

Post-Deployment Parenting in Military Couples: Associations With Service Members' PTSD Symptoms

Sarah T. Giff and Keith D. Renshaw
George Mason University

Elizabeth S. Allen
University of Colorado Denver

Severity of posttraumatic stress disorder (PTSD) symptoms has been linked to parenting impairments in military service members (SMs), but little is known about how SMs' PTSD is related to their partners' parenting. This study evaluated associations of SMs' PTSD symptoms with parenting indices in SMs and their partners, with additional exploratory analyses of how intrapersonal and interpersonal distress might play a role in such associations. Online self-report measures were completed by 128 SMs who scored >27 on the PTSD Checklist (PCL-M) at baseline and their partners at four timepoints over 1.5 years. Data were analyzed using multilevel modeling, with timepoints nested within individuals within couples. SMs' PTSD symptoms were significantly associated with decreased parenting alliance and increased inconsistent discipline in SMs and partners, increased harsh parenting in SMs only, and increased supervision in partners only. Couple satisfaction and conflict accounted for PTSD symptoms' association with parenting alliance, and couple conflict accounted for the association with inconsistent discipline. Couple conflict, couple satisfaction, and individual depression accounted for SMs' increased harsh parenting. SM PTSD remained the only predictor of partners' supervision. Limitations include that data were collected from online self-report and from heterosexual Army couples only. Overall, SMs' PTSD symptoms showed associations with parenting in SMs and their partners, with some evidence of compensatory higher supervision by partners.

Keywords: military, deployment, parenting, PTSD, couples

Since 2001, more than 2 million U.S. military service members (SMs) deployed overseas (Institute of Medicine, 2012), with estimates suggesting that more than 20% of SMs may experience posttraumatic stress disorder (PTSD) after deployments (see meta-analysis by Fulton et al., 2015). More than one third of active duty

SMs are married with dependent children (36.5%; Military One Source, 2015). It is possible that SMs and Veterans with children at home are particularly vulnerable to psychological difficulties after deployments. For example, some research suggests that having children at home may be associated with Veterans' increased PTSD symptom severity and likelihood of receiving a new PTSD diagnosis compared to Veterans without children (Janke-Stedronsky et al., 2016; Jobe-Shields, Flanagan, Killeen, & Back, 2015). In turn, the symptoms of PTSD can disrupt SMs' family relationships. Several studies have shown that PTSD is associated with various marital problems (meta-analyses by Lambert, Engh, Hasbun, & Holzer, 2012; Taft, Watkins, Stafford, Street, & Monson, 2011) and increased risk for psychosocial problems in military children (see review by Creech, Hadley, & Borsari, 2014). Despite knowledge of these disruptions in family functioning, surprisingly little research has focused on how PTSD impacts parenting attitudes and behaviors in SMs and their partners. Given that supportive parenting is a key buffer of children's negative outcomes in stressful environments (Luthar, 2006), and that parent mental health has been identified in military family stress models as a primary determinant of child outcomes (Palmer, 2008), a greater understanding of parenting practices in relation to PTSD is needed.

One of the foundational theories of parenting, posited by Belsky (1984), asserts that a person's parenting behavior is determined by factors in three major domains: child factors, individual parent factors, and contextual factors. In the case of SMs with PTSD, both the individual parent and contextual factors may be compromised. Belsky (1984) states directly that a person's ability to parent

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Sarah T. Giff and Keith D. Renshaw, Department of Psychology, George Mason University; Elizabeth S. Allen, Department of Psychology, University of Colorado Denver.

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Correspondence concerning this article should be addressed to Sarah T. Giff, Department of Psychology, George Mason University, 4400 University Drive, MS 3F5, Fairfax, VA 22032. E-mail: sthoma39@gmu.edu

effectively might be compromised when that person is experiencing psychopathology and emotional distress. This idea has been borne out in numerous studies (review by Berg-Nielsen, Vikan, & Dahl, 2002). Specifically for SMs, elevated PTSD symptoms are associated with SMs' overall poorer parental functioning, more inconsistent discipline, poorer supervision, less positive engagement, and more coercive behavior (Brockman et al., 2016; Cohen, Zerach, & Solomon, 2011; Gewirtz, Polusny, DeGarmo, Khaylis, & Erbes, 2010; Snyder et al., 2016). Furthermore, Belsky (1984) proposed that the marital relationship is a key component of the contextual factors that determine parenting behaviors. Ample research has supported a link between marital distress and impaired parenting behaviors in the broader population (see Krishnakumar & Buehler, 2000), and more specifically, SMs with PTSD report elevated marital distress (Taft et al., 2011). Thus, as two of the three domains that determine parenting factors (Belsky, 1984) are likely impaired by PTSD symptoms, it is not surprising that empirical studies have documented that parenting is more difficult for SMs with PTSD symptoms (review by Creech & Misca, 2017).

