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The Double-Edged Sword: The Role of Empathy in Military Veterans' Partners Distress

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Objective: The existing literature has shown that war veterans' posttraumatic stress symptoms (PTSS) are associated with high levels of distress in their female partners. According to the literature, spouses' empathy for their spouses can be a risk factor for their own mental health. However, this subject has not been examined among veteran couples. The current study therefore investigated both the direct and moderating contribution of females' cognitive and affective empathy to their own PTSS and depression symptoms, above and beyond the preexisting traumatic events of the women's own lives and the veterans' PTSS. **Method:** Participants were 300 Israeli men who had served in the 2006 Israel-Lebanon War and their female partners, all of whom completed survey questionnaires. **Results:** Results revealed that although cognitive empathy can play a positive role for the female in the aftermath of a traumatic event, affective empathy can potentially make a negative contribution to her distress. Women's education, in number of years, and their own previous traumatic life events, as well as veterans' levels of PTSS, were all found to make a direct contribution to females' PTSS and depression symptoms. **Conclusion:** Findings support the theory that although higher empathy can play a positive role in military couples in which the male partner displays symptoms of PTSS symptoms, it can also contribute negatively to her distress.

Keywords: empathy, posttraumatic stress symptoms (PTSS), depression, veterans, spouses

Following military service and participation in combat, estimates of 2–17% of veterans in the armed forces suffer from posttraumatic stress disorder (PTSD) (Richardson, Frueh, & Acierno, 2010; Solomon & Horesh, 2007; Creamer, Wade, Fletcher, & Forbes, 2011). PTSD involves three symptom clusters: intrusion, hyper-arousal, and avoidance/numbing, which in the recently revised *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*; American Psychiatric Association [APA], 2013) were divided into two distinct clusters: avoidance and persistent negative alterations in cognitions and mood. PTSD has various personal (Janoff-Bulman, 1985) and interpersonal effects (Horowitz, 2007). It is important to point out that there are many people who may experience a range of symptom severity but not be diagnosed with PTSD.

It has already been confirmed that veterans' PTSS has negative effects on their spouses. Studies have documented the impact of veterans' PTSS on spouses' mental stress and depression (Arzi, Solomon, & Dekel, 2000; Beckham, Lytle, & Feldman, 1996; Calhoun, Beckham, & Bosworth, 2002) as well as negative effects on marital relations and a strong sense of burden among the wives (Dirkzwager, Bramsen, Adèr, & van der Ploeg, 2005). In addition,

it has been found that approximately 10% of the female spouses of veterans who suffer from PTSD symptoms will also secondarily experience PTSS (Dekel, Levinstein, Siegel, Fridkin, & Svetlitzky 2016; Renshaw, Rodrigues, & Jones, 2008). Indeed, these findings are in line with the *DSM-5* which states that a diagnosis of PTSD can also result from indirect exposure, such as by learning that a close relative or friend was exposed to trauma (APA, 2013).

Although studies have suggested several theoretical and empirical variables that contribute to spouses' distress (above and beyond the contribution of veterans' PTSS), more research must be conducted on factors that can help lessen this distress. In this study, we chose to examine the role of empathy. As PTSD and depression are often comorbid (Campbell et al., 2007), examining both PTSS and depression as dependent variables can provide a broader picture of the experiences of military spouses, as well as an understanding of whether they are predicted by the same subfactors of empathy.

According to Charles Figley, one of the pioneers in the area of the effects of trauma on family members, wives' empathy plays a key role in contributing to the development of their secondary traumatic stress, which occurs due to the emotional connection with the victimized family member (Figley, 1982). Although he argues that empathy is invaluable, positive, and necessary when supporting a loved one who has experienced a traumatic event, the caregiver may begin to project him/herself into the other's perspective. This process of projection and identification can lead to the caregiver experiencing emotions similar to those experienced by her loved one, resulting in the contribution of the woman's empathy to her distress (Abendroth & Figley, 2014; Figley, 1995, 1997, 2002).

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While the role of providing empathy has been examined among parents and children (Manczak, DeLongis, & Chen, 2016), in social settings (Oceja et al., 2014), and in individuals with autism (Deschamps, Been, & Matthys, 2014), it has not been examined among spouses of war veterans. Given gaps in the literature on the role of empathy among couples following participation in war, this study's aim was to examine the direct and moderating contribution of female partners' emotional and cognitive empathy to their own PTSS symptoms and depression symptoms.

