

## **ATTACHMENT ANXIETY AND AVOIDANCE IN COPING WITH BEREAVEMENT: TWO STUDIES**

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Although attachment theory has become one of the primary paradigms for understanding bereavement adaptation, there has been surprisingly little empirical work on this topic. Two studies investigated the role of attachment in coping with the loss of a loved one. Study 1 examined the unique contribution of attachment anxiety and avoidance in prolonged grief symptomatology (PGS) in a sample of 656 recently bereaved young adults. When accounting for demographic factors (age, ethnicity, gender) and loss-related circumstances (relationship to deceased, violent versus natural loss), higher levels of attachment-related anxiety were associated with more PGS but avoidance failed to produce a unique effect. Study 2 investigated the role of attachment insecurities in the context of violent death bereavement. Participants were grouped by those who experienced a violent loss in the past two years (accident, suicide, homicide;  $n = 191$ ) and a matched control group who had not experienced a loss ( $n = 191$ ). Individuals with higher levels of attachment anxiety reported worse physical and mental health symptoms. Attachment avoidance was a salient predictor of poor post-bereavement functioning for violent loss survivors but avoidant attachment was not as relevant for nonbereaved persons. Results of the second study support the worrisome role of attachment anxiety in the context of coping with bereavement, while also suggesting detrimental effects for avoidance in extreme cases of loss.

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Attachment theory has become one of the primary paradigms for understanding adaptation to bereavement (for reviews, see Bonanno & Kaltman, 1999; Shaver & Fraley, 2008; Shear & Shair, 2005; Stroebe, Schut, & Stroebe, 2005). A number of theorists have proposed that attachment insecurities present a major risk factor for complications in the grieving process (e.g., Bonanno et al., 2002; Carr et al., 2000; Neimeyer, Prigerson, & Davies, 2002; Parkes & Weiss, 1995; Stroebe, 2002; van Doorn, Kasl, Beery, Jacobs, & Prigerson, 1998). However, in spite of this strong theoretical interest, empirical research is limited on the contribution of attachment characteristics in adaptation to bereavement. The present paper presents findings from two studies on the role of attachment in coping with bereavement.

Drawing on Bowlby's ideas (1969/1982, 1973, 1980), contemporary models of adult attachment emphasize two primary orientations in this process—*attachment anxiety* and *avoidance* (Bartholomew & Horowitz, 1991; Brennan, Clark, & Shaver, 1998). Attachment anxiety reflects a negative view of self and an optimistic view of others. Persons who score high on this dimension are often dependent in interpersonal relationships but constantly worry that others will not be available in distressing situations. In contrast, attachment avoidance stems from a positive view of self and negative beliefs about others. Those who score high on this dimension tend to mistrust others' motives and goodwill, and frequently attempt to maintain emotional distance in their relationships. From a theoretical standpoint, attachment anxiety is characterized by an over-activation of the attachment system, whereas avoidance represents a deactivation of attachment needs and the minimization of emotional pain (Mancini Robinaugh, Shear, & Bonanno, 2009; Mikulincer, Shaver, & Horesh, 2006; Shaver & Fraley, 2008).

The first goal of this investigation was to examine whether attachment anxiety and avoidance could each uniquely contribute to prolonged grief symptomatology (PGS; previously termed traumatic and complicated grief). Persons with severe levels of PGS experience intense and persistent separation distress (e.g., yearning for and preoccupation with the deceased) and multiple cognitive, behavioral, emotional, and possible spiritual difficulties related to the loss of the attachment relationship (for a detailed review of diagnostic criteria, see Lichtenthal, Cruess, & Prigerson, 2004). Several bereavement theorists have conceptualized the etiology of PGS from an attachment perspective (Lobb et al., 2010; Shear & Shair, 2005; Stroebe et al., 2005). Shear and Shair (2005) proposed that

one's working models of the deceased can be activated after the loss, resulting in a preoccupying and protracted state of grief for prolonged or complicated grievers. As the internalized representation of the lost loved one is revised in a manner that can adequately incorporate the reality of the loss, they maintain that the acute grief symptoms will be transformed into a state of integrated grief. When this process fails, Shear and Shair proposed that an enduring state of acute grief symptomatology would ensue. Similarly, Field and Sundin (2001) suggested that PGS could emerge from insecurely attached persons' inability to cope without the attachment figure, such that they remain in a persistent state of separation distress. Drawing on a dual process model, Stroebe et al. (2005) similarly suggested that anxious persons in particular are more susceptible to becoming fixated in the loss orientation and thus may have difficulty reorienting to life's demands, which may also result in PGS. Although personality traits such as neuroticism impact relationships (Shaver & Brennan, 1992), attachment dimensions have been found to contribute uniquely to prediction of bereavement adaptation over and above personality factors.