When a SM has PTSD, his or her partner likely also experiences impairment in the same individual and contextual domains in Belsky's (1984) model. In terms of individual functioning, is well-documented that a SM's PTSD symptoms are associated with a partner's elevated emotional distress (meta-analysis by Lambert et al., 2012). Moreover, Belsky (1984) noted that optimal parenting requires a parent to use ample emotional resources to sensitively, empathically, and flexibly care for a child. Such emotional resources might be limited in a person who is also providing care for a SM with PTSD, as some partners describe high levels of caregiver burden and feeling drained by "walking on eggshells" to avoid upsetting SMs with PTSD at home (Dekel, Goldblatt, Keidar, Solomon, & Polliack, 2005; Dekel & Monson, 2010). Thus, SMs' PTSD symptoms may exert direct and indirect effects on individual factors in partners that contribute to partners' own parenting. In addition, much like SMs, partners also report marital distress related to a SM's PTSD symptoms (Lambert et al., 2012). Thus, the contextual factors that can influence parenting behaviors are likely also impaired for partners. Belsky (1984) specifically posits that a strong marital relationship contributes to optimal parenting, because, ideally, one's spouse serves as a support system through challenging times. Partners might not receive strong emotional support from a SM with PTSD, especially when such symptoms are severe, and the SM requires more emotional support themselves. Therefore, according to Belsky's (1984) model, partners may well experience disruptions in their emotional and marital functioning based on a SMs' PTSD, which could undermine their ability to show optimal parenting behaviors.

As yet, however, empirical knowledge about associations of PTSD symptoms with parenting behaviors in one's *partner* is quite limited. Two identified studies to date have examined how one partner's psychological distress might be related to another partner's parenting. Blow and colleagues (2013) found that SMs' depressive symptoms were significantly associated with increases in *both* partners' parenting stress. Also, Gewirtz and colleagues (2018) found that, when evaluated simultaneously, partners' elevated emotional distress symptoms, but not SMs' PTSD symptoms, were significantly associated with poorer parenting practices of both SMs and partners. The current study seeks to add to the limited findings regarding partners' parenting in military families

by exploring how SMs' PTSD symptoms are related to multiple indices of both SMs' and partners' parenting behaviors at multiple points in time.

As Belsky's (1984) parenting model specifically points to a supportive marital relationship as a determinant of optimal parenting, it is also important to consider a couple's perceived parenting alliance, or how well two people believe they coordinate parenting together. A positive parenting alliance is important to children's positive social-emotional outcomes (see meta-analysis by Teubert & Pinquart, 2010). Given PTSD symptoms' associations with relationship difficulties, it is likely that PTSD symptoms also may be disruptive to the parenting alliance. To date, however, only one study has yet examined this possibility, finding that greater PTSD symptoms in SMs were associated with lower reports of parenting alliance by partners (Allen, Rhoades, Stanley, & Markman, 2010). Thus, the current study will investigate how SM PTSD symptoms are related to both SM and partner reports of their parenting alliance.

The primary aim of this study is to evaluate the associations of SMs' PTSD symptoms with the parenting behaviors *and* parenting alliance of both SMs and partners. Our hypotheses were that SM PTSD symptom severity would be significantly associated with impairments in parenting behaviors and alliance for both SMs and partners. In addition, given the documented links among SM PTSD symptoms, other types of psychological distress, marital distress, and parenting problems, we had a secondary, exploratory aim to examine whether various intrapersonal and interpersonal factors associated with PTSD symptoms might account for associations of PTSD with parenting outcomes. Our goal in these analyses was to generate hypotheses for future research in this area. Based on prior findings in the literature on PTSD, we examined depression and stress as possible intrapersonal factors (e.g., Blow et al., 2013; Mustillo, Xu, & Macdermid-Wadsworth, 2014) and couple satisfaction and high conflict as interpersonal factors (e.g., Gewirtz, DeGarmo, & Zamir, 2018; Krishnakumar & Buehler, 2000).

Method

Participants and Procedures

Participants were 128 couples enrolled in the Relationships Among Military Personnel (RAMP) study, a longitudinal study aimed at investigating the interpersonal and mental health of Army couples following deployment. Recruitment began in June 2013 and ended in June 2014 and used a variety of online recruitment methods, including sending emails to research and military-related listservs, posting announcements on social media and websites, and features in military related press. Procedures were approved by a university IRB and the Army Human Research Protections Office. Interested individuals were directed to the study website, which included information about the study, an online screening survey, and the informed consent document. Both members of the couple had to complete the screening to be considered for participation. Completed screening surveys were examined for the following eligibility criteria for the larger study: (a) individuals had to be at least 18 years old, English proficient, and able to pass informed consent comprehension questions, (b) individuals had to be a member of a couple consisting of a male soldier who returned

from a U.S. Army or U.S. Army Reserve/National Guard deployment within the past 2 years and a civilian female, and (c) the couple had to have been in a committed relationship for at least the past year, and the relationship had to have begun before the soldier's most recent deployment.

Following this screening process, there were a total of 576 couples who were invited and participated in the initial survey (T1) of the RAMP study via a unique link to an online survey through Qualtrics. A subset of 264 couples (in which SMs scored 27 or greater on the PTSD Checklist; see measures) was subsequently selected to join the longitudinal portion of the study. Individuals invited back also passed screening designed to detect questionable and duplicate data. Screening included verification of military service based on responses to targeted items in T1 surveys, IP address geolocations checks to verify locations of respondents, and survey completion by both partners. These couples were invited to complete a survey 1 month later (T2), followed by three additional surveys, spaced 6 months apart (T3-5).

For this study, we used data from 128 of these longitudinal sample couples (256 individuals) who had at least one child at least 6 years old living in the home at baseline. Measures relevant to the current study were administered at T1 ($n = 128$ couples with children), T3 ($n = 120$ couples with children; approximately 7 months after baseline), T4 ($n = 121$ couples with children; approximately 13 months after baseline), and T5 ($n = 118$ couples with children; approximately 19 months after baseline). Therefore, data were collected from participants approximately every 6 months, with the exception of the 7-month span between T1 and T3. We do not expect that this 1-month difference in time between data collections made a difference in the specific tests conducted for the present study, especially because longitudinal analyses to detect changes over time were not conducted for the present study. Each member of the couple was compensated with a \$50 gift card (\$100 total per couple) for completing the initial survey, and \$75 each per later surveys (\$150 per couple per survey). Of note, at T1, 23 SMs reported that they had previously sought or were currently in treatment for PTSD.

