# Chapter 4
# Distress in Spouses of Combat Veterans with PTSD: The Importance of Interpersonally Based Cognitions and Behaviors

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**Abstract** Despite considerable research indicating that spouses of veterans with posttraumatic stress disorder (PTSD) experience appreciable levels of psychological and marital distress, there is little empirical information about the mechanisms by which this distress develops. Given the ongoing military conflicts in Iraq and Afghanistan, and the fact that spouses form a primary support for combat veterans who return from deployments with symptoms of PTSD, a more comprehensive understanding of such mechanisms is critical. In this chapter, we review research that helps explain spouses' distress from a cognitive-behavioral framework. Relevant veteran behaviors include internalizing behaviors (e.g., emotional withdrawal and avoidance) and externalizing behaviors (e.g., verbal and physical aggression). Although less research exists regarding spousal factors that may contribute to their distress, we review existing knowledge about spouse behaviors (e.g., accommodation of veterans' symptoms) and cognitions (e.g., perceptions of burden and attributions for veterans' symptoms). Finally, we provide recommendations for future research in this area.

## Introduction

Extensive research indicates that spouses of combat veterans with posttraumatic stress disorder (PTSD) have elevated levels of both psychological and marital distress (Calhoun, Beckham, & Bosworth, 2002; Dekel, Solomon, & Bleich, 2005; Dirkzwager, Bramsen, Adèr, & van der Ploeg, 2005; Jordan et al., 1992; Lev-Wiesel & Amir, 2001; Manguno-Mire et al., 2007; Mikulincer, Florian, & Solomon, 1995; Riggs, Byrne, Weathers, & Litz, 1998; Solomon, Waysman, Avitzur, & Enoch, 1991;

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S. MacDermid Wadsworth and D. Riggs (eds.), *Risk and Resilience in U.S. Military Families*,
DOI 10.1007/978-1-4419-7064-0_4, 

Solomon et al., 1992; Westerink & Giarratano, 1999). Moreover, studies also suggest that the level of spouses' distress is directly tied to the severity of combat veterans' PTSD symptoms (Beckham, Lytle, & Feldman, 1996; Dekel, 2007; Dirkzwager et al., 2005; Evans, McHugh, Hopwood, & Watt, 2003; Gallagher, Riggs, Byrne, & Weathers, 1998; Glenn et al., 2002; Hendrix, Erdmann, & Briggs, 1998; Lev-Wiesel & Amir, 2001; Nelson Goff, Crow, Reisbig, & Hamilton, 2007; Renshaw, Rodrigues, & Jones, 2008; Riggs et al., 1998). Despite this extensive evidence, there is unfortunately much less information as to *how* distress develops in these partners. Several researchers have speculated about such mechanisms, but to date, there have been few empirical investigations in this area.

Recently, Nelson Goff and Smith (2005) put forth a comprehensive theory of how PTSD impacts marital/romantic relationships. Their Couples Adaptation to Traumatic Stress (CATS) model includes bidirectional effects between both partners in a couple, as well as bidirectional effects between each member of the couple and the overall relationship (see Fig. 4.1). In other words, the nature and severity of the trauma survivor's symptoms influence the partner, and the partner's response to the survivor also has an influence on the survivor's psychological functioning. Moreover, pretrauma behaviors, patterns, and general relationship factors (e.g., communication patterns) may also influence both members of the couple. At all levels, responses can range from normative and healthy to maladaptive and pathological.

Although such a model is useful in organizing the transactional associations among individual and couple-level distress in such couples, we currently have much less understanding of *how* such effects take place. In other words, what mechanisms account for the effects represented in the model? Nelson Goff and Smith (2005) posited a number of potential mechanisms, including attachment disruptions, internalization of symptoms, projective identification, and pathological physiological

