Do differentiation of self and dispositional optimism moderate the relation of perceived PTSD symptoms to military partners' romantic relationship satisfaction?

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DO DIFFERENTIATION OF SELF AND DISPOSITIONAL OPTIMISM MODERATE THE RELATION OF PERCEIVED PTSD SYMPTOMS TO MILITARY PARTNERS’ ROMANTIC RELATIONSHIP SATISFACTION?

by

Patricia Cabrera

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Abstract

Despite extensive research on the harmful effect of posttraumatic stress disorder (PTSD) symptoms on veterans, little is known about military couples’ post-deployment adjustment process. From the perspective of positive psychology, the present study extended the literature on this topic by examining the possible buffering contributions of dispositional optimism and differentiation of self on the relation between partner-perceived PTSD symptoms and relationship satisfaction.

Military wives and female partners of veterans and active duty service members (N = 235) who had experienced a combat deployment were recruited online. The counterbalanced measures included the Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5; Weathers et al., 2013), the Revised Dyadic Adjustment Scale (RDAS; Busby et al., 1995), the Life Orientation Test-Revised (LOT-R; Scheier et al., 1994) and the Differentiation of Self Inventory-Revised (DSI-R; Skowron & Schmitt, 2003).

The full model, including military status as a covariate (active duty versus veteran), accounted for 21.2% of the variance in relationship satisfaction, as measured by the RDAS. Although neither buffering hypothesis was supported, consistent with prior research partner-perceived PTSD symptoms was associated with less relationship satisfaction. Additionally, dispositional optimism as measured by the LOT-R and self-differentiation (DSI-R total score) were unique predictors of relationship satisfaction. Notably, optimism contributed to satisfaction controlling for the perceived severity of the male partner’s PTSD symptoms and his status as active duty or separated from the military. Contrary to prediction, however, the association between total DSI-R scores and satisfaction was negative, indicating that greater self-differentiation was associated with less relationship satisfaction.
Post hoc analyses with the four DSI-R subscales were conducted to understand which aspects of differentiation may have accounted for this unexpected finding. Results showed that participants who indicated that their partners had a formal PTSD diagnosis and more severe symptoms reported greater emotional reactivity and less emotional cutoff. The implications for working therapeutically with these couples are discussed.
Dedication

I wish to dedicate this dissertation to the brave women and men who have answered the call to serve our country and have selflessly made sacrifices necessary to protect our freedoms, and to their families who have also sacrificed. Your courage, duty, and integrity will forever inspire me.
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INTRODUCTION

Extensive research on the psychological effects of combat has been conducted with military personnel from several eras and conflicts, including the Vietnam war (Jordan et al., 1992), wars in Israel (Solomon, Dekel, & Zerach, 2008), Operation Desert Shield/Storm (Creech, Benzer, Liebsack, Proctor, & Taft, 2013) and more recently, Operation Enduring Freedom [OEF] Operation Iraqi Freedom [OIF] and Operation New Dawn [OND] (Allen, Rhoades, Stanley, & Markman, 2010; Hoge et al., 2004; Nelson Goff, Crow, Reisbig, & Hamilton, 2007; Possemato, Pratt, Barrie, & Ouimette, 2015). In particular, research with service members who experienced one or more combat deployments indicates a high prevalence of negative psychological outcomes, including major depression (Hoge et al., 2004, 2006), self-inflicted wounds (Fischer, 2014), suicidal ideation (Bray et al., 2010) and symptoms of posttraumatic stress disorder (PTSD; Institute of Medicine, 2013; Taft et al., 2007).

In the past decade, a great deal of attention has been paid to the consequences of PTSD in the military population. This disorder, which can result from a person’s exposure to or actual threatened death, serious injury or sexual violation, is characterized by re-experiencing the traumatic event(s), avoidance, hyperarousal and negative changes in cognition and mood (American Psychiatric Association, 2013). The psychological effects of PTSD are not limited to the individual service member, however. Evidence from studies examining the outcomes of combat-related PTSD indicates high rates of family difficulties (Galovski & Lyons, 2004; Sayers, 2011), and longitudinal surveys indicate that the fastest growing concern among service members with PTSD has to do with their interpersonal functioning (Milliken, Auchterlonie, & Hoge, 2007).
Indeed, it has been well established in civilian as well as military couples (Lambert, Engh, Hasbun, & Holzer, 2012) that when one partner has significant PTSD symptoms, the other partner tends to report diminished relationship satisfaction (Dekel & Solomon, 2006; Nelson Goff et al., 2007; Renshaw et al., 2010; Taft et al., 2011). Researchers have repeatedly found significant levels of emotional distress among the partners or spouses of active duty service members/veterans who are experiencing PTSD symptoms (Allen et al., 2010; Greene, Lahav, Bronstein, & Solomon, 2014; Lambert et al., 2012; Mansfield et al. 2010). In many cases, the partner’s distress and relational dissatisfaction are due in part to the burden of caregiving (Dekel, Solomon, & Bleich, 2005), compassion fatigue (Figley, 1995; 2002), or secondary traumatization (Arzi, Solomon, & Dekel, 2000).

In general, little is known about the post-deployment adjustment process for couples. It is known, however, that military deployments, even peacekeeping deployments, tend to be highly stressful for these couples (Negrusa, Negrusa, & Hosek; 2014). In addition to the lack of physical intimacy, considerable changes in the partner’s role responsibilities are required during the service member’s long absences from home, which tend to make the post-deployment adjustment process particularly difficult (Pincus, House, Christenson, & Adler, 2011).

Not surprisingly, there tends to be an even greater strain on the couple’s adjustment when the service member is experiencing a significant mental health condition like PTSD (Riggs, Byrne, Weathers, & Litz, 1998). Among military couples the intensity of PTSD symptoms is associated with the extent of relationship dissatisfaction (Chrysosam et al., 2005; Dekel & Solomon, 2006). While most of the relevant research on romantic relationship satisfaction is retrospective, a few longitudinal studies (Campbell & Renshaw, 2013; Erbes, Meis, Polusny,

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1 Hereafter, the term service member refers to active duty military personnel as well as veterans.
Compton, & Wadsworth, 2012; Snyder, Balderrama-Durbin, Cigrang, & Talcott, 2016) reported that elevated PTSD symptoms predicted subsequent relational conflict for veterans and their partners. Studies have also shown that compared to veterans without these symptoms, veterans with PTSD symptoms tend to report a higher rate of family violence (Byrne & Riggs, 1996), which is, in turn, associated with elevated distress in their romantic partners (Solomon et al., 2008).

Aside from overt conflict, living with a partner who is experiencing PTSD symptoms may contribute to relationship dissatisfaction in other ways. One study reported that male veterans with combat-related PTSD symptoms tended to be less self-disclosing and expressive with their partners than veterans without PTSD (Caroll, Rueger, Foy, & Donahoe, 1985). In the general population, PTSD-related avoidance and emotional numbing are strongly predictive of relationship difficulties and poor family adjustment (Ray & Vanstone, 2009; Taft, Schumm, Panuzio, & Proctor, 2008). Romantic partners often engage in avoidance behaviors when they attempt to accommodate and protect the service member with PTSD in order to make their own lives more controllable (Fredman, Vorstenbosch, Wagner, Macdonald, & Monson, 2014). However, accommodation and protection can pose a dilemma when efforts to assist the partner with PTSD are met with anger and resentment (Grimesey, 2009).

