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Patterns of Attachment and Parents' Adjustment to the Death of Their Child

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The impact of adult attachment on psychological adjustment among bereaved parents and the mediating effect of relationship satisfaction were examined among a sample of 219 couples of parents. Data collection took place 6, 13, and 20 months after loss. Use of the actor partner interdependence model in multilevel regression analysis enabled exploration of both individual as well as partner attachment as predictors of grief and depression. Results indicated that the more insecurely attached parents were (on both avoidance and anxiety attachment), the higher the symptoms of grief and depression. Neither the attachment pattern of the partner nor similarity of attachment within the couple had any influence on psychological adjustment of the parent. Marital satisfaction partially mediated the association of anxious attachment with symptomatology. Contrary to previous research findings, avoidant attachment was associated with high grief intensity. These findings challenge the notion that the avoidantly attached are resilient.

Keywords: *parental bereavement; adult attachment; death of child; avoidant attachment; actor partner interdependence model*

The loss of a child is a devastating event that severely disrupts the lives of those affected (for reviews, see Archer, 1999; Rubin & Malkinson, 2001). Research has shown that loss of a child has psychological and

physical health consequences for the parents, including an increased risk of mortality (Li, Precht, Mortensen, & Olsen, 2003). In Western society, the death of a child has generally been found to elicit more intense and complicated grief reactions than other types of bereavement, due to a variety of complex features associated with both the parental bereavement experience itself and the nature of parent-child bonding (Sanders, 1989). These include survivor guilt, powerful psychological and social drives to care for one's offspring (the child should outlive the parent), and lost opportunity for legacy (e.g., Rubin, 1993).

Parental bereavement is further complicated by the fact that parents as couples have to face their bereavement together: Not only has the couple lost their child, but the person to whom they would probably turn in a situation of distress is actually suffering intensely, too, and may be too distressed to provide support. There may also be discordance between partners in the ways that they go about their grieving (e.g., in the need to confront memories and talk about the deceased child), which may add to individual distress and marital disruption (Dijkstra & Stroebe, 1998). Although both parents are likely to suffer greatly from the loss, there can be substantial differences in reactions among them, and this difference could affect the grieving process (for

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reviews, see Dijkstra & Stroebe, 1998; Dyregrov, Nordanger, & Dyregrov, 2003).

Relevance of Attachment Theory to Bereavement: A Résumé

Attachment theory provides a unique way to characterize individual differences in reactions to child loss (e.g., Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969/1982, 1973, 1980), particularly because it focuses on the formation, maintenance, and dissolution of interpersonal relationships, linking patterns of attachment to individual well-being (see below). More specifically, given its focus on the nature of a person's relationships and adjustment in situations of separation, attachment theory provides a useful way to characterize individual differences in reactions to loss. In the case of child loss, two types of relationships (at least) are altered: Not only has the parent-child attachment bond been broken through the child's death, but it seems likely that the bond between the parents themselves may have been disrupted or at least put under enormous pressure.

According to attachment theory, human beings are born with an innate psychobiological system, the attachment behavioral system, that motivates them to seek proximity to significant others in times of need as a way of protecting themselves from threats and alleviating distress (Bowlby, 1969/1982, 1973, 1980). The theory postulates different styles of attachment, formed through the early parent-child relationship, which guide responses to emotionally distressing situations such as bereavement. Links have been made between these different styles of attachment and health. For example, insecure individuals in general tend to have more mental health problems and lower levels of well-being compared with the more securely attached (Cassidy & Shaver, 1999; Goodwin, 2003; Main, 1996).

Recently, attachment theorists have made strong arguments for conceptualizing attachment strategies in terms of two major dimensions: avoidance and anxiety (Brennan, Clark, & Shaver, 1998). The different dimensions of attachment can be understood in terms of patterns that guide responses to emotionally distressing situations such as bereavement (Fraley & Shaver, 2000; Mikulincer, Shaver, & Pereg, 2003). The first dimension, typically called attachment *avoidance*, has been described as reflecting the extent to which a person distrusts a relationship partner's goodwill and strives to maintain autonomy and emotional distance from partners. The second dimension, typically called attachment *anxiety*, reflects the degree to which a person worries that a partner will not be available in times of need (Mikulincer, Dolev, & Shaver, 2004).

Attachment theorists have also made predictions with respect to differences in adjustment to bereavement associated with these attachment styles: Persons with a secure style of attachment would typically adjust more easily to loss than those with insecure styles (Parkes, 2001; Shaver & Tancredy, 2001). According to Shaver and Tancredy (2001),

Prototypically secure individuals will react emotionally to the loss of an important relationship partner but will not feel overwhelmed by grief. . . . Individuals high in avoidant attachment are not likely to become emotional about such losses. . . . They may always, for example, have limited the extent to which they depended emotionally on their relationship partner. In contrast, individuals high in anxious attachment . . . are probably among the people whom bereavement researchers have found to be very emotional and preoccupied following loss. (pp. 78, 79)

Empirical Studies of Attachment and Bereavement Outcome

It is surprising that to our knowledge no empirical investigations have yet been conducted to examine the validity of such attachment theory claims in the adjustment of parents following the loss of their child. Most studies have reported findings for the spousally bereaved, and these results support the hypothesis that securely attached persons adjust better to loss than insecurely attached. In a study by Waskowic and Chartier (2003), insecure widows or widowers scored higher on several subscales of the Grief Experience Inventory: They felt more anger, guilt, and despair than secure widows. This study did not differentiate between types of insecure attachment. Nor was this done in a second study, by Van Doorn, Kasl, Beery, Jacobs, and Prigerson (1998), which included 59 bereaved persons following the terminal illness of their spouse. They found that insecure attachment styles put spouses at elevated risk for intense grief symptoms but not for depression. These results are in line with attachment theory predictions.

