

## PTSD and Physical Health Symptoms Among Veterans: Association with Child and Relationship Functioning

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### ABSTRACT

This study examines the association between veterans' physical and mental health symptoms and perceptions of adverse child and relationship functioning. Veteran responses to the PHQ-15, assessing physical health; the PCL-C, assessing PTSD symptoms; and reports of family challenges were drawn from a countywide veterans survey. Findings indicate physical health (OR = 1.048; 95% CI, 1.002, 1.098) and post-traumatic stress disorder (PTSD) symptomatology (OR = 1.019; 95% CI, 1.004, 1.034) independently predicted increased child difficulties. Similarly, physical health (OR = 1.081; 95% CI, 1.012, 1.154) and PTSD symptoms (OR = 1.043; 95% CI, 1.022, 1.065) independently impacted relationship difficulties. Using standardized coefficients to compare, PTSD symptoms were a stronger predictor across both models. Results highlight the dual importance of assessing both veterans' physical and mental health symptoms to understand family functioning. Additionally, these findings underscore the importance of longitudinal research, which can follow families beyond separation from the military.

### KEYWORDS

children; deployments;  
marriage; PTSD; war and  
families

## Introduction

The far-reaching effects of the high operational tempo during the recent conflicts in Iraq and Afghanistan have focused new attention on the well-being of military families. Repeated family separations during deployment as well as the physical and psychological effects of combat exposure on returning military personnel have been shown to be associated with the functioning of spousal relationships and children in these families (Cozza, 2014). As these conflicts continue to wind down and military personnel transition to postmilitary life, understanding how deployment experiences as well as veteran health and mental health impact families will become increasingly relevant. This study examines the relationship between deployment experiences, physical health, and post-traumatic stress disorder (PTSD) symptoms among

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veterans and their reports of adverse child and intimate or spousal relationship functioning.

This work is informed by family systems theory, which assumes that (1) the family as a unit is greater than the sum of its individual members, (2) family members will have an ongoing and reciprocal impact on each other, and (3) the behavior of individual members is best understood in the context of the family system as a whole (Cox & Paley, 1997; Minuchin, 1974). Taking a family systems perspective suggests that in military-connected and veteran families, the experiences of the military-involved parent/spouse will have ramifications for the entire family, including the spousal relationship and the functioning of children in the home.

## **Child functioning in veteran families**

### ***Deployments***

The family systems perspective is consistent with empirical research on children in military families. The impact of parental military service on children has largely been studied among an active duty military population, with little research focused on veterans and their children. This literature suggests that deployments as well as the physical and mental health challenges that result from military service may impact child functioning. Findings regarding the impact of deployment on child functioning from the first Gulf War (Jensen, Martin, & Watanabe, 1996) indicated modest increases in depressive symptoms related to parental deployment but no changes in behavioral functioning. More recently, both length and number of parental deployments have been associated with adverse outcomes for children including mental health, behavioral functioning, and suicidality (Chandra et al., 2010; Flake, Davis, Johnson, & Middleton, 2009; Gilreath et al., 2015), although the magnitude of these effects may be relatively small (Card et al., 2011). Difficulties for children have been shown to continue and possibly escalate during the transition period after deployment (Lester et al., 2010). However, because of a paucity of research on the children of veterans, it is unclear whether these challenges to healthy functioning related to parental deployment persist once personnel separate from military service.

### ***PTSD symptoms***

Life course theory, when applied to the experience of veterans, suggests that it is not just military service but veterans' pre- and postservice experiences as well as their innate characteristics that determine outcomes (MacLean & Elder, 2007). Indeed, a series of studies with Vietnam-era veterans determined that although war-related factors were preeminent, both pre- and postwar

variables were also relevant in considering veterans' risk for PTSD symptomatology (King, King, Foy, Keane, & Fairbank, 1999). In recent conflicts, PTSD has been the most commonly researched mental health challenge experienced by service members and veterans (Cozza, Holmes, & Van Ost, 2013). The mental health difficulties that military personnel and veterans experience subsequent to military service also have the potential to adversely impact children in their families. PTSD symptoms among military-connected and veteran parents have been found to impair parenting behaviors (Jordan et al., 1992; Solomon, Debby-Aharon, Zerach, & Horesh, 2011), which may impact child functioning. However, research into the direct impact of veteran PTSD symptoms on child outcomes has produced mixed findings (Dekel & Monson, 2010) with some results indicating an adverse impact including increased behavior problems, anxiety, and aggression, whereas others found little to no impact on outcomes, including emotional distress, social development, and self-esteem.