The general purpose of the present study was to extend this literature by examining service members’ PTSD symptoms from the perspective of the romantic partner. Generally speaking, the partner’s perspective tends to be overlooked in the military literature (Lambert et al., 2012; Nelson Goff et al., 2009; Renshaw, Allen, Carter, Markman, & Stanley, 2014; Renshaw et al., 2008; Renshaw & Campbell, 2011; Taft et al., 2011).
There have, however, been several investigations on partner-perceived PTSD symptoms. One study showed that women can accurately discern these troubling symptoms in their partners (Gallagher, Riggs, Byrne, & Weathers, 1998). In another study (Renshaw et al., 2008), more marital distress was reported by wives who perceived that their husbands had experienced little combat activity when deployed yet had high levels of PTSD symptoms. These results suggest that the female partner’s perception of PTSD symptoms, irrespective of whether the service member actually has received a PTSD diagnosis, is a salient factor in post-deployment relationship satisfaction (Renshaw et al., 2008).

Another limitation in the literature is a lack of attention to factors that may contribute to relationship satisfaction in military couples, relative to knowledge of factors contributing to dissatisfaction and conflict (Karney & Crown, 2007). In other words, the disproportionate focus on problematic military couples obscures our understanding of how couples who are coping with PTSD symptoms are able to manage the transition home from deployment successfully.

The first objective of the present study was to extend studies in this area (Renshaw et al. 2008, 2010) by examining the association between partner-perceived PTSD symptoms and relationship satisfaction. Second, since little is known about how individual differences contribute to satisfaction in military couples (Caska & Renshaw, 2011; Karney & Crown, 2007), and personality has been shown to moderate the outcomes of negative military experiences (Wood et al., 1995), two individual difference factors were examined as potential moderators of the relation between partner-perceived PTSD symptoms and relationship satisfaction. These protective factors were dispositional optimism (Scheier & Carver, 1985) and differentiation of self (Bowen, 1988).
Dispositional Optimism and Relationship Satisfaction

In the positive psychology literature (Seligman, 2002), optimism is described in three distinct ways: optimism attribution (i.e., explanatory style, or the way a person makes sense of good and bad events in the past), optimism bias (i.e., the belief that one is more capable and less likely to face negative situations in comparison to others), and dispositional optimism (i.e., the extent to which a person maintains generalized favorable expectancies for the future; Carver, Scheier, & Segerstrom, 2010).

Although authors differ in their understanding and measurement of optimism, dispositional optimism is the most clearly defined and operationalized of the three constructs (Carver et al., 2010). The concept stems from a model of self-regulation, in which positive expectancies are said to result in more effort to attain desired outcomes or goals, whereas negative expectancies tend to result in less effort and disengagement (Nes & Segerstrom, 2006). In support of this model, early research showed that more optimistic individuals report experiencing less distress across various stressful events (Scheier & Carver, 1985, 1992), suggesting that optimists tend to adjust better to difficult situations.

With respect to how optimists cope with stress, in a meta-analysis of 50 studies, Nes and Segerstrom (2006) found that dispositional optimism was positively associated with approach coping strategies (those that aim to eliminate or reduce stressors), but negatively associated with avoidance coping strategies (those that involve ignoring, avoiding, or withdrawing from stressors). Furthermore, optimists tend to have more behavioral flexibility in handling stressors in that they tend to disengage from hopeless responsibilities and modify their attention to more manageable issues (Srivastava & Angelo, 2009).
With respect to relational functioning, people who report relatively more dispositional optimism generally tend to work harder at relationships (Segerstrom, 2007) and report better romantic relationship quality (Assad, Donnellan, & Conger, 2007) and satisfaction (Neff & Geers, 2013; Terveer & Wood, 2013). Likewise, Srivastava and Angelo (2009) reported that optimists’ romantic relationships tend to have a low risk of dissolution.

In a few studies dispositional optimism has been investigated in relation to PTSD among service members and prisoners of war (e.g., Rauch et al., 2013; Segovia, Moore, Linnville, Hoyt, & Hain, 2012; Thomas, Britt, Odle-Dusseau, & Bliese, 2011). In all of these studies, individuals higher in dispositional optimism reported fewer PTSD symptoms and overall negative outcomes.

To date, however, dispositional optimism has not been studied among military couples or in relation to partner-perceived PTSD symptoms. It was reasoned that since optimists are generally better able to cope and expect positive outcomes irrespective of how challenging a situation may be (Scheier et al., 1994), optimistic partners would be likely to experience their relationships as satisfying, even when their romantic partners exhibit many PTSD symptoms, and the partner’s optimism was expected to weaken the relationship between symptom severity and relationship satisfaction.

**Differentiation of Self and Relationship Satisfaction**

In Bowen’s (1988) family systems theory, the construct *differentiation of self* refers to the effects of a family system on the health and development of its individual members. By definition, differentiation of self refers to the magnitude of emotional interdependence in relationships and how that interdependence affects an individual level of functioning (Kerr & Bowen, 1988). On an intrapersonal level, differentiation represents the distinction between thoughts and feelings and a person’s ability to rely on intellect or emotions as a situation dictates.
On an interpersonal level, differentiation refers to a person’s capacity to experience intimacy with others as well as to function autonomously when necessary (Bowen, 1978). In other words, high levels of differentiation reflect a balance between thought and emotion on the one hand, and separateness and togetherness on the other hand.

Bowen (1978; Kerr & Bowen, 1988) theorized that low differentiation of self is reflected in chronic anxiety, psychological dysfunction and physical symptoms, whereas high differentiation of self is reflected in resilience in the face of stress and psychological adjustment. Moreover, Bowen (1978) theorized that as a construct, differentiation of self is a universal index of global functioning. Despite some mixed results (Chung & Gale, 2006), this theory has been upheld. For example, Tuason and Friedlander (2000) found a relation between differentiation of self and psychological functioning in a Philippine sample, and Işık and Bulduk (2015) found similar results in a Turkish sample.

As a psychological construct, differentiation of self is also said to be foundational to long-term intimacy and mutuality in marriage (Kerr & Bowen, 1988). In line with this theorizing, many studies examined the association between differentiation of self and romantic relationship satisfaction (e.g., Holman & Busby, 2011; Khaddouma, Gordon, & Bolden, 2015; Peleg, 2008; Skowron & Friedlander, 1998). Results generally, but not consistently, suggest a positive association between differentiation and marital adjustment, possibly due to variations in the different measures and samples used in these studies. Skowron (2000), for example, found that in a community sample, couples’ levels of differentiation, as measured by the Dyadic Adjustment Scale (Spanier, 1976), significantly contributed to marital adjustment. Specifically, 74% of the variance in husbands’ marital adjustment and 61% of the variance in wives’ adjustment were accounted for by scores on the revised Differentiation of Self Inventory (DSI-R;
Skowron & Schmitt, 2003). On the other hand, Lal and Bartle-Haring (2011) found that in a sample of patients with chronic lung disease, the patients’ self differentiation did not predict their relationship satisfaction.

According to Bowen (1978), individuals who feel particularly stressed in relationships with others tend to respond either with a high level emotional reactivity or by reactive distancing, also called emotional cutoff. In a study of Israeli couples at different stages of married life, Peleg (2008) found that among the various aspects of self-differentiation measured by the DSI-R, lower emotional cutoff was associated with marital satisfaction for both men and women. Moreover, Peleg also found gender differences, in which emotional reactivity, emotional cutoff and I-positions were related to marital satisfaction for the husbands, and only emotional cutoff was related to satisfaction for the wives.

Military relationships are distinctive from most civilian relationships due to the inherent stressors on couples when one partner is absent for long periods of time and liable to experience significant physical harm, even death, in combat. Due to the extent to which military partners cope with these extreme stressors, PTSD symptoms coupled with low levels of differentiation are likely to contribute to a partner’s relationship distress. Supporting this reasoning, in previous research with former Israeli prisoners of war (POWs), the wives of veterans with PTSD showed significantly more fusion and detachment (Dekel, 2010), two aspects of poor self-differentiation, than the wives of veterans without PTSD, and these extremes of differentiation were predictive of greater marital distress.