Very few studies have explored hypotheses about specific insecure patterns of attachment in relation to bereavement reactions. In one of the studies that did, Field and Sundin (2001) followed 32 widows and widowers over a period of 5 years after loss. As predicted, anxious or ambivalent attachment (which was not derived from a standard attachment-style measure but from one of compulsive care seeking) appeared to be associated with appraised inability to cope with the loss and more severe grief symptomatology over the course of 5 years. A dismissing style of attachment (derived from compulsive self-reliance) appeared to be unrelated

to symptomatology, as was expected. Fearful persons (derived from angry withdrawal) were also higher in symptomatology early on in bereavement, but not later. In a further study, Wayment and Vierthaler (2002) investigated attachment patterns in relationship to adjustment among 92 bereaved adults who had lost a loved one in the previous 18 months. Consistent with predictions, they found that persons high on the dimension anxious attachment had higher grief and depression symptoms, whereas there were no associations between avoidant attachment and grief and depression.

Recently, Fraley and Bonanno (2004) examined the relationship between attachment dimensions and adaptation to bereavement in 59 bereaved adults. This study was conducted longitudinally (4 and 18 months post-loss). As in the studies reviewed above, Fraley and Bonanno reported that in contrast to preoccupied individuals who have elevated levels of grief, depression, anxiety, and posttraumatic stress reactions, dismissing avoidance was not associated with higher levels of symptomatology. Fraley and Bonanno also found that those with a so-called fearful avoidance style had extremely high symptomatology. Although Fraley and Bonanno used measures of attachment dimensions, they reverted to the four types of attachment (Bartholomew & Horowitz, 1991) to discuss their results.

The above studies suggest that there are substantial individual differences in adjustment to bereavement according to patterns of attachment. However, only a small number of investigations have been conducted so far, with small samples, most of them cross-sectional in design. Furthermore, most studies use categories according to attachment *styles* in reporting, rather than *dimensions*, as is now standard practice and considered superior in the attachment field. The range of samples has also been limited to spouses or has been poorly specified. Thus, it seems important to extend this type of investigation to examine whether similar patterns will be found for the situation of losing a child. As noted earlier, this type of loss is generally even more devastating and stressful than other types of loss. Furthermore, loss of a child represents loss of a different kind of attachment from that of a partner, namely, that of a caregiving relationship. In addition, expansion of the scope of investigation of attachment patterns is possible: The investigation of parents' bereavement also enables examination of the impact of attachment patterns in a couple (they are dealing with their ongoing relationship at the same time as dealing with the lost relationship with their child).

Overview of This Research

In a separate account of this longitudinal data set on the relationship of neuroticism and attachment style to

adjustment in bereavement, we reported that attachment style explained a unique part of the variance in grief and depression (Wijngaards-de Meij et al., in press). In that investigation, we did not look at the individual and interactive effects of attachment styles nor at the effect of the attachment style of the partner on the adjustment process. Furthermore, we did not focus on the impact of the specific types of insecure attachment on the course of symptomatology over time.

The purpose of the current investigation was to clarify individual differences in parents' adjustment to the death of their child, using predictions from attachment theory to try to identify patterns. On one hand, the goal was clinically oriented: to gain understanding about comparative vulnerabilities among bereaved parents. On the other hand, there was a strong theoretical interest: Given the limited scope and information available from previous studies, it was considered important to further examine attachment theory predictions about the relationship between the different dimensions of attachment and bereavement outcome.

The design of the study permitted examination of psychological adjustment in relationship to patterns of attachment of the individual as well as of the partner. Both depression and grief were included as dependent measures, given that previous research has shown these to be distinct syndromes in response to bereavement (Prigerson et al., 1995). Based on the previous theoretical and empirical findings, it was expected that anxious attachment of the parent would be positively related to symptomatology. This association was expected to be (partly) mediated by the marital satisfaction of the parent, because in previous research the quality of a marriage shortly after the loss of a child has been shown to affect the grief responses of bereaved couples 2 and 4 years after the loss (Lang, Gottlieb, & Amsel, 1996). Predictions with respect to avoidant attachment were different: Given that avoidant persons are unable to express their grief (cf. Parkes, 2001; Shaver & Tancredy, 2001) and following the results of the studies reviewed above, it was expected that avoidant attachment would be unrelated to psychological adjustment after bereavement. Given the longitudinal design of our data, possible effects of adult attachment on the paths through time were also studied. Furthermore, to exclude possible gender effects, all analyses were controlled for gender.

