

The loss of a child

Effects of adult attachment and relationship adjustment on grief over time among parents



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Sometimes my father tells a story about me as a little child. One particular story is about a day at the beach. I was playing in the water under the close eye of my father, when suddenly a king-wave came up and pulled me under. When the wave had subsided, I did not come to the surface.

For a few moments my father could not find me...

The horror I see in his eyes each time he tells that story, is the horror I imagine parents who actually have lost a child go through...only a million times worse...

Preface

When looking back on the writing of this thesis, I can say that it has been a turbulent period, of being on top of the world after receiving positive feedback, to feeling like starting the day with a bottle of wine, when I had to revise a part of the text. On the whole, it has been a valuable experience, both professionally and personally.

Receiving feedback from Maggie and Henk on my texts, has led to a considerable improvement in my writings skills. Not only the mere constructing and formulating of sentences, but also the process of conveying the ‘story’ I have in mind. They taught me to often take a step back and to think about what I want to tell the reader. Separate the essential issues from the side-issues and take the reader by the hand. This also taught me that more does not equal better.

Furthermore, by working as an assistant on the bereavement project in Canada and reading a lot of literature, I gained more insight in the field of bereavement. This knowledge will be of great value in my work as a psychologist, and perhaps will even lead to specializing in the treatment of the bereaved.

Writing this thesis, surprisingly, has taught me something about myself. During times of struggle I would blame the thesis, while in fact it was ‘me’ that caused the struggle. I always thought of myself to be very disciplined, but I came to realize that this was not the case when it comes to restricting myself. I could go on endlessly in trying to find the perfect article or sentence. As Henk wisely observed, I have an imperfect way of dealing with my perfectionism.

Henk and Maggie, I am sincerely grateful for your supervision. Not only for everything you have taught me, but also your humor, patience and faith in me. This often warmed my heart.

Stephen, thank you for always making time for me in your busy schedule and watching over me during my stay abroad.

For the most part, writing this thesis felt like a lonely venture. Fortunately I had family and friends that stood by me.

Dad, you sympathized with me so much as if you were graduating yourself. Thank you for our walks in the forest, putting up with my bad moods and your unconditional support.

Dorian, thank you for ‘not’ asking me regularly about the thesis, as this was not my favorite topic at a certain point, and for my comfort food ‘Mama’s Indonesian chicken’ on request.

Saskia, it find it fascinating that we are such close friends and at the same time students of a totally different kind. Thank you for your relaxed approach to life and always being there for me.

Claire, thank you for being my instant friend from the moment I arrived in Canada till this present day.

Jonathan, the way you listen and understand me, has been a great comfort. Thank you...

Lastly, I would like to thank all the parents in the bereavement project who were willing to share their thoughts and emotions on the loss of their child.

Hilary Marijne, June 2009

Abstract

The relationship between the parents forms an essential context within which the psychological aspects of the loss of a child are managed. In line with the model of attachment system functioning (Mikulincer & Shaver, 2002) the partner could serve as an attachment figure for bereaved parents and consequently have an effect on their grief over time. To investigate this, a longitudinal study over a period of half a year was conducted. Data were collected from a sample of 83 parents. Multiple regression was applied to explore the main and interaction effect of anxious and avoidant attachment, and relationship adjustment on decrease in grief symptoms. Higher levels of avoidant attachment were related with a smaller decrease in grief symptoms. Neither avoidant attachment nor relationship adjustment had significant associations with the decrease in grief symptoms. Furthermore, relationship adjustment did not moderate the association of the adult attachment dimensions with the decrease in grief symptoms. The interpretation of these results as well as limitations and suggestions for future research are discussed.

Introduction

The loss of a child is a highly significant, inconceivable and inexplicable experience. It constitutes perhaps one of the most devastating life events a parent could face (Hazzard, Weston and Gutterres 1992; Rando, 1986).

The loss of a child affects two bonds inherent to a parent. There is not only the disruption of the parent-child bond, the relationship that is the closest and most intense that life can generate. Also the dyadic bond between the parents is involved. The loss strikes the parents simultaneously, having a significant impact on the relationship (Bowlby, 1980). On the one hand, it could be argued that one of the most important sources of support becomes less available. On the other hand, both the parents have known the child just as intimately and go through the same experience. This could facilitate the sharing and identifying of feelings associated with the loss of a child. Aspects of the relationship between the parents that could underlie these contradictory courses are the focus of the current study, driven by the notion that the first level of help should be in the natural support systems (Silverman & Nickman, 1996).

An integrative approach

There is a wide variance in bereavement outcome after the loss of a child. This ranges from pathological form of grieving to individuals moving on in an adaptive way (Bonnano, Papa, Moskowitz & Folkman, 2005; Stroebe & Schut, 2005-2006). Those factors that contribute in an adaptive or maladaptive way to the grieving process are frequently the subject in bereavement research. Research has identified several factors, from intrapsychic characteristics to environmental and cultural factors, to explain the variance in bereavement outcome. Moreover there seems to be a shift from exploring specific factors in isolation to an integrative framework of these different factors (Lang, Goulet & Amsel, 2004; Stroebe, Folkman, Hansson & Schut, 2006). The latter authors advocate research that investigates the relative impact of different factors and the interactions among them in bereavement outcome. Also more emphasis is being placed on the social/interpersonal perspective of grief resolution in addition to an individual perspective (Moos, 1995; Stroebe & Schut, 1999). For example, it has been demonstrated that the family provides the most significant amount of support for the bereaved and that family dynamics have an influence on the course of grief (Reif, Patton & Gold, 1995; Traylor, Hayslip, Kaminski & York 2003; Worden, 1991). A study of

Wijngaards-de Meij et al. (2008) also reflects this interpersonal trend in research. They concluded after their study that in coping with the loss of their child, interpersonal as well as intra-personal processes are relevant for the adjustment process of parents after the loss of their child.

In line with this course in bereavement research, namely an integrative approach of multiple variables and concern for the interpersonal context, the present study was set up. That is, examining the interpersonal context in relation to interpersonal regulation style of the parent, namely adult attachment. Therefore, the significance of the relationship context will be elaborated upon in the subsequent section. This will be followed up by discussion on the topic of attachment and its relevance to field of parental bereavement before turning to the hypothesis of the present study.