Thus, based on Bowen theory and relevant prior studies, it was predicted that more highly differentiated female partners would be more satisfied overall with their relationships and better able to cope with severe PTSD symptoms in their male partners. In other words, differentiation
was hypothesized to weaken the negative effects of perceived PTSD symptoms on relationship satisfaction.

**Summary and Hypotheses**

The present study extended the limited literature on romantic partners’ perceptions of PTSD symptoms experienced by service members (Renshaw et al., 2008, 2010). In particular, an examination of partners’ personal characteristics was expected to offer an understanding, based on positive psychology, of factors that may facilitate relationship satisfaction when service members who had experienced a combat deployment are exhibiting PTSD symptoms.

It was hypothesized, first, that partner-perceived PTSD symptoms would be negatively associated with relationship satisfaction. Second, it was hypothesized that both differentiation of self and dispositional optimism would be positively associated with relationship satisfaction, replicating earlier research in non-military couples. That is, for partners with relatively higher levels of optimism and self-differentiation, relationship satisfaction would be stronger. Third, it was hypothesized that as moderators, dispositional optimism and differentiation of self would weaken the negative association between partner-perceived PTSD symptoms and relationship satisfaction. That is, for partners with higher levels of dispositional optimism the relation between partner-perceived PTSD symptoms and relationship satisfaction would be weaker than for partners with lower levels of dispositional optimism. Moreover, for partners with higher levels of differentiation of self the relation between partner-perceived PTSD symptoms and relationship satisfaction would be weaker than for partners with lower levels of differentiation.

It was anticipated that results of the study would provide a greater understanding of the role of resilience in military couples who had experienced stress and a prolonged separation due to combat deployment.
METHOD

Participants

Due to limited research on romantic partners’ perceptions of PTSD symptoms and their relationship satisfaction, effect sizes could not be estimated. Therefore, the power analysis was based on the conventional medium effect size of $r^2 = .05$ (Cohen, 1988). For the interactions of perceived PTSD symptoms with differentiation of self and dispositional optimism, the estimated semi-partial $r^2$ for each interaction was .05. Results indicated that a sample of 235 participants would be necessary to achieve .80 power with $\alpha = .05$ (Cohen, 1988).

The final sample included 235 women ($M$ age = 32 years, $SD = 7.38$) who were married or in a committed romantic relationship with a U.S. military (Army, Navy, Air Force, Marine Corps, and Coast Guard) service member who (a) was either on active duty or a veteran and (b) had experienced at least one deployment more than 3 months previously in an area designated by the armed forces as a combat zone (e.g., the Arabian Peninsula, Kosovo, Vietnam, Afghanistan, and the airspace above any of these areas).

To be inclusive, the sample included married as well as non-married women (e.g., engaged, cohabiting, committed). Also, only women who were not themselves service members or veterans were sampled because dual military couples tend to have unique stressors and higher divorce rates than non-dual military couples (Negrusa et al., 2014). Excluded were women who were legally separated or in a romantic relationship with a service member for $< 6$ months.

Only female partners of male service members were studied due to the disproportionately smaller number of female service members and notable gender differences in the preparation for (Carney et al., 2003) and experience of deployment overseas (e.g., Myers, 2009) as well as in couples’ post-deployment re-adjustment (Pollard, Karney, & Loughran, 2009). Male partners of
male service members were also excluded due to a lack of comparative data with gay couples on the relationship measure and because these couples tend to have unique stressors in the military (Barber, 2012).

Responses to a demographic questionnaire (Table 1) showed that 88.7% of participants were married, 8.5% were in a committed relationship and/or cohabiting, and 3% indicated “other.” Participants self-identified as Caucasian/White Non-Latina (83.9%), as well as Latina/Hispanic (8.1%), Asian American/Pacific Islander (3.4%), African American (0.8%), and Bi/Multiracial (2.5%). The average length of the romantic relationship was 8.3 years ($SD = 5.87$); most participants (68.6%) had at least one child. A history of intimate partner violence with the current partner was reported by 6.8% of the sample.

Over half of the participants (63%) reported that their romantic partners were active duty military personnel; 33% were veterans, and 3.8% were reservists. In terms of specific military affiliation, participants reported that their partners were either on active duty or veterans of the Army (47%); Marine Corps (30.1%), Air Force (10.2%), Navy (8.1%) and National Guard or Reserve (3.8%). The number of partners’ combat tours ranged from 1 to 12 ($M = 2.31, SD = 1.63$). Additionally, most participants (89%) indicated that their romantic partners had deployed at least once as part of OEF/OIF/OND. Furthermore, the majority of participants (65.7%) reported that their partners had not previously been diagnosed with PTSD; partners of roughly a quarter (22.4%) of the sample reportedly had a mental health diagnosis other than PTSD, such as anxiety or depression.

**Measures**

**Posttraumatic Stress Disorder Checklist for DSM-5.** Perceptions of partners’ PTSD symptoms were measured using Renshaw et al.’s (2008) modification of the 20-item
Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5; Weathers et al., 2013;). This measure, which is based on the PTSD symptom criteria listed in the 5th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-V; American Psychiatric Association, 2013), was selected due to its prominent use for PTSD screening in military populations (National Center for PTSD, 2013) and prior versions have been used for assessing partner-perceived PTSD symptoms (Renshaw et al., 2008).

Renshaw et al.’s (2008) revision asks wives to report event-specific questions pertaining to hearing or thinking about their spouses’ combat-zone deployment experience. The measure uses a 5-point rating scale for each item, where 0 = *not at all* to 4 = *extremely*. A sample item asked how much the respondent’s partner was “bothered by repeated disturbing, and unwanted memories of the stressful experience?”

The PCL-5 can be scored in three ways, including (a) a total symptom severity score, (b) a sum of scores for the items in each cluster (i.e., category of symptoms) to obtain a cluster severity score, or (c) treating each item rated 2 = *moderately* or higher as an endorsed symptom, then following the DSM-V diagnostic rule that requires at least 1 B item (questions 1-5), 1 C item (questions 6-7), 2 D items (questions 8-14), 2 E items (questions 15-20) for a PTSD diagnosis. The symptom clusters include intrusion, avoidance, negative alterations in cognitions and mood, and changes in arousal and reactivity. In the present study, the total score (ranging from 0 to 80) was used to reflect overall symptom severity. In a preliminary validation study (Weathers et al., 2013), the cutoff for clinical severity of PTSD was 33.

The original PCL has been used extensively and showed high internal consistency, test-retest reliability, construct validity, and convergent and divergent validity (Pratt, Brief, & Keane, 2006). In the current sample Cronbach’s $\alpha = .98$. 

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**Life Orientation Test Revised.** Participants’ dispositional optimism was measured using the 10-item Life Orientation Test Revised (LOT-R; Scheier et al., 1994), which assesses an individual’s generalized expectancies about the future. Items are rated on a 5-point Likert scale (0 = *strongly disagree* to 4 = *strongly agree*). Six of the 10 items are used to obtain a total score, while the remaining 4 items are fillers. Three negatively worded items are reverse coded prior to summing; total scores can range from 0 to 24, where higher values indicate greater dispositional optimism. A positively worded item is, “In uncertain times, I usually expect the best.” This measure was selected due to previous use as a predictor of marital satisfaction (Assad et al., 2007; Terveer & Wood, 2013).

