Dispositional Attachment Orientations, Contextual Variations in Attachment Security, and Compassion Fatigue Among Volunteers Working With Traumatized Individuals

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Abstract

In the present article, we report a series of studies examining the links between attachment orientations and compassion fatigue among volunteers working with traumatized individuals. Participants were volunteers in several trauma-related organizations, ranging in age from 18 to 69 years. In Study 1 ($N = 148$), we examined associations between self-reports of attachment insecurities and compassion fatigue. In Study 2 ($N = 54$), we used a diary design to assess attachment-related differences in emotional reactions to actual helping encounters over a 2-month period. In Study 3 ($N = 108$), we examined the effects of the experimental enhancement of attachment security (*security priming*) on reactions to a hypothetical helping encounter. As expected, attachment insecurities, either anxiety or avoidance, were associated with heightened compassion fatigue. Moreover, security priming reduced compassion fatigue in response to a hypothetical helping encounter. These findings underscore the relevance of attachment theory for understanding and preventing compassion fatigue.

Terrorism, war, and other man-made and natural threats have created a heightened awareness of the needs not only of those who are directly exposed to these traumatic events, but also of helping professionals and other support providers. It is increasingly recognized that exposure to human suffering and trauma involves heightened risk of emotional, cognitive, and behavioral problems among support providers (Adams, Boscarino, & Figley, 2006; Bride, 2007; Craig & Sprang, 2010). Several different but overlapping terms and concepts have been applied to the distress experienced by helpers working with traumatized people, including "secondary traumatic stress" (Figley, 1995) and "vicarious traumatization" (McCann & Pearlman, 1990). In the studies reported here, we focus on "compassion fatigue" (Figley, 1995; Joinson, 1992), an umbrella term used to characterize the potential negative consequences of helping or wanting to help a traumatized person (Figley, 1995, 2002), and we evaluate the utility of attachment theory (Bowlby, 1973, 1982) for understanding individual differences in helpers' responses to working with traumatized people. Attachment theory, which has generated extensive research on caregiving and emotion regulation in stressful situations (see Mikulincer & Shaver, 2007a, for a review), provides a framework for understanding the inner resources that can sustain helpers as they deal with the emotional strains of caring for traumatized people.

Compassion Fatigue

According to Figley (1995), compassion fatigue is a multidimensional phenomenon that includes (a) burnout (a sense of exhaustion and a reduced sense of accomplishment), (b) secondary traumatic stress (a sense of being "infected" by traumatic stress and experiencing psychological symptoms resembling those reported by trauma victims), and (c) reduced compassion satisfaction (lack of satisfaction from helping needy others). Numerous studies have shown that compassion fatigue has debilitating effects on the personal lives of helpers working with traumatized people (e.g., therapists, emergency workers) and on their ability to provide compassionate support (Figley, 2002). For example, Jenkins and Baird (2002) found

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that mental health professionals working with traumatized people are at risk of developing post-traumatic symptoms as a result of listening to trauma narratives, and Pearlman and Mac Ian (1995) found that these helpers can also experience negative changes in their views of the self and others and in the quality of their close relationships. In light of this heavy toll, many studies have been conducted to identify risk factors for developing compassion fatigue; these studies have focused mainly on three factors: the extent of trauma-related exposure, helpers' personal characteristics that facilitate or inhibit the development of compassion fatigue, and contextual-organizational factors that can alter helpers' reactions to caring for traumatized people.

The extent of trauma-related exposure is often measured by hours spent working with traumatized people or by the percentage of trauma survivors in the helper's client load (see Elwood, Mott, Lohr, & Galovski, 2011, for a review). Although some studies support the association between level of trauma-related exposure and compassion fatigue (e.g., Dekel, Hantman, Ginzburg, & Solomon, 2007; Schauben & Frazier, 1995; Sprang, Clark, & Whitt-Woosley, 2007), the findings are inconclusive, and other studies have failed to find such an association (e.g., Boscarino, Figley, & Adams, 2004; Perron & Hiltz, 2006). Research has also identified helpers' personal characteristics that increase the risk for compassion fatigue, such as being female (e.g., Kassam-Adams, 1999; Meyers & Cornille, 2002; Sprang et al., 2007) and having a personal history of unresolved trauma (e.g., Baird & Kracen, 2006; Nelson-Gardell & Harris, 2003). In addition, many studies have found that age is inversely associated with compassion fatigue (e.g., Nelson-Gardell & Harris, 2003) and that the more experienced the helpers, the less they are at risk while caring for traumatized people (e.g., Baird & Jenkins, 2003; Boscarino et al., 2004; Craig & Sprang, 2010). Other researchers have also identified environmental and organizational characteristics that contribute to compassion fatigue, such as lack of appropriate training (e.g., Chrestman, 1995) and lack of supervision and support during the helping process (e.g., Boscarino et al., 2004).

