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Twofold trauma exposure – the dual function of attachment avoidance

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ABSTRACT

Spouses of traumatized war veterans might suffer from distress following indirect exposure to combat and direct exposure to domestic abuse. Yet the effect of this twofold trauma exposure is far from being fully understood. Theory views attachment security as a personal resource mitigating adversity, whereas attachment insecurities intensify distress. Nevertheless, there are mixed results concerning the effects of attachment in the aftermath of trauma. Furthermore, the role of trauma exposure levels regarding the effects of attachment remains largely uninvestigated. Filling these gaps, this study assessed female military spouses 30 (T1) and 38 (T2) years after the 1973 Yom Kippur War. Direct (domestic abuse) and indirect (veteran partners' posttraumatic stress symptoms) trauma exposure, attachment, depression, and anxiety were assessed. Findings indicated an interaction between the trauma types in predicting spouses' anxiety. Domestic abuse moderated the relations between attachment and distress. Although attachment anxiety had non-significant effects on anxiety among low-level domestic abuse sufferers, it predicted elevated anxiety among high-level domestic abuse sufferers. Furthermore, while attachment avoidance predicted elevated distress among low-level domestic abuse sufferers, its effects dissolved or became positive in nature among high-level domestic abuse sufferers. Discussion focuses on evolutionary explanations of the functions of attachment under different conditions of threat.

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Introduction

Warfare is a highly traumatic event that subjects combatants to interpersonal violence and human cruelty. Combat includes inflicting pain and attacking the enemy while experiencing persistent personal threats of injury and death. Additionally, some combatants fall into captivity, which further subjects them to forced interactions with the perpetrator, consisting of enduring psychological and physical torture. These traumatic experiences often have long-term repercussions (e.g. Marmar et al., 2015; Rintamaki, Weaver, Elbaum, Klama, & Miskevics, 2009), with posttraumatic stress disorder (PTSD) being the most conspicuous psychiatric sequelae (American Psychiatric Association, 2013).

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Yet these negative implications are not limited to those who have experienced warfare firsthand, but could affect their significant others. Being in a close relationship with primary trauma survivors, particularly when they suffer from PTSD symptoms (e.g. Lambert, Engh, Hasbun, & Holzer, 2012), might act as an indirect exposure to trauma (American Psychiatric Association, 2013), thereby hampering one's well-being.

Research has consistently revealed a link between veterans' PTSD and their spouses' levels of distress. Previous studies have indicated that spouses of traumatized veterans were at a high risk for elevated PTSD symptoms compared to spouses of non-traumatized veterans (Greene, Lahav, Bronstein, & Solomon, 2014; Lambert et al., 2012). Furthermore, these spouses reported intensified generalized distress, manifested in psychiatric symptoms such as depression and anxiety (Galovski & Lyons, 2004), which are the focus of the current study.

Military spouses as primary survivors of domestic abuse

The potentially malignant aftereffects of PTSD resulting from combat may permeate the basic foundations of human interactions. This may be detrimental in the relationships of traumatized veterans with their significant others (e.g. Cook, Riggs, Thompson, Coyne, & Sheikh, 2004; Gewirtz, Polusny, DeGarmo, Khaylis, & Erbes, 2010). The tendency to relive the past trauma, alongside heightened irritability and anger outbursts – all of which are PTSD symptoms (American Psychiatric Association, 2013) – could lead traumatized veterans to behave abusively within their present intimate relationships (Beckham, Moore, & Reynolds, 2000).

Previous studies have indeed revealed higher rates of the perpetration of domestic abuse among traumatized veterans relative to non-traumatized veterans (e.g. Dekel & Solomon, 2006; Sherman, Sautter, Jackson, Lyons, & Han, 2006). Moreover, a positive relation between veterans' PTSD symptom severity and levels of domestic abuse was found (Samper, Taft, King, & King, 2004) even after taking into account other domestic abuse risk factors (Byrne & Riggs, 1996; Orcutt, King, & King, 2003). In this way, spouses of traumatized veterans might become not only indirect survivors of combat but also direct survivors of domestic abuse.

Suffering from domestic abuse can lead to long-term and varied ramifications. Previous studies among civilian couples have indicated physical domestic violence to be associated with women's multiple somatic symptoms (Drossman et al., 1990), drug abuse (e.g. Simonelli, Pasquali, & De Palo, 2014), suicide attempts (McCauley et al., 1995) as well as elevated depression and anxiety (e.g. Mourad, Levendosky, Bogat, & von Eye, 2008). Studies among spouses of traumatized veterans have shown that domestic abuse was associated with heightened caregiver burden and psychological maladjustment, including depression and anxiety symptoms (Calhoun, Beckham, & Bosworth, 2002; Street, King, King, & Riggs, 2003).