Participants were primarily non-Hispanic White (SMs = 90.6%; partners = 87.0%), and in their early thirties (SM age $M = 33.56$ years, $SD = 4.89$; partner age $M = 32.45$ years, $SD = 4.55$ at T1). The SMs were all in the Army. At the start of data collection, 90.1% of SMs were still on active duty. SMs had been deployed 3.08 times on average ($SD = 2.69$), and all but 2 SMs reported that they had deployed with Operation Iraqi Freedom/Operation Enduring Freedom (OIF/OEF). SMs had returned from deployment, on average 10.13 months ($SD = 16.17$ months) prior to beginning data collection. By the final survey, 27 individuals reported that they had left the Army. All couples in the study were married and had been in a relationship for an average of 123.99 months at the initial survey ($SD = 57.33$ months). Couples had an average of 2.61 children ($SD = 1.05$), who were 47.8% female, and an average of 7.69 years old at the initial survey ($SD = 1.69$).

Measures

PTSD. SMs completed the PTSD Checklist - Military version (PCL-M; Weathers, Litz, Herman, Huska, & Keane, 1994) at every time point. Each of the 17 items corresponds to a PTSD symptom in the *Diagnostic and Statistical Manual of Mental Disorders*, 4th

ed. (American Psychiatric Association, 2000) and is answered on a Likert scale from 1 (*not at all*) to 5 (*extremely*), based on how much the symptom has bothered respondents in the past month. Items are summed to create an overall PTSD severity score. The original authors of the measure suggested that a cutoff score of 50 would indicate likely PTSD in military populations (Weathers et al., 1994); however, more recent empirical study indicates that scores above 34 might reliably predict a PTSD diagnosis (Bliese et al., 2008). To capture a full range of PTSD symptoms, participants were invited to complete subsequent waves of data collection if they scored ≥ 27 on the PCL-M at baseline. This score was selected based on literature showing that the course of PTSD varies over time, and that individuals scoring at or above 27 have a higher risk of displaying greater symptoms over time (Orcutt, Erickson, & Wolfe, 2004). The PCL-M showed excellent internal consistency at all time points ($\alpha > .92$).

Parenting behaviors. When participants completed measures about parenting, they were instructed to respond about how they parent all of all their dependent children (both biological and step-children) with whom they lived and cared for more than half of the time. Parenting behaviors were measured from each parent at all time points (except for SMs at Time 5) using the Alabama Parenting Questionnaire—Short Form (APQ-9; Elgar, Waschbusch, Dadds, & Sigvaldason, 2007). The APQ-9 is a shortened, 9-item version of the original APQ, with three subscales of three items each: Positive Parenting (PP; e.g., “You praise one or more of your children if he/she behaves well.”), Inconsistent Discipline (ID; e.g., “You threaten to punish one or more of these children and then do not actually punish them.”), and Poor Supervision (PS; e.g., “One or more of these children is out with friends you don’t know.”). Thus, higher scores on PS represent poorer supervision, whereas lower scores represent better supervision. Two additional items from the harsh discipline scale on the longer, 19-item APQ (e.g., “You yell or scream at one or more of these children when he/she has done something wrong.”) were included. One item on this subscale was not included due to possible reporting mandates, and replaced with an item (“You lose your temper when one or more of these children doesn’t do something you ask him/her to do”) from the Hostile/Coercive scale in the Parent Behavior Inventory (Lovejoy, Weis, O’Hare, & Rubin, 1999). These three items were used to create a subscale we called Harsh Parenting (HP). All items are answered on a Likert scale from 1 to 5, and subscale scores are created by summing responses; thus, scores on each of the four subscales range from 3 to 15. Internal consistency for SMs on the APQ was adequate for on all subscales at all time points (α ranged from .70 to .94), except for slightly lower values obtained for SMs on at Time 1 (ID $\alpha = .58$; PS $\alpha = .63$) and on the ID subscale at Time 3 ($\alpha = .68$). Internal consistency on the APQ for Partners was also generally good (α ranged from .71 to .96), with the exception of HP at Time 4 ($\alpha = .68$), and PS at Time 5 ($\alpha = .63$).

Parenting alliance. The parenting alliance was measured at each time point using 5 items from the Parenting Alliance Inventory (PAI; Abidin & Brunner, 1995) that have been used in a prior study of parenting alliance in military couples (Allen et al., 2010). These 5 items (e.g., “When there is a problem with these children, we work out a good solution together.”) were selected as best representing the degree to which respondents feel that they parent well with their partner as a team, rather than appraisals of the other

parent's skill or enjoyment of parenting. The items chosen all had factor loadings of at least .50 for both men and women in the original validation sample (Abidin & Brunner, 1995). Items are rated on a scale from 1 (*not at all*) to 7 (*extremely*) and are summed to create a total score. Thus, scores on this version of the PAI range from 5 to 35. The PAI showed good internal consistency across all time points, with $\alpha > .88$ for SMs and partners.