An exploratory factor analysis of the LOT-R revealed a single factor that explained 48.1% of the variance (Scheier et al., 1994). In revising the original LOT, Scheier and Carver (1985) omitted two items that referred to coping style, rather than positive expectancies, to improve the measure’s reliability. The LOT-R was highly correlated with the original LOT ($r = .95$) and has a similar internal consistency reliability (LOT $\alpha = .82$; LOT-R $\alpha = .78$; Scheier et al., 1994). Chiesi, Galli, Primi, Borgi, and Bonacchi (2013) examined the construct validity of the LOT-R in a sample of 484 university students. In that study, LOT-R scores were positively associated with psychological well-being, sense of mastery, and sense of coherence (Chiesi et al., 2013). In the current sample Cronbach’s $\alpha = .78$.

**Differentiation of Self Inventory-Revised.** The Differentiation of Self Inventory-Revised (DSI-R; Skowron & Schmitt, 2003) is a 46-item instrument that assesses self-reported emotional functioning, intimacy, and autonomy in interpersonal relationships on 4 subscales: Emotional Reactivity (ER; e.g., “I feel things more intensely than others do”), Emotional Cutoff (EC; e.g., “Our relationship might be better if my spouse/partner would give me the space I...
need”), Fusion with Others (FO; “When making decisions, I seldom worry about what others will think”), and I-position (IP; e.g., “I tend to feel pretty stable under stress”). The measure was revised from the original Differentiation of Self Inventory (Skowron & Friedlander, 1998) to improve the FO subscale.

All items are rated on a 6-point Likert-type scale (1 = not at all true of me, 6 = very true of me). The total score is determined by reversing the raw scores on all items on the ER and EC subscales, one item in the IP subscale, and all but one item on the FO subscale. The means of the summed items results in scores that range from 1 (low) to 6 (high), where higher total scores indicate greater differentiation of self. Due to the reversal of scores in three of the four subscales, higher subscale scores indicate lower Emotional Reactivity (ER), lower Emotional Cutoff (EC), lower Fusion with Others (FO), but greater I-Position (IP).

Skowron and Schmitt (2003) reported that the total scale’s internal consistency as α = .92, with subscale αs = .89 (ER), .82 (EC), .85 (FO), and .81 (IP). Previously, Skowron (2000) reported a positive significant association between differentiation, as measured by the original DSI, and marital satisfaction as measured by the Dyadic Adjustment Scale (Spanier, 1976). Later, Skowron (2004) found that DSI total scores reflected greater psychological adjustment and better problem-solving skills in an adult sample. Reliabilities in the current sample were αs = .82 (total), ER = .78, EC = .88, FO = .52, and IP = .68.

Revised Dyadic Adjustment Scale. The 14-item Revised Dyadic Adjustment Scale (RDAS; Busby et al., 1995) was used to assess participants’ relationship satisfaction. Like the original 32-item DAS (Spanier, 1976), the RDAS, modified for brevity, has been used with married and cohabiting couples. Participants rate their feelings about various aspects of their relationship using a 6-point Likert scale, ranging from 0 (always disagree) to 5 (always agree), 0
(never) to 5 (all of the time), and a 5-point Likert type scale, ranging from 0 (never) to 4 (everyday) or 0 (never) to 4 (more often than daily). The RDAS has 3 subscales: Consensus (in decision-making, values, and affection; e.g., “Indicate the extent of agreement or disagreement between you and your partner for making major decisions”), Satisfaction (in relation to stability and conflict regulation; e.g., “How often do you and your partner quarrel”), and Cohesion (as seen through activities and discussion; e.g., “How often would you say that having a stimulating exchange of ideas occurs between you and your mate”). Total scores, which were used in the present study, can range from 0 to 69, with higher scores indicating greater satisfaction. The cutoff score for romantic distress in individuals and couples is 48 (Crane et al., 2000).

Like the original DAS, the RDAS has shown strong reliability, with split-half reliabilities ranging from .90 to .95 for the total scale (Busby et al., 1995). Construct validity for the RDAS was supported by a positive correlation with a similar relationship measure, the Locke-Wallace Marital Adjustment Test, \( r = .68 \) (Busby et al., 1995). The correlation with the original DAS was \( r = .97 \). In a recent dissertation study (Melvin, 2011) that examined PTSD and relationship satisfaction among military couples, \( \alpha = .84 \). Cronbach’s \( \alpha \) in the current sample was .90.

**Demographic questionnaire.** In the demographic questionnaire (see Appendix A), participants were asked to indicate their age, race/ethnicity, sexual orientation, romantic relationship status, duration of the relationship, and number of children. Furthermore, participants were asked about intimate partner violence (with their current partner) and about their partners’ mental health (e.g., whether or not they had a PTSD diagnosis or any other mental health diagnosis), number and duration of the partner’s combat-related deployments, Military Occupational Specialty, rank, military status (i.e., active duty or veteran), and branch of the military.
Procedure

Participants were recruited via online military partners’ support groups (e.g., Wives of Wounded Warriors, Wives of PTSD veterans), social media (e.g., Facebook groups for various military bases), and personal contacts. The recruitment email (see Appendix B) contained the link to the website address of the survey and briefly described the purpose of the study as designed to “learn more about the experiences of military romantic partners.” This email indicated that participation was voluntary, anonymous, and that participants had the right to withdraw at any time. Also, information regarding the Veterans Crisis Line, a confidential portal connecting veterans and their families with Department of Veterans Affairs responders, was included in the informed consent.

The data were collected on the password-protected site psychdata.com. First, participants were presented an informed consent (participation in the online study signified consent; see Appendix C), followed by the demographic questionnaire and the PCL-M (Weathers et al., 1994). Subsequently, the DSI-R (Skowron & Schmitt, 2003), LOT-R (Scheier et al., 1994), and RDAS (Busby et al., 1995) were administered in counterbalanced order. After completion of the survey, participants were provided with a separate online form to provide their contact information in order to receive their choice of either a $5 gift card or $5 donation to the Wounded Warrior Project.
RESULTS

Missing Data

Four hundred sixteen (416) individuals completed the survey, but 178 cases were omitted because the participant did not meet the eligibility criteria. Of the remaining 256 participants, another 21 cases were omitted due to participants having omitted 10% or more of the total items on each of the four measures (Schlomer, Bauman, & Card, 2010).

Although Little’s MCAR test (Little, 1998) indicated that the data in the remaining 235 final cases were not missing completely at random ($\chi^2 = 4026.940$, df = 3796, $p = .005$), further examination indicated that the omitted items were missing at random. When this is the case, the observed variable should be included in the analysis to avoid bias (Schlomer et al., 2010). Thus, for cases in which $\leq 10\%$ of the item responses on any of the measures were missing, the scale scores were computed by averaging the mean for the reported items and then summing the total scores.

Preliminary Analyses

Test of assumptions. Regression diagnostics were performed on the data to assess whether the various assumptions for multiple regression were met (Cohen, Cohen, West, & Aiken, 2003). No threats to the independence of data were assumed, as assessed via the design logic and plots of the variables. Scatterplots of the residuals constructed for the predictors (PCL-5, DSI-R, LOT-R), and criterion (RDAS) variables revealed that the assumption of linearity was met, since the residuals corresponded to the horizontal line where $y = 0.0$. The assumption of normality was also met, since all skewness scores were within the range of -2 to +2 (Tabachnick & Fidell, 2007). The normal probability plots (i.e., q-q plots) for the measure scores yielded straight diagonal lines, with slopes that roughly equaled 1. In terms of homoscedasticity, when
the residuals were plotted against the predictor variables, the data were evenly clustered about
the line where \( y = 0 \), indicating that this assumption was met (Cohen et al., 2003).