According to the trauma literature, the high risk for domestic abuse by traumatized military veterans of their spouses may lead to a cumulative effect such that each type of trauma exposure (i.e. direct exposure to domestic abuse and indirect exposure to combat) may contribute to the military spouses' plight, exacerbating their distress. Previous studies investigating the implications of exposure to multiple traumas have supported this line of thinking, indicating a link between the number of traumatic

events to levels of distress (e.g. Briere, Agee, & Dietrich, 2016; Green et al., 2000; Vrana & Lauterbach, 1994). In the same vein, a study conducted among military spouses has found that both direct exposure to interpersonal violence and indirect exposure to veterans' PTSD contributed to higher levels of the spouses' caregiver burden (Calhoun et al., 2002).

At the same time, however, the combined effects of this unique dual trauma exposure to domestic abuse as well as to veterans' PTSD have not been empirically investigated and are highly unclear. Specifically, it is yet to be understood whether there is an interaction between these two types of trauma in predicting military spouses' distress. Does suffering from domestic abuse inflicted by the veterans intensify military spouses' vulnerability in the face of the veterans' PTSD? Or, alternatively, does domestic violence overshadow the secondary traumatization processes, thus reducing the implications of the veterans' PTSD symptoms on military spouses' emotional distress?

Literature implies that the two complementary alternatives might be applicable. On the one hand, exposure to the atrocious trauma of domestic abuse could deplete the military spouses' psychological resources (Hobfoll, 1989) and thus make them more vulnerable in the face of secondary exposure. On the other hand, trauma inflicted by significant others, such as domestic abuse, has profound repercussions (Herman, 1992) that might overshadow the effects of second-hand exposure. The first aim of the present study is to test both alternatives, by investigating the interaction between direct exposure to domestic abuse and indirect exposure to combat – manifested in the veterans' PTSD symptoms – in predicting female military spouses' depression and anxiety symptoms.

Attachment insecurities in the face of trauma

Facing ongoing abuse within an intimate relationship counters the victims' basic need for secure attachment. Attachment orientations are cognitive-emotional schemas of the self and others (Mikulincer & Shaver, 2007). According to the attachment theory (e.g. Bowlby, 1969), social interactions with significant others are internalized in the form of mental representations of the self and relationship partners, which shape close relationships and affect emotion-regulation strategies throughout life (Mikulincer & Shaver, 2007). While interactions with available and supportive attachment figures foster a sense of attachment security, interactions with dismissive or unavailable attachment figures lead to attachment insecurity.

Adults' attachment orientations are often measured in terms of two dimensions, upon which the present study relies (Mikulincer & Shaver, 2007). The first dimension, "attachment avoidance," denotes the extent to which one distrusts the goodwill of relationship partners, strives to maintain behavioral independence and emotional distance within the relationship, and relies on deactivating emotion-regulation strategies, such as denial of attachment needs and suppression of attachment-related thoughts and emotions (Mikulincer & Shaver, 2007). The second dimension, "attachment anxiety," denotes the extent to which one worries that relationship partners will be unavailable in times of need and relies on deactivating emotion-regulation strategies such as energetic, insistent attempts to obtain care, support, and love within the relationship, as a means of regulating distress and coping with threats. Low levels on both dimensions indicate

attachment security that is characterized by comfort and closeness as well as trust in the availability, responsiveness, and supportiveness of relationship partners.

Attachment is often conceptualized as an important personal resource under conditions of trauma exposure, with attachment security acting as a protective factor, and attachment insecurities associated with elevated distress (Mikulincer, Shaver, & Horesh, 2006). Yet scrutiny of the literature reveals that the aftereffects of attachment following trauma exposure are far from being definitive. On the one hand, research has indicated an association between elevated levels of attachment insecurities and severe PTSD symptoms resulting from varied traumatic events, such as accidents and terror attacks (Fraley, Fazzari, Bonanno, & Dekel, 2006), war captivity (Dieperink, Leskela, Thuras, & Engdahl, 2001), sexual victimization (Sandberg, Suess, & Heaton, 2010), as well as domestic abuse (Scott & Babcock, 2010).

On the other hand, theory and research have indicated that the effects of attachment avoidance are inconclusive. According to some researchers and theoreticians (e.g. Fraley & Bonanno, 2004), the effects of attachment avoidance may depend upon the type of the traumatic event. While avoidant adults may be as vulnerable as anxious adults facing impersonal events, they may be relatively resilient in the face of interpersonal trauma or traumas that affect their significant others. Hence, the tendency of dismissing-avoidant adults to be less emotionally invested in their relationships might serve as a strength when facing traumatic events that have impacted their significant other (Fraley & Bonanno, 2004). In addition, avoidant individuals' tendencies of affective numbness and self-reliance may provide protection under conditions of trauma that are inflicted by others (Kanninen, Punamäki, & Qouta, 2003).

Some research has partially supported the latter, providing evidence for the protective aspects of attachment avoidance under conditions of trauma that involve others. For example, a study among survivors of childhood physical abuse (Muller, Sicoli, & Lemieux, 2000) found attachment avoidance to be unrelated to PTSD severity. In addition, a study among individuals who experienced the loss of a loved one (Fraley & Bonanno, 2004) found that dismissing-avoidant adults, similar to secure individuals, exhibited relatively few symptoms of depression, anxiety disorders, or PTSD after the loss.

