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Chapter 5:

Uncontrollable Life Events and Relationship Wellbeing: The Case of Child Loss

This chapter is based on Buyukcan-Tetik, A., Finkenauer, C., Schut, H., Stroebe, M., & Stroebe, W. (Under review). The impact of bereaved parents' comparison of their grief on relationship satisfaction.

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Abstract

The present research focused on bereaved parents' comparison of the intensity of their grief, and aimed to investigate the effects of the perceptions that the partner has less, equal, or more grief intensity than oneself on relationship satisfaction. Participants of our longitudinal study were 229 heterosexual bereaved Dutch couples who completed questionnaires 6, 13, and 20 months after the loss of their child. Average age of participants was 40.7 ($SD = 9.5$). Across three study waves, participants' comparisons of their grief intensity with their partners' and relationship satisfaction were assessed. To control for their effects, own grief intensity, child's gender, child's age at the time of death, expectedness of loss, and parent's age were also included in the analyses. Consistent with the hypotheses, multilevel analyses revealed that bereaved parents who perceived dissimilar levels of grief (less or more grief) had lower relationship satisfaction than bereaved parents who perceived that they and their partner experience similar levels of grief. This effect remained significant controlling for the effects of possible confounding variables and actual similarity in grief between partners. Moreover, results showed that perceived similarity was also related to higher level in partner's relationship satisfaction. Our findings suggest that perceived dissimilarity in grief intensity affects relationship satisfaction of bereaved parents, thus emphasizing the interpersonal nature of grief.

The loss of a child has long been recognized as one of the worst life events that can happen to a person (Paykel, Prusoff, & Uhlenhuth, 1971). Losing a child is a major stressor, and has severe effects on psychological and physical wellbeing of bereaved parents (e.g., Stroebe, Schut, & Finkenauer, 2013a; Vance, Boyle, Najman, & Thearle, 2002). For example, bereaved parents report high levels of depressive symptoms, anxiety, negative emotions, and a negative view of the world (e.g., Rogers, Floyd, Seltzer, Greenberg, & Hong, 2008; Wing, Clance, Burge-Callaway, & Armistead, 2001). Even their mortality rate is higher than the average in the general population (Espinosa & Evans, 2013; Li, Precht, Mortensen, & Olsen, 2003). Worse still, loss of a child is deleterious not only for bereaved parents' personal wellbeing, but also for their relationship. Because both partners are subjected to the same event, partners have to deal with the loss of their child together over the course of their relationship (Rubin, 1993). Loss of a child, therefore, affects people not only as parents, but also as relationship partners.

Research has shown that relationship satisfaction of bereaved parents decreases over time, and that they have higher divorce rates than other parents (Gottlieb, Lang, & Amsel, 1996; Lyngstad, 2013). These studies typically adopted an *intrapersonal* approach, examining the effect of the intensity of people's own grief on their relationship satisfaction. In this study, using an *interpersonal* approach, we investigate whether people's perception of the intensity of their partner's grief compared to their own, affects their relationship satisfaction. Because partners' perceptions of each other's reactions to their loss affect their emotions and behaviors toward each other (Stroebe et al., 2013a; 2013b), in this paper, we propose that bereaved parents' comparison of their grief affects their relationship satisfaction. Specifically, we sought to examine how the perception that the partner experiences less, equal or more intensity in grief than the person himself/herself affects bereaved parents' relationship satisfaction.

Why should bereaved parents' comparison of grief affect their relationship satisfaction? Previous studies have shown that perceived similarity in the level of emotions between romantic partners is positively related to relationship quality (e.g., Anderson, Keltner, & John, 2003; Gonzaga, Campos, & Bradbury, 2007). Nevertheless, to our knowledge, no study has tested whether perceived similarity in terms of grief intensity between bereaved parents affects their relationship satisfaction. We aim to extend the extant literature on perceived similarity to the context of bereavement. Because bereaved parents deal with the same loss, they may have the expectation that they and their partner experience similar levels of

grief (Gilbert, 1996). Hence, we propose that the perception that the partner has dissimilar—lower or higher—levels of intensity in grief has negative effects for the relationship satisfaction of bereaved parents¹⁰.

Comparison and Similarity between Bereaved Parents

Because bereaved parents are also relationship partners, grieving about the loss of a child is not only an intrapersonal process within one person, but also an interpersonal process between parents (Stroebe et al., 2013a). Bereaved parents' reactions to their loss affect not only themselves but also their partner. As stated by Gilbert (1996, p. 271), "In order to truly understand the nature of grief in families, it is necessary to recognize that both individual and relational factors are operating and that these must be considered simultaneously". For example, Stroebe and her colleagues (2013b) showed that one partner's holding in grief for the sake of the partner has detrimental effects on the grief levels of both partners. In the current study, therefore, using an interpersonal approach, we focus on people's comparison of their partner's grief level with their own grief level, and investigate whether the perceived similarity versus dissimilarity of the outcome of this comparison affects their relationship satisfaction.