The Construct of Empathy

The literature has shown empathy to be a complex, controversial, and multilayered construct. Empathy will be herein defined as the individual's ability to both understand and also experience the private world of another person as if it were his or her own (Horvath & Bedi, 2002; Rogers, 2007). Empathy is currently conceptualized as making use of both cognitive and affective processing (Preston & Hofelich, 2012). Cognitive empathy is when the observer aims to imagine the psychological viewpoint of the other, yet an affective change in the observer is not required; that is, the individual is simply thought to project him or herself into the experience of the other (Preston & de Waal, 2002). Affective empathy, on the contrary, is when the observer has an emotional response to another person's experiences, even experiencing the same emotions as that person (Verhofstadt, Buysse, Ickes, Davis, & Devoldre, 2008; Preston & de Waal, 2002). In other words, it is almost as if the observer's emotions become more reflective of the other's situation than of his or her own (Hoffman, 2000). Affective empathy has also been referred to as an emotional contagion or as "the tendency to automatically mimic and synchronize facial expressions, vocalizations, postures, and movements with those of another person and, consequently, to converge emotionally" (Hatfield, Cacioppo, & Rapson, 1994, p. 5). Even though differences can be seen between cognitive and affective empathy, both are thought to play important roles in functioning.

The Role of Empathy in Relationships and Marriage

The primary role of empathy is in helping individuals form and maintain lasting social bonds (Preston & de Waal, 2002). It does so by assisting groups of people to rapidly coordinate their actions and to respond to threats; by helping them to problem-solve the thoughts and intentions of others; and by creating and maintaining a sense of solidarity in which individuals can communicate their shared interests (Anderson & Keltner, 2002). Empathy is considered to play a key role in the formulation of attachment and in caregiving, as it is a vital mechanism in recognizing and responding to the thoughts and feelings of others (Mikulincer & Shaver, 2005).

Research has found that empathy plays an important role in the marital relationship (Simpson, Orina, & Ickes, 2003). When examining civilian couples, higher levels of empathic accuracy were found to be predictive of higher levels of emotional and instrumental support and lower levels of negative forms of support in marriage (Verhofstadt et al., 2008). Higher levels of cognitive empathy have been correlated with more instrumental support (Verhofstadt et al., 2016). Empathy has also been found to be

predictive of forgiveness and closeness, as well as lower levels of tension between spouses (Fincham, Paleari, & Regalia, 2002; O'Brien, DeLongis, Pomaki, Puterman, & Zwicker, 2009; Simpson et al., 2003). Efforts to be empathic, even more than empathic accuracy, were found to be related to relationship satisfaction (Cohen, Schulz, Weiss, & Waldinger, 2012). In a study of 187 civilian couples it was found that dyadic empathy—the ability to experience empathic concern (emotional empathy) and perspective-taking (cognitive empathy)—was found to predict greater levels of dyadic coping strategies and relationship satisfaction (Levesque, Lafontaine, Caron, Flesch, & Bjornson, 2014).

Empathy has also been found to play a role in the duration of marriages and marital satisfaction (Busby & Gardner, 2008). In a study of spouses from long-term and medium-term marriages, researchers found that empathy (as a positive value) and rumination (as a negative value) independently played a vital role in predicting marital quality (Paleari, Regalia, & Fincham, 2005). The role of empathy is important, especially given the fact that researchers have found that one of the variables that can shift over the course of a marriage is one partner's perception of the other. Members of couples in distressed relationships can come to see their spouse's negative behaviors as an indication of fixed negative personality attributes, whereas couples in positive marriages are able to see negative behaviors as situational and temporary (Fincham, Beach, & Baucom, 1987; Fletcher & Fincham, 1991; Gottman, 1999).

Empathy plays an important role in marital quality, duration, and satisfaction, and can also play a role in depression (Lee, Brennan, & Daly, 2001). In couples dealing with rheumatoid arthritis, empathic responding from the unaffected spouse was found to buffer against the negative effects of spousal depression on the marital outcomes for the patient dealing with the chronic illness (Stephenson, DeLongis, Esdaile, & Lehman, 2014).