Several studies have supported the role of attachment anxiety in the context of coping with bereavement (Field & Sundin, 2001; Fraley & Bonanno, 2004; Uren, Heidelberg, & Wastell, 2002; van der Houwen et al., 2010; Waskowic & Chartier, 2003; Wayment & Vierthaler, 2002; Wijngaards-de Meij et al., 2007b). After a loss, attachment anxiety has been associated with more intense feelings of emotional loneliness (van der Houwen et al., 2010), psychological distress (Wijngaards-de Meij et al., 2007b), posttraumatic stress symptoms (Besser & Neria, 2011), as well as disorders of alcohol use (De Rick & Vanheule, 2007), dissociative and identity disorders (Lyons-Ruth & Jacobvitz, 2008). In addition, relational dependency, a characteristic associated with attachment anxiety, has been linked with greater risk of grief complication across a number of studies (e.g., Bonanno et al., 2002; Carr et al., 2000; Field & Sundin, 2001; Lobb et al., 2010; Prigerson, Maciejewski, & Rosenheck, 2000). Furthermore, Burke and Neimeyer (2012) found anxious/insecure attachment style to be consistently associated with elevated grief symptoms in their review of this literature.

In contrast to anxiously attached persons, those who are avoidantly attached might be at risk for PGS due to their tendency to refrain from conscious grieving and inability to reconcile the mental representation of the attachment figure with the reality of the loss

(Field & Sundin, 2001). However, although prior work suggests that attachment avoidance may also figure prominently in the grieving process, research findings have been mixed. Attachment avoidance has been found to promote adequate adjustment to a loss (Fraley & Bonanno, 2004; Wijngaards-de Meij et al., 2007b), but it has also been associated with more negative outcomes after bereavement (Boelen & Klugkist, 2011; Bonanno, Keltner, Holen, & Horowitz, 1995; Field, Gao, & Parderna, 2005; Wayment & Vierthaler, 2002). Boelen and Klugkist (2011) found attachment avoidance to be significantly associated with the severity of complicated grief when controlling for neuroticism and attachment anxiety. In one longitudinal study, Fraley and Bonanno (2004) found that attachment avoidance was related to an increase in symptomatology over the first 18 months of bereavement. However, they found that persons with a dismissive-avoidant style (low anxiety, high avoidance) had less difficulty adjusting to the loss of a loved one compared with fearful-avoidant persons (high anxiety, high avoidance). Mancini and colleagues (2009) also found that the quality of dismissively-avoidant individuals' attachment relationship moderated grief symptomatology, as those reporting high marital quality had a significant reduction of PGS. They posited that the loss of a high quality relationship activated the attachment system, resulting in initial grief but over time the self-reliance of dismissively attached individuals would serve as an adequate coping strategy. Drawing on two samples of bereaved young adults, one of the primary foci of this study was to further address this complexity and to advance a more nuanced understanding of the effects of attachment avoidance in coping with loss.

## STUDY 1

The first study investigated concurrent associations between attachment anxiety and avoidance with PGS. When controlling for demographics and loss-related factors, we hypothesized that the two attachment orientations would uniquely predict PGS. However, in light of prior research and assertions about the role of dependency in grief complication, we anticipated that anxiety would be a particularly salient predictor of PGS.

## METHOD

### Participants

Following institutional review and approval, 656 bereaved adults were recruited from undergraduate psychology courses at a large southern research university between 2006 and 2009. Data were collected electronically via an online subject pool system sponsored by the institution's psychology department. All of the losses included in this study had occurred between 3 and 24 months from the time of the study, reflecting a period in which participants could still be grappling with consequences of their loved one's death (Prigerson, Vanderwerker, & Maciejewski, 2008).

See Table 1 for more demographic information.

