspected because being nonwhite did not correlate with religiosity in this sample. Although 15% of our sample was nonwhite, the number of participants in each racial group was insufficient to allow for comparisons between racial or ethnic categories, which might have provided a better sense of whether religiosity did play a role in the relationship between race and SRG. Religiosity could vary in importance for different cultures. For example, religion plays a prominent role in the search for meaning among African-Americans who are faced with stressful life experiences (McCallum & Yarry, 2008; Rosenblatt & Wallace, 2005) but this may not necessarily be true in other nonwhite populations.

The connection between SRG and age also is inconclusive at best. The data in Model 2 indicated that SRG levels were higher for those who were older but the relationship did not persist in the full model. Some of this could be accounted for by the fact that those who were older tended to be slightly more religious ($r = .14, p < .05$) and more likely to have anticipated their spouse's or partner's death ($r = .13, p < .05$). These were obviously weak relationships that disappeared once the more persistent relationships between growth and religiosity and expectedness were considered. Our analysis of the relationship between age and SRG was constrained by the fact that our sample was limited to those in mid and later life (those aged 50 and older). Therefore, it is unclear if the nature of this relationship would

change if the sample included those in young adulthood, especially given the range of SRGS-SF scale means from other predominantly younger samples facing a variety of stressors (Hettler, 1997; Park & Blumberg, 2002; C. Park, personal communication, August 28, 2008). In other words, although there is some suggestion that growth in the face of partner loss can be somewhat more likely for those who are older, the benefits of life experience may be more similar than different for those in mid versus those in later life. Consequently, the data can not fully answer the question as to whether learning from life experiences as one ages predisposes one to growth (Aldwin & Levenson, 2004; Schaefer & Moos, 2001), or if growth is less likely because one becomes more resilient due to an array of challenges throughout the life course faced prior to this loss as Bonanno (2005) has suggested.

Finally, there was no statistically significant relationship between SRG and gender in any of the analyses we conducted. Contrary to Wortman's (2004) observation that women would be more predisposed to growth than men, our data suggest that men and women would be equally likely to experience SRG during early bereavement. Similar to the findings pertaining to gender and adaptation, the differences between bereaved men and women on their potential to experience growth after partner loss may be tenuous at best and perhaps even exaggerated. Future investigations that examine the relationships between SRG and other demographic indicators, particularly age, race, and gender, should focus on the mechanisms underlying these demographic relationships in addition to verification of their existence.

In summary, therefore, our analyses revealed that SRG did indeed appear to occur for a noteworthy proportion of those who recently lost a spouse or partner and there was substantial variability regarding how much was reported. Growth appeared to be independent of how much the bereaved were grieving their loss but was more likely to be experienced by those whose partners' deaths were expected, who reported they were more religious, and who engaged in both loss- and restoration-oriented coping processes. A death that was anticipated could have allowed more opportunity to cognitively process the loss as well as to effectively address new challenges confronting the bereaved. Also, some bereaved individuals, independent of whether their partners' deaths were expected, might have drawn upon their religious beliefs as a way to find meaning and make sense of what happened. Although some initial associations were observed between SRG and elements of support, self-esteem, and among those who were older and nonwhite, these relationships decreased in importance or were potentially explained by any one or combination of the aforementioned factors.

Was the growth "real"?

Some have argued that individuals will report positive changes as a way to convince themselves (and others) they are doing better than they actually are or they want to believe that they are changing in a positive way as an outcome of a very negative experience, perhaps due to unrealistic expectations (Frazier & Kaler, 2006; Park & Helgeson, 2006; Park & Lechner, 2006). Park and Lechner (2006) suggested that because the items on standardized, forced-choice growth scales are typically worded in a positive direction, a "positive response bias" (p. 53) could result. Alternatively, individuals would tend to be more candid about whether they had genuinely experienced growth if they were asked about it in an open-ended way compared to positively worded scales (Nolen-Hoeksema & Davis, 2004; Park & Helgeson, 2006).

While our findings should be interpreted in light of this caution, we are still confident that SRG had occurred to some extent among a noteworthy proportion of our recently bereaved sample for two primary reasons. First, there was substantial variability in the SRGS-SF

scores themselves, which were normally distributed over the full range of the scale. If a positive response bias existed in the data, the scores would have been much more skewed toward the higher end of the scale. Second, an open-ended question about overall positive experiences (not growth specifically) early in the questionnaires yielded responses that suggested positive growth experiences among 26% of those with moderate to high SRGS-SF scores relative to the overall sample mean. Responses of this type were virtually absent among those whose scores were in the lowest third of the distribution. We have no way to definitively know how the open-ended responses would have changed if the question specifically asked about growth but we believe these data provide at least some support that growth reported by the respondents was genuine and not necessarily an inaccurate self-perception that they had changed for the better because they believed that it was an expected outcome.