Despite the large and growing body of research on compassion fatigue, however, there are significant gaps in our understanding of its underlying dynamics and the specific factors that contribute to variability in helpers' responses to exposure to human suffering. In the present studies, we examine these dynamics further in relation to attachment theory, exploring the contribution of attachment security and insecurities to compassion fatigue.

Attachment Theory and Research

According to attachment theory (Bowlby, 1973, 1980, 1982), social interactions with protective others (*attachment figures*) are internalized in the form of mental representations of the self and relationship partners (*internal working models of self and others*), which affect psychological functioning and mental health across the life span. Interactions with attachment figures who are available and supportive in times of need foster the development of a sense of attachment security and internal working models that are positive and optimistic (Bowlby, 1973). When attachment figures are rejecting or unavailable in times of need, the sense of attachment security is undermined, pessimistic expectations are formed, and people tend to form insecure attachment orientations. These attachment insecurities tend to be arranged in a two-dimensional space defined by two roughly orthogonal dimensions, attachment anxiety and attachment-related avoidance (Brennan, Clark, & Shaver, 1998).

A person's location on the anxiety dimension indicates the degree to which he or she worries that an attachment figure will not be available in times of need, partly because of the person's self-doubts about his or her own love-worthiness. More anxious people also tend to adopt "hyperactivating" attachment strategies—energetic, insistent attempts to obtain care, support, and love from relationship partners—as a means of regulating distress (Mikulincer & Shaver, 2007a). A person's position on the avoidance dimension indicates the extent to which he or she distrusts relationship partners' good will and defensively strives to maintain behavioral independence and emotional distance. More avoidant people tend to rely on deactivating strategies, such as suppression of attachment-related thoughts and emotions (Mikulincer & Shaver, 2007a). People who score low on both dimensions are said to be secure with respect to attachment. A person's location in the two-dimensional space can be measured with reliable and valid self-report scales (e.g., the Experiences in Close Relationships measure [ECR]; Brennan et al., 1998), and this location is associated in theoretically predictable ways with a wide variety of measures of relationship quality and psychological adjustment (e.g., Mikulincer & Shaver, 2008).

Adult attachment research provides extensive evidence that being loved and supported by significant others, and the resulting sense of attachment security, contributes to positive mental representations of self and others and the adoption of constructive coping strategies (e.g., Holmberg, Lomore, Takacs, & Price, 2011; Otway & Carnelley, 2013; Pearce & Halford, 2008). Numerous cross-sectional and longitudinal studies have shown that secure attachment is an inner resource that facilitates emotion regulation and coping in stressful and traumatic circumstances, whereas attachment insecurities, either anxiety or avoidance, increase the risk for emotional problems, maladjustment, and psychopathology (e.g., Bazzazian & Besharat, 2012; Lemche et al., 2006; Quirin, Pruessner, & Kuhl, 2008).

There is also extensive evidence that self-reported attachment insecurities (i.e., anxiety, avoidance) are positively associated with the intensity of post-traumatic stress disorder (PTSD) symptoms following a traumatic event. This association has been replicated across different samples of adults that include, among others, victims of childhood sexual or physical abuse (e.g., Sandberg, 2010), civilians living under life-endangering conditions (e.g., Besser & Neria, 2012), prisoners

of war (e.g., Zakin, Solomon, & Neria, 2003), war veterans (e.g., Dekel, Solomon, Ginzburg, & Neria, 2004), Holocaust survivors (e.g., Cohen, Dekel, & Solomon, 2002), and survivors of the 9/11 terror attacks (e.g., Fraley, Fazzari, Bonanno, & Dekel, 2006). For example, Fraley et al. (2006) found that both attachment anxiety and avoidance, as assessed by self-report scales administered 7 months after the 9/11 terror attacks, predicted more severe PTSD symptoms 4 months after the first wave of measurement.

Adult attachment research has also provided evidence concerning a hypothesized link between attachment security and a constructive orientation to providing care to others. According to attachment theory (Bowlby, 1982), developing a sense of attachment security, which happens in the context of relationships with compassionate, sensitive, and helpful attachment figures, increases a person's motivation and ability to provide protection and care to others who are either chronically dependent or temporarily in need. Only a relatively secure person is likely to perceive others not only as sources of security and support but also as human beings who have important needs of their own (e.g., B. Feeney & Collins, 2001; Kunce & Shaver, 1994). In contrast, both attachment anxiety and avoidance are likely to interfere with effective caregiving (e.g., George & Solomon, 2008; Shaver & Hazan, 1988). Although people who are anxious with respect to attachment may have some of the qualities necessary for effective caregiving (e.g., being comfortable with psychological intimacy and physical closeness), their habitual focus on their own distress and unsatisfied attachment needs may interfere with attending sensitively to others' needs. Avoidant individuals' discomfort with expressions of need and dependence may cause them to back away from rather than get involved with a vulnerable or needy person. As a result, they may attempt to detach themselves emotionally and physically from needy others (Shaver & Hazan, 1988).