Although research on empathy clearly shows the benefits of empathy in relationships, there is still a paucity of research on whether empathy plays a positive or negative role in the context of trauma. Empathy can enhance the attunement between two people, allowing for precision and accuracy in understanding the other's experience (Wilson & Thomas, 2004). However, higher levels of spousal empathy can result in emotional flooding and identification, as well as difficulties in preserving boundaries (Solomon, Dekel, Zerach, & Horesh, 2009).

To date there have been no studies—among couples in the aftermath of stressful situations or within military marriages—on the role played by the female spouse's empathy in her distress. Therefore, this study addresses the gap in the role of the wife's emotional and cognitive empathy and its relationship to her own posttraumatic and depression symptoms. As PTSS and depression are often comorbid, we examined how empathy contributes uniquely to each. Based on the literature on the effects of veterans' PTSS on their spouses, the first hypothesis was that veterans' higher PTSS would be associated with spouses' higher levels of PTSS and depression symptoms. Next, in line with Figley's theory, we hypothesized that spouses' emotional empathy would be associated with their own higher distress. Third, we hypothesized that spouses' cognitive empathy would be associated with their own lower distress. Finally, we expected that spouses' cognitive and emotional empathy would moderate the association between males' PTSS and females' PTSS and depression symptoms.

Method

Three hundred male war veterans of the 2006 Israel-Lebanon War and their wives or female partners participated in the study. The 2006 Israel-Lebanon War was a 33-day military conflict between Hezbollah paramilitary forces in Lebanon and the Israel Defense Forces (IDF). In order to track those soldiers who were most likely to experience PTSS as a consequence of their active service in the war, the study group included all male soldiers who requested the IDF's mental health services. However, since veterans who request mental health assistance might differ in background variables (Pietrzak, Johnson, Goldstein, Malley, & Southwick, 2009) as well as in distress (Brown, Creel, Engel, Herrell, & Hoge, 2011; Erbes, Meis, Polusny, & Compton, 2011) from veterans who do not request help, the sample was then doubled with an additional matched group of veterans who served in the war but did not request mental health services. Indeed, as reflected in the administered questionnaires, the level of PTSD symptoms of the study group was significantly higher ($M = 2.23$, $SD = .82$) than that of the control group ($M = 1.28$, $SD = .38$, $t(298) = 12.81$, $p < .001$). A comparison of the sociodemographic information of the veterans in the two groups revealed that there were no differences between them in terms of country of birth, rank, and military role (combat vs. noncombat), thus allowing us to combine the two groups into one.

The average age of the male veterans was 35.53 years old (ranging from 27 to 61 years, $SD = 5.45$), and the average age of their female partners was 33.8 years (ranging from 24 to 62 years, $SD = 5.57$). The majority of male veterans and their female partners were born in Israel (87% and 85.8%, respectively). The average number of years of education among males was 14.89 (ranging from 10 to 25 years, $SD = 2.83$) and 15.21 (ranging from 11 to 22 years, $SD = 2.44$) among females.

The majority of both males and females were employed (68% and 67%, respectively), and around 15% of the veterans and 18% of the partners were students. The majority of couples reported that they were married (79%), and the remainder reported cohabiting (21%). On average, couples reported having been together for 6.5 years (ranging from 6 months to 37 years, $SD = 5.28$) and had an average of 1.57 children (ranging from 0 to 10 children, $SD = 1.65$). The majority of veterans (61.1%) reported that their income was above average, and the remainder (38.9%) reported their income as average or below. Most of the veterans (89.3%) had held combat positions; the rest (10.7%) had held noncombat positions. Their military ranks included officers (14%) and enlisted men (86%).

Procedures

Participant recruitment began from an IDF-provided list of veterans who had requested mental health services from the IDF in the aftermath of the second Israel-Lebanon war. Research assistants telephoned all potential participants and asked whether they were in a heterosexual relationship that had been in existence for at least one year. Of these veterans, 369 males fulfilled this criterion. The aims of the study were explained to them, and their consent to participate and to recruit their partners into the study was obtained. The couples were sent questionnaires via the Internet or by mail. Of the 369 couples, 150 completed the surveys, leading to a 40% response rate.