The interpersonal context: the couple relationship

People are inextricably embedded in their social context, which exerts a powerful influence on them (Moos, 2003; Reis, Collins & Bersheid, 2000). An essential part of this social context comprises the marital or couple relationship. For the majority of adults, their social experiences revolve around the lives they share with their significant other (Markey, Markey & Fishman Gray, 2007). Accordingly, the marital or couple relationship has consistently been linked to physical and mental health (Horwitz, McLaughlin & White, 1997; Ren, 1997). A common theory behind this notion is that close relationships, such as marriage, have a buffering role in coping with stressful life events (Cohen & Wills, (1985). Significant others are thought to provide emotional and instrumental help, thereby reducing negative outcomes (Barrera, 1986). Similarly, a study of Argyle and Furnham, (1983) confirmed that marriage is a uniquely intense relationship and that it has the greatest potential for the widest range of support provisions. These findings apply to the field of bereavement as well. There is evidence that after the loss of a child the spouse is one of the most frequent and the most helpful sources of support (Goldberger & Brenitz, 1982; Hazzard, Weston & Gutterres, 1992). Similarly, Spinetta, Swarner and Sheposh (1981) found that better adjustment of parents after the loss of their child was related to having a viable and ongoing “significant other” for support, to whom they could turn to for help during the course of the illness of their child. However, some qualification is in order here. Moos (2003) posits in his article that diverse social contexts can be conceptualized, among other aspects, in terms of quality of the personal relationships. These aspects underlie the benevolence and harmfulness of a context. Correspondingly, evidence of research regarding marital status and life stressors, including

parental bereavement, seems to suggest that being married per se does not predict adjustment to stressors, but the quality of the relationship does (Gove, Hughes & Style, 1983; Lohan & Murphy, 2007; Polatinsky & Esprey, 2000). In this view, the couple relationship could function not only as a resource, but also as a source of stress (Cotton, Burton & Rushing, 2003; Coyne & DeLongis, 1986; Horwitz, McLaughlin & White, 1997).

As yet, the effect of relationship functioning on grief over time has not been investigated widely. After an extensive literature research only a small number of studies were found that could make inferences between relationship functioning and adaptation to bereavement. For example, Lang, Gotlieb and Amsel (1996) concluded that verbal forms of intimacy soon after the loss were predictive of wives' grief at follow-up, while for husbands the more physical form of intimacy were predictive of their grief reactions. Bohannon (1990-91) found that husbands who had more negative feelings about their marriages reported greater despair, anger, social isolation, death anxiety, and depolarization. Wives having more negative feelings about their marriages was related to higher scores on despair, isolation, guilt, rumination, somatization and vigor. Gilbert and Smart (1992) found in their study with bereaved parents that couples who reported very little relational conflict had a positive view of each other and of their relationship. The less positive the view, the greater the depth of their continued grief, and its negative impact on the relationship. However, as the aforementioned studies are correlational and measures have only been taken at one point in time, it excludes the possibility for making causal statements about the relationship between marital functioning and grief over time.

Drawing on research from other areas, there seems to be indirect support for the notion that certain aspects of the couple relationship have an important impact on the grieving process. For example, there is evidence that the higher the adjustment of a relationship is, the lower communication problems appear to be (Eğeci & Gençöz, 2006). The ability to engage in honest and open communication has often been seen as essential to recovery from loss (Gilbert & Smart, 1992). Consistent with this, a significant moderate correlation has been found between self esteem and quality and stability of relationships with romantic partners (Cotton, Burton & Rushing, 2003; Hendrick, Hendrick & Adler, 1988). Self esteem in turn appears to have a very primary role in symptom reduction (Murphy, Johnson & Lohan, 2003). Lastly, there is evidence that the relationship between the partners in itself is affected by the loss of the child (Najman, et al., 1993; Oliver, 1999; Rogers, Floyd, Seltzer, Greenberg, Hong, 2008). As Gilbert (1997) phrases it, the marital couple is in an interactive grieving system.

The thought that emerges from the literature research is that the quality of the couple relationship, which in itself may be influenced by the loss, determines the extent to which the relationship with the partner is resourceful. Different aspects of this relationship, like communication and intimacy, seem to account for the functioning of the relationship. The current study is an attempt to clarify this matter further. In this endeavor the attachment theory could provide a different angle from which the nature of the couple relationship can be investigated. Attachment is related to people's goals and wishes in interpersonal encounters, and they influence patterns of communication, including expressiveness, sensitivity, and conflict management (Mikulincer & Shaver, 2007).

Interpersonal regulation: adult attachment

Attachment is a valuable concept in the field of research on relationships, since adult's close relationships have been conceptualized as an attachment process (Hazan & Shaver, 1987). Attachment theory provides a framework for understanding both normative and individual-difference phenomena in interpersonal relationships and enables one to account for the role of these relationships in a person's overall adaptation and functioning throughout life.

Originally, Bowlby (1969) developed this theory to explain and describe the biological function of the attachment system of infants. That is, infants display behavior aimed at seeking and maintaining proximity (attachment behaviors) to significant caregivers (attachment figure) for protection and alleviation of stress. Bowlby also assumed that the attachment system is active over the entire life span and is manifested in thoughts and behaviors related to support seeking. As mentioned before, Hazan and Shaver (1987) took this notion further and argued that the partner could function as an attachment figure as well. According to Bowlby, relationship partners serve three functions as an attachment figure. First, they are targets for proximity maintenance; in time of need proximity is enjoyed and sought to an attachment figure and distress is experienced upon separation from these figures. Second, they function as a safe haven; attachment figures facilitate distress alleviation and are a source of support, reassurance and comfort. Third, they function as a secure base from which people feel free to seek out novelty and face the unknown in knowing that the attachment figure is available (Hazan & Shaver, 1994). Especially the latter two seem particularly relevant for grief resolution. In times when confrontation with the loss (e.g. yearning and rumination) is salient, the partner can be a safe haven. Moreover, the partner can function as a secure base from which the bereaved parent can attend to and face life changes.

Beyond these universal aspects of the attachment system described above, the theory also provides an explanation for individual differences in the functioning of the system. When an attachment figure is appraised as available, a sense of security is attained. However, when an attachment figure is not appraised as available, depending on the person's attachment style a secondary strategy, other than proximity seeking, will be used. By way of clarification, as the present study is concerned with the attachment to the partner, the attachment style will be further explored at the interpersonal level. Attachment at the intrapsychic level is beyond the scope of this research.