Loss of a child is an unfamiliar situation for almost all bereaved parents. Especially in this kind of stressful and uncertain situations, in which people do not know how to react and feel, people automatically compare themselves with others to make things predictable and understandable (Buunk, 1994; Gilbert, Giesler, & Morris, 1995). Originally, social comparison theory (Festinger, 1954) argued that people assess their abilities and attitudes by comparing themselves with others. Schachter (1959) extended the social comparison theory to emotions, and argued that social comparison also helps people to identify their emotions, and to determine the appropriate emotional reaction under threat and unfamiliar situations. Studies on the social comparison of emotions (e.g., Kulik, Mahler, & Earnest, 1994; Schachter, 1959), however, mostly focused on the comparison with strangers (e.g., other participants, confederates). In this study, we extend the social comparison literature to the comparison of a specific emotion, namely grief, between partners who lost their child.

When bereaved parents compare their and their partner's grief intensity, there are three possible outcomes: They perceive that 1) their partner is grieving

¹⁰ Note that similarity in grief can have two different meanings: a) similar levels of grief (i.e., similarity in the intensity of grief), b) similar grief reactions (i.e., similar emotions, e.g., both parents are sad). Our focus in this paper is on the first meaning. We examine the effect of similarity in the intensity of grief across partners on their relationship satisfaction.

less than they are, 2) they and their partner have similar levels of grief; and 3) their partner is grieving more than they are. Interestingly, little attention has been paid to the effects of the second possibility, similarity, in the social comparison literature (Arigo, Suls, & Smyth, 2012; Locke, 2003). Some social comparison studies even excluded similarity from their analyses, because their main focus was whether one person performs better or worse than the other (e.g., Pinkus, Lockwood, Schimmack, & Fournier, 2008).

Our study adds to the literature in three important respects. First, we contribute to the social comparison of emotions under stress literature, because the comparison target is not other, average or strange people in similar conditions (i.e., other parents who lost their child; cf. Buunk, 1994), but the partner. Second, we examine not only the possible perceptions that the partner has a lower or higher intensity of grief, but also the possible perception that the partner has a similar level of grief. Third, we add to the social comparison in romantic relationships literature by investigating the comparison between partners in the context of a major life event (i.e., child loss), instead of daily comparisons between partners (e.g., work performance, physical appearance; cf. Pinkus et al., 2008).

Comparison of Grief and Relationship Satisfaction

Because bereaved parents share a common fate, the outcome of the comparison of their grief level may have evaluative implications for their relationship. Below, we address possible mechanisms to explain how three types of outcomes (i.e., perception that the partner has similar, less, or more intense grief) may affect bereaved parents' relationship satisfaction.

Perception that the partner experiences a similar level of grief. Research demonstrated that partners with similar levels of emotions are happier than partners with dissimilar levels of emotions (Anderson et al., 2003; Gonzaga et al., 2007). For example, in one of the studies by Gonzaga et al. (2007), partners reported on the level of their positive (e.g., happiness) and negative (e.g., anger) emotions after a laboratory session in which they and their partner had discussed seven topics (e.g., a serious concern in their life). Partners who reported similar emotion ratings experienced higher levels in their relationship satisfaction than partners who reported dissimilar emotion ratings. Thus, similarity of emotion levels between partners is positively related to relationship wellbeing.

Although mechanisms of how perceived similarity boosts relationship quality await further research, some studies have addressed possible mechanisms. For example, research has found that, in close relationships, perceived similarity

signals that the partner understands the self, and feeling understood and validated in turn has a positive effect on relationship wellbeing (Laurenceau, Barrett, & Pietromonaco, 1998; Murray, Holmes, Bellavia, Griffin, & Dolderman, 2002; Pollmann & Finkenauer, 2009). Perceived similarity can also indicate that one is not lonely (Bell, 1993). Moreover, a recent study showed that emotional similarity is linked to lower levels of stress in threatening contexts (Townsend, Kim, & Mesquita, 2014). Thus, perceiving that another person has similar emotions has a comforting effect on people, especially when they are under stress. In our study, we extend these findings on similarity of emotions to the context of bereavement. In line with existing studies, bereaved parents who perceive that they and their partner experience similar levels of grief may be better able to feel understood and validated by their partner, feel less isolated and lonely in their relationship, and benefit from the comforting role of having similar levels of emotions with the partner. Therefore, they should experience greater relationship satisfaction.

Perception that the partner experiences a dissimilar level of grief. As discussed above, research suggested that dissimilarity in levels of grief between bereaved parents should have negative effects on relationship wellbeing. That is, converse to the effects of similarity, dissimilarity may indicate the lack of being understood, induce feelings of loneliness in the relationship, and be related to higher levels of stress.

Evidence on how the two types of dissimilarity (i.e., partner has lower or higher grief intensity) may affect relationship satisfaction however is mixed. On the one hand, dissimilar grief may be related to positive outcomes. For example, people may sometimes learn how to cope with their loss, and be hopeful about healing their grief when they perceive another person to have a lower level of grief (cf. Taylor & Lobel, 1989). Or, if they perceive a person to have high level of grief, they may interpret this as a sign of that person's ability to form strong social bonds (Winegard, Reynolds, Baumeister, Winegard, & Maner, 2014).