The comparison group was comprised of randomly selected individuals who had served in the same war and were from the same military units as the study group but had not asked for mental health assistance. The authors of this study obtained a list of approximately 5,000 soldiers who participated in the Second Lebanon War in the same units as did the soldiers from the study group. Every fifth soldier on this list was contacted at random and invited to participate in the study. Collection ceased when 150 couples had been gathered, enough for a sufficient sample. Approximately 30% of the couples contacted agreed to participate in the study. Males were matched in age and rank. All 300 couples were compensated, with each couple receiving \$25 total for their participation. In instances where a participating veteran or his partner displayed emotional or marital distress, the research team referred the individual to a treatment facility. The study received Institutional Review Board approval from the Helsinki Committee of the Medical Corps of the IDF and Bar-Ilan University Ethics Committee.

Measures

Sociodemographic information was collected for all participants for the following variables: age, gender, country of birth, education in number of years, income, length of relationship with partner, number of children, rank, and military role of the veteran.

The Traumatic Life Events Questionnaire. The occurrence of earlier traumatic events was measured using the Traumatic Life Events Questionnaire (Solomon et al., 1993), which provides a standard list of 13 traumatic life events (i.e., injury, car accidents, etc.). In relation to each item, the women had to answer whether they had experienced the event at some point in their lives and, if so, when. This measure seeks to obtain information about additional traumatic events that the spouses have experienced in addition to having a partner with PTSS. Scores were calculated as the mean sum of the traumatic events experienced. The total score of the number of the traumatic events the women had experienced was calculated as the score of the 13 items of this questionnaire. This scale has been used extensively to measure the occurrence of earlier traumatic events in various studies (Dekel & Hobfoll, 2007).

The Interpersonal Reactivity Index (IRI). The level of females' empathy was assessed by the IRI (Davis, 1980), a 28-item self-report questionnaire consisting of four subscales, each of which assesses a specific aspect of empathy. Only three of the subscales were used in this paper. The aspect of cognitive empathy was assessed only by the Perspective-Taking (PT) subscale. This scale measures the tendency to adopt the point of view of other people in everyday life (e.g., "I sometimes try to understand my friends better by imagining how things look from their perspective"). We did not use the second cognitive subscale, the Fantasy subscale, as it measures the tendency to experience the feelings and actions of fictitious characters in books, movies, and plays only, and not of people in real life.

The affective empathy questions assessed Empathic Concern (EC), which measures the tendency to experience feelings of warmth, compassion, and concern for other people (e.g., "I often have tender, concerned feelings for people less fortunate than me"). The Personal Distress (PD) subscale also assesses typical emotional reactions, but rather than other-oriented feelings of

concern, it taps one's own feelings of personal unease and discomfort in reaction to the emotions of others (e.g., "Being in a tense emotional situation scares me"). Respondents were asked to rate their level of empathy on a 5-point Likert scale ranging from 1 (*Does not describe me well*) to 5 (*Describes me very well*). The Cronbach's alpha of perspective-taking was .80, empathic concern was $-.72$, and personal distress was $-.68$.

The PTSD Inventory. PTSD symptoms were measured using the PTSD Inventory (Solomon et al., 1993), a 17-item, self-reported symptom scale that corresponds to the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; APA, 1994). This measure was completed by both male as well as female participants. Male participants were asked to indicate the frequency with which they had experienced each symptom in relation to their wartime service during the preceding month, using a 4-point scale ranging from 1 (*never*) to 4 (*very often*). Women's traumatic stress was measured using a similar questionnaire, and they were asked about experiencing each symptom in relation to their partners' wartime service. Specifically, the women were asked the same questions as the men, but the wording was changed so that the symptom was in reference to their partners' military service. This questionnaire is used to assess the study participants' symptom severity as measured by the mean number of symptoms they experienced; it is a scale that has been used widely with Israeli populations and found to be highly valid and reliable. Cronbach's alpha reliability estimates for the current study were strong, with values of .96 and .90 for PTSS total mean scores for males and females, respectively.

Brief Symptom Inventory (BSI). Depression was measured by the six-item subscale of the BSI. The BSI makes use of a 5-point Likert scale ranging from 0 (*not at all*) to 4 (*extremely*). This measure has been used extensively in Israel with satisfactory validity and internal reliability values (Derogatis, 1993).