Nonetheless, other evidence calls into question the role of trauma type in explaining the effects of attachment avoidance. For example, a recent study that included various types of traumatic events suggested that the protective effects of attachment avoidance might be applicable to impersonal traumatic events as well, such that attachment avoidance was related to lower levels of PTSD symptoms among survivors of physical illness (Elklit, Karstoft, Lahav, & Andersen, 2016). Furthermore, a previous study conducted among part of the present sample of survivors of the interpersonal trauma of war captivity indicated attachment avoidance to be associated with higher levels of PTSD symptoms (Ein-Dor, Doron, Solomon, Mikulincer, & Shaver, 2010).

The inconsistency of findings regarding the effects of attachment avoidance suggests a need for further evaluation. Moreover, scrutiny of the research reveals two main limitations. First, the majority of the previous studies has investigated attachment of survivors of a single trauma type, and has not assessed attachment among individuals who experienced a twofold exposure to trauma, which might have a distinct effect. Second, previous studies have not explored the role of the levels of trauma exposure

with regards to the outcomes of attachment insecurities. It may be that the effects of attachment insecurities on the individual's distress depend on the levels of trauma exposure. It is possible that under conditions of low levels of direct exposure to domestic abuse or indirect exposure to combat, lower attachment insecurities are adaptive. Low levels of attachment anxiety and avoidance (i.e. higher attachment security), which are linked to a healthy emotional regulation (Mikulincer & Shaver, 2007), could help mitigate the ramifications of both traumatic events. However, under conditions of high levels of direct and indirect trauma exposure, attachment avoidance-related tendencies for self-reliance and emotional numbness may be more effective. These tendencies might limit the military spouses' identification with their veteran partners and their relationship dependency, which could decrease their distress associated with both domestic abuse and indirect exposure to combat.

Addressing these questions has theoretical and clinical importance that could expand our understanding of the functions of attachment in the face of a twofold trauma exposure. The present study's second aim, therefore, is to fill this knowledge gap by investigating whether the relations between military spouses' attachment insecurities and their depression and anxiety symptoms depend on their levels of direct and indirect trauma exposure. The current study investigates (1) the interaction between direct exposure to domestic abuse and indirect exposure to combat in predicting military spouses' depression and anxiety symptoms; and (2) the moderating role of the levels of trauma exposure (both direct and indirect) in the relations between military spouses' attachment insecurities and their depression and anxiety symptoms.

Methods

Procedure and participants

The present study used data from a longitudinal study on the psychological implications of war among veterans from the 1973 Yom Kippur War and their spouses (Solomon, Horesh, Ein-Dor, & Ohry, 2012, for full details). The current study utilizes data collected from the military spouses in 2003 (T1) and in 2011 (T2), and from the veterans in 2003 (T1).

A total of 520 combat veterans who served in the Israel Defense Forces (IDF) land forces during the 1973 Yom Kippur War were sampled from Israeli Ministry of Defense records and computerized data banks. Some of them were former prisoners of war. A total of 227 and 294 combat veterans participated in T1 and T2, respectively (43.7% and 56.5% response rates, respectively). The current study utilizes data regarding the veterans' PTSD symptoms at T1 only. In T1, the mean age for the veterans was 52.62 ($SD = 4.56$), mean years of schooling was 13.94 ($SD = 3.46$); the majority were secular (61.7%), with an over-average income (35.6%).

In T1, 213 veterans were married. In T2, the number of married veterans increased to 250. All veterans who participated in the study reported as having a heterosexual marital relationship. In T1, 165 female military spouses participated in the study (77.4% response rate). In T2, the number of military spouses increased to 171 (68.4% response rate). The mean age for the military spouses at T1 was 50.70 ($SD = 6.36$), mean years of schooling was 14.18 ($SD = 3.18$); the majority were secular (57.9%), with an over-average income (35.0%).

Following approval from the Tel-Aviv University Review Board, participants (i.e. military spouses and veterans) were identified using updated IDF files. In order to ensure confidentiality, participants were encouraged to meet with research assistants (licensed social workers) without their partners. Participants completed the research questionnaires, in the presence of a research assistant, in paper format either in their homes or in a location of their choice. Participation in the study was voluntary and no compensation was offered. All participants read and signed an informed consent agreement before taking part in the study. Military spouses who reported domestic abuse were referred for treatment.

Handling missing data

Substantial attrition, and in several cases addition, occurred from T1 of assessment to T2. Military spouses were included in the sample only if they participated in at least one wave of measurement ($n = 74$ [T1], 80 [T2], 91[both]) and the data of their veteran partners at T1 were valid. Overall 31.0–37.1% data were missing across waves. To decide whether the data had missing values in a pattern that was random, we conducted analyses of differences between these groups in all of the variables, using Little's Missing Completely at Random test (Collins, Schafer, & Kam, 2001).