### Instrumentation

The Experiences in Close Relationships—Relationship Structures Questionnaire (ECR-RSQ; Fraley, Heffernan, Vicary, & Brumbaugh, 2011) was used to assess attachment characteristics in this study. The ECR-RSQ was developed by Fraley and colleagues (2011) from an item response theory analysis of the available self-report measures of adult attachment in the literature for assessing two attachment dimensions: anxiety (4 items) and avoidance (6 items; Brennan et al., 1998). Participants rated items on a seven-point scale (1 = strongly disagree; 7 = strongly agree) according to perceptions of attachment relationships (i.e., mother, father, romantic partner, and friend). Example items for the two subscales include, "I'm afraid this person may abandon me" (anxiety) and "I find it easy to depend on this person" (avoidance; reverse scored). Global indices for each attachment dimension were calculated by summing the scores for the items across the four relationships assessed by the ECR-RSQ. Alphas ranged from .78 to .89 and .81 to .87 across the four relationships for the anxiety and avoidance subscales in the present sample, respectively.

The Inventory of Complicated Grief—Revised (ICG-R; Prigerson & Jacobs, 2001) was used to assess PGS. The ICG-R is composed of 31 declarative statements, such as, "I feel like I have become numb since the death of (the deceased)" and "Ever since (the deceased)

TABLE 1. Demographic Features of Study 1 and 2

	Study 1 (N = 656)	Study 2 (N = 382)	
		Bereaved	Nonbereaved
<b>Person Related Variables</b>			
Age [ <i>M (SD)</i> ]	21.67 (7.81)	21.39 (6.06)	21.03 (5.36)
Gender [%]			
Male	18.60%	21.20%	21.20%
Female	81.40%	78.80%	78.80%
Ethnicity [%]			
African American	47.80%	51.30%	54.20%
Caucasian	43.00%	41.10%	40.70%
Asian American	2.90%	2.50%	1.70%
Pacific Islander	0.60%	0.40%	0.00%
Hispanic/Latino	1.50%	3.00%	1.70%
Native American	0.50%	0.00%	0.00%
Other	3.70%	0.00%	1.70%
<b>Education [%]</b>			
Family member with college education	47.20%	46.30%	46.30%
No college education in family origin	52.80%	53.65%	53.65%
<b>Loss Related Variables</b>			
Months since Loss [ <i>M (SD)</i> ]	10.03 (7.43)	10.18 (7.30)	—
<b>Relationship to Loss [%]</b>			
Nuclear family	14.00%	21.90%	—
Extended family member	61.30%	45.30%	—
Close Friend	23.10%	32.80%	—
<b>Type of loss [%]</b>			
Natural Anticipated Loss	42.90%	45.10%	—
Natural Sudden Loss	20.60%	20.30%	—
Violent Death, non-homicide	17.00%	18.40%	—
Homicide	6.00%	6.20%	—
Suicide	5.40%	8.80%	—
Other	8.10%	5.20%	—
<b>Study Related Variables</b>			
Attachment Anxiety [ <i>M (SD)</i> ]	35.65 (16.74)	37.56 (17.32)	35.74 (15.02)
Attachment Avoidance [ <i>M (SD)</i> ]	68.60 (23.36)	70.99 (24.34)	68.68 (21.94)
Mental Health [ <i>M (SD)</i> ]	19.71 (3.74)	19.52 (3.94)	20.62 (3.74)
General Health [ <i>M (SD)</i> ]	18.43 (3.77)	18.41 (3.75)	19.25 (3.84)
Prolonged Grief Symptoms [ <i>M (SD)</i> ]	62.05 (23.66)	—	—

died I feel like I have lost the ability to care about other people or I feel distant from people I care about," to which responses are made on a five-point scale describing the frequency of symptoms. This instrument has displayed high internal consistency (.94) and good temporal stability (.92; Boelen, van den Bout, de Keijser, & Hoitjink, 2003). Research has also shown that diagnoses based on the ICG-R yielded a sensitivity of .93 and a specificity of .93 in the detection of interview determined PGS (Barry, Kasl, & Prigerson, 2002). In addition, ICG-R items have correlated with a range of potentially serious mental and physical health consequences of bereavement and it has been found to have strong psychometric properties (Prigerson et al., 1997). The ICG-R yielded a Cronbach's alpha of .96 in the present sample.