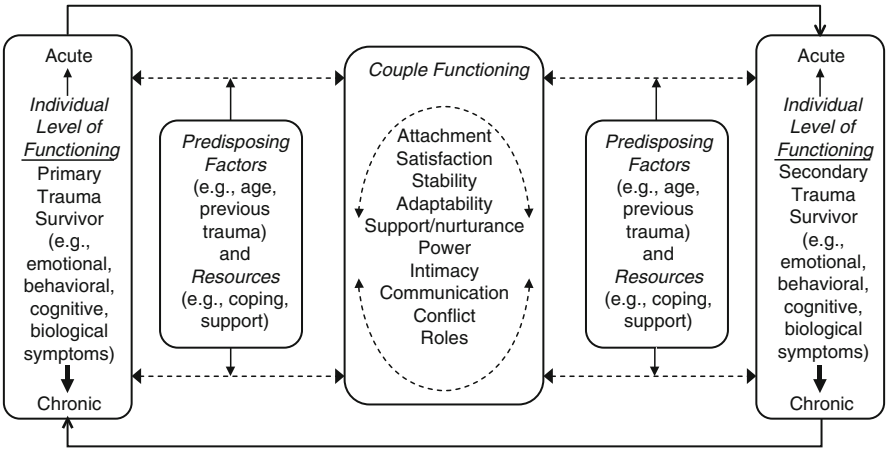


**Fig. 4.1** Couple adaptation to traumatic stress model (reproduced from Nelson Goff & Smith, 2005, p. 149)

responses to conflict in both members of the couple. However, they acknowledged that, to date, none of these mechanisms has been tested empirically.

The current chapter focuses primarily on our understanding of the individual experiences of psychological and marital distress that arise in spouses of combat veterans with PTSD. Emerging research with regard to anxiety disorders in general suggests that interpersonally oriented cognitions and behaviors are important in both the development and maintenance of those disorders and, moreover, the development of distress in relatives of individuals with such disorders (e.g., Monson, Fredman, & Dekel, 2010; Renshaw, Steketee, Rodrigues, & Caska, 2010). In this chapter, we employ a similar approach to furthering our understanding of the psychological and interpersonal functioning of the partners of those with combat-related PTSD. Developing a more complex understanding of the distress in these individuals is important for multiple reasons. Most obviously, well over 1.5 million military service members have been deployed to combat theaters since 11 Sep 2001 (Tanielian & Jaycox, 2008), and initial studies indicate that between 9 and 24% of returning service members experience appreciable levels of PTSD symptoms (Hoge, Auchterlonie, & Milliken, 2006; Hoge et al., 2004; Milliken Auchterlonie, & Hoge, 2007). These numbers mean that a large number of spouses will be coping with returning combat veterans with PTSD. In addition, the CATS model (Nelson Goff & Smith, 2005) suggests that the reactions of spouses have a substantial impact on those suffering from PTSD. Thus, by helping these individuals, we might also have some effect on the combat veterans themselves. In this chapter, we will organize and summarize the relevant research in the context of interpersonally relevant cognitions and behaviors, and then suggest future directions that can further enhance our understanding of distress in spouses of those with combat-related PTSD.

## Interpersonally Relevant Cognitions and Behaviors Related to Distress in Spouses of Combat Veterans

Cognitive-behavioral couples' therapy has long applied a cognitive-behavioral framework to interpersonal phenomena (e.g., Epstein & Baucom, 2002). Such therapies often focus on partners' overt behaviors, as well as underlying interpretations and attributions within each partner. In this vein, we conceptualize behaviors and cognitions as some of the primary mechanisms by which spouses of combat veterans with PTSD develop individual psychological and marital distress. We review each of these areas, in turn, below.

### *Veterans' Behaviors*

Many of the symptoms of PTSD have clear implications for behavior in intimate relationships, notably those associated with the avoidance and hyperarousal clusters.

Symptoms of avoidance may be associated with changes in couples' leisure activities (e.g., avoiding restaurants); furthermore, within the avoidance cluster, emotional numbing may be particularly related to changes in communication patterns and sense of intimacy and closeness. Any of these changes can be related to increased experiences of distress within spouses of veterans with combat-related PTSD. On the other hand, symptoms of hyperarousal may lead to edginess, increased irritability, and angry outbursts in veterans, which can also have a negative impact on spouses' individual functioning. Below, we review the growing evidence regarding these two pathways to distress, broadly conceptualized as internalizing and externalizing behaviors.