A person's attachment style reflects his or her systematic pattern organizing action of a particular attachment strategy. Recently, studies have revealed that attachment styles are best conceptualized as regions in a two-dimensional space. The dimensions defining this space are anxious attachment and avoidant attachment (Brennan, Clark & Shaver, 1998). People who score high on the dimension Anxiety tend to worry whether their partner is available, responsive and attentive. People who score on the low end of this dimension are more secure in the perceived responsiveness of their partners. Scoring on the high end of the dimension avoidance are people that prefer not to depend on or open up to others. People on the low end of this dimension are more comfortable being intimate with others and are more secure depending upon and having others depend upon them. Not only the relational basis of the attachment theory, but also the fact that attachment behavior is most obvious under conditions of distress, makes it useful to implement in the current research.

Shaver and Mikulincer (2002) have proposed a control systems model to characterize the activation and operation of the attachment system in adulthood (see Figure 1). A physical or psychological threat activates the attachment system, which in turn leads to seeking proximity to an attachment figure. When the attachment figure is available and responsive the person will feel relieved and secure. However when the attachment figure is unavailable/unresponsive there will be a compounding of distress. A monitoring and appraising of the viability of proximity seeking will follow and a person has to adopt a secondary strategy, hyperactivation or deactivation. The goal of hyperactivation is to get an attachment figure to pay more attention and provide protection or support. This requires constant vigilance, concern and effort. Anxious attached people primarily use this type of attachment strategy to deal with insecurity and distress. Deactivating strategies have the purpose to keep the attachment system deactivated by striving for self-reliance, denying attachment needs and maintaining psychological distance from the partner. This type of strategy is primarily used by avoidant attached people.

In this view, grieving for the lost child gives rise to distress and activates the attachment system. Depending on the availability/responsiveness of the partner, he or she could either decrease or increase the distress. On the one hand, by fulfilling his or her attachment functions the partner decreases the distress and in turn facilitates the grieving process. On the other hand, an unavailable and unresponsive partner will lead to the compounding of distress. In that case the anxious person will primarily adopt a hyperactivating strategy, and the avoidant person a deactivating strategy. Both of the applied attachment strategies in turn could hinder the grieving process. This could be either by impeding the grieving process directly or indirectly through relationship problems that are associated with insecure attachment strategies but not primarily related to the loss of the child.

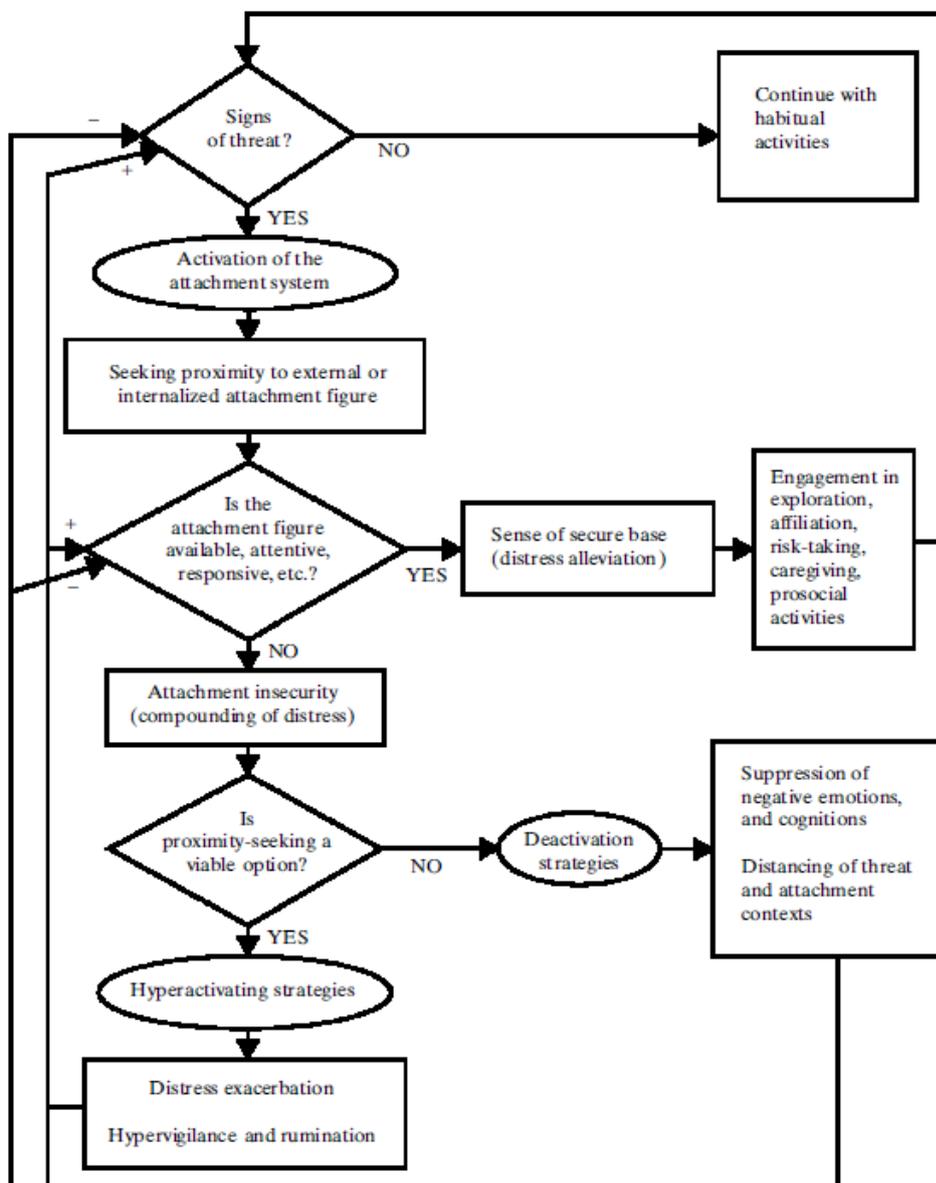


Figure 1: A model of attachment-system activation and functioning in adulthood (Shaver & Mikulincer, 2002)

Whereas Bowlby postulates that both the insecure attachment styles impede adjustment to life stress, empirical evidence with respect to bereavement does not seem to support that. Results regarding anxious attachment are more conclusive about the non adaptive nature of this attachment dimension than those regarding avoidant attachment. Higher rates of anxiety attachment are generally related to poor adjustment to bereavement and higher rates of avoidance attachment are related to resilience pattern of symptoms as well as to maladaptive psychological functioning (e.g. Fraley & Bonanno, 2004; Stroebe, Schut & Stroebe, 2005; Uren & Wastell; Wayment & Vierthaler, 2002; Wijngaards-de Meij et al., 2007). It should be noted however that these studies have two essential differences with the current research. First, in the previous studies, attachment theory is applied to explain bereavement outcome in terms of the inability to reestablish proximity to the deceased (mostly partners), in other words at an intrapsychic level. In the current study attachment to the partner is explored in terms of interpersonal regulation during adjustment to the loss of a child. Second, conclusions of these studies are based on levels of grief at one point in time rather than of change of grief symptoms over time.