## RESULTS

See Table 1 for means and standard deviations of the study variables. Results of bivariate correlations revealed that participants' levels of PGS were positively linked with both attachment anxiety,  $r(656) = .29$ ,  $p < .001$ , 95% CI [.219, .258], and avoidance,  $r(656) = .20$ ,  $p < .001$ , 95% CI [.126, .272], in the sample. In order to assess the specific relations between the two attachment dimensions and PGS, a hierarchical linear regression was conducted using a two-step procedure. On the first step, demographic factors (age, gender, and ethnicity) and loss-related factors (relationship to the deceased—immediate family vs. other losses, and cause of death—violent losses vs. natural losses) were entered in the statistical model as control variables. On the second step, the two attachment variables were entered into the regression equation.

As presented in Table 2, the first model explained a significant portion of PGS in the sample,  $F(5, 650) = 20.31$ ,  $p < .001$ . However, as hypothesized, the entry of attachment-related anxiety and avoidance significantly increased the portion of explained variance beyond the control variables,  $\Delta R^2 = .06$ ,  $F_{\text{change}} = 24.29$ ,  $p < .001$ . In the final model, age, relationship to deceased and cause of death each uniquely contributed to the explained variance in PGS,  $ps < .001$  to  $p = .007$ . In addition, participants' attachment anxiety accounted for differences in PGS in this analysis,  $p < .001$ .

TABLE 2. Attachment Insecurities Predicting Prolonged Grief Symptoms ( $N = 656$ )

Predictor	<i>B</i>	<i>SE B</i>	$\beta$	<i>R</i> <sup>2</sup>
<b>Model 1</b>				.14***
Age	-0.47***	0.11	-.16***	
Gender (1 = male vs. 0 = female)	0.91	2.18	.02	
Ethnicity (1 = Caucasian vs. 0 = Non-Caucasian)	0.75	1.71	.02	
Relationship to deceased	21.52***	2.41	.33***	
Cause of death	5.72**	1.89	.11**	
<b>Model 2</b>				.20***
Age	-0.43***	0.11	-.14***	
Gender (1 = male vs. 0 = female)	1.34	2.13	.02	
Ethnicity (1 = Caucasian vs. 0 = Non-Caucasian)	1.36	1.66	.03	
Relationship to deceased	19.66	2.34	.30	
Cause of death	5.00**	1.83	.10**	
Attachment anxiety	0.30***	0.07	.21***	
Attachment avoidance	0.05	0.05	.05	

Note. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

## DISCUSSION

This initial study yielded several noteworthy findings. First, the addition of attachment insecurities accounted for differences in PGS, above and beyond demographic factors and loss-related circumstances. However, only attachment anxiety was shown to uniquely predict grief severity in the sample, as grievers with higher levels of attachment anxiety also indicated more PGS. Avoidance failed to yield a salient unique effect in the overall analysis. These results are consistent with findings that persons who score high on attachment anxiety tend to experience higher levels of distress symptomatology following bereavement when accounting for both types of attachment insecurities (Field & Sundin, 2001; Fraley & Bonanno, 2004; Uren, Heidelberg, & Wastell, 2002; van Doorn et al., 1998; Waszkowic & Chartier, 2003; Wayment & Vierthaler, 2002; Wijngaards-de Meij et al., 2007b). When controlling for other factors, in this study younger individuals and those who lost loved ones to a violent death reported higher PGS. This is consistent with previous findings that older persons demonstrate less distress over a loss than younger adults (Fukukawa et al., 2005; Monk et al. 2006), but given the over-representation of young adults in the sample, this should be interpreted tentatively. Findings also converge with other re-

search providing evidence on the challenges of coping with violent death bereavement (e.g., Currier, Holland, & Neimeyer, 2006; Kee-see, Currier, & Neimeyer, 2008).

There were several notable limitations to Study 1. Although the cross-sectional design allowed for an examination of concurrent associations between attachment and PGS, we cannot draw causal inferences between these constructs. Consistent with general trends in bereavement research, there was also an overrepresentation of women. Although gender was not found to predict grief, results may have differed had the sample included more men. Additionally, many of the individuals in Study 1 had not experienced the types of losses that are typically linked with greater grief complication, as the majority of participants had not lost close family members or experienced a violent loss. Our broad inclusion criteria allowed us to investigate how the general impact of attachment insecurities was associated with greater PGS, but attachment insecurities could be even more relevant in coping with traumatic losses (see Mikulincer et al., 2006), such as when a loved one dies via homicide, suicide, and fatal accident.