METHOD

Design

The design of the study was longitudinal, consisting of three points of measurement at 6, 13, and 20 months after the death of the child. The attrition rate was

17.8% over this 14-month period. The biographical data about the parents, the child, and circumstances surrounding the loss were gathered during an interview with the couple at the first measurement point after their loss. At all three moments in time, parents were asked to fill in a set of questionnaires separately. Adult attachment was measured once, at the first measurement moment of 6 months after the loss. The dependent variables grief and depression and the mediating variable marital satisfaction were measured at all three moments in time.

Participants

In total, 463 Dutch couples who had lost a child were contacted via obituary notices in local and national newspapers. Bereaved parents who were grandparents (i.e., those parents whose deceased child was a parent himself or herself) were not included in this investigation given that they are likely to experience additional difficulties. Single parents were also excluded, because the study was focused on individual and partner predictors of grief. In total, 219 parent couples (47%) agreed to participate. Informed consent procedures were utilized. The parents who participated ranged in age from 26 to 68 years ($M = 42.2$, $SD = 9.1$), and their deceased child's age ranged from stillborn to 29 years with a mean age of 10.2 years ($SD = 9.8$).¹ A total of 68.7% of the deceased children were boys. The causes of death varied from neonatal death or stillborn (16.3%) to illness or disorder (47.7%) to accident, sudden infant death syndrome (SIDS), suicide, or homicide (36.1%).

Measurement Instruments

Dependent variables. Grief reactions were measured with the Inventory of Complicated Grief (ICG; Prigerson et al., 1995; Dutch version by Dijkstra, Schut, Stroebe, Stroebe, & Van den Bout, 2000). The ICG consists of 19 items covering psychological aspects of grief, e.g., "I find it difficult to accept the death of our child" and "I feel that it is unfair that I should live when our child died." The answers are given on a 5-point scale ranging from *never* (= 1) through *sometimes* (= 3) to *always* (= 5). In our study, the Cronbach's alpha was .90 to .92, and test-retest coefficients varied from .81 to .88.

Depression was measured using the subscale of the Symptom Checklist-90 (SCL-90; Derogatis, 1977; Dutch version by Arrindell & Ettema, 1986). The subscale Depressive Symptomatology consists of 16 items. Answers are given on a 5-point scale, ranging from *not at all* (= 1) to *very much* (= 5). In our study, Cronbach's

alpha ranged from .92 to .94, and test-retest reliability was .74 to .83.

The dependent variables were transformed to a scale of 0 to 100 to facilitate comparison between the predictors and the comparison between the predictive value for depression and grief.

Independent variables. Attachment was measured using the Adult Attachment Scale (AAS; Collins & Read, 1990). In line with contemporary agreement on the two-dimension structure of attachment, the two subscales, Anxiety and Avoidance, were used (Brennan et al., 1998). To construct these scales, we followed the item structure by Hazan and Shaver (1987).² A confirmatory factor analysis was conducted for both scales in which the items that had factor loadings below .32 were not selected (Tabachnick & Fidell, 2001). The Anxious attachment scale consisted of six items, for example, "I often worry that my partner doesn't love me" and "I find others are reluctant to get as close as I would like." Cronbach's alpha was .61. The Avoidance scale consisted of five items, for example, "People are never there when you need them" and "I am somewhat uncomfortable being close to others." Cronbach's alpha was .60. High scores represent more insecure attachment.

Marital satisfaction was measured by eight items of the Relational Interaction Satisfaction Scale (RISS; Buunk & Nijskens, 1980), for example, "I regret being involved in this relationship" and "I enjoy the company of my partner." The RISS has high internal consistency (Cronbach's alpha was .85 to .92; Buunk & Van Yperen, 1991), and results from our study confirm this, with alphas ranging from .86 to .92. Higher scores indicate more marital satisfaction.

Control Variables

Factors that vary between couples (between dyads) assessed in this study were child's age, cause of death, expectedness of the loss (5-point scale), number of remaining children, and subsequent pregnancy and/or baby 20 months after the death. Cause of death was categorized in three groups: stillbirth or neonatal death (0), illness or disorder (1), or traumatic or unnatural death (SIDS, accident, suicide, homicide) (2). Individual factors were education (6-point scale), employment (in hours), religious affiliation (nonreligious vs. religious), and professional help seeking.

Analysis and Statistical Procedure

To deal with the complications associated with having multiple predictors in a dependent structure, the

data were analyzed with multilevel regression analysis (Hox, 2002). A unique feature of multilevel analysis is that it works with a specific statistical model designed for nested data. In our data there is a nested structure captured by a three-level hierarchy. The three measurement moments in time are nested in one person, the father or mother. The measurements of the father and mother are dependent and are thereby nested in a couple. Therefore, time since death is the lowest level (first level), nested in the individual, the parent (second level). The parents (second level) are nested in a couple (third level). Each independent variable varies only at one specific level.³ Time since the loss of the child varies only at the lowest level, the time level (first level). The individual factors of the two parents (e.g., gender) differ at the individual level (second level). The remaining factors are the same for the parents in a couple (e.g., cause of death, age of the child), but these factors do vary between the couples at the couple level (third level). For each of the two dependent variables (grief and depression), a multilevel regression analysis was done with MLwiN (Rasbash et al., 2000).