Multicollinearity was assessed by inspecting the variance inflation factor (VIF) and
tolerance level. Relationships among predictor variables are considered problematic when
tolerance is \( \leq 0.10 \) or less and when VIF is close to or greater than 10 (Cohen et al., 2003).
Inspection of both indices for all variables revealed no violations (PCL-5 VIF = 1.351, Tolerance
= 0.740; LOT-R VIF = 1.001, Tolerance = 0.999; DSI-R VIF = 1.252; Tolerance = 0.799).

**Outliers.** To identify outliers, leverage, shifts in the regression coefficients, discrepancy,
and influential cases in the model were calculated. No cases exceeded the criterion for centered
leverage \( \left( \frac{3k}{n} = 0.064 \right. \); Cohen et al., 2003), which indicates whether a given data point exerts
undue influence on the model. No cases were identified that exceeded the DFBETA criterion of
\( \pm 1.0 \), suggesting no changes in the relative influence of the predictor variables as a result of
omitting cases. Influential cases assessed using Cook’s Distance showed that no cases exceeded
values greater than the criterion of 1.0 (Tabachnick & Fiddell, 2006).

Finally, Studentized deleted residuals (criteria = \( t \geq \alpha, n-k-2 \) or \( \pm 2.0 \)) revealed 12 cases
with residuals > 2.0. Of these 12 cases, none exceeded more than one of the two criteria. Each
case was inspected, and none appeared to be contaminated. Thus, all 12 outlying cases were
retained in the analyses.

**Sample comparison tests.** Table 2 contains the descriptive statistics on participants’
PCL-5, LOT-R, DSI-R, and RDAS scores and their intercorrelations. For descriptive purposes, a
series of \( t \) tests was performed to ascertain whether scores in the current sample deviated from
those reported with previous samples with the same measures (see Table 3).

The average level of partner-perceived PTSD symptoms on the PCL-5, was modest, \( M = 18.89 \) \( (SD = 21.41) \), in that the cutoff for severe symptoms is 33 (Weathers et al., 2013). On an
earlier version of the measure, where a score of 50 was considered indicative of PTSD in military samples (Weathers et al., 1993), Renshaw et al.’s (2008) sample of military wives also reported modest scores ($M = 30.69$, $SD = 10.98$).

The present participants’ mean for dispositional optimism, as measured by the LOT-R, was 20.90 ($SD = 4.89$), indicated a moderate level of optimism (range = 0 to 40). This score was significantly higher than the average ($M = 14.42$, $SD = 14.1$) reported by Scheier (1994) in sample of undergraduates and patients awaiting coronary artery bypass surgery, $t(234) = 19.51$, $p = .0001$, 95% CI [-7.13, -5.83].

The mean total score for differentiation of self, as measured by the DSI-R, was 3.50 ($SD = .52$), a fairly moderate level (range = 0 to 6). However, a comparison with the mean reported by Skowron and Schmitt (2003) in a nonclinical adult sample ($M = 3.86; SD = .72$) indicated significantly lower differentiation in the present sample, $t(234) = 6.16$, $p < .0001$, 95% CI [11.21, 21.71].

Finally, the average level of romantic relationship satisfaction, as measured by the RDAS, was $M = 47.75$ ($SD = 10.49$), which is close to the cutoff (48) for relationship distress (Crane et al., 2000). A $t$ test comparing the current sample mean to the mean in Busby et al.’s (1995) norming sample (heterosexual couples seeking marital therapy at university counseling centers) revealed no significant difference, $t(234) = 0.326$, $p = .744$, 95% CI [-1.26, 1.76].

**Major Analyses**

A hierarchical multiple regression analysis was used to test the hypothesized main effects of (a) partner-perceived PTSD symptoms (PCL-5), (b) dispositional optimism (LOT-R), and (c) differentiation of self (DSI-R) in the prediction of relationship satisfaction (RDAS).

The predictors were entered into the hierarchical multiple regression equation through a series of sequential blocks (Cohen et al., 2003). First, Military Status (veteran = 0, active
duty/reservist = 1), was entered into the equation. This covariate was included because active
duty service members who are eligible to continue deploying are likely to be relatively less
symptomatic (the “healthy warrior effect;” Haley, 1998, p. 316) than veterans, who may have
been discharged due to having received a psychiatric diagnosis. In the second block of the
regression equation, PCL-5, was entered, followed by LOT-R and DSI-R in the third block.
Results of the multiple regression analysis are shown in Table 4.

In Step 1 of the analysis, Military Status was significant (β = .177, p = .007), indicating
that participants whose partners were active military personnel reported statistically more
satisfaction than participants whose partners were veterans. In Step 2, partner-perceived PTSD
symptoms (PCL-5) added a significant unique increment in the prediction of relationship
satisfaction (RDAS), β = -.374, p = .01; ΔR² = .104, p < .0001. Thus, the results of Step 2
supported the first hypothesis. Notably, Military Status was no longer uniquely significant (β = -
.014, p = .846) after accounting for PCL-5.

In Step 3, Dispositional Optimism (LOT-R) was significantly incremental in predicting
relationship satisfaction, β = .204, p = .01. Similarly, DSI-R was uniquely significant, β = -.328,
p = .01; ΔR² = .090, p < .0001). Contrary to prediction, however, DSI-R was inversely associated
with RDAS.

Results indicated that in the full model, the set of 4 predictors (i.e., Military Status, PCL-
5, LOT-R and DSI-R) accounted for 21.2% of the variability in Relationship Satisfaction, F (2,

Tests of the moderation effects. The two hypothesized interactions (PCL-5 X LOT-R and
PCL-5 X DSI-R) were simultaneously tested using the PROCESS macro (Hayes, 2013).
PROCESS is an SPSS macro for conditional process modeling that automatically determines the
centering and interaction terms and provides the unstandardized point estimate and first- and second-order variance estimates of the conditional indirect effect for a given set of moderator values. Results of the PROCESS analysis are shown in Table 5. Neither hypothesized interaction was supported (PCL-5 X LOT-R, $b = .0068, p = .38$; PCL-5 X DSI-R, $b = .0007, p = .63$).

**Post-Hoc Analyses**

First, due to the unexpected negative association between total DSI-R scores and RDAS scores, an analysis was undertaken to identify which of the four aspects of differentiation of self may have uniquely contributed to perceived relationship satisfaction. The sequence of steps was identical to that used in the tests of the main effects reported above, except that Step 3 included the 4 DSI-R subscales (Emotional Reactivity, Emotional Cutoff, Fusion with Others and I-Position) rather than the total score.

Results showed that Emotional Reactivity ($\beta = -.269, p < .0001$) and Emotional Cutoff ($\beta = -.278, p < .0001$) were significant unique negative predictors of Relationship Satisfaction ($F = 11.647, p < .0001$) (Recall that lower scores on these two subscales indicated more emotional reactivity and more emotional cutoff). In other words, participants who reported being highly emotionally reactive and participants who reported being highly emotionally cutoff reported more satisfaction. Since emotional reactivity and emotional cutoff are opposing phenomena (e.g., Kerr & Bowen, 1988), additional analyses were conducted to understand these results.