## STUDY 2

Given both previous and current evidence on the challenges of violent loss, the purpose of the second study was to further investigate the role of the two attachment insecurities in coping with bereavement following homicide, suicide, or fatal accidents. Using a matched control strategy with violent loss survivors and a demographically-similar group of nonbereaved persons, we examined the unique impact of attachment anxiety and avoidance on psychological and physical health across the two subsamples. In keeping with suggestions about how extreme stressors may activate the attachment system (e.g., Field et al., 2005; Mancini et al., 2009; Mikulincer et al., 2006; Shaver & Fraley, 2008; Shear & Shair, 2005), we also wanted to explore whether the experience of violent loss may moderate the effects of the two attachment dimensions in the mental and physical health outcomes assessed in the study. We hypothesized that avoidance could be particularly relevant for persons in the violent loss group (cause of death/attachment avoidance interaction), while attachment anxiety would again figure prominently for all participants (significant main effect).

## METHOD

### Participants

To create a two-group matched control sample, the 191 individuals were selected from Study 1 who had experienced a loss of a loved one via violent means (accident, suicide, and homicide), and were then paired with 191 students from the larger study who had not experienced a bereavement in the preceding two years but reported a non-traumatic life stressor. These non-bereaved persons were selected if they had fully completed measures of attachment, physical health, and mental health symptoms, and shared similar demographic characteristics (gender, age, ethnicity) as one of the violent loss survivors. So as to minimize bias in this matching procedure, researchers were blind to scores on the measures when creating the nonbereaved control group. Descriptive information for the groups can be found in Table 1.

### Instrumentation

The ECR-RSQ (Fraley et al., 2011) was again used to assess attachment characteristics. Focusing on the four referent relationships used for the ECR-RSQ in this study, alphas for attachment avoidance ranged from .88 to .92, and attachment anxiety had a range of alphas from .87 to .92.

The General Health (GH) subscale of the Medical Outcomes Study Short Form-36 (SF-36) Health Survey was utilized to assess the participants' perceived overall health (Ware & Sherbourne, 1992). The GH contains 5 items assessing an individual's beliefs regarding personal health (e.g., "I am as healthy as anybody I know" or "I expect my health to get worse"), such that higher scores indicate a belief in better general health. Research has indicated internal consistency (Cronbach's alpha = .81) of the GH subscale among the general United States population (Ware, Gandek, & the IQOLA Group, 1994). In addition, the GH index has correlated highly with the 22-item GH Rating Index (Ware & Sherbourne, 1992). This measure yielded a Cronbach's alpha of .78 across the participants in Study 2.

The Mental Health Index (MHI-5) from the SF-36 was utilized to assess the participants' mental health symptoms. The MHI-5 consists of five items assessing psychological well-being, anxiety, depression, and loss of behavioral or emotional control. Items were

rated on a six-point scale according to feelings over the past 4 weeks (0 = not at all, 5 = all of the time), such that higher scores again indicate better mental health functioning. The scale has correlated highly with other psychiatric distress measures such as the Hopkins Symptom Checklist (Strand, Dalgard, Tambs, & Rognerud, 2003). The MHI-5 generated a Cronbach's alpha of .88 in the present overall sample.

## RESULTS

Prior to conducting the analysis for Study 2, scores on the ESC-RSQ were converted to *z*-scores and two interaction terms were created: (1) violent loss status (-1 = no, 1 = yes)  $\times$  attachment anxiety, and (2) violent loss status (-1 = no, 1 = yes)  $\times$  attachment avoidance. Two hierarchical regression analyses were then conducted to examine the role of violent loss and attachment insecurities in accounting for differences in mental and physical health. In each analysis, study outcomes were first regressed onto demographic factors (age, gender, ethnicity) and violent loss status. Second, the main effect variables for attachment anxiety and avoidance were entered in the models. On the final step, we entered the two interaction terms to assess whether the experience of violent loss moderated the impact of the two attachment insecurities.

In the first analysis, we used the MHI-5 as the dependent variable. As presented in Table 3, demographic factors accounted for a significant portion of the variance in participants' mental health,  $R^2 = .04$ ,  $F(4, 377) = 4.02$ ,  $p = .003$ . On the second step, the entry of violent loss and attachment variables increased the explained variance,  $\Delta R^2 = .19$ ,  $F_{\text{change}}(2, 375) = 46.66$ ,  $p < .001$ . The entry of the two interaction terms also increased the explanatory power of the model,  $\Delta R^2 = .02$ ,  $F_{\text{change}}(2, 373) = 4.71$ ,  $p = .010$ . In the final model, being of non-Caucasian ethnicity, experiencing violent loss, and higher attachment anxiety were each associated with worse mental health. In addition, there was a strong indication for an interaction between violent loss status and attachment avoidance in the final model,  $p = .061$  (See Figure 1).