Couple satisfaction. Couple satisfaction was measured using the 4-item version of the Couple Satisfaction Inventory (CSI-4; Funk & Rogge, 2007) at all time points. This measure was developed using item response theory in a study of over 5,000 couples. The CSI-4 consists of the 4 most precise items from the full 32-item version of the CSI. Traditionally, the first item ("Please indicate the degree of happiness, all things considered, of your relationship") is scored on a scale from 0 to 6, and the remaining 3 items are scored on a scale from 0 to 5. Due to administration error, all items in our study were scored on a scale from 0 to 5. Items are summed to create a total score; thus, in our sample, total scores ranged from 0 to 20. The CSI showed excellent internal consistency in our sample across all time points, with $\alpha > .94$ for both SMs and partners.

Couple conflict. Couple conflict was measured with the Communication Danger Signs Questionnaire (CDSQ; Stanley & Markman, 1997) at all time points. This measure assesses problematic communication patterns of escalation, invalidation, negative interpretations, and withdrawal that are characteristic of high conflict. An example item is: "My current partner criticizes or belittles my opinions, feelings, or desires." Items are rated on a scale from 1 (*Never or almost never*) to 3 (*Frequently*). Scores are generated by summing the items, and scores range from 3 to 12. The CDSQ showed adequate internal consistency ($\alpha > .72$ for both SMs and partners at each time point).

Stress. The 4-item perceived stress scale (PSS-4; Cohen, Kamarck, & Mermelstein, 1983) measures the degree to which one appraises his or her life to be stressful over the past month, and was collected at each time point. An example item is: "In the last month, how often have you felt that you were unable to control the important things in your life?" The measure uses a 5-point scale from 0 (*Never*) to 4 (*Very often*). Two items are reverse-scored, and then items are summed for a total score, ranging from 0 to 16. Of note, at the first time point, we altered the instructions to ask participants to respond to questions specifically about "nonmilitary circumstances," in an effort to understand stressful situations beyond their military experience. However, we elected to not make this alteration in subsequent administrations, to retain the original measure as intended. In our sample, the measure demonstrated adequate internal consistency for SMs and partners at each time point ($\alpha > .77$), except for SMs at baseline ($\alpha = .66$), possibly due to our altered wording in the instructions.

Depression. Depression was measured at each time point from both partners with the 7-item Depression Subscale (DASS-D) of the Depression, Anxiety, and Stress Scale—Short Form (DASS-SF; Lovibond & Lovibond, 1995). Items are answered in regard to how much the item applied to the respondent over the past week, on a scale from 0 (*Did not apply to me at all*) to 3 (*Applied to me very much, or most of the time*). An example item is: "I felt that I had nothing to look forward to." To score this measure, item scores are summed, and then multiplied by two (for equivalency with the long form). Thus, scores range from 0 to 42, with scores below 9

indicating healthy functioning, and scores above 14 indicating moderate distress. The DASS-D showed good internal consistency in our sample (all $\alpha > .89$ for both SMs and partners across all time points).

Analytic Plan

Although we had longitudinal data, we did not expect to see specific types of change in variables over time (e.g., linear growth), as couples did not enter the study at any specific uniform time point within their marriage, parenting, reintegration after deployment, or development of symptoms. To account for dependencies with the data, we analyzed our data with multilevel modeling, with time points (Level 1) nested within individuals (Level 2), who were nested within couples (Level 3). We used this 3-level approach (rather than a 2-level approach, cf. Laurenceau & Bolger, 2005), because it was important for our hypotheses to be able to statistically test for differences between SMs and partners. The 3-level model provided the ability to statistically test for differences between SMs and partners, using the Role variable.

Parenting variables (PAI and each parenting behavior subscale) were the outcome variables in each model. SMs' PTSD was the primary predictor of parenting outcomes for both SMs and partners. However, with multiple time points, we could not simply enter SMs' score on the PCL-M as a couple-level variable. Rather, SMs' report on the PCL at each time point was entered as a Level-1 variable for both SMs and partners.¹ Role (SM vs. partner) was then entered as a Level-2 predictor of both the intercept (which provided a test of overall differences between SMs and partners in parenting outcomes) and the Level-1 effect of PTSD (which created a test of whether the association of PTSD with parenting outcomes differed for SMs and partners). Predictors were grand mean centered in the equations, and role was coded such that SMs were $-.5$ and partners were $+.5$. Any significant effect of Role on the Level-1 coefficient of SMs' PTSD was probed by rerunning the analysis with an uncentered Role variable coded 0 (for SM in one analysis, partner in another) and 1 (for partner in one analysis, SM in the other). This approach resulted in obtaining different associations of PTSD with outcomes for SMs and partners only when a significant difference between the two was detected.

Finally, for each significant association between SM PTSD and a parenting outcome, exploratory follow-up analyses were conducted to examine relationship and intrapersonal factors that might partially account for that association, by adding variables as additional Level-1 predictors of that outcome. Level-2 effects of Role were included if a significant cross-level interaction between PTSD and Role had been detected in the initial model. Interpersonal variables tested included couple satisfaction and conflict. Intrapersonal variables tested included stress and depression. Due to the exploratory nature of these analyses and the primary goal of generating hypotheses for future research, we used a data-driven approach, in which variables with the least significance were removed from each model in a stepwise-fashion, until only vari-

¹ Identical analyses were conducted using the partner's perception of the SM's PTSD symptoms as the partner's Level-1 predictor variable, which yielded an equivalent pattern of results. These results are available from Sarah T. Giff upon request.

ables with a p value $< .10$ remained. This approach was used to address the limited power of our analyses and the conceptual and likely statistical overlap of the couple- and individual-level variables being examined. Of note, we tested models for all five parenting outcomes while controlling for each of the following covariates (entered as a Level-3 variable unless otherwise noted): length of relationship, months since most recent deployment, number of children, age of youngest child, age of oldest child, SM Rank, age (entered at Level 2) and education level (entered at Level 2). None of the covariates tested changed the pattern of significance, with a single exception. When SM Rank was included as a covariate in the prediction of inconsistent discipline, the coefficient of PTSD dropped from significant ($p = .038$) to nearly significant ($p = .055$). Further exploratory analyses of inconsistent discipline yielded results that were identical to those without SM Rank included. Thus, given the overall lack of change from inclusion of multiple covariates in multiple analyses, results of analyses without covariates are reported, for ease of interpretability.