## *Internalizing Behaviors*

Studies have linked combat-related PTSD with decreased reports of intimacy, less constructive communication, and more demand/withdrawal communication patterns with spouses/partners (Cook, Riggs, Thompson, Coyne, & Sheikh, 2004; Roberts et al., 1982). More specifically, multiple investigations have detected a link between PTSD-related avoidance and both relationship difficulties (Carroll, Rueger, Foy, & Donahoe, 1985; Evans et al., 2003; Solomon, Dekel, & Zerach, 2008) and poorer communication (Hendrix et al., 1998) in veterans. However, only two such identified studies examined spouses' own self-report of distress, with a significant link detected between PTSD-related avoidance in service members and self-reported psychological distress in spouses (Nelson Goff, Crow, Reisbig, & Hamilton, 2009; Renshaw, 2010). Solomon et al. (2008) expanded on the association of avoidance and the marital relationship, finding that veterans' avoidance was specifically associated with lower levels of self-disclosure, which was in turn associated with lower veteran-reported intimacy with partners. This study provided the first direct evidence of a mediational pathway from a specific type of PTSD symptoms to a couple-level behavioral manifestation of those symptoms and, finally, to a change in the overall quality of the relationship.

Within the avoidance cluster, some investigators have further found that the specific symptom of emotional numbing is more strongly tied to veterans' relationship difficulties than other symptoms (Cook et al., 2004; Riggs et al., 1998; Taft, Schumm, Panuzio, & Proctor, 2008). Unfortunately, no research has yet examined whether emotional numbing is tied to changes in specific aspects of romantic relationships. Furthermore, as this symptom is typically subsumed in the avoidance cluster, it is unknown whether emotional numbing and other types of avoidance have additive negative effects on relationship functioning, or whether the findings regarding avoidance symptoms discussed above might be primarily due to the effect of emotional numbing.

As a whole, these findings suggest that PTSD-related avoidance, and perhaps emotional numbing in particular, may lead to problems in communication and feelings of

closeness or intimacy, which, in turn, is associated with relationship distress in veterans. Unfortunately, only two studies (Nelson Goff et al., 2009; Renshaw, 2010) have linked these symptoms directly with distress as reported by spouses. Thus, we must largely rely on the inference that such distress as reported by veterans is, in turn, linked to distress in spouses. Further research that focuses on spouses' own reports of distress, like that of Nelson Goff et al. (2009) and Renshaw (2010), and that focuses on the association of avoidance symptoms (and, specifically, emotional numbing) with defined relationship behaviors (e.g., changes in activity patterns or communication styles), like that of Solomon et al. (2008), is needed to help clarify the mechanisms by which distress develops in spouses of veterans with combat-related PTSD.

## *Externalizing Behaviors*

Multiple investigations have also revealed associations between combat-related PTSD and higher levels of physical and psychological aggression toward spouses (Byrne & Riggs, 1996; Carroll et al., 1985; Glenn et al., 2002; Jordan et al., 1992; Taft, Street, Marshall, Dowdall, & Riggs, 2007; Verbosky & Ryan, 1988). Not surprisingly, such aggression is associated with greater relationship distress in spouses (e.g., Calhoun et al., 2002; Solomon et al., 2008). Furthermore, symptoms of hyperarousal in particular have been linked to greater levels of both aggression and anger (Evans et al., 2003; Savarese, Suvak, King, & King, 2001; Solomon et al., 2008; Taft, Kaloupek, et al., 2007) and greater marital difficulties (Evans et al., 2003; Taft et al., 2008). Along these lines, three groups of investigators have recently reported that anger/aggression mediates the relationship between PTSD-related symptoms of hyperarousal and relationship problems in veterans (Evans et al., 2003; Rodrigues & Renshaw, 2009a; Solomon et al., 2008). In addition, Rodrigues and Renshaw (2009b) found the same pattern of mediation using spouses' own self-report of marital distress, as well as spouses' own perceptions of veterans' symptoms of PTSD and veterans' aggression. These more recent findings provide replicated support for the proposed links between veterans' hyperarousal, veterans' aggressive behavior and angry outbursts, and marital distress, although once again, further research employing direct assessment of spouses, like that of Rodrigues and Renshaw (2009b), is needed.