It was reasoned that these two aspects of differentiation might be related to whether or not the service member had received a formal diagnosis of PTSD. First, a bivariate correlation was used to examine the relation between partner-perceived PTSD symptoms (PCL-5 scores) and participants’ report that their partner had received a formal PTSD diagnosis (0 = no, 1 = yes). This positive correlation was strong and statistically significant ($r = .726, p < .0001$),
supporting the validity of the perceived diagnosis variable. Subsequently, the four DSI-R subscales were used to predict the partner’s report of the service member having received a PTSD diagnosis (1 = yes, 0 = no). The logistic regression model explained 15% (Nagelkerke $R^2$) of the variance, with both Emotional Reactivity ($\beta = -0.046$, OR = .955, $p = .029$) and Emotional Cutoff ($\beta = .055$, OR = 1.057, $p < .0001$) as uniquely significant, but in opposite directions. Specifically, these results indicate that for every one-unit decrease in the Emotional Reactivity score, the odds of reporting that the service member had a PTSD diagnosis increased by 5%, controlling for the three other DSI-R subscales. On the other hand, for every one-unit increase in the Emotional Cutoff score, the odds of the service member having a PTSD diagnosis increased by 6%, controlling for the other subscales.
DISCUSSION

This study extends the limited literature on the role played by romantic partners’ perceptions of military service members’ PTSD symptoms (e.g., Renshaw et al., 2008, 2010) on relationship satisfaction. From a positive psychology or resilience perspective, the female partner’s level of dispositional optimism and differentiation of self, an index of psychological functioning in the relationship (Bowen, 1978), were examined as main effects and as moderators of the relation between partner-perceived PTSD symptoms and relationship satisfaction. Although the hypothesized buffering effects were not supported, the full model was significant, accounting for 21.2% of the variance in relationship satisfaction, and each of the theorized predictors (partner-perceived PTSD symptom severity, dispositional optimism, and self-differentiation) was uniquely significant as well. Moreover, the significant association between PCL-5 scores and participants’ report of their partner having received a formal PTSD diagnosis not only supports the validity of the PCL-5 but also suggests that participants accurately reported the severity of their partners’ symptoms.

The present findings are consistent with previous research (e.g., Renshaw et al., 2010), in which spouses’ perceptions of veterans’ PTSD symptoms fully mediated the relationship between veterans’ self-reported symptoms and spouses’ report of psychological and marital difficulties. Apparently, even if the service member does not meet diagnostic criteria for a PTSD diagnosis but is exhibiting significant clinical symptoms consistent with the diagnosis, the partner’s perception of the severity of these symptoms can be detrimental for the couple’s relationship.

In contrast to the earlier research, the present sample was more inclusive in some ways and more restrictive in other ways. To be inclusive, unmarried partners were sampled as well as
those in committed relationships and marriages, and the sample included active duty military personnel (63%) as well as veterans and reservists. On the other hand, in order to focus on post-deployment adjustment, only women whose partners had returned from an overseas deployment at least 3 months prior to completing the study were sampled.

Interestingly, whereas participants whose partners were still active in the military reported significantly more satisfaction with their relationships, this difference was negligible when the level of partner-perceived PTSD symptoms was taken into account. Since according to their partners, veterans were reportedly more likely than active duty personnel to have severe PTSD symptoms, it is not surprising that the women in these couples saw their post-deployment relationships as particularly difficult (i.e., almost at the RDAS cutoff for clinical distress).

Despite the notable relationship distress, participants reported significantly higher levels of dispositional optimism than did participants in Scheier, Carver, and Bridges (1994) community sample. Interestingly, optimism contributed to participants’ satisfaction controlling for their personal level of differentiation and the severity of their partners’ PTSD symptoms. Consistent with the theory that optimistic people have positive, self-fulfilling expectations (e.g., Carver et al., 2010), the present findings contribute to the abundant evidence indicating that optimism, as a dispositional trait, is beneficial for romantic relationships.

On the other hand, differentiation of self, which was significantly lower in the present sample than in Skowron and Schmidt’s (2003) community sample, had a negative contribution to relationship satisfaction. It was speculated that this unexpected finding might reflect the unique culture of military life, in which couples experience long separations, frequent relocation, and the potential stress of living with a partner experiencing PTSD symptoms. Indeed, lengthy absences and separation from extended family are part and parcel of military life. It is not surprising,
then, that highly differentiated partners might find it particularly difficult to cope with these hardships as well as other aspects of military life, particularly if the service member returns home exhibiting PTSD symptoms.

To understand the differentiation results more fully, the four DSI-R subscales in relation to participants’ report that their partner had or had not received a PTSD diagnosis were examined. Results showed that participants whose partners had received a PTSD diagnosis (and had more severe symptoms) reported greater Emotional Reactivity (i.e., a tendency to react to stressors with intense emotional arousal) and less Emotional Cutoff (i.e., a tendency to manage stressors by maintaining physical or emotional distance).

Taken together with the relationship satisfaction results, these findings suggest that participants who were highly emotionally reactive rather than cutoff and who viewed their male partners as coping with severe PTSD reported relatively better relationship adjustment.

It is understandable that when an active-duty or former service member appears to be suffering with PTSD-like symptoms, his partner is likely to experience intense emotions when trying to understand and cope with these problems. Since results indicated that both high reactivity and high cutoff were associated with relationship satisfaction, it may be that partners cope best by reacting emotionally in some situations and cutting themselves off in other situations. Of course, this interpretation awaits replication and further study.

Strengths and Limitations

The present study contributes to the application of Bowen’s (1978) construct of self-differentiation to the study of a specific population whose unique characteristics provide contradictory evidence that requires further study. While another strength of the study is the finding of a positive association between PCL-5 scores and a PTSD diagnosis, suggesting the
validity of the measure for studying partners’ perceptions (Renshaw et al., 2008), the present sample was one of convenience that, due to the large number of participants who declined to complete the measures, may have been limited by a self-selection bias.

Additionally, three other limitations are apparent. First, the ex post facto, cross-sectional design precludes the interpretation of causal or temporal relationships among the variables. Because only the female partner’s perspective was assessed, generalizability is limited to heterosexual couples with male service members, and assessment of the service member’s functioning was limited to her perspective. Additionally, the design did not account for partners’ level of differentiation prior to the service member’s deployment, nor considered other resilience factors that may explain romantic relationship satisfaction in military couples, such as the extent of the couple’s social support network.

**Implications for Practice**

With respect to clinical practice with military couples, the unexpected negative association between differentiation and satisfaction is potentially informative. This result suggests that the stressors related to lengthy combat deployments and the severity of PTSD symptoms need to be understood in the context of the partner’s perception of the service member’s psychological functioning. First and foremost, the findings highlight the need for therapeutic interventions that focus on partners’ own level of psychological functioning following periods of combat deployment, particularly when their romantic partners are exhibiting PTSD symptoms. Such interventions may help prevent the development of secondary traumatization and forestall relationship dissatisfaction or dissolution. In particular, working from a positive psychology perspective, therapists can help partners access feelings of optimism, which in this study was a strong predictor of relationship satisfaction.
In addition, there are practical implications for the service members themselves. For instance, Meis et al. (2010) found that, among veterans with PTSD, those who were more satisfied with their relationships were more likely to seek professional help. Such help is crucially important since interpersonal disruptions like divorce are the most common precipitant to suicide attempts in service members (Kuehn, 2009), particularly among those with PTSD symptoms (Negrusa et al., 2014).

Another practical implication has to do with the negative association in previous research between perceived social support and PTSD (Brewin, Andrews, & Valentine, 2000). In adulthood, the primary source of social support for most people is their romantic relationship. Thus, pre-deployment interventions for military couples have the potential not only to forestall partners’ distress, but also possibly to protect against exacerbations of symptoms and relationship dissatisfaction post-deployment.

**Recommendations for Future Research**

Although two previous studies found no association between differentiation and marital adjustment (Patrick et al., 2007; Timm & Keiley, 2011), the present study found a significant negative association. As discussed above, this finding may be due to unique characteristics of our sample. On the other hand, there may be other factors at play that could be studied in a replication and extension of this study, particularly intimacy (Patrick et al., 2007) and sexual communication (Timm & Keiley, 2011), which these authors found to be positively associated with self-differentiation.