According to Mikulincer and Shaver (2007) the model for attachment system functioning is sensitive to both context and personal dispositions. Every component in the model can be affected by the current context in which the attachment system is activated and cognitions associated with attachment styles. This has been demonstrated by research in other domains (e.g. transition to parenthood, illness, infertility) that have explored how attachment style interacts with certain interpersonal factors and affect psychological well being (Besser, Priel & Wiznitzer, 2002; Feeney, Alexander, Noller & Hohaus, 2003; Simpson, Rholes, Campbell, Tran & Wilson, 2003). In a similar vein, it could be argued that adult attachment and relationship adjustment interact in bereavement over time. Relationship adjustment between the parents could counteract the non-adaptive outcomes of insecure attachment styles and the adaptive outcomes of insecure attachment styles during grief resolution. In other words, relationship adjustment could mitigate or exacerbate attachment style influences on grief symptoms.

The current study

The current study was designed to provide further insight concerning grieving within the context of the relationship between the parents after the loss of their child. Clinically it could help identify those parents that are at increased risk for intense grief and consequently be valuable for intervention development.

While recognizing that the relationship between grief and the marital relationship is complex and multidirectional, an attempt is made in the current study to explore the impact of the relationship between the parents on grief symptoms over time. At present, research has been limited on this subject. Prior research has been mainly set up in a manner that excludes causal statement. Also, research in the field of bereavement concerning attachment and the couple relationship mainly pertains to widowhood.

The rationale of the current study can be described as follows. The couple relationship signifies a powerful context in which the psychological aspects of the loss of a child are managed. Within this context each parent behaves according to his or her attachment style. Whereas attachment is indicative of the extent to which an individual relies on the (partner) relationship as a resource, relationship adjustment would be indicative of how resourceful/demanding the relationship is. Both of these factors could have an essential influence on grief over time and perhaps interact with each other. In order to explore this line of reasoning, the following hypotheses were examined in the current research:

- 1) Adult attachment and relationship adjustment are both unique predictors of grief over time. More specifically, those scoring higher on the anxious and avoidant dimension have a smaller decrease in grief symptoms than those scoring low on these dimensions. Furthermore, higher levels of relationship adjustment are associated with a higher decrease in grief symptoms
- 2) Interaction between the attachment dimensions and relationship adjustment makes a unique contribution in the prediction of decrease in grief symptoms. That is, the higher the level of relationship adjustment, the weaker the association becomes between adult attachment and grief over time.

Method

Design

The design of the study is longitudinal with two measurement points. The data were collected from a database of a larger study. This research project started in 2004 as a joint venture between York University in Canada and the University of Utrecht in the Netherlands. The central aim of the project was to investigate the efficacy of mutual support groups. Accordingly, both parents receiving mutual support and parents not receiving this intervention were involved in the project. The participants were asked to fill out a questionnaire battery at five points in time. The research project is still in progress and participants are still being recruited. To establish a reasonable sample size for this report only the data of the participants that completed the first and third questionnaires were used (referred to from now on as questionnaires at, respectively, T1 and T2). The reason for not including the data at the second measurement point is that the time interval between the first and second measurement point was small (10 weeks). It would seem uninformative to assess the change in grief symptoms between those points in time, given that a substantial part of the sample lost their child a considerable time prior to this assessment.

Participants

Recruitment. Participants for the current study were recruited through a variety of strategies. Two mutual support group organizations assisted in the recruitment, namely Bereaved Families of Ontario (location Toronto and Halton Peel) and the Coping Centre (location Cambridge). These organizations use an “inreaching” approach to support bereaved families. This procedure implies that intervention is given upon request of the bereaved individual rather than on the initiative of the organization.

The parents were introduced to the research project either at their first group meeting or through an introduction letter by mail before the start of the group. Participants were also recruited for the research project in cooperation with Mothers Against Drunk Driving, namely at a conference where the research project was promoted, and through the organization’s newsletter. Furthermore, advertisements were placed in the newspaper, on bulletin boards in community centers and libraries. An additional recruitment strategy came about through an interview with one of the researchers involved in the project, which was broadcast on the radio. After learning about the research, interested parents could contact the research assistant.

Subsequently, the introduction questionnaire package containing an introduction letter, a consent form and the first questionnaire was sent by mail.

Exclusion criteria. Initially the sample consisted of 185 Canadian parents who had lost a child. For the purpose of the present study the following exclusion criteria were applied. First, because the focus of the study lies on the relationship the parent has with his/her partner, 36 participants with a single status were excluded. Second, to protect the homogeneity of the sample, 7 bereaved parents of prenatal or stillborn babies were excluded. Participants who had neglected to fill out a questionnaire at one of the two measurement points (49 parents) were considered as drop-outs, leading to an attrition rate of 34,5 %. In addition, to increase the homogeneity of the sample, 10 outliers in the data regarding postloss time, relationship adjustment and decrease in grief symptoms were excluded from the study.

The final sample. The final sample for the present study consisted of 83 parents. Participants were primarily female (64%) and Caucasian (84 %). The mean age was 51 years, ranging from 27 to 81 years. The parents were involved in a committed relationship, either married or cohabiting. The causes of death of their child varied from illness to accidents to suicide or homicide. The mean age of the deceased child was 21 years, ranging from 1 month to 48 years.

As the sample as a whole was not homogeneous with respect to (non)attendance at mutual support groups, preliminary analyses were done to examine the extent to which differences existed between these two groups. Independent sample t-tests were performed on the variables age, age of the deceased child, postloss time and time with current partner. Chi-square analyses were done on the variables gender ratio, whether the child died of a natural or unnatural cause, employment status and education. The only statistical difference that occurred was on the variable postloss time, with the control group having a considerably longer postloss time than those in the mutual support group. See Table 1 for information about the main characteristics of the sample.