In addition, PTSD is associated with higher levels of substance use problems (e.g., Breslau, Davis, & Schultz, 2003). Substance misuse is also associated with greater levels of marital distress (e.g., see review by Marshal, 2003). Furthermore, Taft, Kaloupek et al. (2007) found that hyperarousal symptoms exerted not only a direct effect on interpersonal aggression in veterans, but also an indirect effect on aggression via levels of alcohol use. Thus, comorbid alcohol and drug use is another veteran behavior that may have a strong impact on spouses' distress. Once again, future research that includes direct assessment of distress in spouses and that focuses on specific behaviors that may mediate the association of PTSD-related hyperarousal in

veterans and relationship distress in spouses (e.g., Taft, Kaloupek, et al.) can help clarify the mechanisms by which spouses of veterans with combat-related PTSD become distressed.

## *Spouses' Behaviors*

We identified no empirical research focused on specific behaviors of spouses of veterans with combat-related PTSD that might relate to spouses' own distress. Recently, however, Monson and colleagues (Fredman, Monson, & Adair, in press; Monson, Fredman, & Dekel, 2010) have reported frequently observing accommodating behavior in their clinical work with spouses of veterans with combat-related PTSD. In the context of anxiety disorders, accommodation refers to behaviors of relatives that are intended to alleviate a patient's anxiety in the short-term by facilitating the patient's avoidance. For example, Monson, Fredman, and Dekel note that spouses sometimes take on responsibility for tasks that make veterans anxious (e.g., grocery shopping) or make excuses to friends and family for veterans' avoidance of group activities or events.

Although no empirical data regarding accommodation in spouses of those with PTSD yet exist, these types of behaviors have been observed frequently in relatives and spouses of those with other types of anxiety disorders like obsessive compulsive disorder (OCD; see review by Renshaw, Steketee, et al., 2010). In OCD, accommodation in relatives/spouses of individuals with OCD is significantly correlated with both relationship and psychological distress in those relatives/spouses (Renshaw, Steketee et al., 2010). Similarly, Monson, Fredman, and Dekel (2010) note that accommodation in spouses of those with PTSD is typically associated with decreased relationship satisfaction due to restrictions in mutually enjoyable activities and open communication (e.g., a spouses avoiding expression of too much emotion or discussion of certain topics). Thus, accommodation may be one example of spousal behavior that has an impact on their own adjustment to veterans' PTSD. Empirical research that parallels that conducted with relatives/spouses of those with OCD and other anxiety disorders is needed, however, to further evaluate this potential mechanism of spouse distress.

## *Spouses' Cognitions*

In this chapter, we focus on spouses' cognitions rather than veterans' cognitions, as veterans' cognitions would likely influence the spouse through their effects on veterans' overt behavior. There are three primary areas of spousal cognition that have recently been shown to be related to their own levels of distress: (1) perceptions of veterans' functioning, (2) attributions for veterans' psychological and functional difficulties, and (3) perceived burden. We review this evidence below;

however, it is important to note that this general realm has only recently received empirical attention. Thus, there are likely several additional areas of spousal cognition that may impact their reactions to combat-related PTSD that are yet to be investigated.