To analyze the individual-parent effect, the partner effect, and possible interactions, we used the actor partner interdependence model (APIM; Kashy & Kenny, 2000; Kenny, Mannetti, Pierro, Livi, & Kashy, 2002). The APIM was tested, as recommended by Campbell and Kashy (2002), within a multilevel regression analysis. The APIM is appropriate when the dyad (i.e., the marital couple) is the unit of analysis and tests need to be performed both within and between dyads (Kenny, 1996; Rholes, Simpson, & Friedman, 2006). Variables are assessed for both the actor and his or her marital partner. Use of the APIM then allows one to assess not only whether an actor's own attributes predict his or her responses but also whether the attributes of the actor's partner also predict the actor's responses while the impact of the actor's own attributes is controlled. In our study, the actor effect estimates the effect that an actor's own score on the independent variable (e.g., anxious attachment) has on that person's outcome measure (e.g., grief), and the partner effect estimates the effect that scores of the partner on the independent variable have on the actor's outcome (Kashy & Kenny, 2000; Kenny et al., 2002). In the model, not only the actor and the partner effects of variables can be tested but also several interactions involving the actor and/or partner variables.

Multilevel analysis has advantages with respect to dealing with missing data. Problems associated with panel attrition (i.e., individuals who after one or more measurement occasions drop out of the study) are of relevance here. Multilevel analysis leads to unbiased

estimates when the panel attrition follows a pattern defined as missing at random (for more information, see Hox, 2002; Little, Schnabel, & Baumert, 2000).

We started with a simple model, Model 1, which included the variables time and gender. In Model 2, the adult attachment variables of the actor were introduced, and in Model 3, the adult attachment variables of the partner as well as interactions between these variables with the attachment variables of the actor were introduced. In each model, interactions between the independent variables and time were tested to see whether different trends through time were related to these variables. After Model 3, the final model of the attachment variables (Model 4) was made by excluding the variables and interactions that were not significant. In Models 5 and 6, the mediation of marital satisfaction between the adult attachment variables and grief and depression was tested.

RESULTS

Descriptive Statistics and Correlations

The descriptive statistics for the independent and dependent variables can be found in Table 1. Table 2 presents zero-order correlations among the attachment dimensions of the actor and partner, the marital satisfaction (mediator) at 6 months postloss, and the correlation of these variables with grief and depression.

Time and Gender (Model 1)

The variable time (coded 0, 1, and 2) and the variable gender (0 = male, 1 = female) were introduced in Model 1 (see Table 3). As time goes by, grief symptoms and depression decrease (respectively, $B = -2,367$, $p < .05$; $b = -1,823$, $p < .05$). It is possible that the regression slope for time (the rate in which the symptoms decrease) differs for individuals and/or couples. This possibility was checked for both grief and depression. The decrease in grief through time varied only between the couples of parents (third level), whereas the decrease in depression varied between individual parents (second level) as well as between couples. To identify which factors were responsible for particular trends through time, interactions between time and the independent variables were conducted in the following models.

Women reported more grief and depression symptoms than men. The slope of the symptoms through time did not vary between men and women, so the decrease in symptoms through time was the same for men and women.

TABLE 1: Descriptive Statistics: Means, Standard Deviations ($n = 438$), Within-Couple Correlations ($N = 219$), and Test-Retest Coefficients

	M ($t = 0$)	(SD)	M ($t = 1$)	(SD)	M ($t = 2$)	(SD)	Within-Couple Correlation ($t = 0$)	Test-Retest Coefficient $t0 - t1$	Test-Retest Coefficients $t1 - t2$
Avoidant attachment	2.35	(0.66)	—	—	—	—	.15	—	—
Anxious attachment	2.07	(0.62)	—	—	—	—	.16	—	—
Grief	45.24	(19.80)	43.00	(18.65)	41.65	(18.21)	.56	.85	.88
Depression	23.94	(19.71)	22.17	(19.12)	20.56	(18.00)	.32	.83	.84
Marital satisfaction	35.45	(4.13)	35.62	(4.21)	35.45	(4.15)	.50	.74	.77

TABLE 2: Correlations at 6 Months After Bereavement ($t = 0$)

	<i>Actor Avoidant Attachment</i>	<i>Actor Anxious Attachment</i>	<i>Partner Avoidant Attachment</i>	<i>Partner Anxious Attachment</i>	<i>Marital Satisfaction</i>	<i>Grief</i>	<i>Depression</i>
Actor avoidant attachment	1	.32**	.15**	.08**	-.12**	.27**	.33**
Actor anxious attachment		1	.09**	.16**	-.33**	.27**	.31**
Partner avoidant attachment			1	.32**	-.16**	.11**	.13**
Partner anxious attachment				1	-.23**	.08**	.09**
Marital satisfaction					1	-.26**	-.26**
Grief						1	.72**
Depression							1