This theoretical analysis has received extensive support in correlational studies of caregiving within both parent-child and romantic relationships. For example, secure mothers are more caring and supportive than insecure mothers when interacting with their children (e.g., Rholes, Simpson, & Blakely, 1995). Secure individuals are also more sensitive to romantic partners' needs and describe themselves as more likely to provide emotional support to a distressed partner (e.g., J. Feeney, 1996; Kunce & Shaver, 1994). These findings are bolstered by observational studies in which dating couples were video-recorded while one partner waited to undergo a stressful experience or disclosed a personal problem (e.g., B. Feeney & Collins, 2001; Simpson, Rholes, & Nelligan, 1992). More avoidant or anxious individuals were less likely to spontaneously offer support to their distressed partners. This interference with caring reactions associated with attachment insecurities was also found in other correlational studies examining various forms of community volunteerism (Gillath et al., 2005) and willingness to help needy strangers (e.g., Mikulincer, Shaver, Gillath, & Nitzberg, 2005).

Although most adult attachment studies have focused on self-reports of dispositional attachment orientations, a growing body of research shows that the sense of attachment security can be experimentally enhanced by actual or imagined encounters with available and supportive others, even among chronically insecure persons (e.g., Gillath, Selcuk, & Shaver, 2008; Mikulincer & Shaver, 2007b). Subliminal or supraliminal exposure to security-related stimuli (e.g., names of security providers, images or stories of being comforted and reassured by supportive others) has been found to heighten positive mood (Mikulincer, Hirschberger, Nachmias, & Gillath, 2001), positive appraisals of a relationship partner (Mikulincer & Arad, 1999), tolerance toward out-group members (Mikulincer & Shaver, 2001), and willingness to care for a needy stranger (Mikulincer et al., 2005) or a needy relationship partner (Mikulincer, Shaver, Sahdra, & Bar-On, 2013).

The Present Studies

The three studies presented here explored the association between attachment orientations and compassion fatigue among people who volunteered to provide ongoing support to traumatized individuals. Based on the above literature review, we hypothesized that attachment insecurities, either anxiety or avoidance, would contribute to compassion fatigue, increasing burnout and secondary traumatization and reducing compassion satisfaction. Study 1 was a simple cross-sectional correlational study examining associations between self-reports of dispositional attachment insecurities and compassion fatigue. In Studies 2 and 3, we used more sophisticated methodologies (a diary methodology in Study 2 and an experimental design in Study 3) to explore the effects of both dispositional attachment insecurities and contextual enhancement of attachment security on compassion fatigue, while addressing the methodological limitations of Study 1. In the three reported studies, participants were volunteer (unpaid) helpers who provide "first aid" and ongoing support to traumatized individuals in crisis centers in hospitals and outreach programs.

STUDY 1

The goal of Study 1 was to examine associations between self-reports of attachment insecurities (ECR; Brennan et al., 1998) and compassion fatigue. We predicted that higher ECR anxiety and avoidance scores would be associated with higher scores on the compassion fatigue scale.

Method

Participants. The sample included 148 Israeli participants (113 women and 35 men, ranging in age from 18 to 69 years, *Mdn* = 39) who served as volunteers in several trauma-related organizations and agreed to participate in the study without

monetary reward.[1] None of them was a mental health professional. These organizations provide ongoing support to various traumatized populations, such as terror victims, bereaved parents, victims of traffic accidents, and war casualties. All the participants met the following inclusion criteria: (a) being an active volunteer for at least a year and (b) being involved in direct one-on-one contact with traumatized people at least once a week. Participants' average years of experience in working with traumatized people was 3.02 (*SD* = 2.61). Seventy-one percent of the participants received ongoing supervision, and 51% had attended short-term trauma-related courses or workshops.

Materials and Procedure. We sent letters to the volunteer coordinators in several trauma-related organizations explaining the purpose of the study and requesting cooperation in recruiting volunteers. After providing informed consent, the participants completed three questionnaires, the order of which was randomly determined across participants.

As a measure of attachment anxiety and avoidance, participants completed a shortened version of the 36-item Experiences in Close Relationships measure (ECR; Brennan et al., 1998). Specifically, we used the first half of the ECR questionnaire, from item 1 to item 18 (see items in Mikulincer & Shaver, 2007a). Participants rated the extent to which each item was descriptive of their feelings in close relationships on a 7-point scale ranging from 1 (*not at all*) to 7 (*very much*). Nine items tapped attachment anxiety (e.g., "I worry about being abandoned") and 9 items tapped avoidance (e.g., "I prefer not to show a partner how I feel deep down"). Cronbach's alphas were high for the anxiety and avoidance scales (.80 and .94, respectively). Items on each scale were averaged, with a higher score indicating greater anxiety or avoidance (see means and standard deviations in Table 1). The anxiety and avoidance scores were not significantly associated, $r(146) = .08$, supporting Brennan and colleagues' (1998) claims about the orthogonality of the two scales.

