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# Partner Accommodation in Posttraumatic Stress Disorder: Initial Testing of the Significant Others' Responses to Trauma Scale (SORTS)

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## Abstract

Posttraumatic stress disorder (PTSD) is associated with myriad relationship problems and psychological distress in partners of individuals with PTSD. This study sought to develop a self-report measure of partner accommodation to PTSD (i.e., ways in which partners alter their behavior in response to patient PTSD symptoms), the *Significant Others' Responses to Trauma Scale* (SORTS), and to investigate its reliability and construct validity in 46 treatment-seeking couples. The SORTS demonstrated strong internal consistency and associations with individual and relationship distress. Accommodation was positively correlated with partners' ratings of patients' PTSD symptoms, patient self-reported depressive and trait anger severity, and partner self-reported depressive and state anger severity. Accommodation was negatively correlated with patient and partner relationship satisfaction and partners' perceived social support received from



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patients. Findings suggest that accommodation may be an attempt to adapt to living with a partner with PTSD but may have negative implications for patient and partner well-being.

**Keywords**

accommodation; partner; couples; PTSD; SORTS

## 1. Introduction

Epidemiological studies indicate that posttraumatic stress disorder (PTSD) is one of the disorders most strongly associated with relationship problems (Kessler, 2000; Whisman, Sheldon, & Goering, 2000), and meta-analyses demonstrate that PTSD is associated with relationship distress on the part of both trauma survivors and their partners (Lambert, Engh, Hasbun, & Holzer, 2012; Taft, Watkins, Stafford, Street, & Monson, 2011). Lambert et al. (2012) documented a moderate size association between PTSD symptom severity and partner psychological distress ($r$ = .30), some of which may be attributable to the burden of living with a family member with PTSD (e.g., Beckham, Lytle, & Feldman, 1996; Calhoun, Beckham, & Bosworth, 2002; Caska & Renshaw, 2011; Dekel, Solomon, & Bleich, 2005; Manguno-Mire et al., 2007). Caregiver burden refers to the extent to which loved ones perceive that their emotional or physical health, social life, or financial status is affected by their caring for an impaired family member (Zarit, Todd, & Zarit, 1986). Caregiver burden is associated with general psychological distress, dysphoria, and state anxiety among partners of veterans with PTSD (Beckham et al., 1996) and is positively and significantly associated with patient PTSD symptom severity (Beckham et al., 1996; Calhoun et al., 2002). A study by Caska and Renshaw (2011) of National Guard members and their wives revealed that spouses' burden fully mediated the association between Service Members' PTSD symptoms and spouses' own psychological functioning. The observation that PTSD symptoms in one partner are associated with distress in both partners underscores the need for greater understanding of cognitive, behavioral, and affective processes that interact within and between partners and raises the possibility that enhanced understanding of the dynamic interplay of these factors will lead to opportunities to improve individual and relationship functioning for each member of a couple.

With respect to partner variables, researchers have traditionally focused on criticism or other negative behaviors by family members of individuals with PTSD, with the general finding that a negative or unsupportive interpersonal environment serves as a chronic stressor and impediment to recovery for patients (Price, Gros, Strachan, Ruggiero, & Acierno, 2011; Tarrier, Sommerfield, & Pilgrim, 1999). However, even in the absence of ambient negativity, partners and other relatives may unwittingly interfere with natural recovery or treatment effectiveness by reinforcing avoidance (Figley, 1989). Anecdotal reports indicate that partners may collude in avoidance by encouraging dropout from trauma-focused interventions due to fears about symptom exacerbation or interacting in the relationship in such a way that the identified patient avoids anxiety-provoking situations (e.g., the partner does all the grocery shopping so that the identified patient does not have to be around crowds, which serve as a PTSD-related trigger; Maloney, 1988; Verbosky & Ryan, 1988;

Williams, 1980). They may also engage in couple-level avoidance of places or situations that are uncomfortable for the traumatized individual but which would otherwise have been enjoyable or rewarding to the partner (e.g., going to restaurants, movie theaters, social events).

Significant others may also adapt their own behavior in response to patient hyperarousal, numbing, and reexperiencing symptoms. For example, partners might not express their own thoughts and feelings due to concerns about provoking PTSD-related anger or irritability or otherwise distressing the patient, refrain from physical contact with the patient because of the patient's aversion to emotional and physical closeness, and/or sleep in separate beds due to PTSD-related nightmares. As a result of these perhaps well-intended but potentially unhelpful behaviors by others, patients may not avail themselves fully of opportunities to address anxiety-provoking stimuli and consolidate new learning. In addition, partners may be distressed as a result of altering their own behaviors in response to the patients' symptoms and associated impairment. We have labeled these behaviors (i.e., ways in which partners alter their own behavior in response to patient PTSD symptoms) “partner accommodation.”

We are unaware of any efforts to investigate partner accommodative behaviors related to patients' PTSD symptoms and the association of these behaviors to patient and partner well-being. In an effort to address this gap in the literature, we developed a partner self-report questionnaire, the *Significant Others' Responses to Trauma Scale* (SORTS; Fredman & Monson, 2008), and the current study serves as an initial empirical investigation of the construct of partner accommodation in the context of PTSD. Several efforts were made to address content validity in scale development. The first and primary strategy was to draw on theoretically-related constructs in other psychiatric populations that bear phenomenological similarity to the construct of accommodation in PTSD. These include family accommodation in obsessive-compulsive disorder (OCD; Calvocoressi et al., 1995; Calvocoressi et al., 1999), enabling in substance abuse (Rotunda, West, & O'Farrell, 2004), and excessive self-sacrifice in mood and anxiety disorders (Fredman, Baucom, Miklowitz, & Stanton, 2008; Fredman, Chambless, & Steketee, 2004).