**Significant at the .01 level.

TABLE 3: Summary of Actor Partner Interdependence Model Analyses for Grief

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>	
	B	(SE)	B	(SE)	B	(SE)	B	(SE)
Time	-2.367*	(0.841)	-2.207*	(0.318)	-2.192*	(1.907)	-2.196*	(0.327)
Gender	8.014*	(1.158)	7.600*	(1.011)	7.614*	(1.014)	7.607*	(1.014)
Actor avoidant attachment			4.389*	(1.159)	5.223*	(1.381)	5.217*	(1.384)
Actor anxious attachment			7.088*	(1.479)	6.693*	(1.726)	6.762*	(1.738)
Actor avoidant × anxious attachment			1.791	(1.805)	2.014	(2.327)	1.757	(2.345)
Partner avoidant attachment					1.729	(1.378)	1.723	(1.382)
Partner anxious attachment					0.185	(1.735)	-0.026	(1.755)
Partner avoidant × anxious attachment					-0.882	(2.314)	-1.189	(2.347)
Actor × partner avoidant attachment							1.670	(2.724)
Actor × partner anxious attachment							-1.739	(2.398)
Interaction with time								
Time × gender	0.122	(0.514)						
Time × actor avoidant attachment			0.065	(0.494)	0.056	(0.512)		
Time × actor anxious attachment			-1.687*	(0.648)	-1.756*	(0.662)	-1.775*	(0.662)
Time × partner avoidant attachment					-0.092	(0.507)		
Time × partner anxious attachment					-0.185	(0.679)		

* $p < .05$.

Adult Attachment Dimensions of the Actor (Model 2)

In Model 2, anxious attachment and avoidant attachment (as individual dimensional characteristics) were put into the equation, as well as the interaction term individual anxious attachment by individual

avoidant attachment. Both individual attachment measures were positive predictors of grief and depression; the more anxiously attached the person was, the more grief and depression she or he showed (e.g., $b = 7.088$, $p < .05$; see Table 3). Also, the higher the parent scored on avoidant attachment, the more grief and depression

TABLE 4: Summary of Actor Partner Interdependence Model Analyses for Depression

Predictor	Model 1		Model 2		Model 3		Model 4	
	B	(SE)	B	(SE)	B	(SE)	B	(SE)
Time	-1.823*	(0.323)	-1.814*	(0.335)	-1.828*	(0.341)	-1.829*	(0.341)
Gender	12.620*	(1.137)	11.342*	(1.157)	11.435*	(1.165)	11.439*	(1.164)
Actor avoidant attachment			5.617*	(1.232)	8.842*	(1.628)	5.208*	(1.299)
Actor anxious attachment			8.841*	(1.563)	5.256*	(1.295)	8.745*	(1.639)
Actor avoidant × anxious attachment			3.360	(1.918)	3.229	(2.112)	3.097	(2.132)
Partner avoidant attachment					1.251	(1.305)	1.203	(1.309)
Partner anxious attachment					0.688	(1.631)	0.579	(1.651)
Partner avoidant × anxious attachment					-1.500	(2.105)	-1.623	(2.136)
Actor × partner avoidant attachment							-1.749	(2.037)
Actor × partner anxious attachment							0.077	(2.749)
Interaction with time								
Time × gender	-0.483	(0.573)						
Time × actor avoidant attachment			-0.731	(0.544)	-0.384	(0.557)		
Time × actor anxious attachment			-1.833*	(0.701)	-2.140*	(1.631)	-2.140*	(0.715)
Time × partner avoidant attachment					-0.345	(0.742)		
Time × partner anxious attachment					0.041	(0.553)		

* $p < .05$.

symptoms the parent had (e.g., $b = 4.389$, $p < .05$). There was no significant effect of the interaction between the two individual attachment dimensions.

To check whether attachment styles were associated with the differences between the couples through time, the interaction between both avoidant attachment with time and of anxious attachment with time were checked. For grief, there was only one small interaction: The interaction between the anxious attachment and time was significant, indicating that parents with high anxious attachment showed a steeper decline in grief symptoms through time than the parents who were low in anxious attachment ($b = 1.687$, $p < .05$, Table 3).⁴ At 20 months postloss, anxiously attached parents still had more intense grief than low anxiously attached parents.

For the dependent variable depression, the interaction between anxious attachment and time was also significant ($p < .05$). Parents who were anxiously attached had more depression symptoms at 6 months after the loss but showed a steeper decline, reducing the discrepancy between the more and less anxiously attached. For both grief and depression, there were no differences in time related to avoidant attachment.

Partner Attachment Dimensions (Model 3)

In Model 3, the attachment variables of the partner were introduced. Neither of the two attachment variables of the partner, avoidant attachment and anxious attachment, was significant, nor was the interaction between the partner attachment variables (all $ps > .05$, Tables 3 and 4).

For both grief and depression, the partner attachment dimensions were not related to different trends through time (which was checked by interactions between time and the partner attachment dimensions). The interactions between the attachment dimensions and time that were not significant were taken out of the model before going to the next step.

Interactions Between Actor and Partner Attachment Dimensions (Model 4)

The extra effects of combinations of attachment dimensions between the parents within the couple on grief and depression were tested: The attachment dimension of the parent (actor) and the partner were combined by multiplying the score of the actor by the score of the partner (both variables were centered; Aiken & West, 1991). The interactions between the attachment variable of the actor and the attachment variable or variables of the partner on grief and depression were not significant.