Compassion fatigue was assessed with the Professional Quality of Life Scale–Version III (ProQOL-III; Stamm, 1995). On 30 items, participants rated how often they experienced the feeling or thought described in each item. Ratings were made on a 6-point scale ranging from 0 (*never*) to 5 (*very often*). Ten items tapped burnout ("Because of my work as a helper, I feel exhausted," "I feel overwhelmed by the amount of work I need to deal with"), 10 items tapped secondary traumatic stress (e.g., "I am preoccupied with thoughts about the people I help"), and 10 items tapped compassion satisfaction ("I get satisfaction from being able to help people"). In this study, Cronbach's alphas were adequate for the three subscales (.70 for burnout, .85 for secondary traumatic stress, and .83 for compassion satisfaction). We computed three scores for each participant by averaging items of each subscale (see means and standard deviations in Table 1).

Results and Discussion

To test our predictions, we conducted two-step hierarchical regression analyses examining the contribution of attachment scores to explaining variance in each of the three subscales of the compassion fatigue scale (burnout, secondary traumatic stress, and compassion satisfaction). We also introduced the amount of experience treating traumatized people (operationalized as number of years working with traumatized people) as another predictor into the regression model because past studies have found this variable to explain variations in compassion fatigue (Linley & Joseph, 2007). In the first step, we introduced *z*-scores for attachment anxiety and avoidance and volunteer experience as predictors, allowing us to examine their unique contributions. In the second step, we introduced the products of volunteer experience and each of the attachment scores, allowing us to examine their interactive effects.[2]

As can be seen in Table 2, findings indicated that attachment insecurities were significantly associated with more compassion fatigue. However, the attachment dimensions had differential effects on the various compassion fatigue subscales. Whereas attachment anxiety was associated with more frequent symptoms of burnout and secondary traumatic stress, it did not relate significantly to compassion satisfaction (see Table 2). That is, more anxious participants felt heightened burnout and secondary traumatic stress without feeling lack of satisfaction with their caregiving role. In addition, whereas attachment-related avoidance did not significantly contribute to burnout or secondary traumatic stress, it was associated with less compassion satisfaction (see Table 2). That is, more avoidant people felt more dissatisfied with their caregiving role without reporting heightened burnout or secondary traumatic stress.

Participants' experience in working with traumatized people made no significant unique contribution to accounting for variance in the three compassion fatigue scores (see Table 2). However, the interaction of experience and attachment anxiety was significantly related to burnout and

Table 1 Means and Standard Deviations of ECR Scores and Compassion Fatigue Subscales in Each of the Three Samples

Variables	Study 1		Study 2		Study 3	
	M	*SD*	*M*	*SD*	*M*	*SD*
ECR scores						
Attachment anxiety	3.17	1.08	3.21	1.19	3.13	1.17
Attachment avoidance	2.79	1.02	2.90	1.17	2.86	1.17
Compassion fatigue subscales*						
Burnout	1.57	0.88	2.88	1.14	3.00	1.25
Secondary traumatic stress	1.33	0.76	3.52	1.80	3.25	1.15
Compassion satisfaction	3.83	0.72	4.97	1.33	5.23	1.18

Note. ECR = Experiences in Close Relationships. *In Study 1, the rating scale for compassion fatigue items ranged from 0 to 5. In Studies 2 and 3, the rating scale for these items ranged from 1 to 7.

Table 2 Standardized Regression Coefficients for the Prediction of Compassion Fatigue Subscales From the Attachment Scores, Years of Volunteering Experience, and Their Interactions

Effects	Burnout β	Secondary Traumatic Stress β	Compassion Satisfaction β
Step 1			
Attachment anxiety	.42**	.38**	−.01
Attachment avoidance	.05	.14	−.26**
Years of experience	−.08	.01	.01
Step 2			
Anxiety × Experience	−.28**	−.20*	−.08
Avoidance × Experience	.06	.05	.01

Note. *p < .05. **p < .01.

secondary traumatic stress (see Table 2). Simple slope analyses revealed that higher attachment anxiety scores were significantly associated with heightened burnout and secondary traumatic stress when experience in working with traumatized people was relatively low (–1 SD), βs of .70 and .56, ps < .01, but not when experience was relatively high (+1 SD), βs of .14 and .18. In other words, participants' experience in working with traumatized people buffered the association between attachment anxiety and compassion fatigue.[3] No other interactions were significant (see Table 2).

Overall, the findings were in line with our predictions showing that attachment insecurities were associated with heightened compassion fatigue. However, caution was necessary in interpreting the results because of the cross-sectional nature of the study and the retrospective nature of self-reports of compassion fatigue. Study 2 was an attempt to deal with those methodological limitations.