Although the analyses revealed that the data were missing completely at random, $\chi^2(158) = 152.171$, $p = .616$, a more advanced method of maximum likelihood (ML) imputation was conducted using SPSS 24. The ML method is considered to be optimal for both addition and attrition of participants over time (Collins et al., 2001). ML imputation is very effective when conducted in a longitudinal model that borrows information from across waves to serve as auxiliary variables (Schafer & Graham, 2002). This study utilized variables measured for military spouses across waves to increase the likelihood for optimal estimations of missing values. The final sample included 245 military spouses.

Measures

Levels of direct (domestic abuse) and indirect (veterans' PTSD symptoms) trauma exposure, and attachment insecurities were assessed at T1. Military spouses' distress as manifested in depression and anxiety were assessed at T1 and T2.

Direct exposure to domestic abuse (T1)

Military spouses' experience of domestic abuse was assessed using the subscale of physical aggression in the Conflict Tactics Scale (Straus, 1979). This subscale includes 13 items measuring physical aggression (e.g. throwing things, pushing, grabbing, and shoving). Military spouses were asked to rate how often they suffered from each type of aggressive behavior, perpetrated by their partners over the previous year, from *never* (1) to *every day* (6). One index reflecting the frequencies of physical aggression was computed (none of the participants reported the use of the most severe forms of physical aggression; therefore, this score was based on only seven items). The Conflict Tactics Scale has an established internal consistency ranging from .88 to .95 in samples of husbands and wives (Straus, Gelles, & Smith, 1990). In the present study, Cronbach's alpha was .96.

Indirect exposure to combat – the veterans' PTSD symptoms (T1)

PTSD symptoms of the veterans were assessed via the PTSD Inventory, a 17-item, self-report questionnaire (PTSD-I; Solomon et al., 1993). The items on the PTSD-I correspond to the *Diagnostic and Statistical Manual of Mental Disorders* – fourth ed., Text Revision (DSM-IV-TR) diagnosis for PTSD (American Psychiatric Association, 2000). Veterans rated posttraumatic stress symptoms (relating to combat exposure) experienced in the previous month on a scale ranging from 0 (not at all) to 4 (almost always). The number of positively endorsed symptoms was calculated by the items answered as 3 (often) or 4 (almost always) as these responses best capture the DSM-IV-TR criteria of a persistent experience of symptoms. The PTSD-I has proven psychometric properties with good convergent validity (e.g. Solomon et al., 1993). In the present study, Cronbach's alpha was .95.

Attachment insecurities (T1)

Military spouses' attachment anxiety and avoidance were assessed using a 10-item scale developed by Mikulincer, Florian, and Tolmacz (1990). Military spouses rated the extent to which an item described them, using a 7-point scale ranging from 1 (not at all) to 7 (very much). Studies have found this scale to be reliable and valid (e.g. Mikulincer & Shaver, 2007). We computed two scores (anxiety and avoidance) for each military spouse by averaging items corresponding to each attachment subscale.

Anxiety and depression symptoms (T1 and T2)

Military spouses' anxiety and depression symptoms were assessed using the Symptoms Checklist-90 (SCL-90; Derogatis, 1977), a widely used, well-validated, 90-item, self-report questionnaire measuring a range of psychiatric issues. We used the anxiety and depression subscales, which are comprised of six items each. For each item, the respondent was asked to rate, on a 5-point scale, (0) not at all to (4) extremely, the degree to which she suffered from the symptom during the preceding two weeks. The SCL-90 has been found to have good validity (Derogatis, Rickels, & Rock, 1976; Peveler & Fairburn, 1990) and reliability (Solomon, Shklar, & Mikulincer, 2005).

Data analysis

Person correlations were computed to test the pattern of associations between the study's variables. To examine the interaction between direct exposure to domestic abuse and indirect exposure to combat at T1 in predicting military spouses' depression and anxiety at T2, we used Hayes's (2012) PROCESS (model 1) computational macro. Depression and anxiety scores at T2 were treated as dependent variables, levels of indirect trauma exposure (i.e. veterans' levels of PTSD symptoms) as an independent variable, and levels of direct trauma exposure (i.e. domestic abuse) as a moderator. Military spouses' levels of distress (i.e. depression and anxiety at T1) were treated as control variables. All the variables' scores were standardized.

To examine the moderating role of levels of both direct and indirect trauma exposure within the associations between attachment insecurities and military spouses' depression and anxiety scores at T2, two hierarchical regression analyses were conducted for depression and anxiety levels, respectively. The analyses included three blocks. The first block consisted of military spouses' levels of distress (i.e. depression and anxiety) and attachment

insecurities at T1. The second block consisted of levels of direct (domestic abuse inflicted upon the spouse) and indirect (veterans' PTSD symptoms) exposure at T1. The third block consisted of four interactions between levels of direct and indirect exposure and attachment insecurities. All the variables' scores were standardized. Significant interactions were probed using the PROCESS computational macro (Hayes, 2012).