Results

Means and standard deviations of all measures at all time points are shown in Table 1. In our sample, the SMs' scores indicated mild to moderate psychological distress. At baseline, 62.5% of SMs scored above the PCL-M cutoff of 34 (Bliese et al., 2008), and 28.1% of SMs scored above 50, the higher PCL-M threshold (Weathers et al., 1994). Additionally, 46.9% of SMs reported at least mild depressive symptoms on the DASS-D. Partners, on average, reported lower distress than SMs, with 29.7% indicating at least mild depressive symptoms on the DASS-D (Lovibond & Lovibond, 1995).

Results from the initial models testing the relationship between PTSD and parenting outcomes are shown in Table 2. The Level-2 effects of role on the intercept indicated that partners reported significantly more positive parenting and supervision compared to SMs. The Level-1 effects of PTSD indicated that SMs' PTSD symptom severity was significantly associated with lower parenting alliance, greater inconsistent discipline, and increased harsh parenting. In addition, the Level-2 effects of Role on the Level-1 coefficient for PTSD were significant for harsh parenting and supervision, indicating that the associations of SM PTSD with

each of those outcomes in SMs differed from the associations of SM PTSD with each of those outcomes in partners. The probe for harsh parenting revealed that SMs' PTSD symptom severity was significantly related to increased harsh parenting for SMs ($B = 0.03$, $SE = 0.01$, $p = .001$) but not partners ($B = 0.00$, $SE = 0.01$, $p = .582$). The probe for supervision revealed that SMs' PTSD symptom severity was significantly related to increased supervision in partners (i.e., lower scores on poor supervision; $B = -0.02$, $SE = 0.01$, $p = .006$), but not significantly related to SM reports of supervision ($B = 0.01$, $SE = 0.01$, $p = .262$).

Exploratory Analyses: Parenting Alliance

In the exploratory model testing for factors that might account for the association of SM PTSD with parenting alliance in both partners and SMs, the significant variables that emerged were couple satisfaction and conflict (see Table 3). These variables were significant in both the initial model with all variables and the streamlined model after stepwise removal of nonsignificant variables. Furthermore, in both the initial and final models, PTSD was nonsignificant, suggesting that decreased couple satisfaction and increased couple conflict accounted for the variance in parenting alliance that was initially accounted for by SM PTSD.

Exploratory Analyses: Inconsistent Discipline

In the exploratory model testing for factors that might account for the association of SM PTSD with inconsistent discipline in both partners and SMs, couple conflict was the only predictor that significantly predicted the outcome (see Table 4). Conflict was significant in both the initial model with all variables and the streamlined model after stepwise removal of nonsignificant variables. Again, in both the initial and final models, PTSD was nonsignificant, suggesting that increased couple conflict accounted for the variance in parental inconstant discipline behaviors that was initially accounted for by SM PTSD.

Exploratory Analyses: Harsh Parenting

In the exploratory model testing for factors that might account for the association of SM PTSD with harsh parenting in SMs only (tested by using an uncentered variable coded 1 for partners and 0 for SMs),

Table 1
Means and Standard Deviations of Measures at Each Time Point

Measure	Service members				Partners			
	T1	T3	T4	T5	T1	T3	T4	T5
PTSD	41.52 (14.18)	39.35 (16.27)	40.88 (18.15)	40.74 (16.53)	—	—	—	—
Positive parenting	13.13 (2.01)	13.31 (1.99)	12.97 (2.10)	—	13.93 (1.67)	13.68 (1.68)	13.80 (1.53)	13.57 (1.85)
Inconsistent discipline	7.06 (2.21)	6.85 (2.52)	7.16 (2.49)	—	7.34 (2.70)	7.30 (2.45)	7.06 (2.31)	7.08 (2.75)
Supervision	4.98 (1.65)	4.32 (2.13)	4.37 (2.12)	—	3.65 (1.38)	3.87 (1.82)	3.71 (1.62)	3.68 (1.39)
Harsh parenting	7.60 (2.54)	7.25 (2.62)	7.28 (2.66)	—	7.47 (2.55)	7.17 (2.48)	7.14 (2.16)	7.07 (2.49)
Parenting alliance	27.70 (6.54)	28.13 (6.96)	28.07 (7.06)	27.08 (6.71)	27.98 (7.14)	26.82 (7.39)	26.91 (7.73)	26.70 (7.81)
CSI	13.93 (4.62)	14.34 (4.43)	13.72 (5.10)	13.11 (4.68)	13.07 (5.04)	13.52 (5.04)	12.81 (5.22)	12.70 (4.91)
Conflict	7.66 (2.24)	7.44 (2.35)	7.54 (2.18)	7.84 (2.26)	7.50 (2.15)	7.51 (2.21)	7.49 (2.32)	7.85 (2.18)
Depression	9.71 (8.97)	8.67 (8.34)	10.08 (9.51)	11.41 (11.12)	7.77 (8.98)	8.03 (8.95)	9.28 (9.49)	7.89 (8.92)
Stress	8.07 (3.35)	7.29 (3.66)	7.85 (4.12)	8.44 (4.40)	6.95 (3.04)	6.63 (3.28)	6.70 (3.40)	6.43 (3.56)

Note. PTSD = Posttraumatic stress disorder; CSI = Couple Satisfaction Inventory. Dashes indicated data not collected.