On the other hand, dissimilar grief may also be related to negative outcomes. For example, perceiving that the partner is grieving less intensely than oneself may signal to people that their partner was not attached to their child, or that s/he does not care about the loss as much as they do themselves (Bonanno, 2004; Fraley & Bonanno, 2004). Such a perception may give rise to feelings of anger and blame toward the partner (Neff & Karney, 2004; Shuchter & Zisook, 1993; Wing et al., 2001). People who perceive higher levels of grief in a partner, however, may try to stay strong for their partner and hold in their grief, which has detrimental

effects for both partners' grief (Stroebe et al., 2013b). Partners with a lower level of grief may also worry about their partner's possible negative judgments about themselves (i.e., meta-perception) and even feel guilty for not having emotions as intense as their partner (Baumeister, Stillwell, & Heatherton, 1994). Furthermore, they may feel that they are responsible for their partner's wellbeing and feel obliged to provide more support to their partner than they receive. Over time, this felt obligation may be perceived as an imbalance between provided and received support and may negatively affect relationship satisfaction (Gleason, Lida, Bolger, & Shrout, 2003).

Although research on the effects of perceived imbalance is missing, in this study we propose that possible positive outcomes of dissimilar grief may not hold for bereaved parents (or, would be outweighed by negative outcomes) because of the unique context of child loss and the comparison target being the partner. We hypothesize that perceiving a lower or a higher level of intensity in grief in a partner should raise problems between bereaved parents and has deleterious effects for their relationship satisfaction.

Overview of the Study

Across three waves of a prospective, longitudinal study among bereaved parents, we investigated the effect of outcomes of a comparison of grief levels between partners on relationship satisfaction. Data collections took place at 6, 13, and 20 months after the loss of a child. We estimated that perceived similarity in levels of grief between bereaved parents is positively related to their relationship satisfaction, while both types of perceived dissimilarity are negatively related to relationship satisfaction.

Furthermore, we examine whether our results vary across mothers and fathers. Mothers are typically perceived as the primary sufferers following child loss due to their major role during the birth and/or upbringing of the child. Fathers are typically less involved, and expected to stay strong and comfort their partner (Cook, 1988). Given these differential social norms, it is possible that violations of these norms, that is, fathers' perception that the partner has a lower level of grief and mothers' perception that the partner has a higher level of grief is particularly harmful for relationship satisfaction. Consequently, we investigate whether our findings depend on the gender of the parents.

We also attempt to rule out alternative explanations. To our knowledge, only one study has examined factors that affect the differences in the grief levels of mothers and fathers. Rather than using a dyadic design, Fish (1986) used a

between-group design to examine fathers' and mothers' reactions to the loss of their child separately. Results showed that the difference between mothers' and fathers' grief levels varies as a function of child's gender and age at the time of death, expectedness of death, and parents' age. Although Fish (1986) did not examine the effects of these differences on relationship satisfaction, he argued that couples who lost a girl, whose child was younger, who are younger themselves, and who lost their child unexpectedly would experience more problems in their relationships compared to other couples. He reasoned that these couples experience greater differences in grief between mothers and fathers. Thus, we control for the effects of child's gender, child's age at the time of death, expectedness of loss, and parent's age in our analyses.

Our study contributes to the existing literature in several respects. First, in contrast to the majority of the relationship literature examining relationship satisfaction across the life-course or in daily life, we examine the effect of one of the worst life events, namely child loss, on relationship satisfaction of the surviving parents. Second, different from most of the grief studies, our study is quantitative and longitudinal, and includes both partners (Stroebe et al., 2013a). Third, breaking with traditional research on grief and bereavement, we adopt an interpersonal approach, given that both partners try to cope with the same loss, and affect each other's experiences, reactions, thoughts, and emotions. Finally, our study adds to the grief literature by examining the comparison within romantic relationships, including not only dissimilarity but also similarity between partners, and investigating the role of social comparison in the context of child loss.

Method

Participants and Procedure

Participants of this study were 229 Dutch couples. Average age of participants was 40.72 ($SD = 9.54$). Child's age at the time of death ranged between stillborn and 30 ($M = 9.85$, $SD = 9.93$). Most of the children (67.7%) were boys. The causes of death were diverse, including neonatal death, illness, accident, suicide and homicide.

We identified 463 couples who had lost their child, through obituary notices in local and national newspapers in the Netherlands. After receiving the approval of the university review boards, all couples were invited to participate in a longitudinal study composed of three data collections. Of all couples who were invited, 229 couples accepted participation in the study. Data collections took place at the 6th, 13th, and 20th months after the loss of the child. Partners filled in the questionnaires separately after they signed the consent forms.

Measures

Comparison of grief. We assessed comparison of grief intensity using two items developed for this study. For example, we asked participants to rate, as compared to their partner, how much they were preoccupied with their grief using a 5-point Likert scale (1 = “*I am much more preoccupied with my grief*”, 3 = “*We are similarly preoccupied with our grief*”, 5 = “*My partner is much more preoccupied with his/her grief*”). We reversed the two items, such that higher levels indicated the perception that one has higher level of grief than the partner. Cronbach’s alpha levels ranged between .93 and .95 across three waves ($M = .94$).

Relationship satisfaction. To assess relationship satisfaction, we used the 8-item Relational Interaction Satisfaction Scale (Buunk & Nijskens, 1980). Sample items were “I regret being involved in this relationship” (reverse-coded) and “I enjoy the company of my partner” (1 = *never*, 5 = *very often*). Across three waves, Cronbach’s alpha levels ranged between .88 and .91 ($M = .89$).