Family accommodation in OCD refers to “participation in behaviors related to patient rituals and modification of daily routines” (Calvocoressi et al., 1995, p. 441). Family accommodation in OCD has been assessed via the *Family Accommodation Scale for OCD* (FAS; Calvocoressi et al., 1999), which was developed as a clinician-rated interview but administered as a relative-rated self-report measure in many research studies. The FAS includes items assessing the frequency of participation in OCD rituals, severity of modification of the relative's routine, distress caused to the relative, and the patient's reactions if the relative does not accommodate. Research has documented an association between relatives' scores on the FAS and patient symptom severity and poor global functioning, rejecting attitudes toward the patient, limits on family opportunities, burden experienced by the relative, and poor family functioning (Calvocoressi et al., 1999). In addition, partner accommodation has been found to be negatively associated with relationship satisfaction among spouses of patients with OCD (Boeding et al., 2013). Family accommodation is associated with poorer treatment outcomes in both adults and children with OCD (Amir, Freshman, & Foa, 2000; Boeding et al., 2013; Storch et al., 2007),

whereas improvements in family accommodation during treatment predict better treatment outcome among children with OCD (Merlo, Lehmkuhl, Geffken, & Storch, 2009).

Enabling in substance use disorders refers to partners' behavioral responses that may reinforce patient drinking or drug using behaviors (Rotunda et al., 2004) and bear phenomenological similarity to partner accommodation in the context of PTSD. This construct is assessed using the *Behavioral Enabling Scale* (Rotunda, 1996), a partner self-report measure of partner behaviors such as buying alcohol or making up excuses to explain the patient's substance use-related absences. Specific relationship beliefs (e.g., “my partner cannot get along without my help” and “it is my duty to take on more responsibility for home and family obligations than my partner in times of stress”) have been found to be positively associated with behavioral enabling scores (Rotunda et al., 2004).

Excessive self-sacrifice refers to the tendency of a relative of a psychiatric patient to inappropriately or unreasonably subjugate his or her own well-being on behalf of the patient (Leff & Vaughn, 1985). Examples of this include the partner of an individual with panic disorder with agoraphobia driving the patient to and from work despite the fact that it makes the partner late for his or her own job (Fredman et al., 2004) or the parent of a patient with bipolar disorder giving the patient money for expenses incurred during a spending manic spending spree with no expectation that the patient participate in treatment or pay the money back (Fredman et al., 2008). Fredman and colleagues (2014) found that relatives' inappropriately self-sacrificing behaviors towards patients with bipolar disorder, most of which took the form of accommodating the patients' mood dysregulation at the relatives' expense, predicted symptom trajectories following an acute mood episode over a two-year period. Specifically, patients whose relatives were rated as engaging in high levels of inappropriately self-sacrificing behaviors at baseline did not experience an improvement in manic symptoms over time unless they received family-based therapy as an adjunct to medication.

We also considered how each of the 17 *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text revision; DSM-IV-TR; American Psychiatric Association, 2000) symptoms of PTSD might elicit certain responses by partners, such as not expressing one's own needs or opinions during conflictual topics as a result of patients' anger or irritability. Items were subsequently created to capture these phenomena (e.g., “How often did you avoid [the patient] because of his/her irritable or angry mood?” and “How often did you ‘tiptoe’ around [the patient] so as not to anger him/her?”).

To broaden the conceptual understanding of the construct of behavioral accommodation, the present study serves as an initial psychometric investigation of the SORTS by examining the internal consistency of the scale and the cross-sectional associations between SORTS scores and the following sets of variables: patient PTSD and comorbid symptom severity, partner psychological distress, and patient and partner relationship satisfaction and perceived social support. We hypothesized that partner accommodation would be (a) positively correlated with patient PTSD and comorbid symptom severity (e.g., depression, anxiety, anger); (b) positively correlated with partner psychological distress (depression, anxiety, anger); and (c) negatively correlated with partner and patient relationship satisfaction and perceived social

support. We further hypothesized that the association between partner accommodation and relationship satisfaction would not be due solely to partner or patient psychopathology. Accordingly, we predicted that partner accommodation would account for variance in partner relationship distress above and beyond that accounted for by partner individual psychological distress and partner perceptions of patient PTSD symptom severity. Similarly, we expected that partner accommodation would predict variance in patient relationship distress above and beyond that accounted for by patient psychological distress and patient perceptions of their own PTSD symptom severity.

## 2. Method

### 2.1 Participants

Participants in the current study were 46 treatment-seeking intimate couples recruited for a study evaluating cognitive-behavioral conjoint therapy (CBCT) for PTSD (Monson et al., 2012). Veteran and community couples were recruited from a Department of Veterans Affairs (VA) Medical Center in Boston, MA, and a psychology department-based clinical research center in Toronto, Ontario, Canada. All study procedures were approved by the Institutional Review Boards at each site.

Couples were included in the present investigation if one partner met DSM-IV-TR diagnostic criteria for PTSD and had an intimate partner willing to participate; both partners were between the ages of 18-75; there were no changes in psychotropic medication in either partner within the previous 8 weeks; and, neither partner met criteria for a current uncontrolled psychotic disorder or bipolar disorder. Demographic characteristics for the PTSD-identified patients and their partners in the current study are provided in Table 1. Identified patients reported a diverse range of traumatic events, including combat, sexual assault, physical assault, life-threatening illness, and childhood physical and sexual abuse.

Seven couples in which one member met criteria for PTSD and had a partner who completed the SORTS were included in the present study but excluded from the parent (i.e., randomized controlled trial of CBCT for PTSD) study for the following reasons and consistent with eligibility requirements for the trial: current substance dependence in at least one member of the couple ($n$ = 2), severe intimate partner aggression within the past year ($n$ = 2), the PTSD-identified patient became incarcerated ($n$ = 1), the PTSD-identified patient was imminently suicidal ($n$ = 1), and the PTSD-identified patient was still peritraumatic ($n$ = 1). For additional information about other patients/couples who were excluded from the parent (and current) study, please see the CONSORT figure in Monson et al. (2012).