Table 2
Multilevel Modeling Analyses of Service Member PTSD With Parenting Outcomes

Predictor	Parenting alliance		Positive parenting		Inconsistent discipline		Poor supervision		Harsh parenting	
	B (SE)	t	B (SE)	t	B (SE)	t	B (SE)	t	B (SE)	t
Intercept	27.30 (.46)	58.75***	13.68 (.07)	183.36***	7.05 (.14)	49.29***	4.00 (.12)	34.18***	7.39 (.16)	48.84***
Role (L2)	-.73 (.52)	-1.39	.50 (.13)	3.85***	.20 (.20)	1.03	-.52 (.12)	-4.51***	-.19 (.23)	-.85
PTSD (L1)	-.05 (.02)	-2.77**	.00 (.00)	.77	.01 (.01)	2.08*	-.01 (.00)	-1.02	.02 (.00)	2.53*
Role (L2)	.03 (.03)	1.27	.00 (.01)	.06	-.01 (.01)	-1.08	-.02 (.01)	-3.39***	-.02 (.01)	-2.03*

Note. PTSD = Posttraumatic stress disorder; L1 = Level-1 effect; L2 = Level-2 effect; Role refers to Service Member (-.5) or Partner (+.5).

* $p < .05$. ** $p < .01$. *** $p < .001$.

couple conflict and couple satisfaction again emerged as significant, and the individual variable of depression did, as well (see Table 5). No variables met criteria for stepwise removal. Similar to results for the PAI, PTSD was not significantly associated with harsh parenting once all of the other predictors were included. As would be expected, couple satisfaction was negatively associated with harsh parenting, and couple conflict was positively associated with harsh parenting. Depression was negatively associated with harsh parenting, indicating that—when accounting for all other variables including PTSD—greater depressive symptoms were associated with less harsh parenting.

Supervision

In the exploratory model testing for factors that might account for the association of SM PTSD with increased supervision in partners only (tested by using an uncentered variable coded 0 for partners and 1 for SMs), PTSD was the only significant predictor in the initial and final models (see Table 6). Thus, none of the interpersonal or intrapersonal variables tested accounted for the association of higher PTSD symptoms in SMs with increased supervision scores in partners.

Discussion

This paper represents one of the first evaluations of associations of SMs' PTSD symptoms with parenting behaviors and parenting alliance in both partners and SMs. Our results revealed that the

associations of SMs' PTSD symptoms with parenting outcomes may differ based on both which parent is under consideration and which specific outcome is being evaluated. The diverse pattern of findings highlights the complex nature of couple and family processes, and the importance of investigating multiple outcomes from both members of the dyad in order to build a more complete picture of how families operate under emotional stress.

In our sample, parenting alliance was negatively related to SM PTSD symptoms in both SMs and partners. This finding is consistent with those from the only other study to date of parenting alliance in military couples (Allen et al., 2010). Our measure of parenting alliance in this study focused specifically on the degree to which an individual feels a good partnership with the coparent regarding parenting decisions. The negative association of PTSD in one partner with parenting alliance in both partners is consistent with the broader pattern of disruptions in couple processes found in couples coping with PTSD (Lambert et al., 2012; Taft et al., 2011). In fact, our exploratory analyses revealed that measures of couple conflict and satisfaction largely accounted for the association of SM PTSD with both partners' reported parenting alliance.

To understand this now replicated finding, it is helpful to consider some of the key symptoms of PTSD, such as feeling distant from others, emotional numbing, and irritability. Such symptoms are often related to couples reporting difficulty with interpersonal communication and feeling close to one another, and who likely have a hard time feeling they are "on a team" together in multiple life domains (Allen et al., 2010). Having effective conversations about parenting decisions and strategies in the context of such

Table 3
Multilevel Modeling Results of PTSD, Interpersonal, and Intrapersonal Factors Predicting Parenting Alliance

Predictor	Initial model			Final model		
	B	SE B	t	B	SE B	t
Intercept	27.35	.37	74.30***	27.36	.37	74.21***
Role	-.57	.44	-1.29*	-.50	.43	-1.15
PTSD	.00	.02	.27	.00	.02	.12
Couple satisfaction	.56	.06	9.59***	.56	.05	10.23***
Conflict	-.52	.12	-4.52***	-.53	.11	-4.63***
Stress	-.05	.07	-.62	—	—	—
Depression	.00	.03	.02	—	—	—

Note. PTSD = Posttraumatic stress disorder; Role refers to Service Member (-.5) or Partner (+.5). Dashes indicated predictor not included in the model.

* $p < .05$. *** $p < .001$.

Table 4
Multilevel Modeling Results of PTSD, Interpersonal, and Intrapersonal Factors Predicting Inconsistent Discipline

Predictor	Initial model			Final model		
	B	SE B	t	B	SE B	t
Intercept	7.07	.14	50.49***	7.06	.14	50.42***
Role	.24	.20	1.22	.21	.20	1.08
PTSD	.01	.01	1.05	.01	.01	1.24
Couple satisfaction	-.01	.02	-.28	—	—	—
Conflict	.14	.05	2.73**	.15	.04	3.55***
Stress	.06	.03	1.80	—	—	—
Depression	-.02	.01	-1.34	—	—	—

Note. PTSD = Posttraumatic stress disorder; Role refers to Service Member (-.5) or Partner (+.5). Dashes indicated predictor not included in the model.