## *Perceptions of Veterans' Symptom Severity*

One area of cognition that likely plays a role in a spouse's distress is his/her perception of how symptomatic the veteran is, and how well the spouse believes the veteran is coping with any perceived distress. Although this point may seem fairly obvious, there are important implications that derive from considering this area of cognition. In a recent study of 50 National Guard service members who had served in Iraq, Renshaw, Rodrigues, & Jones (2008) found that spouses' perceptions of service members' PTSD symptom severity were significantly more strongly related to spouses' distress than service members' own self-report of symptom severity. Moreover, there was a significant interaction between spouses' perceptions and veterans' own self-report, such that when spouses perceived high levels of PTSD symptoms in service members, higher reports of PTSD from service members were related to *less* psychological distress in spouses. In other words, spouses were most distressed when they believed service members were having psychological difficulties, but service members reported that they were not symptomatic. Renshaw, Rodrigues, and Jones (2008) argued that the greater distress in these spouses may be due to the combined effects of (a) service members' symptoms and (b) conflicts and problems that ensue due to the disagreement between service members and spouses about how distressed the service members truly were (e.g., conflict about whether service members should seek mental health services). This type of situation could lead to both increased frustration and marital conflict for spouses, which could contribute to greater psychological and marital distress.

These replicated findings suggest that spouses' perceptions of veterans' symptoms may be more than simply a proxy index of veterans' PTSD. Rather, the correspondence (or lack thereof) between spouses' perceptions and veterans' own admissions of such symptoms appears to be influential in its own right. In addition to potential conflicts regarding the veterans' need for psychological help, such disagreements in perceptions of veterans' symptoms may lead to overt conflicts if the spouse openly interprets certain behaviors as reflective of a mental illness (which veterans may view as patronizing or condescending). Moreover, such disagreement may impact the spouse's beliefs about the likelihood that such problems will remain intractable (e.g., if the veteran does not admit the need for help, the spouse may have a more pessimistic outlook on the likelihood of improvement), which could have additional impact on the spouse's distress and commitment to the relationship. Future studies of spouses of veterans with combat-related PTSD are needed to investigate these possibilities and to determine whether such information can help inform the design of interventions to help mitigate spouses' distress.

## *Attributions for Perceived Problems*

Prior research has suggested that people's emotional reactions to others' psychological problems are highly related to their attributions for those problems. For example, when individuals view another's psychological difficulties as uncontrollable, they are more likely to experience empathy or pity, but when they view such difficulties as controllable, they are more likely to feel critical and blaming of that individual (Barrowclough & Hooley, 2003; McKay & Barrowclough, 2005; Renshaw, Chambless, & Steketee, 2006; Weiner, Perry, & Magnusson, 1988). Along these lines, two recent studies have yielded results suggesting that spouses' attributions may be important in their reactions to combat veterans' symptoms.

In the aforementioned study of 50 spouses of National Guard service members who served in Iraq (Renshaw, Rodrigues, & Jones 2008), spouses' perceptions of service members' deployment experiences were also assessed. There was a significant interaction between spouses' perceptions of service members' combat experience and service members' self-report of PTSD symptoms in predicting spouses' marital distress. Specifically, when spouses perceived that service members had experienced low levels of combat exposure, the association between service members' PTSD and spouses' marital distress was significant and positive, as in most prior research (see reviews by Galovski & Lyons, 2004; Monson, Taft, & Fredman, in press). However, when spouses perceived that service members had experienced high levels of combat, spouses' marital distress was not related to service members' PTSD symptoms. In a larger follow-up study of nearly 200 spouses of service members who had been deployed to Iraq or Afghanistan during OEF/OIF, a similar pattern with regard to spouses' psychological distress was found (Renshaw, Rodrigues, Caska, Owens, & Jones 2008). Specifically, when spouses perceived that service members had experienced high levels of traumatic postbattle experiences (e.g., handling dead bodies), there was no significant association of service members' symptoms and spouses' psychological distress. However, when spouses perceived that service members had experienced few such postbattle experiences, there was a significant, positive association between service members' and spouses' psychological symptoms.

This replicated pattern of findings is consistent with the idea that spouses are less negatively affected by veterans' symptoms if they can attribute those symptoms to external, uncontrollable events. In addition, spouses' attributions of globality and stability may also play an important role in their distress. For instance, spouses who view veterans' problems as specific to only their relationship may have a substantially different reaction than those who view veterans' problems as more global in nature, and spouses who see veterans' symptoms as stable and intractable are likely to develop more distress than those who see such problems as temporary. Furthermore, spouses' attributions are likely to change over time, as spouses' view of problems as temporary and uncontrollable may change if significant amounts of time pass without any improvement in veterans' functioning. Future research that incorporates explicit assessment of spouses' attributions over time will help elucidate these relationships.