Control variables. To examine whether one person’s comparison of grief level affects his/her relationship satisfaction above and beyond the effect of his/her own grief level, we controlled for the effect of participants’ own grief level. To assess participants’ grief levels, we used the 19-item Inventory of Complicated Grief (Prigerson et al., 1995; Dutch version by Dijkstra, Schut, Stroebe, Stroebe, & van den Bout, 2000; $\alpha = .91-.92$ across waves). Based on the findings of Fish (1986; see Introduction), we also added child’s gender, child’s age at the time of death, expectedness of loss, and parent’s age as confounding variables in our analyses. Furthermore, we controlled for the effects of study waves and participant’s gender in our study.

Results

Strategy of Analysis

Because our data were composed of three levels, in which each lower level was nested in higher level (i.e., time, individuals, and couples), we conducted multilevel analysis to deal with the interdependence in our dataset (Hox, 2010; Kenny, Kashy, & Cook, 2006). To confirm the need to use multilevel analysis, we first ran a multilevel analysis for the null-model (i.e., using only the dependent variable in the model). Results revealed that 27%, 21%, and 52% of the variance in relationship satisfaction were situated at time, individual, and couple levels of data, respectively. Given that relationship satisfaction targets the quality of the couple relationship, it is not surprising to find the largest amount of variance in bereaved parents’ relationship satisfaction at the couple-level.

We also checked the interdependence across waves within the same individual, and across partners within the same couple by calculating intraclass correlations (ICC). Results showed that relationship satisfaction levels across the three waves of data collection were similar to each other within the same person, and partners reported similar relationship satisfaction levels, $ICC_1 = .73, p < .001$ and $ICC_2 = .72, p < .001$, respectively. These significant intraclass correlations verified the need to run multilevel analysis. Hence, we conducted our multilevel analysis using the SPSS Mixed procedure, maximum likelihood estimation, and standardized variables. Intercept was allowed to vary across individuals and couples in our multilevel models¹¹.

Descriptive Statistics and Correlations

The descriptive statistics of and correlations between the study variables are reported in Table 5.1. Average comparison of grief level in our sample was 2.97, which was very close to the perception of similar grief (i.e., the mid-point of Likert scale, see Method section). Correlation results revealed that comparison of grief had a marginal negative linear association with relationship satisfaction. That is, the more one partner perceived that s/he is grieving more intensely than the other partner, the less satisfied s/he was with the relationship. Results also showed that grief was positively, and parents' age was negatively correlated with comparison of grief. Additionally, grief, child's age at the time of death, expectedness of loss, and parent's age were all negatively related to relationship satisfaction.

In further analyses, we investigated whether comparison of grief and relationship satisfaction levels varied across participant gender. Results revealed that women ($M = 3.74, SD = .85$) reported higher levels of comparison of grief than men ($M = 2.21, SD = .81$), $t(1022) = -29.65, p < .001$. Given that averages of women's and men's reports were higher and lower than the similarity point in the Likert scale (3 represents similar grief, see Method section), we examined the frequencies of comparison of grief variable across gender. Results revealed that 64% of women, but only 5% of men reported that they experienced more intense grief than their partner (i.e., reported a value higher than 3). Furthermore, women ($M = 4.39, SD = .55$) reported lower level of relationship satisfaction than men ($M = 4.49, SD = .48$), $t(1228) = 3.52, p < .001$.

11 To determine our multilevel model, we compared AIC and BIC statistics of random intercept model, and random intercept and random slope of time model. Results revealed that random intercept model had lower AIC and BIC scores. Still, we also re-ran our analysis using a random intercept and random slope of time model, and found identical results.

Table 5.1*Descriptive Statistics and Correlations among the Study Variables*

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Comparison of grief	2.97	1.12	-							
2. Relationship satisfaction	4.44	.52	-.06†	-						
3. Grief	2.68	.71	.25**	-.25**	-					
4. Child gender	-	-	-.00	.01	-.04	-				
5. Child age	9.85	9.93	-.01	-.12**	.34**	-.15**	-			
6. Expectedness of loss	1.86	1.35	.05	-.05†	-.14**	.06*	.03	-		
7. Parent age	40.72	9.54	-.10*	-.10**	.22**	-.18**	.85**	.02	-	
8. Parent gender	-	-	.68**	-.10**	.21**	.01	.00	.03	-.13**	-
9. Time (study waves)	-	-	.03	-.01	-.09*	.00	.00	.00	.00	.00

Note. Descriptive statistics and correlations show the statistics across all three waves of data. Time-invariant variables (e.g., child gender) do not have correlations with time (i.e., see the last row). For child's and parent's gender variables, -1 and 1 represent boys/fathers and girls/mothers, respectively. ** $p < .001$; * $p < .05$; † $p < .10$

We also examined the correlations of confounding variables with each other to avoid collinearity in our analysis. Only the association between child's age at the time of death and parent's age was very high (see Table 5.1). We included parent's age in our models. Nevertheless, we also re-ran our analyses using child's age at the time of death, instead of parent's age, and found identical results.