STUDY 2

The goal of Study 2 was to further examine the link between attachment and compassion fatigue while addressing methodological limitations imposed by the cross-sectional design of Study 1. For this purpose, we designed a 2-month diary study assessing compassion fatigue immediately after each actual meeting participants had with a traumatized person. Specifically, participants, who served as volunteers providing ongoing support to traumatized individuals, completed the ECR at the beginning of the study and then reported on their compassion fatigue after each actual meeting with a traumatized person they experienced over a period of 2 months. This diary methodology allowed us to address the limitations of retrospective and cross-sectional studies (Bolger, Davis, & Rafaeli, 2003). Since compassion fatigue is often an acute reaction that may emerge without warning (Figley, 1995), the use a diary methodology was particularly valuable for this study.

After each meeting, participants also reported on the perceived distress of the care recipient during the meeting and their context-specific sense of attachment security while working with the specific case (i.e., perceived support avail-

ability). In this way, Study 2 also provided information about within-person fluctuations in volunteers' compassion fatigue resulting from variations in perceived distress of the care recipient and the extent to which they felt they had a solid, secure base while working with traumatized people (perceived support availability). We also examined the extent to which these variations moderate the link between attachment insecurities and compassion fatigue. The assessment of perceived support availability also allowed us to examine the unique and interactive contributions of dispositional and contextual sources of attachment security to compassion fatigue.

Method

Participants. Another sample of 54 Israeli participants (41 women and 13 men, ranging in age from 22 to 71 years, *Mdn* = 50), who served as volunteers in the organizations described in Study 1, participated in the study without monetary reward. All of them met the inclusion criteria described in Study 1 and reported that they had at least one face-to-face meeting per week with at least one care recipient as part of their volunteer activity. Participants' average years of experience in working with traumatized people was 3.79 (*SD* = 2.82).

Materials and Procedure. At the beginning of the study, participants completed the ECR described in Study 1 (Cronbach's alphas were .87 and .83 for the attachment anxiety and avoidance subscales, respectively; see means and standard deviations in Table 1). They then received an envelope containing post-meeting forms and were asked to choose a specific case for which they were currently offering ongoing support as part of their volunteer activity. They were also asked to complete one of these forms immediately after each of the meetings they held with the chosen care recipient over a period of 2 months. We contacted participants by email or phone once each week to improve compliance with the study protocol. Participants reported full compliance with the protocol and completed the form after all the helping encounters they experienced during the study period. Overall, participants

submitted 483 forms during the 2-month period: 71% of them submitted 10 report forms and 29% submitted 9 forms.

In the post-meeting form, participants answered 19 items using a 7-point scale that ranged from 1 (*not at all*) to 7 (*very much*). In the first part, participants rated the perceived distress of the care recipient during the meeting. Specifically, they received seven negative mood items (e.g., distressed, tense) from the Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988) and rated the extent to which each item was descriptive of the care recipient during the meeting. Cronbach's alpha for the seven items was .76 (*M* = 3.83, *SD* = 1.53). In the second part, participants completed 11 items taken from the ProQOL-III (see Study 1), assessing current compassion fatigue following a meeting. Seven items tapped burnout ("I feel exhausted"), two items tapped secondary traumatic stress ("I'm preoccupied with thoughts about the care-recipient"), and two items tapped compassion satisfaction ("I experience a sense of satisfaction"). Cronbach's alphas for each subscale were acceptable (ranging from .72 to .76; see means and standard deviations in Table 1). In the third part of the questionnaire, participants received a single item asking them to rate the extent to which they felt they had available sources of support for dealing with the specific care recipient (*M* = 5.88, *SD* = 1.56).

Results and Discussion

The association between dispositional attachment insecurities and post-meeting compassion fatigue was examined for each subscale of the ProQOL-III (burnout, secondary traumatic stress, compassion satisfaction) using hierarchical linear modeling (HLM). In these analyses, we also examined the potential effects of meeting-specific perceived care-recipient distress and perceived support availability. The upper level of the HLM included volunteers' dispositional attachment anxiety and avoidance scores, and the lower level included post-meeting variables: perceived care-recipient distress, per-

ceived support availability, and each compassion fatigue subscale. At the upper level, we asked whether dispositional attachment anxiety and avoidance contributed to burnout, secondary traumatic stress, and compassion satisfaction across the different meetings. At the lower level, we asked whether perceived care-recipient distress and perceived support availability affected scores on each of the three compassion fatigue subscales following a specific meeting. In addition, we examined cross-level interactive effects of dispositional attachment insecurities and meeting-specific variables (perceived care-recipient distress and perceived support availability) on each of the three compassion fatigue subscales following a specific meeting.

As can be seen in Table 3, significant effects of dispositional attachment insecurities were found at the upper level of the HLM. Specifically, attachment anxiety was significantly associated with post-meeting burnout, and its effects on post-meeting secondary traumatic stress approached significance (*p* = .07). That is, the higher a participant's attachment anxiety, the higher his or her burnout and secondary traumatic stress following helping meetings across the 2-month period. Avoidant attachment did not make a unique contribution to post-meeting burnout or secondary traumatic stress, but its association with post-meeting compassion satisfaction was significant (see Table 3). The higher a participant's avoidance score, the lower his or her compassion satisfaction following helping meetings across the 2-month period.