Results

Intercorrelations between the study's variables

Pearson correlations indicated positive significant correlations between the levels of direct and indirect trauma exposure, and attachment insecurities, depression, and anxiety (see Table 1). The higher the veterans' PTSD symptoms, the more frequent was the domestic abuse inflicted upon the military spouses, and the higher the military spouses' attachment avoidance as well as depression and anxiety symptoms. The higher the levels of domestic abuse inflicted upon the military spouses, the higher their attachment insecurities as well as their levels of depression and anxiety. Lastly, military spouses' attachment insecurities were associated with their anxiety and depression symptoms: the higher the attachment insecurities, the higher the levels of depression and anxiety.

Interactions between direct and indirect trauma exposure

Moderation analysis in predicting military spouses' depression at T2 revealed a nonsignificant interaction between direct exposure to domestic abuse and indirect exposure to combat (see Table 2). Only levels of distress at T1 (i.e. depression and anxiety) had significant effects in predicting military spouses' depression at T2. Moderation analysis in predicting military spouses' anxiety at T2 revealed a significant interaction between direct exposure to domestic abuse and indirect exposure to combat (see Table 2). Probing the interaction revealed that while veterans' levels of PTSD symptoms had significant effects on anxiety among military spouses who suffered from low levels of domestic abuse ($\beta = .39, p < .001$) – with veterans' higher levels of PTSD symptoms predicting military spouses' higher levels of anxiety – their effects were nonsignificant among military spouses who suffered high levels of domestic abuse ($\beta = -.27, p = .12$).

The moderating role of levels of direct and indirect trauma exposure

Hierarchical regression in predicting the military spouses' depression at T2 explained 60.0% of the variance of depression, $F(10,234) = 35.1, p < .001$ (see Table 3). The model revealed a significant interaction between domestic abuse and attachment avoidance. Probing the interaction revealed that while attachment avoidance had significant effects on depression symptoms among military spouses who suffered from low levels of domestic abuse ($\beta = .46, p < .001$), so that higher levels of attachment avoidance predicted higher levels of depression, its effect was nonsignificant among military spouses who suffered from high levels of domestic abuse ($\beta = .10, p = .39$). The interaction between levels of domestic abuse and attachment anxiety as well as the interactions between levels of indirect exposure to combat and attachment insecurities were nonsignificant.

Table 1. Intercorrelations between the study variables.

Measure	1	2	3	4	5	6	7	8
1. Veterans' PTSD symptoms (T1)	1							
2. Domestic Abuse reported by military spouses (T1)	.29***	1						
3. Military Spouses' Attachment Avoidance (T1)	.15**	.36***	1					
4. Military Spouses' Attachment Anxiety (T1)	.05	.30***	.38***	1				
5. Military Spouses' Anxiety (T1)	.31***	.50***	.49***	.52***	1			
6. Military Spouses' Depression (T1)	.41***	.51***	.49***	.51***	.87***	1		
7. Military Spouses' Anxiety (T2)	.36***	.35***	.43***	.51***	.58***	.62***	1	
8. Military Spouses' Depression (T2)	.32***	.30***	.58***	.52***	.65***	.64***	.75***	1
<i>M (SD)</i>	6.82 (5.44)	1.07 (.26)	3.20 (1.09)	2.49 (.96)	.64 (.61)	.77 (.64)	1.00 (.65)	.69 (.48)
<i>Range</i>	17.00	3.33	6.00	6.00	3.70	3.92	3.83	3.00

p < .05; ***p* < .01; ****p* < .001.

Table 2. Interactions between direct exposure to domestic abuse and indirect exposure to combat at T1 in predicting military spouses' depression and anxiety at T2 ($n = 245$).

	Depression (T2)	Anxiety (T2)
	β	β
Predicting variables		
Military Spouses' Depression (T1)	.25*	.41***
Military Spouses' Anxiety (T1)	.44***	.15
Domestic Abuse reported by military spouses (T1)	.08	.43*
Veterans' PTSD symptoms (T1)	.08	.06
Domestic Abuse reported by military Spouses (T1)X Veterans' PTSD symptoms (T1)	-.12	-.33*

Table depicts two separated regression analyses. Values represent regression standardized beta coefficients.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Table 3. Regression beta standardized coefficients predicting military spouses' levels of depression and anxiety at T2.