In an attempt to maintain a reasonable sample size, two decisions were made. First, the 13 couples among the sample were kept in the study, which violates the assumption of independence of measurements. Second, parents who had experienced multiple losses of children were not excluded. Therefore the results should be interpreted in the light of these limitations (see discussion).

Table 1: *Main characteristics of the final sample*

	M	SD
Age parent (years)	50.59	10.36
Age child (years)	20.69	11.50
Postloss time (months)	21.69	23.49
Time with current partner (years)	23.37	12.92
	Ratio	
Gender ratio (female/male)	53/30	
Cause of death (natural/unnatural)	40/43	

Procedure

As mentioned before, the parents received an introduction letter and a consent form in addition to the first questionnaire. In the introduction letter parents were informed about the confidentiality of their information and the right to withdraw at any time during their participation. For admission to the study, it was required of parents to sign the consent form. The questionnaire battery at both of the measurement points in time contained the same scales (see section Measurement Instruments). In addition to these scales, a section regarding biographical data was included in the first questionnaire battery. First, inquiries were made about socio-demographic aspects of the parent. This was followed up by questions pertaining to the deceased child: age, gender, date of the death, cause and expectedness of death. Furthermore, questions about additional stressful experiences and consultation of professional help or (other) mutual support groups currently or in the past were included. Approximately 36 weeks after completing the first questionnaire battery (at T1), parents were asked to complete a follow-up questionnaire battery (at T2).

Before sending out a questionnaire battery to a participant, a notification was sent by email or letter. After receiving a completed questionnaire battery, an email or letter was sent to thank the participant for his/her ongoing participation. To prevent drop-outs, reminders were sent by regular mail or email when participants had neglected to return a questionnaire within one month.

Measurement Instruments

Since the focus of the present study is on the effect of adult attachment and relationship adjustment reported by the parents on grief over time, only those scales relating to this topic will be discussed below. See Table 2 for the psychometric properties of the scales.

Dependent variable. Grief symptoms were measured with the Inventory of Complicated Grief Revised (ICG; Prigerson, Kasl & Jacobs, 1997). The ICG-R, is an expanded version of the ICG (Prigerson et al., 1995). The ICG-R consists of 30 items, measuring cognitive and emotional reactions to the death of a loved one. For example: “I feel that life is empty or meaningless without my child” and “I have lost my sense of control since my child died.” It is designed to measure the proposed criteria of complicated grief and other potentially maladaptive symptoms. In other words, it discriminates between ‘normal’ and ‘pathological’ grief. Respondents rate how often each of the symptoms occurred in the last month (ranging from ‘never’ to ‘always’) on a 5-point Likert scale. High reliability (Cronbach’s alpha of .95) has been found among a sample of widows and widowers (Prigerson & Jacobs, 2001). In the present study a high internal consistency (Cronbach’s alpha of .94) was found as well. The test-retest reliability was .83

The dependent variable was created by calculating the percentage decline in mean score on the ICG-R at T2 in comparison with the mean score at T1.

Independent variables. Adult attachment was measured with the Experiences in Close Relationship – Revised Scale (Fraley, Waller & Brennan, 2000). It is a revised version of Brennan, Clark, and Shaver’s (1998) Experiences in Close Relationship Scale. The questionnaire is designed to assess individual differences with respect to attachment-related anxiety (the extent to which a person worries about the availability and responsiveness of the attachment figure) and attachment-related avoidance (the extent to which a person is comfortable with closeness and depending on others). It yields scores on two subscales, namely Avoidance and Anxiety, each consisting of 18 items. Typical items include respectively: “It helps to turn to my romantic partner in time of need” (reverse-key item) and “I often worry that my partner will not want to stay with me.” The ECR-R requires a participant to rate the extent to which each statement applies to the participant on a 7 point Likert scale. A high internal consistency has been found for the anxiety and avoidance subscale (resp. .95 and .93; Sibley & Liu, 2004). In the present sample similar values for the internal consistency were found, namely a Cronbach’s alpha of .92 for the anxious and .93 for

the avoidant attachment scale. Results of a study by Sibley, Fischer and Liu (2005) have indicated that the ECR-R displays suitable convergent and discriminant validity as a measure of attachment representations of the romantic relationship domain.

Relationship adjustment was measured with the subscale Dyadic Satisfaction of the Dyadic Adjustment Scale (DAS), which is a measure designed for assessing the quality of marriage and other similar dyads. Besides the Dyadic Satisfaction, the DAS consists of the sub-scales Dyadic Consensus, Dyadic Cohesion and Affectional Expression (Spanier, 1976). Hunsley, Pinsent, Lefebvre, James-Tanner and Vito (1995) reported that the 10-item DAS satisfaction subscale was a valid and reliable substitute for the original 32-item scale, since it explains almost all of the variance and is the principal dimension giving rise to the correlation between the DAS and other relationship measures. For the purpose of this study, the Satisfaction subscale has been adapted. Eight items were selected, of which seven were used in their original form. Typical items include: “Do you confide in your partner?” and “Do you regret that you married (or lived together)?” One item was phrased differently. “Do you kiss your mate?” was substituted for “How often do you show your partner that you love him?” In addition, one item was constructed for the purpose of the research, namely “How often do you feel that you make a good match?” The reason for this was because it could be argued that the loss of a child affects the parents’ sense of compatibility. The respondent had to rate the frequency of the situations mentioned in the statements on a 6-point scale. In the present study the internal consistency of the scale was .89, close to what Spanier (1976) found for his scale. Furthermore a test-retest reliability of .77 was found.

Table 2: *Reliability of scales*

	Internal consistency (Cronbach’s alpha)	Test-retest reliability (Pearson correlation.)
ECR-R: Anxiety	.92	.81
ECR-R: Avoidance	.93	.64
DAS (Satisfaction subscale)	.89	.77
ICG-R	.94	.83

Analysis and assumptions

Hierarchical multiple regression was performed to examine main and interaction effects in the association between features of the relationship between the parents and grief over time. More specifically, the individual attachment dimensions and relationship adjustment were each analyzed for their relative contribution to the prediction of decrease in grief symptoms. In

addition, relationship adjustment was examined as a moderator in the association between attachment dimensions and decrease in grief symptoms.

Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity and homoscedasticity. This led to the removal of outliers and the transformation of the variables anxious attachment and relationship adjustment. Only with the third model did the analysis reveal two outliers, as both cases exceeded the maximum Mahalanobis distances. Removal of the aforementioned cases from the analysis did not result in a significant improvement of the model.

Results

Descriptives

Before describing tests of the hypothesis, it is useful to consider the general trend in scores on the scales by the participants. They show a mean of 5.78 % (SD = 15.67) decrease in grief symptoms between the two measurement points (T1 and T2) as measured with the ICG-R, ranging from -33.78 to 44.44. As a positive value of this variable represents a decrease, a negative value signifies an increase in grief symptoms.

Furthermore, at T1 the mean score on both the attachment scales is in the low end of the range, more specifically the mean score for anxious attachment is 2.41 (SD = 1.12) and for avoidant attachment it is 2.69 (SD = 1.17). This suggests that the sample has a slight tendency towards the secure side of attachment organization.

In general, the sample considered their relationship to be functioning well. This is indicated by a mean score of 4.96 (SD = .73) on a scale that ranges from 1 to 6. As the SD indicates, the variance of RA is rather low, possibly causing problems with regard to restricted range of scores. Table 3 shows descriptive statistics for all independent and dependent variables and the time of their administration.

Table 3: *Timing and measures of the attachment dimensions, relationship adjustment and decrease in grief symptoms*

	Time	M	SD	Scale range
Anxiety	T1	2.41	1.12	1 - 7
Avoidance	T1	2.69	1.17	1 - 7
Relationship adjustment	T1	4.96	.73	1 - 6
Decrease in grief symptoms (%)	T1-T2	5.78	15.67	-400 - 80

Correlational analyses

Table 4 presents correlations among the study variables. Postloss time does not significantly correlate with any of the variables. Especially regarding decrease in grief symptoms this seems remarkable. Furthermore, the correlational analyses reveal significant negative correlations between the attachment dimensions and decrease in grief symptoms, ranging from moderate to moderately high. The correlation between the attachment dimensions and relationship adjustment is moderately high. Also worth noting is the rather high correlation between the two attachment dimensions. Lastly, the correlation between relationship adjustment and decrease in grief symptoms is not significant.

Table 4: *Correlations among study variables*

	1	2	3	4	5
1. Postloss time	1	.04	.08	-.13	-.11
2. Anxious attachment		1	.64 *	-.58 *	-.29 *
3. Avoidant attachment			1	-.54 *	-.50 *
4. Relationship adjustment				1	.18
5. Decrease in grief symptoms					1

* Significant at the .01 level.

Main effects of the adult attachment dimensions and relationship adjustment in predicting decrease in grief symptoms

Before starting the hierarchical regression it was checked whether the variable postloss time correlated significantly with decrease in grief or any of the relevant variables in this study. Since this was not the case, this variable was not included in the hierarchical regression analyses as a covariate (see Table 4).

Are both adult attachment and relationship adjustment predictors of the decrease in grief symptoms? To investigate whether the individual attachment dimensions and relationship adjustment had a main effect in predicting the decrease in grief symptoms, anxious and avoidant attachment, and relationship adjustment were entered together at step 1 in Model 1. Combined in one equation, only avoidant attachment was a significant predictor ($\beta = -.57$, $p < .001$; see Table 5) of the decrease in grief symptoms. The more avoidant attached the person was the less the decline in grief symptoms was.

Analyzed separately, anxious attachment is significantly correlated with decrease in grief symptoms ($r = -.29$, $p < .005$; see Table 4). However, after including the other predictors, anxious attachment does not have a significant contribution in predicting the decrease in grief symptoms.

It was also tested whether anxious and avoidant attachment dimensions interacted in their prediction of decrease in grief symptoms. Therefore this interaction term was entered at step 2 in Model 1. This revealed no significant effect of an interaction between the two individual attachment dimensions. Hence this interaction term was not included in Model 2.

Table 5: Hierarchical regression analysis with the attachment dimensions, relationship adjustment and decrease in grief symptoms

	Model 1		Model 2	
	β	R Square	β	R Square
Anxious attachment	.00	.26	.01	.27
Avoidant attachment	-.57 **		-.58 **	
Relationship adjustment	-.13		-.13	
Anxiety x RA ^a			.02	
Avoidance x RA ^b			-.08	

Note. Significance measured at the .05 level.

** $p < .001$.

^a Interaction anxious attachment x relationship adjustment

^b Interaction avoidant attachment x relationship adjustment

It seems conceivable that the more anxious or avoidant people are, the more this insecurity would interfere with their grieving process. The fact that avoidance and not anxiety as well was a predictor of grief over time, was therefore rather unexpected. For this reason it was checked whether the effects of attachment on grief over time were the same for parents who received mutual support and for those who did not. It is possible that any effect of attachment on grief over time is counterbalanced because of the heterogeneity of the group. Therefore the interactions between intervention condition and the attachment dimensions and relationship adjustment were tested. This analysis revealed no significant interactions, again supporting the decision of including both parents who were receiving and those who were not receiving mutual support in the sample.

Overall, it can be concluded that the first hypothesis concerning both adult attachment and relationship adjustment being a predictor of decrease in grief symptoms was partly confirmed. In a combined analysis, only the avoidant attachment dimension is a predictor in the decrease in grief symptoms: higher levels of avoidant attachment were related to lower levels of decrease in grief symptoms. Anxious attachment and relationship adjustment do not predict changes over time in bereavement.

Interactions between the individual attachment dimensions and relationship adjustment

To deal with the matter of multicollinearity effects between the predictor and moderator, and the interaction variable, it is recommended to center the aforementioned variables before testing the significance of the interaction term (Aiken & West, 1991). Therefore the variables anxious attachment, avoidant attachment and relationship adjustment were centered.

Does relationship adjustment moderate the association between adult attachment and decrease in grief symptoms? In exploring interactions effects of the individual attachment dimensions and relationship adjustment a third model was composed. These interaction terms were computed by multiplying the centered predictor with the centered moderator.