At the lower level, perceived care-recipient distress was not significantly associated with the compassion fatigue subscales (see Table 3). However, perceived support availability was significantly associated with post-meeting burnout, and compassion satisfaction and its association with secondary traumatic stress approached significance (see Table 3). Specifically, the higher a participant's perception of support availability after a given meeting, the lower was his or her burnout and secondary traumatic stress and the higher was his or her post-meeting compassion satisfaction. No cross-level interactions between

Table 3 HLM Coefficients for the Prediction of Post-Meeting Compassion Fatigue Subscales by the Attachment Scores, Meeting-Specific Variables, and Their Interactions

Effects	Burnout γ	Secondary Traumatic Stress γ	Compassion Satisfaction γ
Upper (dispositional) level			
Attachment anxiety	.12*	.17[a]	.02
Attachment avoidance	.06	.02	−.28**
Lower (meeting) level			
Perceived care-recipient distress	.01	.03	.01
Perceived support availability	−.14*	−.12[a]	.16*
Cross-level interactions			
Anxiety × Care-Recipient Distress	−.04	−.01	−.01
Avoidance × Care-Recipient Distress	−.03	−.01	.08
Anxiety × Support Availability	−.03	−.05	.04
Avoidance × Support Availability	.04	.06	−.02

Note. [a]*p* < .10. **p* < .05. ***p* < .01.

dispositional attachment insecurities and meeting-specific variables were statistically significant (see Table 3).

Overall, the findings conceptually replicated and extended the findings of Study 1: More anxious participants reported more burnout and secondary traumatic stress following actual meetings with traumatized people, and more avoidant participants reported less post-meeting compassion satisfaction. In addition, a context-specific proxy of attachment security (perceived support availability) was associated with less compassion fatigue following actual meetings with traumatized people. However, this context-specific factor was not able to buffer the significant associations between dispositional attachment insecurities and post-meeting compassion fatigue. In Study 3, we further examined the effects of this context-specific factor by experimentally enhancing participants' sense of security and assessing the effects of this manipulation on reports of compassion fatigue in response to a hypothetical meeting with a traumatized person.

STUDY 3

The goal of Study 3 was to examine the direction of causality of the attachment–compassion fatigue link by using an experimental design and a well-validated technique of security enhancement (security priming; see Baldwin, Keelan, Fehr, Enns, & Koh Rangarajoo, 1996; Mikulincer & Arad, 1999; Mikulincer & Shaver, 2001). Participants, who served as volunteers providing ongoing support to traumatized people, completed the ECR and were randomly assigned to a security priming condition (visualizing the face of a security provider) or a neutral priming condition (visualizing the face of a mere acquaintance). They then read a hypothetical scenario in which they had a helping meeting with a traumatized person and were asked to report on their compassion fatigue in response to this scenario. We predicted that dispositional attachment insecurities would be associated with more post-scenario compassion fatigue and that security priming, as compared to neutral priming, would reduce this compassion fatigue.

Method

Participants. Another sample of 107 Israeli participants (85 women and 22 men, ranging in age from 18 to 85 years, $Mdn = 55$), who served as volunteers in the organizations described in Study 1, participated in this study without monetary reward. All met the inclusion criteria described in Study 1. Their average years of experience in working with traumatized people was 4.64 ($SD = 4.40$).

Materials and Procedure. The study was conducted in two sessions. In the first session, conducted in small groups, participants completed the ECR described in Study 1 (Cronbach's alphas were .81 and .87, respectively, for the attachment anxiety and avoidance subscales; see means and standard

deviations in Table 1). Two to three weeks later, participants were invited to an individual laboratory session and were randomly assigned to one of two priming conditions (i.e., security or neutral) based on Baldwin and colleagues' (1996) visualization task. In the security priming condition ($n = 42$), participants were asked to visualize the face of a person "who accepts and loves you and helps you in times of need." In the neutral priming condition ($n = 65$), participants were asked to visualize the face of a person "who lives in your neighborhood, but you do not know well." No significant differences were found between the two experimental conditions in gender distribution, age, years of experience in working with traumatized people, or attachment scores.

After the visualization task, all participants read a hypothetical scenario in which they provided ongoing support to a woman suffering from severe depression and social withdrawal one year after the sudden death of her husband in a car accident. This scenario was based on an actual case of a traumatized woman who was treated by one of Study 2's participants. The scenario included sociodemographic information about the care recipient, a detailed description of the traumatic event she experienced, and a description of the emotional, relational, and functioning problems she was suffering. After reading the scenario, participants completed the 11-item compassion fatigue scale described in Study 2 (but rephrased in the future tense), tapping the extent to which they would feel burnout, secondary traumatic stress, and compassion satisfaction after meeting the described woman. Cronbach's alphas for each compassion fatigue subscale were acceptable (ranging from .71 to .78; see means and standard deviations in Table 1).