The second analysis focused on the outcome of physical health. The first model with only demographic factors again achieved statistical significance,  $R^2 = .03$ ,  $F(4, 377) = 4.02$ ,  $p = .003$  (See Table 3). Adding the two attachment dimensions in the second model yield-

**TABLE 3. Attachment Insecurities Predicting Mental Health and Health Symptoms (N = 382)**

Predictor	Mental Health				Physical Health			
	<i>B</i>	<i>SE B</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>B</i>	<i>SE B</i>	$\beta$	<i>R</i> <sup>2</sup>
<b>Model 1</b>				.04*				.04
Age	0.02	0.04	0.03		0.02	0.04	0.03	
Gender	-0.20	0.50	-0.02		-0.20	0.50	-0.02	
Ethnicity	-0.99*	0.39	-0.13*		-0.99*	0.39	-0.13*	
Violent loss (-1 = no vs. 1 = yes)	-0.60**	0.20	-0.16**		-0.60**	0.20	-0.16**	
<b>Model 2</b>				.23*				.23
Age	0.03	0.04	0.03		0.03	0.04	0.03	
Gender	-0.27	0.47	-0.03		-0.27	0.47	-0.03	
Ethnicity	-1.12**	0.35	-0.14**		-1.12**	0.35	-0.14**	
Violent loss (-1 = no vs. 1 = yes)	-0.48**	0.18	-0.36**		-0.48**	0.18	-0.36**	
Attachment anxiety	-0.09***	0.02	-0.36***		-0.09***	0.02	-0.36***	
Attachment avoidance	-0.02	0.02	-0.11		-0.02	0.02	-0.11	
<b>Model 3</b>				0.25*				0.25
Age	0.04	0.04	0.04		0.04	0.04	0.04	
Gender	-0.24	0.45	-0.03		-0.24	0.45	-0.03	
Ethnicity	-0.91*	0.36	-0.12*		-0.91*	0.36	-0.12*	
Violent loss (-1 = no vs. 1 = yes)	1.14*	0.56	0.29*		1.14*	0.56	0.29*	
Attachment anxiety	-0.09***	0.02	-0.37***		-0.09***	0.02	-0.37***	
Attachment avoidance	-0.02	0.10	-0.10		-0.02	0.10	-0.10	
Violent loss x Anxiety	-0.01	0.01	-0.57		-0.01	0.01	-0.57	
Violent loss x Avoidance	-0.02	0.01	-0.36		-0.02*	0.01	-0.36*	

Note. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

ed an increase in the explained variance as well,  $\Delta R^2 = .09$ ,  $F_{\text{change}} = 19.22$ ,  $p = .001$ . In the final step, the two interactions terms also increased the explanatory power of the model,  $\Delta R^2 = .01$ ,  $F_{\text{change}} = 2.88$ ,  $p = .057$ . Gender, anxious attachment, and the violent loss x attachment avoidance interaction each emerged as unique predictors of physical health in the final model.

As a way of investigating the significant interactions between violent loss status and attachment avoidance, two independent sets of univariate regressions were performed. In these analyses, the interactions were decomposed by testing the simple slopes of attachment avoidance on study outcomes separately for survivors of violent loss and nonbereaved participants. For the violent loss group,

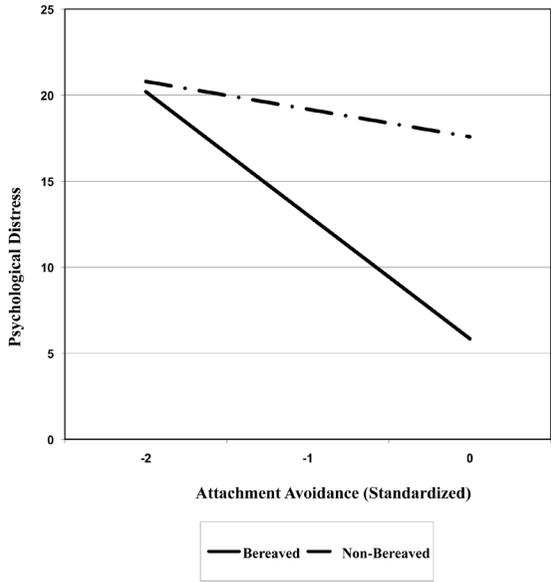


FIGURE 1. Simple Slopes for Attachment Avoidance on Mental Health.