## *Perceived Burden*

Perceived burden refers to the negative impact that a spouse believes a veteran and his/her PTSD symptoms have had on areas of the spouse's life, such as physical and psychological well-being, social life, and finances. Higher levels of perceived burden have been detected in relatives of individuals with a variety of medical and mental health–related problems, with direct correlations between patient symptom severity and relatives' perceived burden (Biegel, Ishler, Katz, & Johnson, 2007; Majerovitz, 2007; McDonell, Short, Berry, & Dyck, 2003). These findings have recently been extended to spouses of veterans with combat-related PTSD (Beckham et al., 1996; Calhoun et al., 2002; Dekel et al., 2005; Manguno-Mire et al., 2007). In turn, spouses' perceived burden has also been shown to be related to their levels of psychological distress (Beckham et al., 1996; Calhoun et al., 2002; Caska & Renshaw, in press; Dekel et al., 2005; Manguno-Mire et al., 2007), and two studies have found that spouses' perceived burden partially or fully mediates the relation between patients' symptoms of PTSD and spouses' distress (Caska & Renshaw, in press; Dekel et al., 2005). Moreover, Caska and Renshaw (in press) found that this pattern held for other types of psychological symptoms (e.g., depression, general anxiety) and was equally strong for spouses of service members with clinical and nonclinical levels of distress.

Although the relevance of perceived burden seems clear, what is yet to be determined is the extent to which such perceptions might reflect distortions due to spouses' own methods of coping with stress, vs. an accurate reflection of difficulties stemming directly from veterans' PTSD. Caska and Renshaw (in press) made a preliminary attempt to address this by examining the unique variance in perceived burden that was accounted for by veterans' self-reported PTSD symptom severity and several spousal characteristics (e.g., neuroticism, coping styles, social support). In a simultaneous regression of burden onto these factors, only veterans' symptom severity and one spousal characteristic (emotion-focused coping) remained as significant correlates of burden. This pattern suggests that perceptions of burden are more tied to veterans' actual symptoms than intraindividual characteristics of the spouse; however, some intraindividual characteristics may play a role. These results, however, are clearly preliminary. Further research is needed to determine how such perceptions relate to more objective measures of veterans' functioning, of excess responsibility and limitations placed on spouses, and of individual characteristics of spouses that may be associated with cognitive distortions.

## *Summary*

In the context of the CATS model (Nelson Goff & Smith, 2005) (see Fig. 4.1), the evidence reviewed above focuses on the individual partner functioning box, and the paths from veterans' functioning and the couples' relationship to partners' functioning. There appear to be several interpersonally oriented behaviors on the part of both veterans and spouses that can directly impact spouses' psychological well-being and

marital satisfaction. Veterans' avoidance and emotional withdrawal may result in feelings of loneliness, abandonment, frustration, and marital dissatisfaction in spouses. Veterans' hyperarousal and angry outbursts may result in a chaotic living situation that contributes to psychological and marital distress in spouses. At the extreme, such outbursts may include violent acts toward the partner that lead to more severe distress. Although there is less research to date on spouses' behaviors that may play a role in their distress, the novel work of Monson and colleagues (Fredman et al., in press; Monson, Fredman, Dekel, 2010) suggests that spouses of veterans with combat-related PTSD may engage in accommodating behaviors, such as facilitating veterans' avoidance. Despite the fact that such behaviors may be well-intentioned, research with regard to other anxiety disorders suggests that accommodating behavior is linked with increased levels of both psychological and relationship distress in family members (e.g., see review by Renshaw, Steketee, et al., 2010).