** $p < .01$. *** $p < .001$.

Table 5
Multilevel Modeling Results of PTSD, Interpersonal, and Intrapersonal Factors Predicting Harsh Parenting Behaviors for Service Members

Predictor	Initial and final model		
	B	SE B	t
Intercept	7.53	.19	39.79***
Role	-.21	.23	-.95
PTSD	.02	.01	1.74
Role	-.02	.01	-1.41
Couple satisfaction	-.10	.03	-3.29**
Role	.10	.04	2.33**
Conflict	.15	.06	2.47**
Role	.01	.09	.09
Stress	.07	.04	1.65
Role	-.08	.06	-1.29
Depression	-.04	.02	-2.33**
Role	.06	.02	2.97***

Note. PTSD = Posttraumatic stress disorder. Role refers to Service Member or Partner.

** $p < .01$. *** $p < .001$.

symptoms might be difficult, thus affecting both partners' felt levels of communication, satisfaction, and teamwork.

Our findings regarding specific self-reported parenting behaviors were less consistent. First, SMs' PTSD symptoms were positively associated with both partners' reports of inconsistent discipline. This finding is similar to that of Creech and colleagues (2017), who found a significant correlation between National Guard fathers' PTSD symptoms and SMs' inconsistent discipline practices. Also, in civilian families, inconsistent discipline is one of the most common forms of parenting problems when a parent experiences psychopathology (Berg-Nielsen et al., 2002). When tested with additional predictors, conflict significantly predicted inconsistent discipline, rather than PTSD symptoms. It is possible that parents' inconsistent discipline practices may be more related to interparental conflict, which is higher when SMs have greater PTSD symptoms. Indeed, multiple studies have found links between interparental conflict and negative parenting behaviors, including inconsistent discipline behaviors (e.g., Krishnakumar & Buehler, 2000). Couples engaged in higher conflict may be drained of emotional resources necessary to effectively discipline children, or might not be in agreement about the rules or methods of discipline used with children (i.e., lower parenting alliance). Continued research in this area will be important to identify potential mechanisms, as well as potential reciprocal associations between these variables.

SMs' PTSD symptoms had a significant positive association with their own, but not their partners', self-reports of harsh parenting. It is possible that the symptoms of PTSD themselves, particularly hyperarousal symptoms, are particularly related to harsher responding to children (Sherman, Gress Smith, Straits-Troster, Larsen, & Gewirtz, 2016), with partners who do not experience these same symptoms less affected in their levels of harsh parenting. Of note, we did not assess partner PTSD in this sample, so we were unable to assess whether partner PTSD symptoms might have shown a similar association.

Interestingly, our follow-up exploratory analyses revealed that SMs' reports of lower couple satisfaction and higher couple con-

flict both accounted for some of the variance in harsh parenting that had been accounted for by SMs' PTSD. It is possible that this pattern reflects a more general pattern of "harsh responding" to others that may be present in SMs with greater PTSD symptoms. Many studies have documented that SMs with PTSD are more likely to show anger and hostility, or even intimate partner violence, in romantic relationships (e.g., Miller et al., 2013; Taft et al., 2011). These same patterns may emerge in interactions with children, in the form of harsh parenting. Interestingly, in this analysis, SMs' depressive symptoms demonstrated a negative association with harsh parenting. It is important to recognize that these are multivariate results; thus, this association is only negative when accounting for couple conflict, couple satisfaction, SM PTSD symptoms, and stress. That caveat notwithstanding, it is possible that, when accounting for all other variables, SMs who experience more depressive symptoms may be doing less parenting in the first place, or might not have the energy or motivation to harshly respond to their children. Further research is thus needed to identify mechanisms by which PTSD symptoms might be associated with harsher parenting practices, and what contextual elements, such as couple satisfaction, might serve as protective factors from dysfunctional parenting practices in SMs.

The other significant finding that emerged in our sample was the association of higher SM PTSD symptoms with reports of increased supervision from partners, an association that held even when accounting for intrapersonal and interpersonal factors and all possible covariates. This finding ran contrary to our hypotheses and might indicate that, in some cases, greater distress in a SM might prompt a partner to compensate by supervising children more closely. Although we can only speculate on why this compensation may be occurring, it is possible that if SMs are engaging in harsher parenting and overall more conflictual interpersonal patterns, partners may feel the need to insulate children from such reactions. Such a pattern is consistent with the idea of maternal gatekeeping (Allen & Hawkins, 1999). Alternatively, it may be that when a SM has higher PTSD symptoms after deployments, couples are slower to renegotiate parenting roles, such that partners

Table 6
Multilevel Modeling Results of PTSD, Interpersonal, and Intrapersonal Factors Predicting Poor Supervision for Partners

Predictor	Initial model			Final model		
	B	SE B	t	B	SE B	t
Intercept	3.71	.13	28.29***	3.71	.13	28.07***
Role	.59	.12	4.87***	.57	.12	4.75***
PTSD	-.02	.01	-2.75**	-.01	.01	-2.67**
Role	.03	.01	3.70***	.03	.01	3.80***
Couple satisfaction	.01	.02	.57	—	—	—
Role	-.04	.03	-1.38	—	—	—
Conflict	.05	.05	1.04	—	—	—
Role	-.02	.07	-.32	—	—	—
Stress	.00	.04	.02	—	—	—
Role	-.01	.05	-.70	—	—	—
Depression	-.02	.01	-1.49	-.02	.01	-1.71
Role	-.01	.02	-.70	-.01	.01	-.46