Results and Discussion

To test our predictions, we conducted a two-step hierarchical regression analysis for each of the compassion fatigue subscales (burnout, secondary traumatic stress, compassion satisfaction). In the first step, security priming (a dummy variable contrasting security priming with neutral priming) and attachment anxiety and avoidance (z scores) were introduced as predictors. The product terms representing the two-way interactions between security priming and each of the attachment scores were introduced in the second step.

As can be seen in Table 4, security priming, as compared to neutral priming, significantly reduced burnout and secondary traumatic stress and increased compassion satisfaction. In addition, dispositional attachment anxiety was significantly associated with heightened burnout and secondary traumatic stress, and dispositional avoidant attachment was associated with reduced compassion satisfaction (see Table 4). No interaction was significant, but the interaction between security priming and avoidant attachment approached significance (see Table 4). Simple slope tests indicated that the association between avoidant attachment and reduced compassion satisfaction was stronger in the neutral priming condition, $\beta = -.65$,

Table 4 Standardized Regression Coefficients for Predicting Compassion Fatigue Subscales by the Attachment Scores, Security Priming, and Their Interactions

Effects	Burnout β	Secondary Traumatic Stress β	Compassion Satisfaction β
Step 1			
Attachment anxiety	.22*	.28**	−.08
Attachment avoidance	.16	.17	−.46**
Security priming	−.32**	−.31**	.18*
Step 2			
Anxiety × Security Priming	−.07	−.06	−.01
Avoidance × Security Priming	.01	−.02	.19[a]

Note. [a]$p < .10$. *$p < .05$. **$p < .01$.

$p < .01$, than in the security priming condition, $\beta = -.27$, $p < .01$.

Overall, the experimental enhancement of the sense of attachment security was able to reduce compassion fatigue and to minimize the detrimental effects of dispositional avoidant attachment on compassion satisfaction. The findings also replicated the observed association between anxious attachment and heightened burnout and secondary traumatic stress (see Studies 1–2) and indicated that these associations were not moderated by security priming.

GENERAL DISCUSSION

The three studies reported here support the hypothesis that the sense of attachment security—whether dispositional or due to contextual enhancement—would be associated with reduced compassion fatigue among volunteers who engage in providing ongoing support to traumatized people. Specifically, dispositional attachment insecurities, either anxiety or avoidance, were positively associated with retrospective reports of compassion fatigue (Study 1), reports of compassion fatigue following actual meetings with traumatized people over a 2-month period (Study 2), and reports of compassion fatigue in response to a hypothetical meeting with a needy other (Study 3). Moreover, the perception of support availability (a proxy of attachment security) following actual meetings with traumatized people (Study 2) or the experimental enhancement of the sense of attachment security (Study 3) was associated with reduced signs of compassion fatigue in response to an actual or hypothetical helping meeting. In addition, at least in Study 3, the contextual enhancement of attachment security moderated the detrimental effects of avoidant attachment on compassion satisfaction.

Although self-reports of attachment insecurities were associated with heightened reports of compassion fatigue, the two types of attachment insecurities—anxiety and avoidance—were associated with different aspects of compassion fatigue. Self-reports of attachment anxiety were associated with heightened burnout and secondary traumatic stress, but not with compassion satisfaction. These findings are in line with

previous correlational studies (e.g., Pines, 2004; Ronen & Mikulincer, 2009; Vanheule & Declercq, 2009) and laboratory experiments (e.g., Collins, Guichard, Ford, & Feeney, 2006; Mikulincer et al., 2005; Rholes, Simpson, & Orina, 1999) showing that people who are higher in attachment anxiety tend to become personally distressed and overwhelmed when witnessing another person's suffering and to feel less able to attend to that person's needs while effectively regulating their own emotions. The fact that more anxious people might not become dissatisfied while helping others, despite their heightened distress, can be explained by their comfort with emotional closeness and dependence and their tendency to engage in caregiving activities in order to be loved and appreciated by others (Mikulincer & Shaver, 2007a).

Self-reports of avoidant attachment were not related to burnout or secondary traumatic stress, but they contributed to reduced compassion satisfaction. This finding may reflect avoidant people's heightened reliance on distancing strategies, which block access to feelings of warmth, love, and compassion that normally contribute to compassion satisfaction. It also fits the habitual detached attitude of avoidant people toward expressions of need and vulnerability and their reluctance to help others in distress (e.g., Mikulincer & Shaver, 2011). It is important to note that Study 3 indicated that this defensive strategy of avoidant individuals can be somewhat reduced, at least in the short run, by having them visualize the face of a security provider (security priming). In other words, even people who are relatively avoidant with respect to attachment can sometimes feel satisfaction while helping others if their sense of security is temporarily augmented.