Statistical Analysis

We first ran a Pearson correlation between the study variables. Next, we ran two hierarchical regressions (one with female partners' PTSS and the second with female partners' depression symptoms as the dependent variables) with four steps to test the study hypotheses. In Step 1, we entered the females' sociodemographic variables: years of education, length of relationship, and females' own preexisting traumatic life events. In Step 2, we added males'

PTSS. In the third step, we added the empathy subscales: perspective-taking, personal distress and empathic concern. In the fourth and final step, the two-way interactions between males' PTSS and the empathy subscales (PT, PD, and EC) were added. In order to control for a possible effect of a correlation among the dependent variables, we performed a multivariate analysis of variance (MANOVA) test (STATA 14.0), which provides several measures of this correlation effect, that is, Wilk's λ . Wilk's λ gives the product of error variance to the total variance across the two regression models. This analysis revealed that the regression coefficients remained unchanged. We found these overall model measurements to be significant, as they indicate that the overall multivariate test was significant and the dependent variables shared common effects, ($\lambda = .61, F = 11.06, p < .001$). We have added λ for each indicator in Table 2, before and after the testing of the interactions.

Results

Table 1 presents correlations between the various study variables.

Regarding the association between the female's sociodemographic variables and her distress, the number of her years of schooling was associated with her lower PTSS ($r = -.16, p < .01$) and lower depression ($r = -.18, p < .01$). The preexisting traumatic events of her own life were positively associated with her own higher PTSS ($r = .19, p < .01$), her higher depression symptoms ($r = .20, p < .01$), and her relationship length ($r = .11, p < .05$). In addition, there was a positive significant correlation between females' PTSS and females' depression symptoms ($r = .57, p < .01$) and as expected, there was a significant positive correlation between males' PTSS and females' PTSS ($r = .45, p < .01$) and females' depression symptoms ($r = .34, p < .01$). In addition, there was a positive significant correlation between relationship length and females' years of schooling ($r = .25, p < .01$).

Regarding the empathy subscales, the factor of PD was associated positively with both females' PTSS ($r = .22, p < .01$) and females' depression symptoms ($r = .27, p < .01$), and was associated negatively with females' years of schooling ($r = -.15, p < .01$). The factors of PT and EC were associated negatively only with females' depression symptoms ($r = -.17, p < .01$ and $r = -.14, p < .01$, respectively). In addition, there was a positive

Table 1
Correlations Among Study Variables

Variable	1	2	3	4	5	6	7	8
1. Females' PTSS symptoms								
2. Females' depression symptoms	.57**							
3. Education (years of schooling)	-.16**	-.18**						
4. Relationship length	.01	-.04	.25**					
5. Life traumatic events	.19**	.20**	.09	.11*				
6. Males' PTSS symptoms	.45**	.34**	-.11	.03	-.01			
7. Personal distress (affective)	.22*	.27**	-.15**	-.04	.01	.04		
8. Perspective-taking (cognitive)	-.05	-.17**	.08	.01	.02	.00	-.06	
9. Empathic concern (affective)	-.00	-.14*	-.04	-.04	-.06	-.04	.14*	.41**

Note. $N = 300$. PTSS = posttraumatic stress symptoms.

* $p < .05$. ** $p < .01$.

significant correlation between PC and EC ($r = .41, p < .01$) and PD ($r = .14, p < .05$). None of the three females' empathy subscales were significantly associated with males' PTSS.

Table 2 presents the results of the hierarchical regression for the two dependent variables of the study: females' PTSS and females' depression symptoms.

On the whole, the variables included in Step 1 significantly predicted females' PTSS ($F(3, 296) = 7.26, p < .001, R^2 = .07$) and females' depression symptoms $F(3, 296) = 8.42, p < .001, R^2 = .08$). Of the variables included in Step 1, years of education and traumatic life events constituted significant predictors of females' PTSS and their depression symptoms. Specifically, a greater number of years of education were significantly and negatively associated with PTSS and depression levels, whereas more previous traumatic events in the female's life were significantly and positively associated with her higher PTSS and depression. In this step, relationship length made no significant contribution to females' PTSS and females' depression.

On the whole, the variables included in Step 2 significantly predicted females' PTSS ($F(4, 295) = 24.87, p < .001, \Delta R^2 = .18, R^2 = .25$) and females' depression ($F(4, 295) = 16.3, p < .001, \Delta R^2 = .1, R^2 = .18$). Males' PTSS was found to be significantly and positively associated with females' higher PTSS and depression.