Control Variables

To check whether the attachment effects were the same for men and women, we tested the interaction between gender and attachment dimensions (of the actor as well as of the partner). These were not significant and were not included in the final model.

To control for confounding effects from relationships between demographic and situational variables with grief and depression (Wijngaards-de Meij et al.,

2005), these variables were introduced step by step in Model 6. The introduction of these variables into Model 6 did not result in significant changes.

Mediation (Models 5 and 6)

For the final attachment model, the variables that were not significant were excluded from the model that resulted in Model 5. To check whether the association between the attachment style and depression was mediated by marital satisfaction,⁵ the variable marital satisfaction was included in Model 6 (similar procedure for grief). The attachment dimensions and the mediator are both fixed variables on the same level, and therefore a mediation procedure can be validly tested in the multi-level context (Hox, 2002; Krull & MacKinnon, 1999). Following the procedure of Sobel (1982), it was shown that marital satisfaction partly mediated the association of the anxious attachment of the actor with depression. Although the regression weight of anxious attachment remained significant after inclusion of marital satisfaction in the model, according to the *t* test of Freedman and Schatzkin (1992; see also MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002), the decrease in slope (e.g., from $b = 8.680$ to 6.868 for depression; see Table 5) was significant ($p < .05$). When the parent was anxiously attached, this was associated with less marital satisfaction ($p < .05$; see Table 6), and low marital satisfaction in turn was associated with more depression ($p < .05$). There was no significant decrease in the slope of avoidant attachment on depression when marital satisfaction was included in the model. The same mediation process was checked for the dependent variable grief and attachment style, and the decrease in slope was not found significant.

Explained Variance

The part of the variation in, for example, grief symptoms that can be predicted by the variables in the model is known as explained variance. Of the variance⁶ in grief, a sum of 10% was explained by the attachment variables in the model. In depression, 18% of the variance was explained by the attachment variables.

DISCUSSION

The results of our study provide some unique information about persons likely to be at high risk of poor bereavement outcome following the loss of a child. Given that bereaved parents are such a highly vulnerable group (e.g., Li et al., 2003), it is indeed important to gain insight into the mechanisms associated with

individual differences in bereavement reactions. Our results also challenge some basic assumptions that have been formulated on the basis of recent bereavement research on attachment, while at the same time demonstrating that the attachment perspective is an important framework for understanding individual differences in parental adjustment following the loss of a child.

Attachment emerged from our study as a strong predictor of bereavement outcome among bereaved parents: After controlling for individual and loss-related risk factors, of the remaining variance of grief, 14% was explained by the attachment dimensions of the parents, and of the variance of depression, 16% was explained. Looking more specifically at the dimensions of attachment, there were some expected and some unexpected results. The association that was found between high anxious attachment and more grief and depression parallels that which was found in the previous studies on bereavement quite closely (Field & Sundin, 2001; Wayment & Vierthaler, 2002). It seems that bereaved parents who score high on the dimension anxious attachment—like the bereaved groups in the other studies—are very likely to suffer extremely following the loss of their child. Persons high on the dimension anxious attachment, whose relationship style is typified by highly dependent insecurity, can be considered at high risk of poor bereavement outcome.

It is more surprising—and in contrast to the research reviewed earlier (Field & Sundin, 2001; Fraley & Bonanno, 2004; Wayment & Vierthaler, 2002)—that avoidant attachment was also associated with an increase in emotional problems: Among the bereaved parents in our study, those scoring high on the avoidant dimension were more vulnerable to the negative effects of bereavement than those scoring low on this dimension, whereas none of the previous studies had reported such an effect. Our findings do not fit previous understanding: Fraley and Bonanno (2004) had concluded that dismissing avoidance was associated with a “resilient pattern of symptoms” (p. 887). They detailed broader theoretical implications, namely, that patterns of dismissing avoidance should *not* be considered a maladaptive defense mechanism. Following this, the attachment theory assumption that emotional avoidance is indicative of poor psychological adjustment was taken to be incorrect. Clearly, none of these interpretations could be made on the basis of our results: Bereaved parents whose interpersonal relationship style is characterized by discomfort with and wariness of closeness or intimacy are not resilient, do not use defense mechanisms effectively, and are not psychologically well adjusted.

Why, then, are our results so different from the other studies, how can they be interpreted, and what are the

TABLE 5: Mediation of Marital Satisfaction

Predictor	Grief				Depression			
	Model 5		Model 6		Model 5		Model 6	
	B	(SE)	B	(SE)	B	(SE)	B	(SE)
Time	-2.206*	(0.318)	-2.232*	(0.329)	-1.807	(0.640)	-1.935*	(0.333)
Gender	7.614*	(1.015)	7.392*	(1.021)	11.398*	(1.170)	10.618*	(1.132)
Actor avoidant attachment	4.582*	(1.079)	4.565*	(1.081)	5.195*	(1.133)	5.130*	(1.109)
Actor anxious attachment	6.810*	(1.446)	6.141*	(1.460)	8.680*	(1.531)	6.868*	(1.546)
Marital satisfaction			-0.407*	(0.117)			-0.880*	(0.120)
Interaction with time								
Time × actor anxious attachment	-1.612*	(0.587)	-1.662*	(0.600)	-2.135*	(0.640)	-2.247*	(0.643)

p* < .05.TABLE 6:** Summary of Actor Partner Interdependence Model Analyses of Marital Satisfaction