The observed association between perceived support availability for care providers and reduced compassion fatigue (Study 2) also fits with previous findings showing that caregivers with more available sources of support feel more confident in handling caregiving strains (e.g., Chrestman, 1995; Linley & Joseph, 2007; Schauben & Frazier, 1995). In addition, Study 3's finding that activation of mental representations of a supportive other reduced compassion fatigue is consistent with previous studies demonstrating that a person's sense of security can be augmented, at least temporarily, which

enhances his or her willingness to help a needy other (Mikulincer et al., 2005). It also shows that heightening attachment security through a visualization task can enhance the confidence of volunteer helpers in handling the potential distress induced by providing support to traumatized people. These findings suggest the potential utility of developing security-enhancing interventions for professional and volunteer caregivers. Increasing helpers' sense of security by revisiting personal memories and re-authoring narratives of received support from protective others can be applied in programs for preventing compassion fatigue (Pardess, 2011). There is some evidence that repeated security priming has long-lasting beneficial effects on people's attitudes and behaviors (e.g., Carnelley & Rowe, 2007; Gillath et al., 2008). However, more research is needed on the long-term effectiveness of such interventions among professional and nonprofessional helpers. In light of our findings, it seems likely that if helpers were trained to mobilize security-related scripts of receiving and providing care (Mikulincer, Shaver, Sapir-Lavid, & Avihou-Kanza, 2009), they would be able to cope more effectively with caregiving strains and could find new ways to balance their own needs and the needs of others.

Our findings are also concordant with previous studies showing that mental health professionals tend to respond to a traumatized client through a personal lens shaped by their own attachment experiences and insecurities (e.g., Racanelli, 2005; Tosone, Bettmann, Minami, & Jasperson, 2010). However, our findings extend these studies by examining volunteer caregivers, thereby controlling for variations in helpers' responses that stem from professional training, and by examining fluctuations in helpers' reactions to actual helping encounters over a period of 2 months. Diary data can provide more reliable and valid information about reactions to helping encounters than traditional retrospective methods because the interval between the experience and the report is shorter (Bolger et al., 2003). However, more research is necessary to examine the validity of the diary version of the compassion fatigue measure. Further studies should also use longitudinal, prospective designs to determine the contribution of dispositional and contextual sources of attachment security to a caregiver's reactions to actual helping encounters.

Although the present studies overcome methodological limitations of previous correlational studies, they have limitations of their own. First, the samples of the three studies included only unpaid helpers. Further studies should include both unpaid helpers and paid novice helpers or mental health professionals and examine whether the current findings look different in each of these groups. Second, the samples of the three studies were overwhelmingly female. Although gender did not contribute to the reported findings, future studies should include more males in their samples and examine whether the link between attachment insecurities and compassion fatigue looks different in males and females. Third, although the current studies indicated that people differing in attachment orientations also differ in the extent to which they

experience burnout, distress, and satisfaction while caring for traumatized people, no data were collected on the psychological processes that mediated the link between attachment insecurities and compassion fatigue. Further studies should attempt to examine the extent to which problems in emotion regulation mediated the responses of people who are high in attachment anxiety and the extent to which lack of caregiving motivation and hostile appraisals of others mediated the responses of people who are high in avoidant attachment. Fourth, further studies should examine more in depth potential moderators of the link between attachment insecurities and compassion fatigue. In Study 1, we found that experience had a significant moderating effect, but this effect was not replicated in Studies 2 and 3.

In addition, security priming in Study 3 was accomplished in only one way, by asking participants to visualize the face of a security provider. Future studies should use other priming procedures to see whether the results generalize. Moreover, it is possible that the visualization task, a supraliminal priming procedure, operates differently from subliminal priming procedures, such as fast exposure to the name of a security provider (Mikulincer et al., 2011). This possible difference should be examined in future studies. Future work should also examine the extent to which security priming can override the effects of mental depletion and emotional flooding with stressful memories because these are other kinds of experiences that are likely to interfere with sensitive, responsive caregiving (Mikulincer & Shaver, 2011). Finally, our studies exclusively relied on caregivers' self-reports of compassion fatigue. Future studies should gather information about helpers' compassion fatigue from other sources, such as their supervisors. Despite these limitations, the findings presented here contribute substantially to the development of an integrative theory of adult attachment and caregiving, and they may be useful in developing interventions aimed at preventing caregivers' compassion fatigue and promoting their satisfaction, well-being, and even psychological growth.

Notes

1. Across the three studies reported here, we did not find any significant association between participants' sex or age and the other study variables. Moreover, controlling for participants' sex or age did not alter the pattern of reported results across the three studies. Statistical analyses also revealed no significant interaction between participants' sex or age and other predictors in the analyses of their responses across the three studies.

2. Across the three studies reported here, the interaction between the two attachment scores and three-way interactions between these scores and other predictors were not significant.

3. Across Studies 2 and 3, number of years working with traumatized people did not significantly predict compassion fatigue scores and did not significantly interact with attachment scores. It seems that experience contributed to global accounts of compassion fatigue (Study 1)

but was less relevant in explaining reports of compassion fatigue with regard to a specific case (Study 2) or a hypothetical care recipient (Study 3).

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