Additionally, for therapeutic and preventive interventions to be maximally effective for this population, a better understanding is needed of the mechanisms by which military partners become distressed in their relationships. In this study, the female partners, many of whom were
in relationships with men who had been diagnosed with PTSD, were suffering a good deal. It remains to be demonstrated how they can best be helped.

On the whole, the results largely support the protective role of partners’ dispositional optimism and the more complex role of their personal psychological functioning in the prediction of relationship satisfaction. Future studies should include both partners’ perspectives and assess each partner’s trauma history as a potential contributing factor to relationship distress. Although a partner’s dissatisfaction with the relationship is assumed to result from the burden of caring for a traumatized service member, the results point to individual differences in the extent to which this burden is experienced. Considering the abundance of research on relationship dissatisfaction in military couples, continued study of these couples, perhaps longitudinally, from a resilience perspective would likely be beneficial.

Research design limitations that mirror common limitations in the study of couples, as well as significant difficulties in accessing military samples, have made it difficult to establish an empirically-based understanding of relationship adjustment in this population. Further study of personal characteristics in both partners has the potential to provide a sensitive understanding of military couples that can suggest interventions to address the personal and relational functioning of this vulnerable population.
References


Segerstrom, S. C. (2007). Optimism and resources: effects on each other and on health over 10 years. *Journal of Research in Personality, 41,* 772-785.


Appendix A

Demographic Questionnaire

1. What is your age? _____________________

2. What is your gender? ______________

3. What is your race/ethnicity?
   a. African American/ Black
   b. Asian/ Asian American/Pacific Islander
   c. Latino(a)/ Hispanic
   d. Native American
   e. Caucasian/ White/ Non-Latino(a)
   f. Biracial/ Multiracial
   g. Other (please specify ______________________)

4. What is your sexual orientation?
   a. Straight
   b. Gay
   c. Lesbian
   d. Bisexual
   e. Prefer not to answer
   f. Other (please specify ______________________)

5. Do you have any children?
   a. Yes
      i. If yes, how many? ________
   b. No

6. What is your current romantic relationship status?
   a. Casually dating
   b. Cohabiting, committed relationship
   c. Divorced
   d. Married
   e. Separated
   f. Widowed
   g. Other (please specify _________________)

7. How long have you and your partner been in this relationship? __________________

8. What is your romantic partner’s current status in the military?
   a. Active duty
   b. Veteran status
   c. Reservist non-active duty
   d. Other (please specify _____________)
9. In which military branch is your romantic partner currently serving or formerly served?
   a. Air Force
   b. Army
   c. Coast Guard
   d. Marine Corps
   e. National Guard or Reserve
   f. Navy

10. What is your partner’s MOS/NEC? __________________________________________

11. What is your partner’s rank? ___________________________________________

12. How many combat-zone deployments has you romantic partner experienced (e.g., combat zones include: Afghanistan, Iraq, Kuwait, Bosnia Herzegovina, Croatia, Macedonia, and Vietnam)? __________________________________________

13. Please list the location(s) your romantic partner experienced a combat-deployment to and the duration of each deployment: ____________ ____________ ____________

14. If your romantic partner is currently active-duty, how long ago did he return from the last combat zone deployment? ____________________

15. Do you currently live in a military installation?
   a. Yes
   b. No

16. Did your romantic partner ever receive a formal PTSD diagnosis, following deployment to combat zone, from a mental health professional?
   a. Yes
   b. No
   c. Don’t know

17. Did your romantic partner receive any other mental health diagnosis, following a combat deployment, from a mental health professional?
   a. Yes
      a. If yes, please specify what the diagnosis was: ____________________
   b. No
   c. Don’t know

18. Have you been diagnosed with any mental health disorder by a mental health professional?
   a. Yes
   b. No
   c. Prefer not to answer
19. If you answered yes to the question above, please specify what the diagnosis was: ______________________

20. Did your romantic partner receive the Combat Zone Tax Exclusion (CZTE)?
   a. Yes
   b. No
   c. Don’t know

21. Are you currently experiencing or have experienced intimate partner abuse from your current romantic partner?
   a. Yes
   b. No
   c. Prefer not to answer

22. Did you attend any pre-deployment preparedness workshops/seminars addressing possible issues related to your partner’s combat-zone deployment(s)?
   a. Yes
   b. No
   c. Don’t know

23. Are you currently a member of a military spouse support group?
   a. Yes
   b. No
   c. Prefer not to answer

24. If you answered yes to the question above, what is the name of the military spouse support group you are member of? ________________________________
Appendix B

Recruitment Letter

Greetings,

My name is Patricia Cabrera, and I’m writing to ask for your participation in my dissertation research, which has to do with the experiences of women who are spouses/partners of military service men who are or previously were deployed overseas in combat.

As you probably know, despite the many effects that combat-related deployment has on couples, most of what has been written about focuses only on the perspective of the service member, not the spouse or partner. I hope that the results of my study will help military couples in the future by adding to our understanding of what makes military romantic relationships satisfying, particularly from the perspective of the wife/partner.

As a thank you for your time, you will have the option to receive either a $5 gift card to Starbucks or, if you prefer, I will make a $5 donation on your behalf to the Wounded Warrior Project. You are eligible to fill out this survey if your husband or partner is either on active-duty (including active-duty reservists) or a veteran, and if he returned from a combat-zone deployment at least 4 months ago.

If you agree to take part, you will be asked to fill out a brief, anonymous survey, which should take you no more than 20 minutes to do. You may choose to withdraw from the study at any time and may choose not to answer any questions of the survey.

In order to see the survey, please click on the following link: [LINK]

Thank you in advance for your time.

Kindly,

Patty Cabrera

Patricia Cabrera, Ph.D. Candidate
Division of Counseling Psychology
Department of Educational and Counseling Psychology
University at Albany, State University of New York
Albany, NY 12222
pcabrera@albany.edu
Appendix C

Cover Letter

Greetings,

Thank you very much for considering participation in my research project. I know that your time is valuable and greatly appreciate your willingness to take this survey. I hope that the results of my study will help military couples in the future by adding to our understanding of what makes military romantic relationships satisfying, particularly from the perspective of the wife/partner.

As a thank you for your time, you will have the option to receive a $5 giftcard to Starbucks or a $5 donation will be made to the Wounded Warrior Project. At the end of the survey, you will be able to enter an email address in order to receive the giftcard or confirm my donation to Wounded Warriors. Your email address will be kept separate from survey responses to ensure confidentiality.

After clicking “I consent” below, you will see my brief, anonymous survey, which should take you about 20 minutes to do.

Please note that your participation is voluntary. You may withdraw from the study at any time and may choose not to answer specific questions. If you don’t have time to finish the entire survey today, please complete it later, when you have more time. This is because in order to protect your anonymity, if you stop your answers will not be saved.

This project was approved by the University at Albany’s Institutional Review Board. Approval of this project only signifies that the procedures adequately protect the rights and welfare of the participants. If you have any questions about this research, please contact me by email at pcabrera@albany.edu or contact my faculty advisor, Dr. Myrna L. Friedlander, at mfriedlander@albany.edu. If you have any questions concerning your rights as a research participant or if you wish to report any concerns about the study, you may contact the University at Albany’s Office of Regulatory & Research Compliance 1-866-857-5459 or at orrc@albany.edu. Please contact the Veterans Crisis Line (dial 1-800-273-8255 and Press 1) if the service member or veteran is showing signs of crisis.