### 2.2 Measures

**2.2.1 Partner accommodation—**The SORTS (Fredman & Monson, 2008) is a self-report measure designed to assess partner behaviors performed in relation to the identified patient's PTSD symptoms. Items on the SORTS consist of two parts: First, partners are asked to rate the frequency with which they engaged in each behavior within the past month on a scale from 0 (never) to 4 (daily or almost every day). Second, partners are asked to rate either the extent to which engaging in the behavior distressed them on a scale from 0 (not at all) to 4 (extremely) or the amount of effort they exerted engaging in each behavior on a

scale from 0 (none) to 4 (extremely high amount). Four items (i.e., 3, 4, 11, 18) include a "not applicable" option, which is recoded as 0 before the items are totaled. Items are summed to yield a total score, frequency subscale score, and intensity subscale score.

**2.2.2 PTSD symptom severity—**Clinician, patient, and partner ratings of patients' PTSD symptoms were collected. The *Clinician-Administered PTSD Scale* (CAPS; Blake et al., 1995) was used to determine PTSD diagnostic status according to the DSM-IV-TR for both the patient and partner in each couple. The CAPS is a gold standard semi-structured interview for assessing PTSD diagnostic status and symptom severity and has excellent reliability and validity across populations (Weathers, Keane, & Davidson, 2001). PTSD diagnosis on the CAPS was based on meeting the symptom criteria as defined in the DSM-IV-TR, as well as having a minimum severity score of 45. Symptoms were considered to be present when they had a frequency rating of at least 1 and a severity rating of at least 2 on the CAPS. Ten percent of each site's CAPS administrations, including participants who were subsequently deemed ineligible for the parent study, were evaluated by an independent doctoral-level clinical psychologist. Interrater reliability for the CAPS was excellent, with a kappa of 1.00 for diagnostic status and an intraclass correlation coefficient of .99 for total symptom severity.

The *PTSD Checklist* (PCL; Weathers, Litz, Herman, Huska, & Keane, 1993) was used to obtain patient- and partner-reported severity ratings of patients' PTSD symptoms. The PCL is a 17-item self-report measure that assesses the severity of each DSM-IV-TR PTSD symptom on a scale from 1 (not at all) to 5 (extremely). Items are summed to yield a total score ranging from 17 to 85. The PCL has strong psychometric properties (e.g., Ruggiero, Del Ben, Scotti, & Rabalais, 2003). In the present sample, internal consistency was $\alpha = .88$ for patient ratings and $\alpha = .91$ for partner ratings.

**2.2.3 Axis I psychopathology—**The *Structured Clinical Interview for DSM-IV-Patient Version* (SCID-P; First, Spitzer, Gibbons, & Williams, 1996), a semi-structured interview assessing Axis I disorders, was used to determine exclusion criteria and to characterize the sample with respect to Axis I diagnoses. Ten percent of each site's SCID-P administrations were evaluated by an independent doctoral-level clinical psychologist. Interrater reliability for the SCID-P, including participants who were subsequently deemed ineligible for the parent study, ranged from good to excellent across all disorders ($\kappa = 0.71\text{-}1.00$), with the exception of mood disorders ($\kappa = 0.60$).

**2.2.4 Relationship satisfaction—**Relationship satisfaction was assessed using the *Dyadic Adjustment Scale* (DAS; Spanier, 1976). The DAS is a 32-item self-report measure that assesses relationship satisfaction in intimate dyads; higher scores represent greater relationship satisfaction. The DAS is widely used in the intimate relationship literature and demonstrates construct invariance across sex (e.g., South, Krueger, & Iacono, 2009). Internal consistency for the present sample was $\alpha = .91$ for patients and $\alpha = .93$ for partners.

**2.2.5 Perceived social support—**Perceived social support was assessed using the *Multidimensional Scale of Perceived Social Support* (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988). The MSPSS is a 12-item self-report measure that assesses perceptions of

social support from three sources: family, friends, and significant other. The MSPSS total score, family subscale, and significant other subscale were used in the present study. Items are scored on a seven-point Likert-type scale that ranges from 1 to 7, summed, and then divided by the number of total or subscale score items, respectively. Higher scores indicate more perceived social support. Internal consistency of the MSPSS in the present sample was $\alpha = .84$ for the total scale, $\alpha = .90$ for the family subscale, and $\alpha = .94$ for the significant other subscale for patients; $\alpha = .82$ for the total scale, $\alpha = .85$ for the family subscale, and $\alpha = .89$ for the significant other subscale for partners.

**2.2.6 Patient and partner psychological distress—**Patient and partner depression, anxiety, and anger severity were assessed using self-report measures. Depressive symptom severity was assessed using the *Beck Depression Inventory-II* (BDI-II; Beck, Steer, & Brown, 1996), a widely used measure consisting of 21 items each scored on a four-point Likert scale that ranges from 0 to 3. Items are summed to yield a total score, with higher scores indicating greater depressive symptoms. Internal consistency for the present sample was $\alpha = .91$ for patients and $\alpha = .92$ for partners.

Anxiety symptoms and anger expression were assessed using the *State-Trait Anxiety Inventory* (STAI; Spielberger, 1983) and the *State-Trait Anger Expression Inventory* (STAXI; Spielberger, 1988), respectively. The STAI consists of two 20-item scales: state anxiety and trait anxiety. Each item is measured using a four-point Likert scale that ranges from 1 (almost never) to 4 (almost always). The STAXI consists of 44 items that are measured on a four-point Likert scale ranging from 1 (not at all) to 4 (very much so). The STAXI scales of state anger, trait anger, and anger expression subscales were included in the present study. For patients, internal consistency for the STAI in the present sample was $\alpha = .95$ for the total scale, $\alpha = .94$ for the state subscale, and $\alpha = .92$ for the trait subscale. Internal consistency for the STAXI in the present sample was $\alpha = .91$ for the state anger subscale and $\alpha = .89$ for the trait anger subscale. For partners, internal consistency for the STAI was $\alpha = .96$ for the total scale, $\alpha = .94$ for the state subscale, and $\alpha = .93$ for the trait subscale. Internal consistency for the STAXI was $\alpha = .88$ for the state anger subscale and $\alpha = .85$ for the trait anger subscale. Internal consistency for the STAXI anger expression subscale was low for both patients and partners, $\alpha = .55$ and $\alpha = .58$, respectively.