Note. PTSD = Posttraumatic stress disorder. Role refers to Service Member or Partner. Dashes indicated predictor not included in the model. ** $p < .01$. *** $p < .001$.

remain responsible for relatively more supervision duties even after the SM has returned home (Devoe & Ross, 2012). A partner's assumption of greater parenting supervision might reflect some resilience; however, it will be important for future studies to also identify if and when greater supervision might have negative consequences, such as increased caregiver burden (Dekel, Solomon, & Bleich, 2005). Of note, there was no significant association of SMs' PTSD symptoms with SMs' own reported levels of supervision.

Finally, our hypotheses of associations between SM PTSD and both parents' reports of positive parenting were not supported. We were surprised by these findings, as other researchers have found links between SMs' PTSD symptoms and detriments in positive parenting, sometimes with similar measures (Brockman et al., 2016; Creech, Trotman, Michaelson, et al., 2017; Gewirtz et al., 2010). Our findings do not appear to be related to restricted range, as the spread of scores was similar across all four subscales of the APQ in our sample. Furthermore, the direction of the nonsignificant association between PTSD and positive parenting was actually positive. Thus, even with a larger sample and more power, this result would stand in contrast with prior research indicating that PTSD is *negatively* associated with positive parenting (Brockman et al., 2016; Creech et al., 2017). Of note, the limited research on parenting difficulties related to PTSD has tended to focus on couples soon after deployments. Thus, it is possible that our contradictory findings may be due to the fact that our sample included couples assessed months to years after deployment. Many couples might have adjusted to some aspects of parenting and the home environment successfully, even in the context of PTSD symptoms. It is also possible that the couples who are able to participate in research such as ours, and SMs who are able to remain in the Army, are better-adjusted than other couples who might not meet our inclusion criteria, so we did not fully capture the range of difficulties experienced by couples in this population. Overall, the lack of consistency of our findings with those from prior research highlight the need for continued empirical investigation of these phenomena. In particular, research examining parenting at different stages after returning from deployments, and research using observational measures or collateral reports from partners or children, which can help reduce susceptibility to bias, is needed.

In a clinical context, it may be beneficial to include in treatments for PTSD education about healthy family communication to help address these issues. Such additions might promote healthier relationship and parenting strategies for SMs and overall healthier outcomes for military families, even in the context of PTSD. Additionally, our finding of *increased* partner supervision in the context of higher SM PTSD highlights the need for attention to potential strengths in such families, which will also contribute to future successful clinical treatment of SMs and partners.

Although this study possesses many strengths, including data collected over multiple time points from both partners and SMs and inclusion of a sample with moderately elevated PTSD symptoms, it is not without limitations. The respondents were surveyed through online self-report questionnaires, raising the possibility of biased and inconsistent responding. It is likely that, especially for parenting behaviors, individuals would not want to endorse engaging in behaviors that might not be considered socially acceptable or optimal parenting. Additionally, parenting is a complex and dynamic process that may be difficult to capture adequately with

self-report questionnaires. Of note, the internal consistency of some of our parenting scales was low at some time points, raising some questions about the reliability of results. Moreover, additional contextual information may have a great influence on the associations studied here, such as the amount of time each parent spends with children or the child's understanding of a parent's PTSD symptoms. Therefore, results from this study should be considered a first step in testing hypotheses to generate information for future, more in-depth study on parenting in military families. In addition, we did not conduct formal mediational analyses, despite our longitudinal data, as our study baseline did not necessarily reflect the onset of either PTSD symptoms or parenting problems. Future studies with a clear trajectory of PTSD symptoms would be helpful.

It is also important to note that our sample limits the generalizability of our findings. First, the sample was comprised of primarily White and all heterosexually partnered male SM/female civilian couples. Therefore, our findings may not be readily generalizable to couples with different demographics from our sample, such as female SM/male civilian couples or same-sex couples. Given empirical findings that combat PTSD symptoms might relate differentially to parenting difficulties for mothers with PTSD compared to fathers with PTSD (Berz, Taft, Watkins, & Monson, 2008; Gold et al., 2007), expanding research to other configurations of military families remains an important need. Also, by only sampling members of the Army, we did not capture the full breadth of experiences of all SMs across military branches, due to potential differences in deployments and demographics. Such differences might alter the way that a SM experiences PTSD and how symptoms relate to family relationships, so our findings may be most applicable to Army couples. Finally, we did not include assessment of partners' PTSD in response to any potential trauma, which could have further informed our results.

In sum, our findings present a complex view of military couples' parenting in the context of PTSD. In families where a SM is experiencing greater PTSD, it is more likely that the couple struggles in terms of feeling like they are on the same page in parenting, and with consistently disciplining children. Also, it appears that the SM's PTSD symptoms are linked with more conflictual communication with and harsh responding to the partner and children. A partner's increased levels of supervision in the presence of more severe PTSD symptoms may reflect the partner's recognition of the SM's difficulties, leading the partner to "pick up the slack." Such compensatory parenting behaviors may even contribute further to the disruption in the parenting alliance. It is also possible, based on our nonsignificant associations between SM PTSD and positive parenting, that many families in our sample have learned to adjust to a SM's PTSD symptoms over time.

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