By moving to the next page and answering the survey questions, you will be:
(a) Consenting to participate in the study;
(b) Indicating that you are a woman who is at least 18 years of age
(c) Indicating that you are either married or currently in a committed romantic relationship
(d) Indicating that your husband or romantic partner is either on active duty in the military OR a veteran (from any military combat era) and has had at least one combat-zone deployment.

With many thanks,
Patricia Cabrera, Ph.D. candidate
Division of Counseling Psychology
University at Albany, State University of New York
Table 1

Participants’ Demographic Characteristics

<table>
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<tr>
<th>Variable</th>
<th>n</th>
<th>%</th>
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<td>0.4</td>
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<td>Sexual orientation</td>
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<td></td>
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<td>Bisexual</td>
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<tr>
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<td>0.8</td>
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<tr>
<td>Children</td>
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<td></td>
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<td>162</td>
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</tr>
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<td>74</td>
<td>31.1</td>
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<tr>
<td>Prefer not to answer</td>
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<td>0.8</td>
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<tr>
<td>Current romantic relationship status</td>
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<td></td>
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<tr>
<td>Casually dating</td>
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<td>Cohabiting and/or committed relationship</td>
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<td>8.4</td>
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<td>Married</td>
<td>211</td>
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<td>Separated</td>
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<td></td>
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<td>Prefer not to answer</td>
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<td>1.7</td>
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<td>Workshop/seminar attendance pre-deployment</td>
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<td>Yes</td>
<td>103</td>
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<td>No</td>
<td>132</td>
<td>55.5</td>
</tr>
<tr>
<td>Prefer not to answer</td>
<td>1</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Table continues
| Current member of a military spouse support group | Yes | 60 | 25.2 |
|                                              | No  | 171| 74.0 |
|                                              | Prefer not to answer | 5 | 2.1 |
| Currently living in a military installation | Yes | 57 | 24.2 |
|                                              | No  | 179| 75.8 |
|                                              | Prefer not to answer | 0 | 0.0 |
| Military branch                              | Air Force | 24 | 10.2 |
|                                              | Army  | 111| 47.0 |
|                                              | Coast Guard | 2 | 0.8 |
|                                              | Marine Corps | 71 | 30.1 |
|                                              | National Guard or Reserve | 9 | 3.8 |
|                                              | Navy  | 19 | 8.1 |
|                                              | Prefer not to answer | 0 | 0.0 |
| Service member’s formal PTSD diagnosis        | Yes | 61 | 25.8 |
|                                              | No  | 155| 65.7 |
|                                              | Do not know | 17 | 7.2 |
|                                              | Prefer not to answer | 3 | 1.3 |
| Service member’s formal mental health diagnosis (excluding PTSD) | Yes | 42 | 17.8 |
|                                              | No  | 157| 66.0 |
|                                              | Do not know | 23 | 9.7 |
|                                              | Prefer not to answer | 4 | 1.7 |
Table 2

Descriptive Statistics and Intercorrelations of the Study Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>PCL-5</th>
<th>LOT-R</th>
<th>DSI-R</th>
<th>RDAS</th>
<th>M</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCL-5</td>
<td>-</td>
<td>.00</td>
<td>.14**</td>
<td>-.37**</td>
<td>18.90</td>
<td>21.41</td>
<td>1.20</td>
<td>0.32</td>
</tr>
<tr>
<td>LOT-R</td>
<td>-</td>
<td>-</td>
<td>.42</td>
<td>.07**</td>
<td>20.90</td>
<td>4.89</td>
<td>-0.45</td>
<td>2.04</td>
</tr>
<tr>
<td>DSI-R</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-.29**</td>
<td>161.10</td>
<td>23.70</td>
<td>0.47</td>
<td>1.59</td>
</tr>
<tr>
<td>RDAS</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>47.76</td>
<td>10.49</td>
<td>-1.18</td>
<td>1.39</td>
</tr>
</tbody>
</table>

Note. N = 235. *PCL-5 = Posttraumatic Stress Disorder Checklist for the DSM-V (Weathers et al., 2013); LOT-R = Life Orientation Test-Revised (Scheier et al., 1994); DSI-R = Differentiation of Self Inventory-Revised (Skowron & Schmitt, 2003); RDAS = Revised Dyadic Adjustment Scale (Busby et al., 1995). ** p = .01.
Table 3

*Mean Comparisons of the Study Variables with Previous Samples*

<table>
<thead>
<tr>
<th>Variable</th>
<th>( N )</th>
<th>( M )</th>
<th>( SD )</th>
<th>( t )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOT-R(^a)</td>
<td></td>
<td></td>
<td></td>
<td>19.51</td>
<td>.00</td>
</tr>
<tr>
<td>Comparison sample</td>
<td>622</td>
<td>14.42</td>
<td>4.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Present sample</td>
<td>235</td>
<td>20.90</td>
<td>4.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DSI-R(^b)</td>
<td></td>
<td></td>
<td></td>
<td>6.16</td>
<td>.00</td>
</tr>
<tr>
<td>Comparison sample</td>
<td>225</td>
<td>177.56</td>
<td>33.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Present sample</td>
<td>235</td>
<td>161.10</td>
<td>23.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RDAS(^c)</td>
<td></td>
<td></td>
<td></td>
<td>0.33</td>
<td>.74</td>
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<tr>
<td>Comparison sample</td>
<td>454</td>
<td>48.00</td>
<td>9.0</td>
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<td></td>
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<tr>
<td>Present sample</td>
<td>235</td>
<td>47.75</td>
<td>10.49</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* \(^a\)College students and artery bypass patients (Scheier et al., 1994); \(^b\)Community adults (Skowron & Schmitt, 2003); \(^c\)Adults seeking couples therapy (Busby et al., 1995).
Table 4

*Predictors of Romantic Relationship Satisfaction: Results of the Hierarchical Regression*

<table>
<thead>
<tr>
<th>Variable</th>
<th>β</th>
<th>t</th>
<th>adj. $R^2$</th>
<th>$\Delta R^2$</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Military status</td>
<td>.18</td>
<td>2.75</td>
<td>0.03</td>
<td>0.007</td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Military status</td>
<td>-.01</td>
<td>-0.20</td>
<td>.13</td>
<td>.10</td>
<td></td>
</tr>
<tr>
<td>PCL-5</td>
<td>-.37</td>
<td>-5.27</td>
<td></td>
<td>.846</td>
<td></td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Military status</td>
<td>.01</td>
<td>0.07</td>
<td>.212</td>
<td>.086</td>
<td></td>
</tr>
<tr>
<td>PCL-5</td>
<td>-.32</td>
<td>-4.68</td>
<td></td>
<td>.946</td>
<td></td>
</tr>
<tr>
<td>LOT-R</td>
<td>.20</td>
<td>3.18</td>
<td></td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>DSI-R</td>
<td>-.33</td>
<td>-5.05</td>
<td></td>
<td>.002</td>
<td></td>
</tr>
</tbody>
</table>

Note. $N = 235$. Military Status: veteran = 0, active duty = 1. Step 1 $\Delta F(1, 233) = 7.52, p = 0.007$; Step 2 $\Delta F(1, 232) = 27.79, p = .0001$; Step 3 $\Delta F(1, 230) = 25.50, p = .0001$. 

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Table 5

*Summary of Moderation Analyses with PROCESS*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$b$</th>
<th>$t$</th>
<th>$\Delta R^2$</th>
<th>$F(1, 228)$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCL-5 x LOT-R</td>
<td>.01</td>
<td>.88</td>
<td>.00</td>
<td>.77</td>
<td>.38</td>
</tr>
<tr>
<td>PCL-5 x DSI-R</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.23</td>
<td>.63</td>
</tr>
</tbody>
</table>

*Note. N = 235.*
**Figure 1.**

Hypothesized Model