		Depression		Anxiety	
		β	R^2 change	β	R^2 change
Block 1	Military Spouses' Depression (T1)	.18**	.55	.42	.45
	Military Spouses' Anxiety (T1)	.26**		.03	
	Military Spouses' Attachment Anxiety (T1)	.18*		.24***	
	Military Spouses' Attachment Avoidance (T1)	.29***		.13*	
Block 2	Military Spouses' Depression (T1)	.11	.03	.30**	.03
	Military Spouses' Anxiety (T1)	.30**		.06	
	Military Spouses' Attachment Anxiety (T1)	.21***		.27***	
	Military Spouses' Attachment Avoidance (T1)	.31***		.13*	
	Domestic Abuse reported by military spouses (T1)	-.12*		-.01	
	Veterans' PTSD symptoms (T1)	.15**		.19***	
	Military Spouses' Depression (T1)	.12	.03	.27**	.05
	Military Spouses' Anxiety (T1)	.29**		.08	
Block 2	Military Spouses' Attachment Anxiety (T1)	.21***		.28***	
	Military Spouses' Attachment Avoidance (T1)	.28***		.05	
	Domestic Abuse reported by military spouses (T1)	.15		.48***	
	Veterans' PTSD symptoms (T1)	.12*		.14**	
	Domestic Abuse \times Military Spouses' Attachment Anxiety (T1)	.06		.23*	
	Domestic Abuse \times Military Spouses' Attachment Avoidance (T1)	-.18*		-.38***	
	Veterans' PTSD symptoms \times Military Spouses' Attachment Anxiety (T1)	.09		.03	
	Veterans' PTSD symptoms \times Military Spouses' Attachment Avoidance (T1)	.04		.00	

All study variables were standardized.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Hierarchical regression analysis in predicting military spouses' anxiety at T2 explained 53.2% of the variance of anxiety, $F(10,234) = 26.63$, $p < .001$ (see Table 3). The model revealed significant interactions between the levels of domestic abuse and both attachment avoidance and attachment anxiety. Probing the interaction between levels of domestic abuse and attachment anxiety indicated that while attachment anxiety had nonsignificant effects on anxiety symptoms among military spouses who suffered from

low levels of domestic abuse ($\beta = .05$, $p = .62$), it had a significant effect on anxiety symptoms among military spouses who suffered from high levels of domestic abuse ($\beta = .51$, $p < .001$), so that higher levels of attachment anxiety predicted higher levels of anxiety.

Probing the interaction between levels of domestic abuse and attachment avoidance indicated a significant positive effect of attachment avoidance on anxiety symptoms among military spouses who suffered from low levels of domestic abuse ($\beta = .43$, $p < .001$) so that higher levels of attachment avoidance predicted higher levels of anxiety. However, the direction of the effect of attachment avoidance on anxiety symptoms was negative among military spouses who suffered from high levels of domestic abuse, so that higher levels of attachment avoidance predicted lower levels of anxiety ($\beta = -.33$, $p = .01$). The interactions between levels of indirect exposure to combat and attachment insecurities were nonsignificant.

Discussion

The current study had two main aims: first, to investigate the interaction between direct and indirect trauma exposure in predicting military spouses' distress, and second, to explore the moderating role of the levels of trauma exposure in the relations between military spouses' attachment insecurities and their distress. Levels of domestic abuse inflicted upon the military spouses moderated the relations between indirect trauma exposure – manifested through the veterans' PTSD symptoms – and the military spouses' anxiety symptoms. Moreover, levels of direct exposure to domestic abuse moderated the relations between the military spouses' attachment insecurities and their depression and anxiety symptoms.

Our results revealed an association between veterans' PTSD symptoms and domestic abuse, which is consistent with previous studies (Sherman et al., 2006; Samper, Taft, King, & King, 2004). This, therefore, indicated that PTSD symptoms among veterans are a risk factor for perpetrating violence toward their spouses. In warfare, violent behavior is frequently modeled and reinforced and is often perceived as a necessary means for resolving conflicts and survival (Gimbel & Booth, 1994). Reliving the traumatic past, as part of PTSD symptoms (American Psychiatric Association, 2013), might thus increase the propensity to use violence in conflicts within intimate relationships. Relatedly, traumatized veterans' aggressive behavior might be rooted in their memory regarding their past trauma (Beckham et al., 2000). This process consists of the activation of a memory structure that carries the prototype for the overt aggressive behavior as performed during combat, which may thus lead to the perpetration of violent behavior once veterans have returned home.

The main innovative contribution of the present study is the investigation of the combined ramifications of dual traumatic exposure – consisting of direct exposure to domestic abuse and indirect exposure to combat – on the military spouses' emotional distress. Our results indicated an interaction between direct and indirect trauma exposure in predicting the military spouses' anxiety symptoms. While the veterans' PTSD symptoms had significant effects on anxiety symptoms among military spouses who suffered from a low frequency of domestic abuse, their effect was nonsignificant among military spouses who suffered from a high frequency of domestic abuse.

According to theoretical and empirical literature, anxiety is often related to themes of danger and harm and is future oriented (Beck, Emery, & Greenberg, 2005; Finlay-Jones & Brown, 1981; Sandin, Chorot, Santed, & Valiente, 2004). It may be that the moderating role of domestic abuse, in the relations between indirect exposure to combat and military spouses' anxiety, reflects the dominance of domestic abuse concerning the military spouses' anticipation of potential threats. Frequent domestic abuse poses severe, concrete, and immediate threats to the military spouse's physical and mental well-being, contrary to the second-hand exposure to combat, which does not impose hazards on her safety. Hence, under these conditions, the woman might exclusively divert her attention to the threats rooted in domestic abuse. She might be constantly alert, scrutinizing her environment for clues of upcoming attacks in order to protect herself. In this way, exposure to frequent physical domestic abuse becomes the main source that generates the woman's anxiety, overshadowing the effects of indirect exposure to combat.