### ***Physical health symptoms***

Although the association between service member mental health and family outcomes has been examined more thoroughly, less attention has been paid to the association between the physical health of veterans and child functioning. Cozza et al. (2010) found that the impact of physical injuries on child outcomes depended on family functioning before the injury; children from families that were previously distressed tended to be more adversely impacted by parental combat injury. Physical injuries and physical health symptoms may impair child functioning through a number of pathways, including limiting parenting abilities and disruptive shifts in family roles (Holmes, Rauch, & Cozza, 2013). Theoretically, some researchers in this field suggest that "invisible wounds," including mental health symptoms, may be more problematic for children than "visible wounds," including many injuries and physical health deficits, because mental health symptoms may be more difficult for children to understand and could be misinterpreted by children, leading to more emotional and behavioral difficulties (Gorman, Fitzgerald, & Blow, 2010).

## **Intimate relationship functioning in veteran families**

### ***Deployments***

Deployment experiences as well as physical and mental health also have the potential to impact spousal relationships in veteran families. Previous research related to the impact of deployment on spousal relationships has been mixed. Some results have indicated that marital satisfaction may be adversely

impacted by deployment (McLeland, Sutton, & Schumm, 2008), and others have even noted an increase in divorce among military and veteran couples in the years after a deployment (Schumm, Bell, & Gade, 2000). However, other research has found no lasting impact on relationship functioning related to deployment alone (Allen, Rhoades, Stanley, & Markman, 2010) and mixed or nonsignificant findings related to the impact of deployment on divorce rates (Conley & Heerwig, 2011; Karney & Crown, 2007).

### ***PTSD symptoms***

Although results related to deployment may be mixed, results regarding the impact of mental health difficulties, and PTSD symptoms specifically, on relationship functioning have been consistent. In both military and veteran populations, PTSD symptoms in the military or veteran spouse have been associated with lower relationship quality, more relationship distress, and impaired intimacy (Goff, Crow, Reisbig, & Hamilton, 2007; Jordan et al., 1992; Khaylis, Polusny, Erbes, Gewirtz, & Rath, 2011; Lambert, Engh, Hasbun, & Holzer, 2012). This relationship appears to hold even at subclinical symptom levels (Caska & Renshaw, 2011). PTSD among combat veterans has also been associated with an increase in aggression and intimate partner violence in spousal relationships (Taft, Watkins, Stafford, Street, & Monson, 2011).

### ***Physical health symptoms***

The association between injuries and impaired physical health with relationship functioning is less clear. There is little research examining this association in veteran families. In the active duty population, one study of the impact of physical health on family functioning among National Guard members and their spouses did not find an increase in relationship stress related to poor physical health (Gorman et al., 2014). However, others have suggested that physical injuries among military-connected individuals may increase burden for their spouses (Holmes et al., 2013), which has the potential to impact relationship functioning.

### ***Hypotheses***

This study examines the impact of deployment experiences, PTSD symptoms, and physical health symptoms on veteran reports of adverse child and intimate relationship functioning. Previous research suggests that deployments as well as the physical and mental health of veterans have the potential to impact child functioning and spousal relationships in veteran families. However, most of this research has focused on the impact of one of these stressors

at a time, and most has been conducted in military rather than veteran families. This study contributes to the existing body of literature in two distinct ways. First, by examining the simultaneous effect of these significant stressors (deployment, impaired mental health, and impaired physical health), we may be able to identify which has the strongest association with adverse outcomes, a finding that has the potential to guide services for veteran families. Second, examining these issues in a veteran population may shed light on the lasting impact of these stressors on military families after separation from military service.

Family systems theory undergirds our assumption that the deployment experiences and physical and mental health symptoms of veterans will have ramifications for the entire family system and specifically for children and intimate relationships within these systems. This theoretical orientation and previous empirical evidence inform two specific hypotheses:

- H1. We hypothesize that each stressor (deployments, physical health symptoms, and PTSD symptoms) will be independently associated with increased reports of adverse child and intimate relationship functioning.
- H2. We hypothesize that PTSD symptoms will have the strongest relationship with reports of adverse child and relationship functioning as compared with deployments or physical health symptoms. Because there is little empirical evidence comparing the impact of physical and mental health on veteran families, this hypothesis is considered exploratory.

## **Methods**

### ***Data and participants***

Data for these analyses were drawn from a survey of veterans living in southern California. The survey was completed between August 2013 and March 2014 by 1,356 veterans, including 448 who reported being in a serious relationship and 513 with at least one child. To capture the diversity of the veteran population in the area, survey participants were identified through a mixed, nonprobability sampling strategy. Contact information data from a state agency were leveraged to capture veterans who reported California residency at separation from military service. Via an e-mail containing a link to the survey, the state agency invited veterans living within one large southern California county to participate. Further, a local information center was enlisted to recruit participants from individuals who called the center and identified as a veteran. Those who were willing to be contacted about the study received a call from a member of the research team and were sent a link to the survey or a paper copy, if they agreed to participate.