## 2.3 Procedure

Participants provided written informed consent and then completed assessments to determine their eligibility for the parent study. Doctoral students in clinical psychology and Ph.D.-level psychologists administered the CAPS and SCID to both partners to establish eligibility. Data collected from these assessments resulted in 46 couples being included for the present study.

## 2.4 Data Analyses

The SORTS was originally developed as a 20-question measure. Means, standard deviations, medians, and observed ranges were calculated to examine the measure's descriptive properties. Internal consistency was evaluated vis-à-vis item-total correlations and Cronbach's alpha. Following conventional cutoffs for item retention in the context of

scale construction (e.g., de Vaus, 2002), items with a negative item-total correlation or an item-total correlation < .30 for either the frequency or the distress rating for that item were dropped.

Pearson correlation analyses were conducted to assess the SORTS' associations with patient PTSD symptom severity (CAPS, PCL) and comorbid symptom severity (BDI, STAI, STAXI), partner psychological distress (BDI, STAI, STAXI), and both partners' relationship satisfaction (DAS) and perceived social support (MSPSS). Correlational analyses were first conducted using the total score on the SORTS and then repeated using the frequency and intensity subscales. Effect sizes were interpreted consistent with Cohen's (1992) recommendations for interpreting the sizes of correlations whereby .10 is considered small, .30 is considered moderate, and .50 and above is considered large.

Next, hierarchical regressions were conducted predicting partner and patient relationship distress, respectively. Individual psychological distress variables that had significant zero-order associations with partner accommodation were entered in step 1, and PTSD symptom severity (i.e., partner reported PTSD symptom severity or patient reported PTSD symptom severity) was entered in step 2. Partner accommodation was entered in step 3 to determine if partner accommodation predicted variance in relationship distress above and beyond that accounted for by individual psychological distress and PTSD symptom severity.

## 3. Results

Inspection of item-total correlations revealed poor item-total correlations for the two reverse-scored items (items 1 and 7). These items were subsequently dropped, consistent with recommendations by Rodebaugh et al. (2011), who advise against the inclusion of reverse-scored items, as this tends to result in decreased validity of the overall scale. Item-total correlations were subsequently re-run with an 18-item version of the SORTS and indicated that item-total correlations for items 2, 3, 11, and 18 were < .30. These items were dropped as well, resulting in a 14-question scale in which all items had an item-total correlation ≥ .30.

Means and standard deviations (or percentages, where applicable) for total partner accommodation based on the 14-question version,[1] patient PTSD and comorbid symptom severity,[2] patient and partner mental health diagnoses and psychological distress, relationship satisfaction, and perceived social support are provided in Table 1. In Table 2, we report descriptive statistics (means, standard deviations, medians, and ranges) and item-total correlations for the 20 questions originally included in the SORTS, as well as the item-total correlations for items calculated based on the 18- and 14-question versions of the scale.

For the 14-question scale, the total score includes all 28 items, the frequency subscale includes the 14 frequency items, and the intensity subscale includes the 14 distress items, with a possible range of 0-112 for the total scale, 0-56 for the frequency subscale, and 0-56

[1]There were not significant differences in partner accommodation between male ($n$ = 28; $M$ = 30.18, $SD$ = 22.58) and female partners ($n$ = 18; $M$ = 32.83; $SD$ = 19.04), $t(44) = -0.41$, $p = .68$.

[2]Low concordance was observed between patient and partner psychopathology for severity with respect to depression, anxiety, and anger (ICCs = .02 - .06). In addition, no partner met diagnostic criteria for PTSD.

for the intensity scale. Observed ranges were 0-90 for the total scale, 0-41 for the frequency scale, and 0-49 for the intensity scale. Cronbach's alpha was .93 for the total scale and was .86 and .87 for the frequency and intensity subscales, respectively. As displayed in Table 2, item-total correlations for the 14-question SORTS ranged from .33 to .82. Four-week test-retest reliability was $r$ = .83 for the total scale, $r$ = .81 for the frequency subscale, and $r$ = .83 for the intensity subscale (all $p$s < .001).

Prior to conducting correlational and regression analyses, we inspected the performance of individual items with respect to mean levels, variability, and item-total correlations of the 14-question version of the SORTS to determine patterns in responses across the items. As displayed in Table 2, behaviors pertaining to avoiding the patient because of his or her angry mood or not expressing one's own thoughts and feelings about the relationship due to concerns about upsetting or angering the patient (items 9, 13, 15) exhibited the highest mean values (*M*s = 1.39-1.65, *SD*s = 1.26-1.45), corresponding to a frequency of engaging in these behaviors somewhere between once or twice per month to once or twice per week. Taking over a chore that the patient is uncomfortable doing because it serves as a trauma reminder (item 10a) had the lowest mean value for a behavior performed ($M$ = .59, $SD$ = 0.96), corresponding to a frequency of less than once per month. Greatest variability was observed for item 5b, feeling distressed about avoiding physical contact with the patient due to the patient's discomfort ($SD$ = 1.52), and least variability was observed for item 14b, distress related to avoiding discussing events related to the patient's traumatic event in front of him or her to avoid his or her becoming upset ($SD$ = 0.70). Behaviors pertaining to not expressing one's own thoughts and feelings due to concerns about angering or otherwise upsetting the patient (item 13a) and distress related to changing one's own routine as a result of the patient's difficulties (item 16b) had the highest item-total correlations, with correlations of .75 and .82, respectively, whereas giving up control to the patient because of his or her desire to be in charge had the lowest item-total correlation (item 19a, with a correlation of .33).

As displayed in Table 3, bivariate correlations between partner accommodation and patient PTSD symptom severity revealed a large and significant positive association between partner accommodation and partners' perceptions of PTSD symptom severity. There were also small- to medium-sized positive associations between partner accommodation and clinicians' perceptions of PTSD symptom severity and patients' perceptions of PTSD symptom severity that were in the expected direction but fell short of statistical significance ($p$s = .08 and .06, respectively). As displayed in Table 4, there was a large and significant positive association between partner accommodation and patient depressive symptoms and a medium and significant correlation between partner accommodation and patient trait anger. Results also revealed moderate and significant positive associations between partner accommodation and partner depressive and state anger severity. As expected, and displayed in Table 5, there were large and significant negative associations between partner accommodation and partner relationship satisfaction and partners' perception of support from their significant other. There was a moderate negative association between partner accommodation and partners' perceptions of total social support. Partner accommodation

was negatively and moderately associated with patient relationship satisfaction and perceived support from family but not patients' perceptions of social support from partners.