At the same time, however, the current results indicated that this trend does not apply with regards to the military spouses' depression. Our results indicated nonsignificant effects of the interaction between the two types of trauma exposure, as well as nonsignificant effects of both direct and indirect trauma exposure, in predicting the military spouses' depression. Only military spouses' levels of distress (i.e. depression and anxiety) at the previous measurement had a significant effect in predicting their depression. These findings are inconsistent with the ample evidence regarding the link between trauma exposure and elevated depression (e.g. Mourad et al., 2008; O'Donnell, Creamer, & Pattison, 2004) and are thus highly unexpected. One may suggest that the present results are rooted in methodological shortcomings concerning the time of measurements. It may be that direct and indirect trauma exposure had negative effects on military spouses' well-being, thereby exacerbating their depression; however, these effects occurred before the time of the first measurement in the present study and therefore could not be detected. Future studies assessing the outcomes of twofold trauma exposure should include multiple measurements, some of which are closer in time to the beginning of the trauma exposure.

Exploring the role of the levels of direct and indirect trauma exposure regarding the effects of military spouses' attachment insecurities on their depression and anxiety symptoms revealed interesting findings. We found that the effects of attachment insecurities were moderated by the levels of domestic abuse but not by the levels of indirect exposure to combat. As both traumatic events are characterized by interpersonal traits, it may have been expected that the levels of both traumatic events would shape the effects of attachment insecurities on military spouses' distress (Fraley & Bonanno, 2004). The current findings are somewhat surprising and might imply that under the condition of twofold trauma exposure one should take into account other features of the traumatic events, such as the severity of the threat inflicted by the trauma. In viewing attachment as an important resource to further the individual's survival (e.g. Bowlby, 1980), it might be that in the case of exposure to multiple traumas, the effects of attachment is shaped exclusively by the levels of the most dangerous traumatic event. Hence, in the current case, the effects of the military spouses' attachment insecurities changed as a function domestic abuse, which consisted of a more severe, immediate, and concrete endangerment to the woman's physical and mental

well-being. Future studies should further investigate this among individuals who are twofold or multiple trauma survivors by assessing the moderating roles of various types of traumatic events – which impose different levels of threat to the individual's survival – with respect to the effects of attachment insecurities on distress.

Our findings revealed that domestic abuse moderated the effects of attachment on military spouses' distress. Attachment insecurities had either positive or negative effects on military spouses' distress, depending on the frequency of abuse. These results indicate that the effects of attachment insecurities might depend not only on the trauma type, as claimed (Fraley & Bonanno, 2004), but also on the level of trauma exposure. Furthermore, this trend might be applicable to both attachment avoidance and attachment anxiety.

The current findings could be explained by the evolutionary viewpoint (Ein-Dor, Mikulincer, Doron, & Shaver, 2010), according to which each attachment orientation has adaptive advantages and disadvantages. While attachment security has prominent benefits in day-to-day life, it may be counterproductive in circumstances of serious danger. The optimism inherent in the secure base script and the concern regarding close proximity to relationship partners may be maladaptive when one experiences a substantial threat. Under these conditions, tendencies that are associated with attachment insecurities may have unique benefits for survival (Ein-Dor, Mikulincer, et al., 2010).

Consistent with the aforementioned theory (Ein-Dor et al., 2010), our findings indicated that under conditions of a low frequency of domestic abuse, attachment avoidance is maladaptive and is linked with elevated depression and anxiety. However, under conditions of a high frequency of domestic abuse, the effects of attachment avoidance dissolve or become positive in nature. It seems that when the domestic abuse is less frequent, the costs of attachment avoidance are considerable: the military spouse's avoidance patterns might lead to ignoring or denying the source of the adversity (Dozier & Kobak, 1992) and impair her ability for efficient self-regulation (Mikulincer & Shaver, 2007), thereby escalating her distress. However, under conditions of a high frequency of domestic abuse, the effects of attachment avoidance take on a different role. In circumstances of more frequent abuse inflicted by a central attachment figure (i.e. the spouse), avoiding intimacy, holding negative perceptions of significant others, and being mistrustful and self-reliant could soften the military spouse's experience of interpersonal loss, despair, and self-blame. This may possibly compensate for and offset the negative potential impacts of attachment avoidance, thereby not exacerbating depression.