Predictor	Marital Satisfaction	
	B	(SE)
Gender (0 = father)	-0.737*	0.213
Actor avoidant attachment	-0.020	0.241
Actor anxious attachment	-2.183*	0.325
Actor anxious × avoidant attachment	-0.493	0.424
Partner avoidant attachment	-0.352	0.239
Partner anxious attachment	-1.298*	0.305
Partner anxious × avoidant attachment	-1.051*	0.424
Interactions		
Gender × anxious attachment (actor)	-0.764*	0.250
Gender × avoidant attachment (actor)	0.246	0.222

**p* < .05.

theoretical and clinical implications? First, it is important to remember that other major attachment theorists working in the field of bereavement, such as Shaver and Tancredy (2001) and Parkes (2001), clearly agreed with Fraley and Bonanno (2004) that bereaved persons high on avoidance would *not* be expected to exhibit more symptoms of grief. This is in line with formulations by Cassidy and Kobak (1988), who argued that the deactivating mechanisms used by avoidantly attached adults (such as minimizing the emotional involvement with and dependence on others and the pursuit of autonomy and control) result in fewer emotional problems. However, ours have not been the only results to apparently contradict these theoretical arguments. Similar findings were described by Mikulincer, Dolev, and Shaver (2004). In two studies of attachment-related variations in thought suppression, these investigators found that under high cognitive load, avoidant participants were less able to suppress thoughts of separation and were more likely to activate negative self-representations. The authors interpreted these patterns in terms of a

so-called rebound effect involving avoidant attachment strategies. Although avoidant strategies would be expected to be useful in situations with a low amount of stress, during prolonged, highly demanding, stressful experiences, these strategies prove useless (for review, see Mikulincer & Shaver, 2003). Deactivating strategies (as we noted at the outset, these are typical for avoidant attachment) can collapse in such situations, revealing a sense of shortfall in coping and a decline in functioning.

Linking this analysis to our own results, we have noted that the death of a child is a prolonged and extremely stressful experience, even more so than other types of bereavement. Following this, it seems reasonable to assume that parents who were high in avoidant attachment had more grief symptoms and more depression because the loss of their child led to a situation where their deactivating strategies were no longer functional. They cannot shut off thinking about the painful loss of their child. In cases of extremely severe bereavements, then, avoidance seems no longer to work for individuals as a defense mechanism (cf. Edelstein & Shaver,

2004). In conclusion: Avoidantly attached parents undergoing this extreme type of bereavement must also be considered a high-risk subgroup, one that, like the anxiously attached, may be in need of intervention (cf. Schut & Stroebe, 2006).

Whereas other studies looked only at the individual patterns, we also looked at the attachment of the partner, this being especially relevant in studying parental bereavement. In our study, grief and depression symptoms were unrelated to insecurity of the partner's attachment. Furthermore, there were neither any combinations between attachment dimensions of the actor and the partner, nor with gender. Contrary to these findings, we did find partner effects of anxious attachment on marital satisfaction generally in line with those previously found in nonbereavement settings (e.g. Banse, 2004). So although insecurity of attachment of both the parent and his or her partner is important for marital satisfaction, only insecurity of the parent himself or herself is important for grief and depression. Perhaps the above patterns of results have to do with the different natures of attachment to one's partner and one's child.

An additional pattern was found with respect to parents who were high on anxious attachment. For these parents, the problems in psychological adjustment were partly related to marital satisfaction. Specifically, at all three moments in time, anxiously attached parents were lower in marital satisfaction, and when they were lower in satisfaction, this was associated with more depression. In contrast, although parents who were high on avoidant attachment were also higher on depression, this association was unrelated to marital satisfaction. It seems likely that in the situation of an anxiously attached parent, the parent has high expectations of the support and caregiving of their partner. These expectations are probably not met by their partner, he or she being similarly distressed. Possibly, such expectations do not pertain for the parent who scored high on avoidant attachment. Further research is needed to gain more insight into the processes underlying these patterns of results.

Although there has been very little research on the association between adult attachment and grief processes through time, the expectations of specific complicated grief patterns related to attachment have been frequently suggested (for a review, see Stroebe, Schut, & Stroebe, 2005), based on the patterns described by Bowlby (1980).⁷ In our study, these expectations were not confirmed: In general, through time the decrease in symptoms was not associated with the attachment dimensions. There was one small effect in time for parents who were high in anxious attachment: Their rates decrease relatively more rapidly than those low in anxious attachment (although they remain

higher in grief through time). Two explanations can be suggested to account for this. First, although the attachment dimensions are seen as quite consistent over time (Davila & Cobb, 2004), it is possible that anxiously attached individuals become even more anxiously attached after bereavement and return to their still high levels over time (we discuss this further below). Second, there is more room for "improvement," in the sense of lowering their scores, because these were very high (regression to the mean). Such speculations would need further empirical investigation.