Main Analyses

To test the hypothesis that bereaved parents who perceive that they and their partner have similar levels of grief have the highest level of relationship satisfaction, we examined whether relationship satisfaction at the mid-level (i.e., perceived similarity in grief intensity) of our Likert-scale was higher than relationship satisfaction at the other levels (i.e., perceived dissimilarity in grief intensity). Thus, we examined the quadratic (i.e., second order non-linear effect) association of comparison of grief with relationship satisfaction. We computed the quadratic effect of comparison of grief by multiplying the standardized variable with itself².

12 The average score of our sample (2.97) was almost the same as the mid-level score (3.0) in our Likert scale. Because mid-level of our Likert scale (not the average score of the sample) represented the similar grief level, we ran the analyses using both the average score and mid-level for centering, and obtained identical results. Also, the quadratic graph using the average score of our sample (2.97) was almost the same as the graph using the mid-level score (3.0). We report here the results of the analysis using standardized variables to simplify the analyses and interpretations, because in this method, mean is represented by zero.

First, we ran a multilevel analysis using only linear and quadratic effects of comparison of grief as predictors. Results revealed that the linear effect of comparison of grief on relationship satisfaction was marginally significant, $b = -.02$, $t(334.84) = -1.70$, 95% CI = $[-.05, .00]$, $p = .09$. Consistent with our hypothesis, there was a quadratic association between comparison of grief and relationship satisfaction, $b = -.06$, $t(961.03) = -5.17$, 95% CI = $[-.08, -.04]$, $p < .001$. Subsequent analyses showed that none of the higher order non-linear associations between comparison of grief and relationship satisfaction were significant.

Importantly, we ran the same analysis controlling for the effects of own reported level of grief, child's gender, expectedness of loss, parent's age, parent gender, and time (i.e., study waves). Four effects were significant in our analysis (see Table 5.2). Own grief was negatively related to relationship satisfaction, showing that people with higher levels of grief reported lower levels of relationship satisfaction. Parent gender was associated with relationship satisfaction, and women reported lower level of relationship satisfaction than men. Time was negatively associated with relationship satisfaction, suggesting a decrease in relationship satisfaction over time. Crucially, the quadratic effect of comparison of grief on relationship satisfaction remained significant when controlling for the confounding influence of these variables (see Figure 5.1a). The turning point of the graph (Figure 5.1a), where maximum relationship satisfaction occurred, was .20 in the standardized scale of comparison of grief, which corresponds to 3.17 in the original scale¹³. Hence, the results of this analysis suggest that neither the perception that the partner has higher grief intensity, nor the perception that the partner has lower grief intensity is conducive to relationship satisfaction: Perceiving that the partner has a similar level of grief seems to maximize relationship satisfaction.

As discussed in previous sections, because mothers and fathers reported different levels of comparison of grief and relationship satisfaction, in subsequent analysis, we examined whether the quadratic relation of comparison of grief to relationship satisfaction varied across parent gender. No three-way interaction with parent gender emerged, $b = -.00$, $t(784.21) = -.04$, 95% CI = $[-.04, .04]$, $p = .97$. Given the longitudinal nature of this study, in another analysis, we examined

13 The turning point of the graph is computed by taking the first derivative of the quadratic regression equation and setting this function equal to zero (Cohen, Cohen, West, & Aiken, 2003, pp. 205-206). This analysis revealed that relationship satisfaction reached its maximum value at the comparison of grief score of .20 in the standardized scale. Given that unstandardized mean was 2.97, this score was 3.17 in the original scale.

Table 5.2
Fixed Effect Estimates for the Study Variables on Relationship Satisfaction

Variable	b	t(df)	95% CI	ES(r)	p
Intercept	4.53/4.53	131.55(197.77)/131.76(197.89)	[4.46,4.60]/[4.46,4.60]		<.001/<.001
Grief	-.09/-.10	-4.34(826.11)/-4.63(828.85)	[-1.13,-.05]/[-.14,-.05]	.15/.16	<.001/<.001
Child gender	.01/.01	.19(158.47)/.22(158.78)	[-.06,.07]/[-.06,.07]	.02/.02	.85/.83
Expectedness of loss	-.01/-.01	-.45(216.02)/-.47(216.28)	[-.07,.04]/[-.07,.04]	.03/.03	.66/.64
Parent's age	-.04/-.03	-1.13(226.18)/-1.08(226.49)	[-.10,.03]/[-.10,.03]	.07/.07	.26/.28
Parent gender	-.05/-.05	-2.50(249.03)/-2.54(248.66)	[-.08,-.01]/[-.09,-.01]	.16/.16	.01/.01
Time (Study waves)	-.03/.00	-2.44(658.65)/.25(661.70)	[-.05,-.01]/[-.03,.03]	.09/.01	.02/.81
Comparison of grief (Linear)	.03/.03	1.51(548.52)/1.79(550.93)	[-.01,.06]/[-.00,.07]	.06/.08	.13/.07
Comparison of grief (Quadratic)	-.07/-.07	-5.38(904.51)/-5.84(902.77)	[-.09,-.04]/[-.10,-.05]	.18/.19	<.001/<.001
Comparison of grief (Linear)*Time	/ .02	/ 1.56(660.67)	/ [-.00,.04]	/ .06	/ .12
Comparison of grief (Quadratic)*Time	/ -.03	/ -3.18(684.16)	/ [-.06,-.01]	/ .12	/ .002