results demonstrated negative associations between avoidance and both mental health,  $r(191) = -.47, p < .001, 95\% \text{ CI } [-.573, -.352]$ , and physical health  $r(191) = -.33, p < .001, 95\% \text{ CI } [-.450, -.198]$ . We detected a small negative correlation between avoidance and mental health for nonbereaved participants,  $r(191) = -.20, p = .005, 95\% \text{ CI } [-0.332, -0.060]$ . In contrast, we failed to find significant relations between avoidance and general health outcomes for this population  $r(191) = -.12, p = .101, 95\% \text{ CI } [-0.257, 0.022]$ . As depicted in Figure 2, these results indicated that greater attachment avoidance was associated with poorer physical health for violent loss survivors. For the nonbereaved sample, attachment avoidance was not associated with participants' levels of physical functioning.

DISCUSSION

In Study 2, the addition of participants' attachment orientation significantly augmented predictions of their mental and physical health. However, consistent with the research literature and findings from Study 1, only attachment-related anxiety was associated with

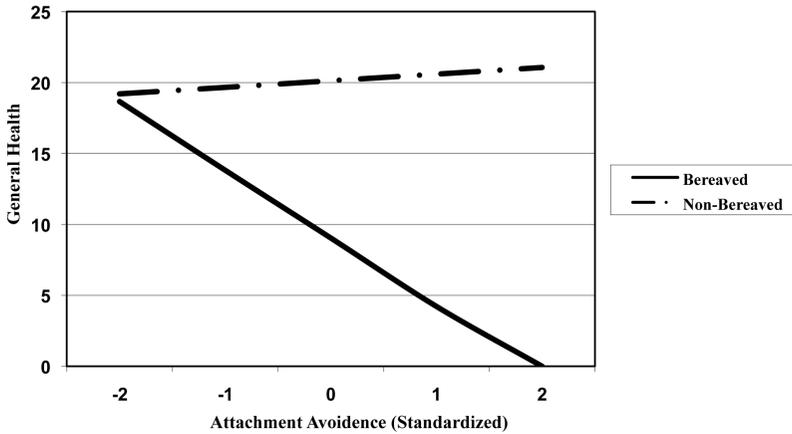


FIGURE 2. Simple Slopes for Attachment Avoidance on General Health.

both outcomes in the presence of other study variables (Bonanno et al., 1995; Wayment & Vierthaler, 2002). Although we again failed to find a significant main effect for attachment avoidance, there was evidence that this dimension might be particularly relevant under times of heightened stress. Further investigation of this construct demonstrated that the association between attachment avoidance and study outcomes was moderated by whether or not the participant had experienced a violent loss in the past two years, as violent loss survivors with higher avoidance endorsed substantially worse physical health. Although follow up tests revealed that nonbereaved persons with higher levels of avoidance also reported worse mental health, the magnitude of this association was greater for violent loss survivors. We did not find evidence of a link between avoidance and physical health in the nonbereaved sample, whereas there was a moderate negative correlation in the bereaved group. Contrary to previous assumptions (Shear & Shair, 2005), avoidant persons do not necessarily need to experience a significant distressing event in order to activate attachment-related distress, as higher attachment avoidance was associated with mental health issues even among the nonbereaved. However, those who had experienced a violent loss reported significantly more mental health issues than the nonbereaved. Although deactivating the attachment system may not cause as significant problems in the absence of significant loss-related stressors, these results support previous suggestions that an

over-reliance on attachment avoidance further undermines healthy coping and increases the griever's risk for maladjustment when faced with a significant bereavement (Mancini et al., 2009; Mikulincer et al., 2006; Shaver & Fraley, 2008; Shear & Shair, 2005).