Overall, the variables included in Step 3 significantly predicted females' PTSS ($F(7, 292) = 16.96, p < .001, \Delta R^2 = .04, R^2 = .3$) and females' depression ($F(7, 292) = 15.56, p < .001, \Delta R^2 = .09, R^2 = .27$). PD positively and significantly predicted females' PTSS and females' depression. PT had a significant and negative association with females' depression only. EC did not contribute to any of the dependent variables.

The interactions included in the fourth and final step significantly predicted females' PTSS ($F(10, 280) = 12.27, p < .001, \Delta R^2 = .02, R^2 = .31$) and females' depression ($F(10, 278) = 12.67, p < .001, \Delta R^2 = .03, R^2 = .31$). Regarding interactions, Males' PTSS \times Personal Distress predicted females' depression, and Males' PTSS \times Perspective-Taking significantly predicted females' PTSS.

To test the simple slopes of this interaction, effects tests were performed which evaluated the regression coefficients for the variables involved in interactions by taking 1 SD below and above their means.

Figure 1 provides graphic depictions of the interaction between Males' PTSS \times Personal Distress and females' depression.

This analysis revealed that when PD was high, males' PTSS was associated more positively and strongly with females' depression ($\beta = .46, p < .001$) than when PD was low ($\beta = .19, p < .001$).

Table 2
Regression Analysis Predicting Females' PTSS and Depression Symptoms

Females' PTSS	Dependent variable						Wilk's λ
	Females' PTSS			Females' depression			
	B	SE	β	B	SE	β	
Step 1							
Education	-.04	.01	-.19***	-.07	.02	-.21***	
Relationship length	.00	.01	.03	-.00	.01	-.02	
Traumatic life events	.79	.23	.20***	1.44	.37	.22***	
Step 2							
Education	-.03	.01	-.14*	-.06	.02	-.17**	
Relationship length	.00	.01	.00	-.01	.01	-.04	
Traumatic life events	.80	.20	.20***	1.43	.35	.22***	
Males' PTSS	.24	.03	.43***	.31	.05	.34***	
Step 3							
Education	-.02	.01	-.10	-.04	.02	-.13*	.98*
Relationship length	.00	.01	.00	-.01	.01	-.04	.99
Traumatic life events	.78	.20	.20***	1.37	.33	.21***	.93***
Males' PTSS	.23	.03	.43***	.30	.05	.33***	.78***
Perspective-taking (cognitive)	-.03	.04	-.03	-.15	.07	-.12*	.98
Personal distress (affective)	.13	.04	.19***	.29	.06	.25***	.91***
Empathic concern (affective)	.01	.05	.02	-.13	.08	-.10	.99
Step 4							
Education	-.02	.01	-.10	-.04	.02	-.13*	.98*
Relationship length	.00	.01	.01	-.00	.01	-.02	.99
Traumatic life events	.81	.20	.21***	.78	.33	.21***	.92***
Males' PTSS	.23	.03	.43***	.31	.05	.33***	.78***
Perspective-taking	-.03	.04	-.05	-.18	.07	-.15**	.98*
Personal distress	.13	.04	.19***	.30	.06	.26***	.91***
Empathic concern	.02	.05	.02	-.09	.08	-.07	.99
Males' PTSS \times Personal Distress	.00	.03	.01	.08	.04	.11*	.98
Males' PTSS \times Perspective-Taking	-.05	.03	-.11*	-.09	.05	-.10	.98
Males' PTSS \times Empathic Concern	-.01	.03	-.02	.06	.05	.08	.99

Note. PTSS = posttraumatic stress symptoms.
* $p < .05$. ** $p < .01$. *** $p < .001$.

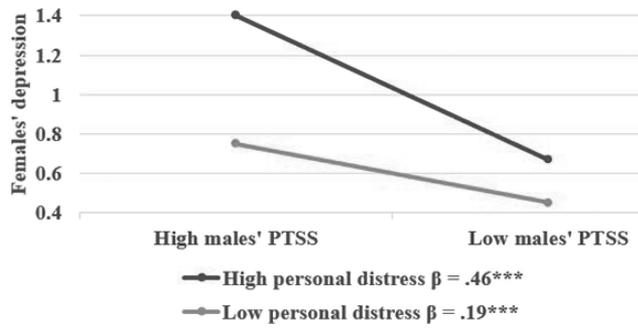


Figure 1. The interaction of males' PTSS symptoms with personal distress to predict females' depression symptoms. The variables were mean centered prior to analysis; *** $p < .001$.