In addition, there are several areas of cognition that may directly affect spouses' individual experience of psychological and marital distress. Mounting research suggests that the degree to which spouses feel burdened by veterans' symptoms has an important association with their own levels of distress (Beckham et al., 1996; Calhoun et al., 2002; Caska & Renshaw, in press; Dekel et al., 2005; Manguno-Mire et al., 2007). Also, recent findings from multiple samples indicate that the way in which spouses perceive and explain veterans' problems and symptoms are an important component of their emotional reaction to veterans' PTSD. These perceptions of and attributions for others' behaviors have proven to be integral in understanding the reactions of relatives of patients with other types of anxiety disorders (e.g., Renshaw, Steketee et al., 2010). Based on this type of research and the recent findings discussed above, such cognitions appear to have the potential to help elucidate our understanding of the distress experienced by spouses of veterans with combat-related PTSD, as well.

Below, we discuss the implications for future research of these findings and the application of a cognitive-behavioral perspective to this area. Given the recency of much of this research, the implications and recommendations presented below are certainly preliminary, but will hopefully provide a guide for future inquiry in this area.

## Conclusions and Future Directions

As noted above, over 1.5 million military service members have been deployed to combat theaters in recent years (Tanielian & Jaycox, 2008), and the current sociopolitical climate suggests that such deployments will continue for some time to come. Epidemiological studies of returning service members indicate that as much as 24% of returning service members are experiencing appreciable levels of PTSD symptoms within a few months of returning home (Milliken et al., 2007). One of the most important predictors of whether individuals develop PTSD after traumatic events is the presence of strong social support (see meta-analyses by Brewin, Andrews, & Valentine, 2000; Ozer, Best, Lipsey, & Weiss, 2003). At the same time, a large body of literature demonstrates that spouses of those with combat-related

PTSD, who could potentially provide such needed social support, are particularly vulnerable to personal distress of their own (see reviews by Galovski & Lyons, 2004; Monson, Taft & Fredman, in press). Thus, veterans with combat-related PTSD and their spouses represent a system at risk of worsening intraindividual and interpersonal distress. This potential systemic risk is captured in the CATS model proposed by Nelson Goff and Smith (2005) (see Fig. 4.1).

Given this clear risk, it is imperative to advance our understanding in this area by investigating the potential mechanisms by which distress occurs in both combat veterans with PTSD and their spouses. With regard to the spouses, we need to begin to understand how some individuals become distressed while others do not. What are the risk and protective factors for the development of individual distress in spouses of those with combat-related PTSD? As reviewed above, emerging research over the past several years suggests that interpersonally relevant cognitions and behaviors can provide a useful theoretical perspective in this area. This perspective can, in turn, provide a structure for the design of interventions that target both individual- and possibly couple-level distress. Based on this perspective and the research to date, we offer the following suggestions for future research that can help advance our knowledge in this area.

1. Research on functioning in romantic relationships needs to progress to include reports from the actual partners of veterans, rather than relying solely on veterans' self-report. Although it is important to understand the perceptions of veterans, it is clear that those perceptions do not always match the perceptions of their spouses. Thus, to gain a clearer understanding of spousal distress, we recommend that researchers include explicit assessment of those spouses. Ideally, future investigations would incorporate self-report from both partners in the couple, as well as objective measures (e.g., clinician-administered interview, behavioral observation).
2. Investigations of spousal distress should move beyond consideration of general PTSD symptom severity in veterans to include presence and severity of specific symptoms associated with PTSD. Studies that examine the specific clusters of reexperiencing, avoidance, and hyperarousal have suggested that veterans' reexperiencing symptoms are typically unrelated to spousal distress, whereas avoidance and hyperarousal seem more strongly linked to such distress. Moreover, specific symptoms within clusters may be important. The clearest example of this possibility is the specific association of veterans' emotional numbing (over and above other avoidance symptoms) with relationship distress (Cook et al., 2004; Riggs et al., 1998; Taft et al., 2008). Future research needs to consider the possibility that specific symptoms within the clusters may carry more weight than others in predicting spouses' distress. Thus, we recommend that researchers employ assessment and analytic techniques that enable the examination of associations between spousal distress and specific symptoms or sets of symptoms in veterans with PTSD.
3. Related to the recommendation above, there are many comorbid conditions that frequently accompany PTSD, such as depression and substance abuse (e.g., Miller, Fogler, Wolf, Kaloupek, & Keane, 2008). Thus, we recommend that

researchers include these constructs when examining specific symptom sets in relation to spouses' distress.