First, in Model 2, anxious and avoidant attachment, and relationship adjustment were entered together at step 1. Subsequently the interaction terms were entered at step 2. There was no significant effect of the interaction between the individual attachment dimensions and relationship adjustment on the decrease in grief symptoms (see Table 5). Thus the hypothesis concerning relationship adjustment as a moderator in the association between the adult attachment dimensions and the decrease in grief symptoms could not be confirmed. Relationship adjustment does not affect the relation between attachment style and changes over time in grief symptoms.

Discussion

Overall results of the study

The purpose of the present study was to investigate adjustment to the loss of a child in the context of the relationship of the parents. The partner can function as an attachment figure, and serve as a secure base and a safe haven. In this study it was suggested that this form of behavior could be beneficial in the grieving process. However, the ongoing quality of the relationship between the partners, which may be influenced by the loss experience, should also be taken into account. Therefore, both the individual attachment dimensions, namely anxiety and avoidance, and relationship adjustment were investigated in association with change in grief symptoms over time. In line with attachment theory and former research, it was hypothesized that more secure attachment and better relationship adjustment of the parents would be associated with a greater decline in grief symptoms. In addition, the interaction between adult attachment and relationship adjustment was explored. The hypotheses were only partly confirmed.

As expected, avoidant attachment made a unique contribution in the decrease in grief symptoms. Parents who were more avoidant had a smaller decline in grief symptoms over a period of six months. Rather unexpected was the finding that the level of anxious attachment did not predict a change in grief symptoms over time. Furthermore, an association between relationship adjustment and decrease in grief symptoms was not found in the current study. This is also in contrast with research reviewed earlier. Lastly, the expected moderator effect in the association between the individual attachment dimensions did not emerge. In the next section these discrepant findings with respect to the attachment theory and empirical evidence will be discussed.

Interpreting the results

Anxious attachment. Three alternative explanations can be proposed for the failure of finding an effect for anxious attachment in the decrease in grief symptoms. The first has to do with ambivalent behavior anxious people are inclined to. The second and third explanation are based on the methodology, namely the conceptualizations of the attachment dimensions and multicollinearity between the independent variables.

In their model of attachment system functioning, Mikulincer and Shaver (2007) stated that anxious attached people are prone to ambivalence. Anxious people are caught in an

approach-avoidance conflict and therefore likely to ruminate obsessively about how to react in social situations, which interferes with adaptive interpersonal regulation. On the one hand they tend to overly garner attention, affection and support, and compulsively approach the partners with these needs in mind. On the other hand, they suffer from intense fear of rejection and harbour serious doubts about their ability to inspire partners' loyalty and love. This insecurity can cause them to inhibit approach tendencies and demands on their partners when they sense the possibility of disapproval or rejection. Relating this to the results of the current study, it would suggest that when proximity is sought while the partner is available, he or she could alleviate the distress of the grieving parent. At other times the parent inhibits his or her approach tendencies and the level of distress remains heightened. These contradictory outcomes in managing (bereavement related) distress by the anxious attached people could thus counterbalance one another in bereavement outcome in the present study, and be responsible for not finding an effect of anxious attachment on change in grief symptoms. However, whether the interactions following the approach towards the partner were adaptive, was not assessed. Therefore this line of thought remains speculative.

On the other hand, the contradicting results of the current study could be attributed to methodological matters. Firstly, the conceptualizations of the individual attachment scales could account for the null effect of anxious attachment in this study. As research indicates that attachment is best conceptualized along the two dimensions anxiety and avoidance (Brennan, Clark & Shaver, 1998), the ECR-R was utilized to measure this interpersonal aspect of the parent (Fraley, Waller & Brennan, 2000). The anxious dimension of the ECR-R taps into the worries about the availability and responsiveness of the partner. In terms of the attachment control system, it does not describe the attachment behavior that follows from these cognitions. The avoidant scale, however, taps into the behavioral strategy people are most comfortable with, ranging from approach, reliance and dependence to withdraw from the partner. As Fraley and Shaver (2000) postulated, anxiety reflects an appraisal component about the attachment figure, whereas the avoidant dimension reflects a behavioral orientation component of the attachment system. Relating this to the partner serving as an attachment figure, the statements on the avoidant dimension seem to represent secure base and safe haven behavior. The avoidant dimension may therefore be directly related to the grieving process, reflected in the significant effect found in the current study. While anxious attachment excludes inferences about actual attachment behavior, it could be argued that as a single predictor it does not have a direct relationship with the grieving process.

Alternatively, the failure to find an effect for anxious attachment, might be a matter of multicollinearity. First of all, it should be noted that anxiety does have a moderate correlation with the change in grief symptoms. However after controlling for avoidant attachment, anxiety does not make a significant contribution any longer. In addition, as discussed earlier, the correlation between the anxious and avoidant attachment is high. When two predictors correlate highly this could result in a failure to reject the null hypothesis. In other words it could be falsely concluded that there is no relationship between the predictor and the outcome variable (Miles & Shelvin, 2001). This might be the case with anxious attachment and the decrease in grief symptoms.

On the basis of these alternative explanations it would seem premature to conclude that anxious attachment does not have an effect on the grieving process. Subsequent research is needed to clarify this matter.

Relationship adjustment. Failing to find a significant association between relationship adjustment and the decrease in grief symptoms could be related to methodological issues. The most salient explanation would be the restricted range in scores, indicating a very small variance in relationship adjustment. This could have prevented finding an association between relationship adjustment and change of grief symptoms. It should be noted that relationship adjustment did, however, have a significant correlation with both the attachment dimensions. In light of this, an alternative explanation could pertain to the relationship adjustment construct itself. In this study an attempt was made to use a predictor for the relationship of the parents that would adequately represent this interpersonal context. Based on the presumption that the satisfaction subscale is an adequate substitute for the full DAS (a measure of dyadic adjustment; Hunsley, Pinsent, Lefebvre, James-Tanner & Vito, 1995), this was carried out in the current study. However this could not have been appropriate in the current study, for example because the sample concerned highly distressed people. Hence relationship satisfaction, as the scale is supposed to measure, could have been measured instead of the intended relationship adjustment. Research had demonstrated that relationship satisfaction is just one of several domains that relationship quality is judged upon (Fletcher, Simpson & Thomas, 2000). In short, the current study may not have captured the wider range of aspects of relationship functioning.

Aside from which construct actually was measured, it should be noted that for the purpose of this study the satisfaction subscale was adapted from its original form. However

subsequent analyses were not performed to verify if this was a legitimate action for the reason that it could have had an unfavorable effect on the construct validity.