When the analyses were repeated using the frequency and intensity subscales of the SORTS, an identical pattern of findings was observed, with the following exceptions: the distress subscale and partner state anger and the frequency subscale and patient trait anger exhibited small-to-medium associations (*r*s .29 and .28, respectively) that failed to reach statistical significance (*p*s .05 and .06, respectively); the frequency subscale and patient trait anxiety did exhibit a medium and significant association ($r = .30$, $p = .049$).

Results of the first hierarchical regression indicated that partner accommodation accounted for variance in partner relationship satisfaction above and beyond that accounted for by partner depressive symptom, partner state anger symptoms, and partner-reported PTSD symptoms, such that greater partner accommodation was associated with lower relationship satisfaction (i.e., greater relationship distress). In the first step, partner depression and state anger were simultaneously entered as predictors of partner relationship satisfaction. Partner depression ($\beta = -.55$, $p = .002$), but not partner state anger ($\beta = .02$, $p = .92$), significantly predicted lower partner relationship satisfaction, $F(2, 43) = 8.65$, $p = .001$, $R^2 = .29$. In the second step, partner-reported PTSD symptom severity was added but did not significantly predict partner relationship satisfaction above and beyond partner depression and state anger ($\beta = -.12$, $p = .36$), $F(3, 42) = 6.03$, $p = .002$, $\Delta R^2 = .01$. As expected, when partner accommodation was added in the third step, partner accommodation predicted lower partner relationship satisfaction and was associated with variance in partner relationship satisfaction above and beyond partner depression and anger and their perceptions of patients' PTSD severity ($\beta = -.46$, $p = .006$), $F(4, 41) = 7.42$, $p < .001$, $\Delta R^2 = .12$.

A different pattern of findings was observed when predicting patient relationship satisfaction after controlling for severity of patient psychopathology. In the first step, the combination of patient depression ($\beta = -.35$, $p = .05$) and trait anger ($\beta = .05$, $p = .76$) did not significantly predict patient relationship satisfaction, $F(2, 40) = 2.32$, $p = .11$, $R^2 = .10$. In the second step, patient-reported PTSD symptom severity was added and also did not predict variance in patient satisfaction ($\beta = .14$, $p = .45$), $F(3, 39) = 1.73$, $p = .18$, $\Delta R^2 = .01$. In the third step, partner accommodation predicted lower relationship satisfaction ($\beta = -.31$, $p = .08$) and was associated with a small-to-medium sized effect but did not reach statistical significance, $F(4, 38) = 2.19$, $p = .09$, $\Delta R^2 = .07$.

## 4. Discussion

This study was a preliminary validation of a self-report measure of partner accommodation to PTSD symptoms using a sample of treatment-seeking patients with PTSD and their intimate partners. Findings from this sample indicated that partners' accommodation most often took the form of “tiptoeing” around the patient so as not to anger him or her and not expressing one's own thoughts and feelings out of concern for upsetting the patient and, indeed, these behaviors had some of the highest item-total correlations of the scale. Items relating to changing one's routine and modifying one's leisure activities as a result of patients' difficulties also had high item-total correlations (i.e., correlations ≥ .66). The items

of taking over a task or chore for the patient and avoiding doing things, going places, or seeing people with the patient that cause the patient to feel anxious or uncomfortable were endorsed least frequently but still moderately to strongly correlated with the rest of the scale.

In this sample, partner accommodation was most strongly associated with partner perceptions of patient PTSD symptom severity. There were also small-to-medium sized associations between partner accommodation and clinician- and patient-reported PTSD symptom severity in the predicted direction, a large association between partner accommodation and patients' own reports of depressive symptom severity, and a medium size association between accommodation and patient trait anger. This suggests that partners perceive the presence of psychological distress and associated impairment in the patient and are not merely imposing their own perceptions of patient mental health problems in the absence of patient psychopathology. Moreover, the large and negative association between partner accommodation and partner relationship satisfaction, which remained after controlling for partners' own depressive symptoms, state anger, and perceptions of patient PTSD severity, indicates that it is not just partners' own psychopathology that is accounting for their own relationship distress. That partner accommodation was strongly and significantly associated with lower levels of perceived social support from patients further supports the notion that partner accommodation may be a well-intentioned effort to adapt to living with a loved one with PTSD but which, like caregiver burden, may carry with it negative implications for partner well-being in the form of greater distress.

Previous work has examined family accommodation in OCD (Calvocoressi et al., 1995; Calvocoressi et al., 1999), but this is the first study to examine the construct of partner or family accommodation in the context of PTSD. The present investigation was based on a treatment-seeking, clinical sample of couples that was diverse with respect to the identified patient's index event, race and ethnicity of the participants, and couples' marital status, and employed a well-validated diagnostic interview (i.e., CAPS) to establish the presence of PTSD in one member of the couple. The results from this clinical sample help to further characterize perceptions of relationship dynamics and symptoms co-occurring within dyads in which one member has PTSD and yield several intervention implications. For example, it may be helpful to sensitize clinicians working with patients suffering from PTSD, either individually or in a couple context, to the construct of accommodation during assessment by soliciting collateral information from significant others and targeting maladaptive accommodative processes accordingly during treatment. In CBCT for PTSD (Monson & Fredman, 2012), the role of partner accommodation is included in case conceptualization, and there is a focus on modifying accommodative processes during treatment. This is accomplished through the use of ideographically-programmed, couple-relevant *in vivo* approach exercises that allow patients and partners to learn new ways of relating that encourage both members of the couple to approach, rather than avoid, uncomfortable situations and, in so doing, optimize the likelihood that the couple will experience positive and relationship-enhancing exchanges.