Furthermore, under these circumstances, other features of attachment avoidance might promote adaptive coping, mitigating the military spouse's anxiety. Emotional numbing and detachment, associated with attachment avoidance, could alleviate the woman's plight. Perceiving others in a negative fashion could help the military spouse to accurately detect threats and minimize hazard. Moreover, the avoidant woman's inclination to look out for her own interests and take care of herself, even at the expense of others (Mikulincer & Shaver, 2007), might foster self-protective behavior. Although in the present study all of the participating military spouses remained in their marital relationship, an avoidant spouse could potentially employ other self-protective strategies such as limiting interactions and distancing herself from her partner, thereby alleviating her anxiety.

Surprisingly, in relation to the military spouses' anxiety symptoms, our results revealed that the effects of attachment anxiety also depended on the frequency of domestic abuse. However, the effects of attachment anxiety were contrary to those of attachment avoidance. While attachment anxiety had a nonsignificant effect on the military spouses' anxiety under conditions of a low frequency of domestic abuse, it had negative effects under conditions of a high frequency of domestic abuse, intensifying the women's anxiety.

It might be that under conditions of a lower frequency of domestic abuse, both advantages and disadvantages of attachment anxiety exist, thus offsetting one another. The rapid access of anxious individuals to sentinel scripts might allow the military spouses to detect danger accurately and rapidly (Ein-Dor et al., 2010). In addition, anxiously attached women's tendencies for heightened dependency on their relationship (Mikulincer & Shaver, 2007) could be perceived by the abusive partners as an appeasement (Dutton, 1994; Dutton & Golant, 2008) and limit the escalation of the abuse. Yet alongside these benefits, military spouses' attachment anxiety has disadvantages as well, such as emotional regulation difficulties and tendencies for rumination (Mikulincer & Shaver, 2007). These conflicting impacts of military spouses' attachment anxiety might counteract one another, leading to neither positive nor negative effects on their anxiety symptoms.

However, our results suggested that this delicate balance between attachment anxiety's pros and cons might be impeded under conditions of high occurrences of domestic abuse. In this case, the maladaptive aspects of attachment anxiety become prominent, intensifying the military spouse's distress. While undergoing frequent abuse, anxiously attached women who suffer from self-regulation difficulties may experience emotional flooding and heightened anxiety. In addition, the propensity for dependency within an abusive romantic relationship may become highly destructive.

In the case of more frequent abuse, the anxiously attached military spouse's insistent attempts to achieve care and love from her romantic partner might lead to the experience of loss of control and learned helplessness, which, in turn, could give rise to elevated anxiety. Furthermore, the woman's dependency on her partner might intensify the ramifications of abuse as she might be more inclined to internalize her partner's negative perceptions of her and avoid behaviors that could help her escape the abuse cycle, such as distancing herself from her partner and searching for support from other benevolent relationships. These ramifications might be further intensified by other negative characteristics of attachment anxiety, such as the woman's negative self-perceptions (e.g. Mikulincer, Birnbaum, Woddis, & Nachmias, 2000), difficulties in suppressing negative thoughts and feelings (e.g. Mikulincer, Dolev, & Shaver, 2004), and rumination over distressing thoughts (e.g. Mikulincer & Florian, 1998), all of which accelerate her anxiety symptoms.

Several limitations may have affected our findings. First, this study was based on self-report measures, which may be subjected to response biases and shared method variance. Second, the present study did not include prospective data regarding domestic abuse before or immediately after the veterans' exposure to combat and relied on data that were collected many years after the war. This prevented our ability to control for the effects of domestic abuse on military spouses' distress before their indirect exposure to combat. Lastly, our sample included middle-age and elderly

Israeli military spouses, some of whom were exposed indirectly to combat three to four decades ago. Adjustment following trauma might be affected by cultural background (American Psychiatric Association, 2013) and life phase (Buffum & Wolfe, 1995). Hence, generalizing the current findings should be made with caution, and future studies conducted among young military spouses from different cultural backgrounds are needed.

The present findings have important theoretical and clinical implications. The results demonstrated the combined ramifications of twofold exposure to trauma. Although military veterans' PTSD symptoms could intensify their spouses' distress, these effects may be dissolved under conditions of more frequent domestic abuse. The current results also revealed that the effects of attachment insecurities in light of trauma exposure are not unified, and depend on the level of exposure. Under conditions of more chronic domestic abuse, attachment avoidance might be adaptive. In this case, holding negative perceptions of significant others and being self-reliant might limit the abused woman's experience of loss and despair, and could help her to accurately detect threats of abuse and to conduct self-preserving behaviors.

Holding positive mental representations of the relationship partner, reflected in attachment security, is an important psychological resource associated with individual well-being (Mikulincer & Shaver, 2007). At the same time, however, the current results offer that under conditions of frequent exposure to trauma that occurs within attachment relationship, perceiving others in a negative fashion and avoiding intimacy might be adaptive and ease the victim's distress. Under these conditions, clinical interventions that encourage attachment avoidance and limit attachment anxiety tendencies could help those experiencing domestic abuse to reduce their dependency on their destructive relationship and to limit their self-blame, and furthermore might act as an important alarm, driving the victims toward self-protecting reactions.

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