Figure 2 provides graphic depictions of the interaction between Males' PTSS \times Perspective-Taking and females' PTSS symptoms.

This analysis revealed that when perspective-taking was high, males' PTSS was associated less strongly with females' PTSS ($\beta = .34, p < .001$); this figure stands in comparison to when PT was low, as males' PTSS was more strongly associated with females' PTSS ($\beta = .55, p < .001$).

The MANOVA test (STATA v.14.0) showed an overall significant level ($p < .05$) for the model, based on the Wilk's λ test ($\lambda = .61, F_{1,281} = 11.06, p < .001$). This analysis, (taking the two dependent variables together) revealed the same significant effects: whenever the effect was significant on both dependent variables, it was supported by the Wilk's λ index. However, when the effect of perspective-taking was significant for depression but not for PTSS, the overall effect test was found insignificant. Interaction effects were not supported by the MANOVA test, indicating that interactions had no effect on both models and appeared significant in one model only. (See λ for each indicator in Table 2, before and after testing the interactions).

Discussion

This study focused on understanding and suggesting possible contributors to female partners' distress. Based on Figley's ideas and previous research, this study examined both the direct and moderating contribution made by females' partners' cognitive and emotional empathy to females' PTSS and depression symptoms.

Findings supported the contribution of several factors to the females' distress: the females' previous traumatic life events, the number of years of the females' education, and the males' PTSS. Indeed, this study's findings are supported by those of Renshaw and colleagues who also found that less than 20% of civilian wives who endorsed symptoms on the PTSD measure attributed their symptoms wholly to their husbands' military experiences; the females also attributed their current symptoms to their own traumatic life experiences (Renshaw et al., 2011). The results of both studies support the idea that partners' PTSS cannot be examined independently, but rather must include their own previous life experiences as well.

This study also found that veterans' PTSS was the major source for their wives' distress: veterans' higher PTSS were found to be positively associated with spouses' higher level of PTSS and

depression symptoms, results that are consistent with other findings and support the negative effects of a veteran's PTSS on his spouse (Arzi et al., 2000; Beckham et al., 1996; Calhoun et al., 2002; Al-Turkait & Ohaeri, 2008).

In the current study, we suggested examining an additional contributor—the wives' own capacity for empathy. Three different aspects of empathy were examined—PT, PD, and EC—and differences were found between the subscales and their direct and moderating contribution to wives' PTSS and depression.

A significant finding was that only PD—a factor of emotional empathy—was positively associated with both higher female PTSS and depression. Although there are no studies that address this topic in military marriages, in a study that examined a sample of social workers it was found that their higher levels of PD were associated with their higher compassion fatigue and burnout as well as their lower levels of compassion (Thomas, 2013). As women are generally thought to be more attuned to the emotional health of their relationships, the PTSD-related behaviors of their partners may cause them distress (Renshaw, Campbell, Meis, & Erbes, 2014).

An additional finding of this study was that PT—a factor of cognitive empathy—was found to play a moderating role. Specifically, among females with lower levels of perspective-taking, the association between veterans' PTSS and females' PTSS and depression symptoms was found to be higher. These findings on perspective-taking mirror the results of other studies on this aspect of empathy, which found PT to be consistently related to measures of interpersonal functioning; those individuals with high levels of PT were found to have more social competence (Davis, 1983). PT has also been found to be positively correlated with forgiveness behaviors in civilian couples in times of duress and with overall positive marital adjustment (Welton & Hill, 2008; Long & Andrews, 1990). These cognitive interpersonal skills may help the female partner navigate and comprehend the veteran's PTSS; this ability can in turn improve the female's emotional functioning, as well as her ability to differentiate between her distress and that of her partner (Coutinho, Silva, & Decety, 2014).