Note. Comparison of grief (Quadratic)*Time=Three-way interaction with time. Results before and after the sign “/” (slash) represent the results in models without (i.e., Figure 5.1a) and with (i.e., Figure 5.1b) the three-way interaction with time, respectively. For child's and parent's gender variables, -1 and 1 represent boys/fathers and girls/mothers, respectively. Three consecutive study waves were coded as -1, 0, and 1. CI=Confidence interval. ES(r)=Effect size. ES is computed using the formula

$$r = \sqrt{\frac{t^2}{t^2 + df}}$$

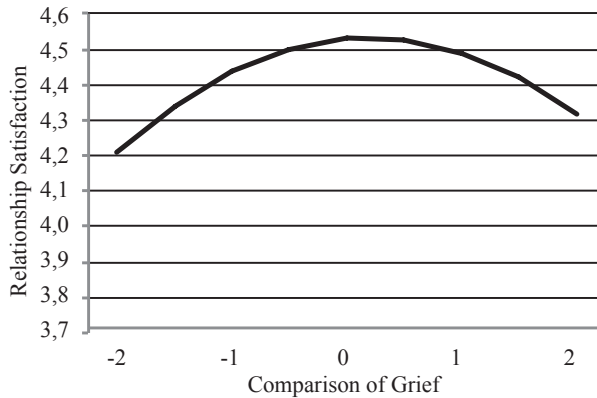


Figure 5.1a

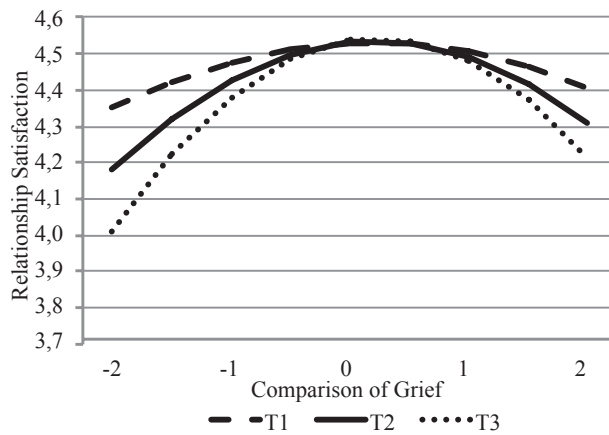


Figure 5.1b

Figure 5.1a and Figure 5.1b. The quadratic association between comparison of grief (i.e., perceived dissimilar level of grief) and relationship satisfaction across study waves. Figure 5.1a and Figure 5.1b represent the models without and with three-way interaction with time, respectively (see Table 5.2 for details). T1 = Time-1/Study Wave-1, T2 = Time-2, T3 = Time-3. On the x-axis, 0 (zero) represents perceived similarity in grief level. -2 and -1 on the left to the 0 (zero) on the x-axis represent the perception that one has lower levels of grief than the partner, while 1 and 2 on the right to the 0 on the x-axis represent the perception that one has higher levels of grief than the partner.

whether the quadratic relation of comparison of grief to relationship satisfaction varied across our study waves, and found a significant three-way interaction with time (i.e., quadratic effect of comparison of grief*time; Table 5.2; Figure 5.1b). As presented in Figure 5.1b, across all three study waves, the highest level of relationship satisfaction emerged close to zero (i.e., similar grief intensity). Maximum relationship satisfaction occurred at the scores of .22 and 3.19 in the standardized and original scales of comparison of grief, respectively.

To decompose the interactive association between time and the quadratic effect of comparison of grief in Figure 5.1b, we conducted additional analyses by recoding time variable. Results revealed that the quadratic effect of comparison of grief on relationship satisfaction was significant at all study waves, $b = -.04$, $t(820.07) = -2.46$, 95% CI = $[-.07, -.01]$, $p = .01$ at the first study wave, $b = -.07$, $t(902.77) = -5.84$, 95% CI = $[-.10, -.05]$, $p < .001$ at the second study wave, and $b = -.11$, $t(821.37) = -6.14$, 95% CI = $[-.14, -.07]$, $p < .001$ at the third study wave.

In subsequent analyses, we decomposed the interactive association using very low (i.e., much less grief) and very high (i.e., much more grief) levels of comparison of grief defined as two standard deviations below and above the mean, respectively. Results revealed that time had a significant negative association with relationship satisfaction among the participants who perceived that they had a lower level of grief than their partner (i.e., left-hand side of Figure 5.1b), suggesting that their relationship satisfaction decreased over time, $b = -.17$, $t(683.84) = -3.90$, 95% CI = $[-.26, -.08]$, $p < .001$. There was a decrease in the relationship satisfaction levels across study waves among participants who perceived that they had a higher level of grief than their partner (i.e., right-hand side of Figure 5.1b) too, $b = -.10$, $t(673.19) = -2.41$, 95% CI = $[-.18, -.02]$, $p = .02$. Thus, our results suggest that the effects of both dissimilarities, namely perceiving a lower level and perceiving a higher level of grief than the partner, impair or have a negative effect on relationship satisfaction over time. Nevertheless, change in the effect over time is stronger for the perception that one experiences less grief than the partner.