Alternatively, even if couples in which one partner suffers from posttraumatic stress symptoms are engaged in generic couple therapy for relationship distress without a specific goal to modify the couple's relationship vis-à-vis the PTSD, it could nonetheless be helpful

to provide them with psychoeducation on the role of accommodation. Such psychoeducation might facilitate a more nuanced understanding for both members of the couple of the ways in which patients and significant others may inadvertently interact to maintain each other's individual and relationship distress and, thereby, potentiate a desire to learn other, more constructive ways of relating. Attention to the role of accommodation also may be clinically valuable when meeting jointly with patients and their significant others in preparation for individual, trauma-focused cognitive-behavioral therapy for PTSD, such as prolonged exposure (Foa, Hembree, & Rothbaum, 2007) or cognitive processing therapy (Resick, Monson, & Chard, 2008), to provide psychoeducation about the importance of patients' learning to confront and tolerate uncomfortable memories and situations without partners managing patients' distress.

There are several limitations of the current investigation. First, the sample was relatively small and may have lacked adequate statistical power to detect statistically significant associations between partner accommodation and certain variables (e.g., the association between partner accommodation and clinician- and patient-rated PTSD symptom severity). Relatedly, the relatively small sample size precluded the ability to conduct certain data analytic procedures, such as exploratory factor analysis to discern the presence of discrete factors or dyadic modeling using a structural equation framework, to be able to consider the associations among multiple variables simultaneously. Future studies that employ larger samples would permit the use of these techniques and help to further elucidate the construct of accommodation in the context of PTSD. A larger sample would also be useful in clarifying whether there are differences in partner accommodation across trauma type (e.g., combat versus sexual assault). Second, we did not include a measure of caregiver burden, which could help to demonstrate the SORTS' discriminant validity and further clarify the extent to which partners feel subjectively burdened by accommodating to patients' PTSD symptoms. Third, the analyses were cross-sectional in nature, making it difficult to ascertain the extent to which patient psychopathology contributes to partner accommodation and related distress or if there is a bidirectional association.

Future studies should explore the extent to which accommodation predicts the naturalistic course of recovery from PTSD in the absence of treatment, moderates outcomes in individual or couple therapy for PTSD, or is itself modified by disorder-specific conjoint treatment. Examination of the association between accommodation and caregiver burden, as well as the concordance between patient and partner ratings of partner accommodation, would also help to elucidate the construct of accommodation and its role in relationship functioning among couples in which one partner suffers from PTSD. Other areas for future research include an investigation into partners' reasons for accommodating. That is, some partners may perform these behaviors out of a desire to be helpful and supportive, whereas others may accommodate in an effort to maintain a sense of stability or homeostasis in the family system without intending to be supportive *per se*. The finding that accommodation was uncorrelated with patients' perceptions of support from partners suggests that patients may perceive some behaviors as reflecting care and concern but others as unsupportive, particularly if they occur in tandem with partner resentment or relationship distress. Lastly, given the importance of partners' attributions for patients' PTSD-related behaviors

(Renshaw, Allen, Carter, Markman, & Stanley, 2014), it would be useful to examine the role of partner cognitions in predicting accommodative behaviors and the resulting associations with partners' mental health.

There is increasing recognition that family processes play a potent role in the recovery, or lack thereof, from traumatization and that there are significant psychological sequelae for partners living with a family member who suffers from untreated PTSD. Results of this study suggest that partner accommodation plays an important role in partner individual and relationship distress and may play a role in the maintenance of patient psychopathology and relationship dissatisfaction. Enhanced understanding of the interpersonal context of PTSD and the role of modifiable relationship variables, such as partner accommodation, offers the possibility of improved well-being not only for those with PTSD but for their partners as well.

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## Highlights

- We developed a measure of partner accommodation to patient PTSD symptoms.
- Accommodation is positively associated with patient PTSD symptom severity.
- Accommodation is positively associated with patient and partner depression.
- Accommodation is positively associated with patient and partner anger.
- Accommodation is negatively associated with relationship satisfaction.

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**Table 1**

**Demographic Characteristics and Descriptive Statistics by Partner Status**

| | PTSD identified patient (*n* = 46) | Partner (*n* = 46) |
|---|---|---|
| **Characteristic** | ***M* or *n* (*SD* or %)** | ***M* or *n* (*SD* or %)** |
| Age | 37.3 (10.7) | 38.0 (11.7) |
| Male | 13 (28.3%) | 28 (60.9%) |
| Non-Caucasian | 14 (30.4%) | 8 (17.4%) |
| Married | 17 (37.0%) | 17 (37.0%) |
| Military veteran status | 9 (19.6%) | 1 (2.2%) |
| Employed at least part-time | 26 (56.5%) | 32 (69.6%) |
| Years since trauma | 14.5 (13.1) | - |
| Current co-morbid diagnoses | 30 (65.2%) | 14 (30.4%) |
| Mood disorder | 19 (41.3%) | 4 (8.7%) |
| Other anxiety disorder | 13 (28.3%) | 6 (13.0%) |
| Substance use disorder | 1 (2.2%) | 2 (4.3%) |
| Stable psychotropic medications | 22 (47.8%) | 10 (21.7%) |
| Outcome Measures | | |
| Partner accommodation (SORTS) | | |
| Total score | | 31.22 (21.09) |
| Frequency subscale | | 15.72 (10.35) |
| Intensity subscale | | 15.49 (11.28) |
| PTSD symptoms | | |
| Clinician-rated (CAPS) | 73.35 (13.98) | |
| Patient report (PCL-S) | 55.37 (12.12) | |
| Partner report (PCL-P) | 45.30 (14.52) | |
| Relationship adjustment (DAS) | 100.11 (20.96) | |
| Perceived social support (MSPSS) | | |
| Total score | 4.78 (1.03) | 5.52 (0.72) |
| Family subscale | 3.96 (1.73) | 5.16 (1.12) |
| Friends subscale | 4.70 (1.51) | 5.38 (0.98) |
| Significant other subscale | 5.66 (1.30) | 6.01 (1.07) |

| | PTSD identified patient (*n* = 46) | Partner (*n* = 46) |
|---|---|---|
| **Characteristic** | ***M* or *n* (*SD* or %)** | ***M* or *n* (*SD* or %)** |
| Depression (BDI-II) | 23.51 (11.98) | 9.52 (8.92) |
| Anxiety (STAI) | | |
| Trait subscale | 51.89 (11.29) | 38.08 (10.82) |
| State subscale | 49.40 (12.52) | 35.17 (12.18) |
| Total score | 101.28 (21.93) | 73.26 (22.03) |
| Anger (STAXI) | | |
| Trait subscale | 22.64 (6.97) | 16.91 (5.37) |
| State subscale | 12.80 (4.65) | 11.72 (4.88) |
| Expression subscale | 35.10 (10.58) | 23.71 (9.54) |