Study 2 also had several limitations. A prospective longitudinal investigation would be necessary to examine the direct influence of attachment insecurities on coping with violent loss, as the extent to which distress was due to the nature of the death rather than their attachment orientation is not apparent. Conversely, bereaved individuals who did not display distress on study measures may have still been in shock due to how recently the violent loss occurred, which might have further complicated these results. In addition, this sample consisted primarily of young adults with equivalent levels of education (i.e., college students) and we used broad criteria for the nature of the relationship to the deceased (i.e., extended family members). Thus, the results may not generalize as well to persons who have lost a closer relative. Future research would do well to replicate these findings for attachment characteristics and PGS in the context of violent loss using more sophisticated designs and measurement strategies.

## GENERAL DISCUSSION

Attachment theory has served as a primary framework for conceptualizing prolonged grief and other post-bereavement challenges (Lichtenthal et al., 2004; Lobb et al., 2010; Shear & Shair, 2005; Stroebe et al., 2005). Findings supported the protective role of attachment security in coping with bereavement, while also highlighting the relevance of anxiety and avoidance in the grieving process. Results supported prior work in that attachment anxiety was uniquely linked with higher levels of PGS (Field & Sundin, 2001; Prigerson et al., 2000; Wijngaards-de Meij et al., 2007a). However, findings from Study 2 indicated that attachment anxiety factored prominently in both mental and physical health for all participants, regardless of whether participants had experienced a violent loss. Other researchers have similarly found concurrent associations between attachment anxiety and a number of distress symptoms, such as posttraumatic stress symptoms (PTSS; Besser & Neria, 2011) as well as alcohol use (De Rick & Vanheule, 2007), dissociation and

anxiety (Lyons-Ruth & Jacobvitz, 2008). Hence, attachment anxiety could be linked with poorer functioning in general, as well as being a specific risk factor for bereavement complications (Burke & Neimeyer, 2012; Field & Sundin, 2001; Fraley & Bonanno, 2004; Lobb et al., 2010; Uren et al., 2002; van der Houwen et al., 2010; Waskowic & Chartier, 2003; Wayment & Vierthaler, 2002; Wijngaards-de Meij et al., 2007b). Such findings carry practical implications in contexts such as palliative care, where relational dependency displayed by family members can be evaluated as a prospective risk factor for complicated grief (Neimeyer & Burke, 2012). Likewise, therapeutic methods that enhance an anxiously attached client's felt security with the therapist and a reorganized continuing bond with the deceased could help foster loss adaptation (Neimeyer, 2012).

Though previous research has indicated that attachment avoidance can promote resilience after the loss of a loved one (Fraley & Bonanno, 2004), our findings indicated a somewhat different picture. When controlling for the effects of demographics, loss-related circumstances, and attachment anxiety in Study 1, participants' levels of avoidance were not correlated reliably with PGS. However, in Study 2, which focused only on violent loss survivors and included a matched control group of nonbereaved persons, attachment avoidance was linked with worse physical health functioning for bereaved persons. However, higher attachment avoidance was associated with poor mental health functioning among both the bereaved and nonbereaved, though this relationship was stronger among the violent loss survivors. These results align with other studies in which attachment avoidance further undermined psychological adaptation when confronted with severe bereavement, such as a violent loss (Bonanno et al., 1995; Wayment & Vierthaler, 2002; Wijngaards-de Meij et al., 2007b). When stressors are more traumatic, deactivating and denial strategies more consistently emerge as less effective, resulting in an inability to cope with bereavement (Edelstein & Shaver, 2004; Wijngaards-de Meij et al., 2007b). Thus, attachment avoidance as a defense can further collapse under the weight of unexpected loss, increasing susceptibility to PGS (Bonanno et al., 1995; Wayment & Vierthaler, 2002). If substantiated by future research, this finding should alert clinicians to the limits of avoidance strategies in mitigating grief and the importance of distinguishing between avoidance and genuine resilience in the context of bereavement (Bonanno et al., 2004).

This study highlighted the illusion of coping in avoidant attachment, as grief appears to manifest in general health symptoms and even poorer mental health functioning. Although avoidant individuals who did not experience bereavement reported minimal health problems, those who experienced violent losses were susceptible to greater health problems. These violent loss survivors attempting to cope with the loss through avoidance may have been unable to integrate the loss as part of their life narrative, rendering them more susceptible to PGS. Therapeutic strategies to confront the loss and promote its assimilation into the survivor's life narrative, schemas, or autobiographical memory play a major role in evidence-based treatments for PGS, which meld attachment, meaning reconstruction and cognitive behavioral perspectives (Shear, Boelen, & Neimeyer, 2011). The results of the current study suggest the relevance of these strategies.

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