Taken together, our analyses so far revealed that, as compared to bereaved parents who perceive dissimilar levels of grief, bereaved parents who perceive their partner to have a similar level of grief had the highest levels of relationship satisfaction. Furthermore, the negative effect on relationship satisfaction of the perception that the partner differs in his/her level of grief increased over time.

Additional Analyses

Controlling for actual similarity. In our study, the comparison of grief variable assessed partners' perceptions of similarity in grief. Nevertheless, these perceptions may not reflect actual correspondence between grief levels of partners, and both actual and perceived similarity may play a role in relationship satisfaction (Gagné & Lydon, 2004). We therefore examined whether perceived similarity affects relationship satisfaction above and beyond actual similarity of grief across partners. We computed the difference score between grief levels of partners. The correlation between this difference variable and perceived

similarity (i.e., comparison of grief variable) showed that parents' perceptions were anchored in reality, $r(1014) = .51, p < .001$. That is, the closer bereaved parents' actual grief levels were, the more they perceived similarity in grief. Then we examined whether the comparison of grief level was related to relationship satisfaction controlling for the actual similarity in grief (i.e., absolute difference score), grief levels of both partners, and other confounding variables we used in our previous analyses¹⁴. Results revealed that the interactive quadratic effect of comparison of grief remained significant even when we controlled for the effect of actual similarity, $b = -.07, t(899.26) = -5.30, 95\% \text{ CI} = [-.09, -.04], p < .001$.

Partner effect. These results showed within-person associations between a person's comparison of grief and his/her own relationship satisfaction. In subsequent analyses, we tested whether Partner A's comparison of grief also had a quadratic effect on Partner B's relationship satisfaction. We ran the same analyses we reported above, but used Partner B's relationship satisfaction as the dependent variable. Results revealed a quadratic effect of comparison of grief on the partner's relationship satisfaction, $b = -.05, t(897.61) = -3.81, 95\% \text{ CI} = [-.07, -.02], p < .001$. Partner B's maximum level of relationship satisfaction occurred where Partner A's comparison of grief had a score of 3.21¹⁵. Paralleling the within-person effect reported above, inspection of the graph of this effect showed that when Partner A perceived either type of dissimilarity of grief, Partner B's relationship satisfaction was lower. When Partner A perceived similarity of grief, Partner B's relationship satisfaction was highest.

Discussion

This study shows that bereaved parents' comparisons of their grief levels with each other affect their relationship wellbeing. Previous research on parents who have lost a child found a negative association between individual grief and relationship quality (i.e., one's own grief level negatively affects one's relationship satisfaction) (Gottlieb et al., 1996; Lyngstad, 2013). Yet, grieving about the loss of a child is an inherently interpersonal process between partners who are also parents. In this study, we highlighted this interpersonal process by demonstrating that bereaved parents' comparison of their grief too affects their relationship satisfaction.

¹⁴ See Luo and Klohnen (2005) for a discussion about assessing actual similarity between partners. We also re-ran our analyses using the actual similarity variable, which was computed applying the couple-centered approach (Luo & Klohnen, 2005), and found that the quadratic effect of comparison of grief again remained significant.

¹⁵ Similar to the graph in Figure 5.1a, in the graph of this analysis, Partner A's comparison of grief was positively associated with Partner B's relationship satisfaction up to the level of 3.21 in the original scale. At higher levels of relationship satisfaction, the association was negative.

In line with the hypotheses, our results consistently showed that the perception that the partner has dissimilar —lower or higher— levels of grief was related to lower levels of relationship satisfaction among bereaved parents, whereas the perception that the partner has a similar level of grief was related to the highest level of relationship satisfaction. Note that our focus was on the similarity in the intensity of grief level across bereaved parents. For example, some partners who reported similar intensity in grief may show different grief reactions and have different feelings (e.g., sad vs. angry), or they may have different coping styles (e.g., dismissive vs. adaptive; cf. Chow, Buhrmester, & Tan, 2014). Rather than similarities in grief reactions or coping styles, in this study, we examined the effect of similarity in grief intensity levels on relationship wellbeing. Our results revealed that the comparison of intensity in grief between partners had a quadratic effect on relationship satisfaction: The maximum relationship satisfaction emerged when grief levels were perceived as similar (i.e., a value close to 3 in the original scale).

Furthermore, our results showed that this quadratic effect of comparison of grief varied across time. Although a similar level of grief was associated with the highest level of relationship satisfaction across all three study waves, the negative effects of perceived dissimilarity increased over time. However, the decrease in relationship satisfaction was stronger for the perception that one experienced less grief than the partner than for the perception that one experienced more grief than the partner. This finding suggests that over time, people who perceive their partner to have more intense grief experience important declines in their relationship satisfaction.

Further research is needed to examine the mechanisms underlying this decline. To illustrate, it is possible that people may feel that after a certain time one needs to get on with one's life, and may become impatient when they see that their partner's grief does not decrease. It is also possible that the bereaved parent who perceives that his/her partner has a higher level of grief may feel obliged to continue providing support. This however may give rise to feelings of inequity and unfairness in daily activities and chores, and can tire out and wear down the supporting partner (cf. Gleason et al., 2003; Kleiboer, Kuijer, Hox, Schreurs, & Bensing, 2006; Ybema, Kuijer, Hagedoorn, & Buunk, 2002). Considering that both partners experience the same life event, such an imbalance in terms of support may be especially destructive for the relationship. This finding is also consistent with the literature on equity in close relationships, which showed that under-benefiting

(e.g., providing more support than receiving support) has more harmful effects on relationship quality than over-benefiting (Sprecher, 1986; Ybema et al., 2002).