Limitations

Calhoun and Tedeschi (2006) argued that cross-sectional research on SRG still has value because potentially important factors either need to be examined further or they even might be given attention for the first time. To our knowledge this is the first attempt to examine the role of the loss- and restoration-oriented features of the dual process model (Stroebe & Schut, 1999) in the occurrence of SRG among those in early spousal or partnered bereavement in addition to other salient factors that we believe needed to be explored within the context of recent loss. The cross-sectional nature of the data, however, did not permit us to make causal assumptions about the relationships between these factors. Only longitudinal designs would enable us to determine if certain factors, either before the death or more recently after it occurred, precipitated growth 2 – 6 months later. Longitudinal data would also help to determine to what extent there is a ceiling on how much growth can take place. Similarly, it is unclear if those who score low on the SRG scale do so because they had experienced growth at an earlier time so that any facet or personal changes that would be considered growth could have happened prior to the loss and not as an outcome of it (Park & Lechner, 2006).

It also is important to place these findings within the context of the nature of the study sample. Although the participants in this study were randomly assigned to one of two study conditions (DPM treatment vs. traditional support group) and each participant was blind to the group to which they were not assigned, our conclusions should be interpreted in light of the fact that the sample consisted of individuals who were willing to receive a bereavement intervention. Those who agree to be enrolled into an intervention research project often do so because they anticipate personally benefiting in some way as an outcome of their participation (Picton, Cooper, & Tobin, 2001). In our recruitment efforts we deliberately emphasized the importance of one's participation even if they did not perceive themselves as experiencing exceptional difficulty but we do acknowledge that some of those who agreed to participate might have been motivated to do so because they hoped to receive help. Conversely, 46% of the participants reported that they hoped to learn how to do new things (in addition to how to cope better) by joining the project. This might suggest that some of our participants could be more predisposed to self-improvement and growth than if we recruited them without offering a treatment.

While the short form of the SRG scale is apparently very reliable and correlates well with the longer version (Cohen et al, 1998), we are unsure to what extent the findings in this study might be consistent with results using the original 50-item scale (Park et al., 1996). There could be particular nuances of each of the dimensions of growth captured more specifically in the long version that might have generated correlations we did not detect in this investigation. We opted for the short form because we were concerned about respondent burden associated with an already lengthy questionnaire. While we were always interested in

examining growth as one of several outcomes, it was not the sole focus of the LAL study. So although we believe the short form of the scale provided important and valid data on SRG among the bereaved in our sample, we do acknowledge that the data potentially could have been richer had the longer version been used.

Another potential limitation is that the absence of a relationship between SRG and grief could be due to how grief was measured. We chose to use the TRIG (Faschingbauer, 1981) in this project in order to be able to compare the results from this sample with data from our previous work. Although the TRIG is a commonly used instrument, its limitations are that some of the items were constructed in a way that constricts variation while some particularly disruptive features of grief seen in other scales were not measured (Neimeyer & Hogan, 2001). Our conclusion that grief and growth were not correlated and hence can co-exist should be tempered by the fact that some of the more distressing aspects of grief were missing from our assessment. We used grief as our measure of the nature of the distress in this study but our design could have benefited further if we had a clearer measure of how much the respondents actually struggled as they attempted to cope with the loss in addition to the level of grief they were experiencing.

Similarly, this study used limited measures of religiosity and social support. While it is true that religiosity remained a robust factor in SRG, the single-item indicator we used did not allow us to specifically determine what aspect of religiosity was related with growth. Growth could be the outcome of religious forms of coping, the essential importance or centrality of religion in one's life or both, although these dimensions of religiosity are often related (Park, 2006; Wortmann & Park, 2008). The limited range and scope of the way support frequency and satisfaction as well as the opportunity to express thoughts and feelings to others were measured could explain why these variables were not significant factors in growth in the multivariate models. Our findings pertaining to support could have changed had more extensive standardized measures been used.

Finally, there are personality traits identified in previous studies that predispose individuals to SRG that our study did not measure. Tedeschi and Calhoun (2004) reported that those who are extraverted and who are open to new experiences could more easily process and recognize positive outcomes and emotions as well as be more receptive to the support of others as well as actively seek it out. Individuals who are inherently optimistic (Park et al, 1996) could be more predisposed to growth due to their belief that they will somehow get through the crisis or trauma they are facing. We were unable to determine how these personality traits might have operated in the case of recent partner loss but future investigations should include these factors as Park (2004) suggests.