Some remarks need to be made about limitations of our study. In prior research, although it is considered traitlike and reasonably stable, adult attachment style may be susceptible to some change over time; for example, it may be influenced by major life events (for a review, see Davila & Cobb, 2004). Thus, it is conceivable that there was a shift away from secure attachment following the severe event of child loss. However, even if this were the case, it is still important to establish the relation between current adult attachment and psychological adjustment after the loss. Furthermore, the reliability of the attachment scales were relatively low. Thus, the results of our study are likely to have been conservative. It is noteworthy that we did find actor and partner effects of attachment dimensions on marital satisfaction, implying that the attachment measures were actually quite sensitive. Another point for consideration concerns prebereavement symptomatology. For example, because baseline measures are usually difficult—if not impossible—to establish in studies of parents' bereavement, we know nothing about the symptom level of depression before the loss of the child. Insecure attachment has been shown to be related to a variety of clinical problems and disorders (e.g., Dozier, Stovall, & Albus, 1999; Van IJzendoorn & Bakermans-Kranenburg, 1996). Thus, we do not know for sure whether patterns of depression were bereavement-specific or general. Clearly, a nonbereaved control group would have helped us to establish this. Unfortunately, neither the studies reviewed earlier nor our own investigation included nonbereaved controls. Given the patterns of results from our study, future researchers would be well advised to include them.

Notwithstanding these considerations, our results clearly show the importance of an adult attachment theory perspective for understanding bereavement. This approach has enabled us to identify high-risk subgroups of bereaved parents. The patterns can be used to guide more applied research and ultimately, perhaps, intervention. For example, given that marital satisfaction partly mediated the relationship between attachment and depression among parents high on anxious attachment, it would be useful to examine whether these partners

could be helped through their grief by counseling that focuses on the marital relationship.

Conversely, our findings have interesting implications for attachment theory: We have argued that conclusions drawn about the adaptiveness and “resilience” of avoidant attachment do not hold true for the severe experience of the death of a child. We suggested different processes that are likely to be responsible for this. Again, we hope that the results and explanation that we put forward will stimulate further research, perhaps most important into the nature of avoidant ways of coping, underlying mechanisms, and relationships with outcome variables.

NOTES

1. The deceased children of the nonrespondents turned out to be older than the children of the parents participating in the study, $t(378) = -5.29, p < .001$. Unfortunately, additional information on nonrespondents was not available to investigate further selection effects. It is unlikely that participation was related to financial resources enabling placement of an obituary, because it costs very little to do this in local newspapers in the Netherlands.

2. The approach used by Collins (e.g., Collins, Ford, Guichard, & Allard, 2006) differs mainly in that her avoidant scale is constructed by combining avoidant and secure items (of the original Hazan & Shaver [1987] conceptualization). However, the secure items (which Collins included) were not included in constructing our avoidance scale because the inclusion of the secure items did not improve the psychometric properties of our avoidance scale.

3. Although the raw scores of each variable can only vary on one level, the aggregated scores of this variable can vary on a higher level (e.g., the averages of the two anxious attachment scores of the couple can vary between the couples on the third level).

4. To study differences between couples through time, strictly, only variables on the couple level can be included. Because both the actor's attachment as well as the partner's attachment were included in the model, the average attachment of the couple could not be added. Therefore, interaction between the individual attachment and time were included in the model (cf. Hox, personal communication, February 2006).

5. In previous nonbereavement research, the adult attachment of the actor as well as that of the partner have been found to be reliable predictors of marital satisfaction (Banse, 2004; Feeney, 1999). To assess whether this was also the case in our study, we performed an actor partner interdependence model (APIM) analysis with marital satisfaction as a dependent variable and actor and partner attachment dimensions as predictors. In contrast to the APIM analyses on grief and depression, in the analysis of marital satisfaction a (negative) actor effect of anxious attachment was found as well as a (negative) partner effect of anxious attachment (see Table 6). The more anxiously attached the parent is, the lower the marital satisfaction. Anxious attachment of the partner is related to the marital satisfaction of the parent (actor) in the same way: The more anxiously attached the partner is, the lower the actor's marital satisfaction. There was no effect of avoidant attachment on marital satisfaction, but there was a significant interaction between the partner's avoidant attachment and the partner's anxious attachment on marital satisfaction. So when the partner is high on anxious as well as avoidant attachment, the marital satisfaction of the parent (actor) was even lower. Mothers were lower on marital satisfaction than fathers, and there was also a significant interaction of gender with anxious attachment of the actor: When mothers were high in anxious attachment, they had even lower marital satisfaction (beside the main effects of gender and anxious attachment).

6. The variable anxious attachment explained 4% and 13% of the variance in time in grief and depression, respectively.

7. Bowlby (1980) hypothesized that complicated grief would be related to insecure attachment in the following ways: Attachment

anxiety would be related to a pattern of chronic grief (prolonged high levels of grief), whereas attachment avoidance would be related to a pattern of delayed grief (an apparent absence of overt grief symptoms early in bereavement and an increase in symptoms over time).

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