*Note*. PTSD = Posttraumatic stress disorder. SORTS = Significant Others' Responses to Trauma Scale. CAPS = Clinician-Administered PTSD Scale. PCL-S = PTSD Checklist patient self-report. PCL-P = partner/collateral report of patients' symptoms on PTSD Checklist. DAS = Dyadic Adjustment Scale. MSPSS = Multidimensional Scale of Perceived Social Support. BDI-II = Beck Depression Inventory II. STAI = State Trait Anxiety Inventory. STAXI = State Trait Anger Expression Inventory.

**Table 2**

**Item-Level Statistics for the Significant Others' Responses to Trauma Scale (SORTS)**

| Item | *M* | *SD* | Median | Range | Item-total correlation (20-question version) | Item-total correlation (18-question version) | Item-total correlation (14-question version) |
|---|---|---|---|---|---|---|---|
| 1a. Encourage ___ to talk about his/her traumatic event(s)? | 3.02 | 1.06 | 3.00 | 0-4 | .06 | - | - |
| 1b. How much effort did you put into encouraging him/her to talk about the traumatic event(s)? | 2.76 | 1.25 | 3.00 | 0-4 | .18 | - | - |
| 2a. Encourage ___ to avoid people, places, situations, or feelings that reminded him/her of the traumatic event(s)? | .59 | 0.86 | 0.00 | 0-3 | .26 | .26 | - |
| 2b. How much effort did you put into encouraging him/her to avoid these reminders? | .57 | 0.83 | 0.00 | 0-3 | .46 | .46 | - |
| 3a. Try to distract ___ when he/she talked about disturbing dreams about his/her traumatic event(s)? | .20 | 0.54 | 0.00 | 0-3 | .35 | .37 | - |
| 3b. How much effort did you put into distracting him/her from the disturbing dreams? | .33 | 0.90 | 0.00 | 0-4 | .20 | .20 | - |
| **4a. Avoid ___ because of his/her irritable or angry mood?** | **1.33** | **1.30** | **1.00** | **0-4** | .57 | .53 | **.54** |
| **4b. How much does your avoidance of ___ due to his/her irritable or angry mood bother you?** | **1.39** | **1.36** | **1.00** | **0-4** | .59 | .56 | **.57** |
| **5a. Avoid being physically close with ___ because of his/her discomfort?** | **1.00** | **1.25** | **0.50** | **0-4** | .52 | .50 | **.42** |
| **5b. How much does your avoidance of physical contact with ___ bother you?** | **1.21** | **1.52** | **0.00** | **0-4** | .50 | .49 | **.40** |
| **6a. Cancel or rearrange plans or social activities because ___ did not want to do them?** | **0.93** | **0.98** | **1.00** | **0-4** | .45 | .49 | **.47** |
| **6b. How much does this cancelling or rearranging of plans or activities bother you?** | **1.28** | **1.42** | **1.00** | **0-4** | .37 | .37 | **.35** |
| 7a. Encourage ___ to think about his/her traumatic event(s)? | 3.46 | 0.75 | 4.00 | 1-4 | -.36 | - | - |
| 7b. How much effort did you put into encouraging him/her to think about the traumatic event(s)? | 3.37 | 0.85 | 4.00 | 0-4 | -.27 | - | - |
| **8a. Avoid doing things, going places, or seeing people with ___ that make him/her anxious or uncomfortable?** | **0.67** | **1.06** | **0.00** | **0-4** | .43 | .45 | **.44** |
| **8b. How much does this avoidance bother you?** | **0.74** | **1.32** | **0.00** | **0-4** | .50 | .52 | **.51** |
| **9a. "Bite your tongue" or hold back from trying to discuss any relationship issues with ___?** | **1.50** | **1.26** | **1.00** | **0-4** | .52 | .55 | **.54** |
| **9b. How much dos this "biting your tongue" or holding back bother you?** | **1.61** | **1.29** | **2.00** | **0-4** | .41 | .44 | **.44** |
| **10a. Take over a task or chore for ___ that he/she is uncomfortable doing because of his/her traumatic event?** | **0.59** | **0.96** | **0.00** | **0-3** | .37 | .41 | **.39** |
| **10b. How much does this taking over tasks and chores bother you?** | **0.39** | **0.95** | **0.00** | **0-4** | .44 | .45 | **.46** |
| **11a. Help ___ with a task because he/she was having trouble concentrating?** | **1.28** | **1.17** | **1.00** | **0-4** | .48 | .53 | **.56** |
| **11b. How much does this helping bother you?** | **0.70** | **1.05** | **0.00** | **0-4** | .66 | .69 | **.71** |
| **12a. Make excuses to others for ___ 's behavior or try to manage his/her relationships with other people?** | **0.89** | **0.99** | **1.00** | **0-4** | .50 | .54 | **.59** |
| **12b. How much does this making excuses or managing relationships bother you?** | **1.20** | **1.36** | **1.00** | **0-4** | .64 | .68 | **.72** |