Future Directions

Future research will certainly benefit from longitudinal designs using more diverse samples and precise measures. We plan to continue this line of research in the *Living After Loss* project once all the follow-up assessments are completed. A primary focus will be to see if our dual process intervention has an impact on SRG. Park and Helgeson (2006) believe we need to know more about the underlying mechanisms of SRG before interventions tailored to growth are designed and implemented. The DPM intervention we are testing in that project is not specifically targeted toward fostering SRG but we will have an opportunity to see if in fact growth emerges for those in the DPM treatment condition. This is especially intriguing to us given the relationship we found between SRG and loss- and restoration-oriented coping processes. If no treatment effect is detected, we will still have an opportunity to examine the pattern of SRG longitudinally. In either event, we hope our efforts along with others will further develop our understanding of stress-related or posttraumatic growth after recent loss and throughout the course of bereavement.

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Table 1

Description of Stress-Related Growth Scores Among Recently Bereaved Persons, Living After Loss Study (n=292)

	N	% of Sample ^a
<u>Range of Scores</u> (in intervals)		
0 – 5	18	7%
6 – 10	33	12%
11 – 15	59	21%
16 – 20	77	28%
21 – 25	54	19%
26 – 30	38	14%
<u>Low Growth</u> (≥ 1 SD Below Mean)	51	18%
<u>High Growth</u> (≥ 1 SD Above Mean)	58	21%
(M = 17.2; SD = 7.0)		

^aPercentages may not total 100% due to rounding

Table 2

Pearson Product-Moment Correlations (r) of Selected Indicators with Stress-Related Growth, Living After Loss Study (n=292)

Indicator	r
<u>Personal Resources</u>	
Religiosity	0.23 ***
Self-Esteem	0.18 **
Frequency of Support	0.08
Satisfaction with Support	0.13 *
Opportunity to Express Thoughts and Feelings ^a	0.17 **
<u>Demographic Characteristics</u>	
Male ^a	-0.04
Age	0.09
Nonwhite ^a	0.16 *
<u>Situational Factors</u>	
Weeks since Death	0.02
Death Expected ^a	0.18 **
Grief	-0.08
<u>Bereavement Related Coping Processes</u>	
Loss-Orientation	0.09
Restoration-Orientation	0.30 ***

*
p<.05

**
p<.01

p<.001

^aDummy coded

Table 3
OLS Regression Coefficients (b & β) Predicting Stress Related Growth Among Recently Bereaved, Living After Loss Study

	<u>Model 1</u>		<u>Model 2</u>		<u>Model 3</u>		<u>Model 4</u>		<u>Model 5</u>	
	b	(Std Error)	β	B	(Std Error)	β	b	(Std Error)	β	(Std Error)
<u>Personal Resources</u>										
Religiosity	1.29	(0.30)	0.26***				0.96	(0.29)	0.19***	
Self Esteem	0.21	(0.09)	0.14*				0.12	(0.10)	0.08	
Frequency of Social Support	-0.08	(0.35)	-0.02				-0.19	(0.34)	-0.04	
Satisfaction w/Social Support	0.25	(0.35)	0.06				0.22	(0.34)	0.05	
Opportunity to Express Thoughts& Feelings	1.99	(1.17)	0.12				1.74	(1.14)	0.10	
<u>Demographic Characteristics</u>										
Male				-1.11	(0.87)	-0.08				
Age (in years)				0.08	(0.04)	0.12*				
Non-White				3.65	(1.24)	0.18**				
<u>Situational Factors</u>										
Expected the Death							2.34	(0.86)	0.17**	
Grief							-0.03	(0.04)	-0.04	
<u>Bereavement-Related Coping Processes</u>										
Loss Orientation										
							0.08	(0.06)	0.09	0.14*
Restoration Orientation							0.42	(0.08)	0.29***	0.22***
Constant	4.38			11.53			17.02		1.61	-7.82
N	269			280			272		274	263
Adjusted R-Squared	0.09			0.03			0.03		0.09	0.16
R-Squared	0.11			0.04			0.03		0.09	0.20

Notes:

^a Grief was excluded in the full model because of multicollinearity issues between Grief and the Loss Orientation Coping Process. The bivariate correlation between these two variables was 0.76 ($p \leq .001$). When grief was included in the model in place of loss-orientation it was not statistically significant.

* $p < .05$

100>*p*

10>*p*
**

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