The positive effect of perceived similarity and the negative effect of perceived dissimilarity in levels of grief on relationship satisfaction held even when we controlled for the effects of actual grief levels, child's gender, child's age at the time of death, expectedness of loss, parent's age, and actual similarity of grief between partners. Furthermore, we showed that comparison of grief affects not only one's own relationship satisfaction, but also the partner's relationship satisfaction. That is, bereaved parents whose partner perceives that they have a dissimilar level of grief, have a lower level of relationship satisfaction than bereaved parents whose partner perceives that they have a similar level of grief. This finding underlines that grief is an interpersonal process. It is possible that when people perceive that their partner has dissimilar grief, they enact aversive, irritable, condescending, or blaming behaviors toward their partner, which, in turn, may decrease their partner's relationship quality (Kowalski, 2001).

Limitations, Future Directions, and Strengths

Given the correlational nature of the study, the direction of the association between comparison of grief and relationship satisfaction requires further research. That is, although perceived similarity across partners in terms of grief level may lead to greater relationship satisfaction, it is also possible that people with higher levels of relationship satisfaction are motivated to perceive similar levels of grief (e.g., Murray, Holmes, & Griffin, 1996). For ethical reasons, we could not conduct experiments to manipulate their perception of their partner's grief compared to themselves. Longitudinal studies which include both pre-loss and post-loss variables should examine the direction of the association (cf. Bonanno et al., 2002).

In this study, we investigated the effect of similarity in the intensity of grief levels across bereaved parents on their relationship satisfaction. Whether other types of similarities across bereaved parents affect their relationship is a question that necessitates future research. For example, do bereaved parents with similar coping styles (e.g., both parents have adaptive coping styles) experience higher levels of relationship quality than bereaved parents with dissimilar coping styles (cf. Chow et al., 2014)? Also, is feeling the same emotions positively related to relationship satisfaction?

In this study, our focus was on the *perception* that the partner experienced less, similar, or more grief intensity than oneself. Because this perception can be

biased, bereaved parents' perceptions may not reflect reality. For example, people with a dismissive coping style may be perceived by their partner as grieving less, a perception which might or might not be accurate (Bonanno, 2004; Gilbert, 1996). Because men are less expressive of their emotions than women, they may be perceived as having low levels of grief by their partner (Stroebe, Stroebe, & Schut, 2001). Future studies should examine the factors that moderate the association between actual level of and perceived level of partner's grief.

In this study, we tested the effect of perceived similarity in grief between partners in the first 20 months after bereavement. Nevertheless, Fish (1986) showed that discrepancy between mothers' and fathers' grief levels increases after the first 2 years. Future studies should investigate if the effects of comparison of grief levels change over longer time periods. For example, do the negative consequences of perceived dissimilarity for relationship satisfaction accelerate when the discrepancy between the partners' grief levels increases over time?

We also acknowledge some strengths of our research. First, different from most of the studies in the grief literature, our study was quantitative and longitudinal, and had a large sample size and a low attrition rate (Stroebe et al., 2013a). Second, our study included both husbands and wives, which provided us with the opportunity to consider the interdependence between partners and examine dyadic effects and processes.

Implications

The present research has implications for therapy and intervention programs targeting bereaved parents. Losing a child is devastating for the surviving parents. Our results suggest that the perception of having dissimilar grief aggravates parents' negative experience by putting additional strain on their relationship satisfaction.

Our findings highlight the necessity of incorporating interpersonal components and comparison processes into intervention programs for parents coping with the loss of a child. These findings are in line with family and couple intervention efforts (e.g., Hayslip & Page, 2013; Kissane & Parnes, 2014; Stroebe, 2010) and research (e.g., Wijngaards-de Meij et al., 2008), which emphasize the interdependence of survivors. Because one partner's reaction and responses to the loss affect the other partner's reaction and responses (cf., Bowen, 1976), intervention and counseling efforts should target both surviving parents. Our findings suggest that it is important to identify and work at aligning perceptions of dissimilarities across partners. For example, it may be possible to include

perspective-taking exercises to facilitate acceptance of differences in grief between partners, promote empathy, and ameliorate the negative association between perceived dissimilarity and relationship satisfaction. This is all the more important, as studies suggest that relationship quality may serve as a buffer and increase couples' resilience when coping with the loss of a child (e.g., Essakow & Miller, 2013; Lang & Gottlieb, 1993).

Conclusion

Losing a child can have devastating effects for both personal and relational wellbeing. Most of the time, bereaved parents deal with this major life event with their partner. The present work investigated whether bereaved parents' perception that they and their partner have similar or dissimilar levels of grief has an impact on their relationship satisfaction. Our findings suggest that bereaved parents are more satisfied with their relationship if they perceive that their partner has a similar level of grief. Both the perceptions that the partner has a lower level of grief and that the partner has a higher level of grief are harmful for relationship satisfaction.