| Item | *M* | *SD* | Median | Range | Item-total correlation (20-question version) | Item-total correlation (18-question version) | Item-total correlation (14-question version) |
|---|---|---|---|---|---|---|---|
| **13a. "Tiptoe" around ___ so as not to anger him/her?** | **1.39** | **1.32** | **1.00** | **0-4** | .71 | .73 | **.75** |
| **13b. How much does this "tip-toeing" around bother you?** | **1.59** | **1.45** | **2.00** | **0-4** | .67 | .67 | **.68** |
| **14a. Avoid discussing events related to ___ 's traumatic event(s) in front of him/her to avoid his/her becoming upset?** | **0.80** | **1.29** | **0.00** | **0-4** | .45 | .46 | **.48** |
| **14b. How much does this avoidance bother you?** | **0.30** | **0.70** | **0.00** | **0-3** | .49 | .54 | **.58** |
| **15a. Not share your own feelings or concerns with ___ due to concerns that he/she would become upset?** | **1.61** | **1.34** | **1.00** | **0-4** | .63 | .66 | **.68** |
| **15b. How much does this not sharing bother you?** | **1.65** | **1.29** | **2.00** | **0-4** | .56 | .58 | **.57** |
| **16a. Change your routine due to ___'s difficulties?** | **1.28** | **1.31** | **1.00** | **0-4** | .71 | .72 | **.73** |
| **16b. How much does this changing your routine bother you?** | **1.15** | **1.37** | **1.00** | **0-4** | .82 | .81 | **.82** |
| **17a. How much have you modified your leisure activities due to ___'s difficulties?** | **1.26** | **1.29** | **1.00** | **0-4** | .63 | .63 | **.66** |
| **17b. How much does this bother you?** | **1.15** | **1.35** | **1.00** | **0-4** | .67 | .66 | **.71** |
| 18a. Sleep in a different bed from ___ due to his/her trauma-related nightmares or sleep disturbances? | 0.59 | 1.29 | 0.00 | 0-4 | .43 | .42 | - |
| 18b. How much does this sleeping in different beds bother you? | 0.54 | 1.19 | 0.00 | 0-4 | .29 | .26 | - |
| **19a. Give up control to ___ because of his/her desire to be in charge?** | **1.16** | **1.28** | **1.00** | **0-4** | .32 | .31 | **.33** |
| **19b. How much does this giving up control bother you?** | **1.09** | **1.29** | **1.00** | **0-4** | .40 | .37 | **.39** |
| 20a. Avoid physical intimacy with ___ because of his/her discomfort? | 1.20 | 1.42 | 1.00 | 0-4 | .47 | .45 | - |
| 20b. How much does this avoidance of physical intimacy bother you? | 0.91 | 1.23 | 2.00 | 0-4 | .30 | .29 | - |

*Note*. Items retained for the 14-question version are bolded.

**Table 3**

**Associations between Partner Accommodation and PTSD Symptom Severity**

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Partner accommodation (SORTS total) | - | | | |
| 2. Clinician-rated PTSD symptoms (CAPS) | .26† | - | | |
| 3. Patient-reported PTSD symptoms (PCL-S) | .28† | .69*** | - | |
| 4. Partner-reported PTSD symptoms (PCL-P) | .61*** | .29* | .36* | - |

*Note*. PTSD = Posttraumatic stress disorder. SORTS = Significant Others' Responses to Trauma Scale. CAPS = Clinician-Administered PTSD Scale. PCL-S = PTSD Checklist patient self-report report. PCL-P = partner/collateral report of patients' symptoms on PTSD Checklist. $n$ = 46 for all correlations.

† $p < .10$.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

**Table 4**

**Associations between Partner Accommodation, Patient Psychological Distress, and Partner Psychological Distress**

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 1. Partner accommodation (SORTS total) | - | .55*** | .11 | .28† | -.06 | .30* | -.26† | .23 |
| 2. Depression (BDI-II) | .32* | - | .57*** | .65*** | .40** | .50** | -.00 | .51*** |
| 3. Anxiety (STAI total) | .25† | .79*** | - | .91*** | .93*** | .33* | .15 | .47** |
| 4. Trait anxiety (STAI trait) | .21 | .82*** | .95*** | - | .69*** | .47** | .11 | .57*** |
| 5. State anxiety (STAI state) | .27† | .70*** | .96*** | .83*** | - | .15 | .16 | .31* |
| 6. Trait anger (STAXI trait) | .14 | .33* | .22 | .23 | .19 | - | .10 | .84*** |
| 7. State anger (STAXI state) | .32* | .64*** | .58*** | .54*** | .57*** | .43** | - | .15 |
| 8. Anger expression (STAXI expression) | .10 | .27† | .45** | .38* | .47** | .54*** | .32* | - |

*Note*. Correlations for the PTSD-identified partner (*n*s = 44-45) are presented above the diagonal, and correlations for the partner (*n* = 46) are presented below the diagonal. SORTS = Significant Others' Responses to Trauma Scale. BDI-II = Beck Depression Inventory-II. STAI = State Trait Anxiety Inventory. STAXI = State Trait Anger Expression Inventory.

† *p*< .10.

* *p*< .05.

** *p*< .01.

*** *p*< .001.

**Table 5**

**Associations between Partner Accommodation, Relationship Adjustment, and Perceived Social Support**

| Measure | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1. Partner accommodation (SORTS total) | - | -.39** | -.16 | -.34* | -.04 |
| 2. Relationship satisfaction (DAS) | -.50*** | - | .38* | .26 | .39* |
| 3. Perceived social support (MSPSS total) | -.35* | .44** | - | .70** | .60*** |
| 4. Perceived social support (MSPSS family) | -.03 | .19 | .71*** | - | .07 |
| 5. Perceived social support from significant other (MSPSS significant other) | -.54*** | .60*** | .64*** | .11 | - |

*Note*. Correlations for the PTSD-identified partner (*n*s = 40-44) are presented above the diagonal, and correlations for the partner (*n*s = 43-46) are presented below the diagonal. SORTS = Significant Others' Responses to Trauma Scale. DAS = Dyadic Adjustment Scale. MSPSS = Multidimensional Scale of Perceived Social Support.

* $p < .05$.

** $p < .01$.

*** $p < .001$.