These results lend support to the theory that although *cognitive* empathy can play a positive role for a couple in the aftermath of a traumatic event, *affective* empathy can contribute negatively to

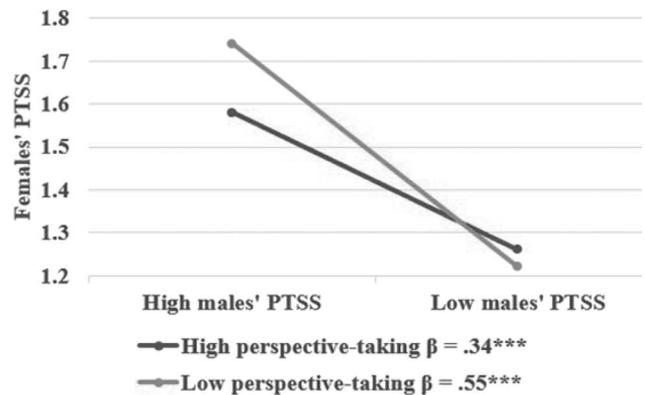


Figure 2. The interaction of males' PTSS symptoms with perspective-taking to predict females' PTSS symptoms. The variables were mean centered prior to analysis; *** $p < .001$.

females' distress partner. These findings are in line with Figley's hypothesis that higher empathy can contribute to a higher likelihood of caregivers' distress (Figley, 1982). Additionally, these results support Figley's hypothesis that although empathy may be helpful in supporting a loved one in the aftermath of a traumatic event, it can also facilitate the female's absorption of the veteran's stress, leading to negative changes in her own behavior (Figley, 1995, 1997, 2002).

It is important to consider that this study used the IRI, which examines empathy in terms of affective and cognitive empathy, as opposed to a more hierarchical vision of empathy as described by Cliffordson (2002). According to Cliffordson, the two affective components of empathy consist of a compassionate response to another person (EC) or to a response characterized by emotional discomfort (PD). PD may be interpreted as consisting of a fear-driven response to trauma-related cues that has been associated with avoidance of trauma-related cues (or withdrawal from the person with PTSS) while EC may be seen as consisting of a prosocial response to trauma-related cues that allows the partner to draw closer to his or her partner with PTSS. Therefore, according to this interpretation it is not a surprise that partners with anxiety responses tend to be classified as having PTSS or depression while partners who respond in a prosocial manner are less likely to be classified as showing PTSS. Healthy partners are more likely to be resilient and not engage in the avoidant behavior known to predict the development of PTSD.

Limitations of this study include the use of self-reporting measures in a cross-sectional design; hence there was no baseline information on each participant's levels of empathy. Moreover, although we assume that empathy contributes to PTSS, it is also possible that the female's distress, PTSS, or depression can result in her lessened ability to be empathetic. In addition, empathy was assessed as a general ability and did not specifically refer to wives' reactions toward their partners. Moreover, although we assessed wives' PTSS in relation to their spouses' experiences, our findings and the findings of others suggest that wives' PTSS might be a result of their own traumatic life events (Dekel et al., 2016; Renshaw et al., 2011).

Future studies would benefit from further examining the role of cognitive and affective empathy toward the partner and seeing how each contributes to the interaction between male and female PTSS. It could be of interest to study couples in which the female is a veteran with PTSS, and to examine how her PTSS affects her civilian male partner. Finally, additional studies should focus more on dyadic empathy, and how interactions between partners impact their functioning.

Clinically, more can be learned about existing interventions, such as how empathy within military veteran couples in therapy could lead to the improved functioning and mental health status of both partners. This study provides preliminary support for the importance of the role of empathy in clinical work with couples who present with PTSS (Sautter, Armelie, Glynn, & Wielt, 2011). Existing interventions for couples in which one or both members suffer from PTSD could be adapted to incorporate practices tailored to increase the role of empathy (Dagleish et al., 2015). For instance, cognitive-behavioral couple's treatment focuses on the PT of each member of the couple, a valuable exercise as PTSS can impact PT, which also plays a role in empathy (Monson & Fredman, 2012). It would be of interest to further explore the positive

and negative role of affective and cognitive empathy and to apply this research to therapeutic interventions for couples in the aftermath of a traumatic event. Studies should also examine the role of emotion regulation and its role in empathy (Lockwood, Seara-Cardoso, & Viding, 2014), particularly as research has shown a negative change in emotion regulation in individuals with PTSD (Zhang et al., 2013). These interventions could potentially aid couples in navigating new avenues in their relationship and finding ways to be emotionally and empathically present for the other.

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