4. Along the same lines, not all combat veterans who experience distress upon return from deployment will meet criteria for a clinical diagnosis of PTSD. Nevertheless, subclinical levels of PTSD and associated conditions are likely to be quite stressful for spouses. Thus, we recommend that researchers include a focus on subclinical levels of PTSD in future research on couples and families of combat veterans.
5. In general, research on marital relationships in the context of combat-related PTSD has been largely confined to global measures of relationship satisfaction as outcome variables. We recommend that researchers focus on specific aspects of relationship satisfaction, such as intimacy and closeness, trust, commitment, and sexual functioning. It is likely that different areas of relationship functioning may be more or less associated with different aspects of PTSD (e.g., emotional numbing may be associated with greater decreases in intimacy than in trust); thus, research that includes multiple realms of relationship functioning can help clarify the distress experienced by spouses.
6. We strongly recommend that research in this area move toward a focus on the mechanisms by which spouses of veterans with combat-related PTSD develop psychological and marital distress. In this vein, we encourage researchers to include explicit assessment of interpersonally relevant cognitions and behaviors (i.e., veterans' behaviors, spouses' behaviors, couple-level behaviors, and spouses' cognitions). Moreover, because this perspective is only one theoretical possibility, we call on researchers with other theoretical orientations to clearly spell out their theoretical framework of spousal distress and design and conduct research that can test their proposed constructs. Relatedly, we encourage researchers to move beyond simple correlational associations to examine theoretically driven models of mediation and moderation. A good example of such research is provided by Solomon et al. (2008), who examined specific types of PTSD symptoms (i.e., reexperiencing, avoidance, and hyperarousal), theoretically informed behavioral correlates (e.g., self-disclosure and aggression), and relationship variables (e.g., intimacy). Only with such focused efforts can we move our knowledge in this area forward in a meaningful manner.
7. Given the likely transactional processes that occur in the relationships of combat veterans with clinical or subclinical PTSD, there is a strong need for longitudinal research that can adequately test and model such transactions. In addition, as such data are collected, the use of more sophisticated analytic approaches (e.g., latent growth curve analysis, hierarchical linear modeling) that can model effects over time and account for both individual and couple-level effects will be needed. This type of research will greatly enable us to increase our knowledge in this important area.
8. Lastly, we urge researchers to attend to potential sex and cultural differences in this area. Studies of spouses of veterans with combat-related PTSD have been almost uniformly limited to female spouses of male veterans, with predominantly White samples. As we begin to advance our knowledge in this area, and particularly as increasing numbers of women join the branches of the

military, it is extremely important not to overgeneralize previous findings. For instance, extensive prior research has indicated that veterans' degree of combat exposure is related to interpersonal problems only indirectly, via symptoms of PTSD (see reviews by Galovski & Lyons, 2004; Monson, Taft, & Fredman, 2009). However, in a recent study that included large numbers of both male female veterans, Taft et al. (2008) found that combat exposure exhibited both direct and indirect effects on interpersonal problems for female veterans (not for male veterans). This type of research is sorely needed, as correlates of relationship distress often differ across sexes. Similarly, very little empirical information exists on potential differences across racial/ethnic groups in terms of distress in spouses of combat veterans with PTSD. In one recent study of perceived burden (Caska & Renshaw, in press), there was preliminary evidence for higher levels of perceived burden in nonwhite spouses, relative to White spouses. However, these findings were limited by the very low number of minority participants in that sample. Future studies that can recruit both minorities and male spouses of female veterans would greatly enhance our knowledge in this area.

Although we recognize that these recommendations do not address all of the limitations in this area of research, we hope that they will help provide a template for future studies that can assist in the overall understanding of functioning in spouses of veterans with combat-related PTSD. As we broaden this understanding, we can move toward the design of interventions that target risk factors and enhance resilience factors in these spouses. Such interventions could serve not only to alleviate distress in these individuals, but also in veterans who can be bolstered to some degree by strong support networks.

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