Overall, these limitations may have obscured possible predictor and/or interaction effects in association with decrease in grief symptoms.

Limitations of the study

In addition to the limitations of the DAS discussed earlier, there are other limitations in the design of this study that should be considered in connection with the interpretation of the results.

The sample. The sample in the current study in fact consisted of two different groups, parents receiving mutual support and those who did not. Analyses did not reveal differences on most of the essential aspects between these two groups of parents, except that the latter group had a considerably longer postloss time and a lower symptom level at the second measurement. Moreover, additional analyses did not reveal differential effects of attachment and relationship adjustment on change in grief symptoms between the two groups. Nevertheless it remains a fact that a substantial part of the sample in this study received an intervention during the first ten weeks of participation in the research. Importantly, this intervention intends to affect exactly that what the outcome variable represents, namely the adaptation to bereavement. Hence, collapsing the two groups into one could have led to the masking of effects that in fact existed within these two groups. According to a study of Murphy et al. (1998) attending mutual support group meetings for bereaved parents can have favorable and unfavorable effects on grief resolution depending on the initial symptom level and gender. Also a later study of Murphy, Johnson and Lohan (2003) showed that parents who attended a bereavement support group were 4 times more likely to find meaning than parents who did not attend. Moreover parents who found meaning in the deaths of their children reported significantly higher scores on marital satisfaction and well being than parents who were unable to find meaning. In the current study marital adjustment was measured only before attending a support group, at that time the two groups did not differ in marital adjustment. However, this could have been the case after closure of the group meetings. Furthermore, to maintain a reasonable sample size it was decided that parents who had suffered multiple losses remained in the study. It is plausible that multiple losses could have more negative consequences than for the grieving process than a single loss. This could have led to a lower variance in change of grief symptoms, making it more difficult to find

significant effects. In sum, future research on the loss of a child in the context of the relationship is needed with a more homogeneous group with respect to attendance to mutual support groups and amount of losses.

Furthermore, the sample in the study was self-selected. Participants had chosen to participate in the research either directly or through a mutual support group. They may not be representative of those grieving parents that omit to participate in research. According to Stroebe, Stroebe and Schut (2003) participation decisions and grief reactions are likely to be related. These incentives can range from coming to terms with the loss, sharing feelings and wanting to contribute to research (by participants) to avoiding to get upset (by refusers). This was reflected in the results of their study, which showed that depression affected willingness to participate differently for males and females. Similarly, those parents that remain in a study may not be representative of those that did drop out of the study. The aforementioned study of Murphy et al. (1998) showed that parents reporting less dyadic satisfaction were more likely to drop out than those more satisfied. This corresponds with the overall high mean score on the DAS by the sample in the current study.

Thus caution must be taken when interpreting the results of this study to bereaved parents outside of the sample.

Selection of measurement instruments. In addition to the limitation of the adapted satisfaction scale of the DAS as reported earlier, several limitations associated with the other measurement instruments.

By using the ICG-R the focus of the outcome variable in this study is on grief symptoms. This leads to a very one-sided investigation of bereavement resolution, excluding adjustment in other life domains and resilient outcome factors. First of all, it ignores the biopsychosocial nature of the attachment system and accordingly of the loss of a major attachment bond (Bowlby, 1969). Therefore, not utilizing scales to measure physical and social functioning in addition does not capture the wide range of consequences of the loss of a beloved (Stroebe, Hansson, Stroebe & Schut, 2001). The full-scale influence of the attachment system and the adjustment of the relationship could therefore be underrepresented in the current study. Second, the ICG-R concentrates on bereavement-related distress rather than resilience or personal growth. As these concepts are not mutually exclusive, a bereaved person can experience both at the same time. However, by not using an inventory that covers the resilient and personal growth factors as well (e.g. Hogan Grief Reaction Checklist),

adaptive aspects of the attachment style and relationship adjustment following the loss of a child could be missed in the present study.

As the study relied on self-report measures, there is the risk of responding in a biased or socially desirable manner to questions. This could lead to a discrepancy from the actual behavior under investigation and consequently to results that are less valid. The restricted range of scores on the adaptive side of relationship adjustment could therefore also be related to socially desirability. Fortunately with respect to attachment, evidence is accumulating that self-reports of attachment style correspond considerably with observer evaluations (e.g. Collins & Feeney, 2000; Simpson, Rholes & Nelligan, 1992).

Time frame. The current study failed to show an association between postloss time and change in grief symptoms. Correspondingly, Rogers et al. (2008) did not find an association with time since death and any measure of functioning. However, these results seem counterintuitive and inconsistent with earlier research. For example, Wijngaards-de Meij et al. (2005) found a decrease in grief symptoms over time among bereaved parents. Foremost, the non significant result regarding postloss time, both in this study and in Rogers' study (2008) seems attributable to methodological constraints. Postloss time was used in both studies as a cross-sectional variable. In other words, conclusions are based on different postloss time periods between the participants, instead of the grieving process over time after the loss of each individual parent. The latter allows for more explicit inferences. In addition, in both studies the period was quit long since the occurrence of the death, approximately two decades. In contrast, the study of Wijngaards-de Meij et al. (2005) assessed grief over time with each individual parent and the assessment took place over much shorter period (of 20 months) after the loss. Furthermore, it should be noted that in the current study we assessed grief change over time, as a relative measure, over a period of half a year. This time interval could become insignificant in the perspective of a loss several years ago, in other words it would seem unrealistic to expect a change in grief symptoms after such a lengthy period.

Taken together, instead of viewing the results of the aforementioned studies as contradictory, the following could be suggested. The period closely after the loss is subject to change, though the longer the loss of the bereavement the more stable grief symptoms remain. Longitudinal research on grief over time with the use of a more homogeneous sample with respect to the duration of bereavement is needed to shed more light on this issue.

Concluding comment. Notwithstanding these limitations, this study has revealed interesting patterns with potentially important implications. First, results suggest that a different relationship exists between the individual attachment dimensions and change in grief symptoms. More specifically, avoidance seems to predict grief over time and anxiety does not. Future research, taking the methodological limitations of the current study into account, could shed further light on this issue. Second, as highly avoidant people have a poorer adjustment to bereavement, it would imply that avoidant attachment is a risk factor in parents grieving the loss of their child and should therefore be a point of attention during intervention.

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