Additionally, the research team partnered with a national veterans agency, local agencies serving the county veteran population, and college veterans agencies and organizations. Agencies provided a number of services to veterans, including employment, health, mental health, and housing. The national agency identified veterans in the target area using zip codes; these veterans were invited to participate using an online survey link. Several local agencies also participated in the recruitment process through two different approaches. These agencies e-mailed a link to the survey to their clients or invited research team members to agency events where participants completed paper-and-pencil instruments. Similarly, college veteran organizations also recruited participants through the online survey link or at data collection events. Finally, participants were recruited through advertising, a public service announcement, and social media campaigns. All surveys were completed online (approximately 60%) or in paper-and-pencil format (approximately 40%). To avoid redundancies in data collection, contact information was collected from all participants and similar information double checked to ensure individuals did not complete the survey more than once. Participants received a \$15 gift card for completing the survey, which took 30 to 90 minutes. All procedures were reviewed and approved by the University of Southern California Institutional Review Board.

### **Measures**

Independent variables for these analyses included level of PTSD symptomatology, level of physical health symptomatology, and whether the veteran had experienced at least one deployment (yes or no), as well as a number of demographic variables controlled for in analysis, including age ( $\leq 18$  through  $\geq 71$ ), gender (male or female), race (American Indian/Alaskan Native, Asian, Black or African American, Native Hawaiian or Pacific Islander, White [not Hispanic], or Hispanic and Latino) and education level (less than college education or college education or higher). Dependent variables included perceived adverse child and intimate relationship functioning. Demographic variables and number of deployments were captured via single items on the survey. The remaining measures are discussed in more detail below.

### **Mental health symptoms**

Although veterans may experience a number of mental health challenges, the prevalence of PTSD symptoms among active duty and veteran populations suggest that this is a critical variable to be included in models. PTSD symptoms were measured using the PTSD Checklist-Civilian (PCL-C; Weathers & Ford, 1996). The PCL-C is a 17-item measure in which respondents rate how much they were bothered during the last 30 days by each problem on

5-point rating scale from 0 = not at all to 4 = extremely. Items on the PCL-C correspond directly with PTSD diagnostic criteria in the *Diagnostic and Statistical Manual of Mental Disorders IV-TR* (American Psychiatric Association, 2000). Higher values indicate greater levels of symptomatology. The measure has demonstrated strong internal consistency and test-retest reliability ( $\alpha = .96$ ;  $r = .96$ ; Weathers, Litz, Herman, Huska, & Keane, 1993). The internal consistency in this study was excellent ( $\alpha = .97$ ).

Given the previously discussed theoretical and empirical findings suggesting that both preservice and postservice factors should be considered alongside military experiences in determining veterans' health and mental health, we chose to use the civilian rather than military version of the PCL. The civilian version anchors prompts to "stressful experiences," allowing for the consideration of pre- and postwar factors, whereas the military version anchors prompts to "stressful military experiences," thus potentially obscuring the impact of other life course experiences. When previously used with a veteran population, the PCL-C has been shown to have acceptable psychometric properties (Wilkins, Lang, & Norman, 2011).

### **Physical symptoms**

Physical symptoms were measured using the Patient Health Questionnaire 15-item scale (PHQ-15; Kroenke, Spitzer, Williams, & Löwe, 2010). This scale assesses how much participants were bothered by health symptoms during the last 30 days on a scale of 0 = not bothered at all to 2 = bothered a lot. The final item on the PHQ-15, which relates to menstrual cramps, was excluded because there are relatively few female veterans in this sample. The PHQ-15 has been used to assess physical health symptoms in military and veteran populations (Wilk et al., 2010). The scale has demonstrated internal consistency ( $\alpha = .80$ ; Kroenke, Spitzer, & Williams, 2002) as was also demonstrated in the current study ( $\alpha = .89$ ).

### **Adverse child functioning**

Child functioning was measured using a list of five challenges often experienced by children in military/veteran families. The list included concerns about behavior, academic performance, peer relationships, emotional problems, and physical problems. The list begins with the prompt, "Have you worried about the following child-related problems in the past 12 months?" and response options included 0 (no), indicating that a particular difficulty is not a concern for their child, or 1 (yes), indicating that a particular difficulty is a concern. The list demonstrated adequate internal consistency in this study ( $\alpha = .80$ ), and exploratory factor analysis indicated that these items loaded together onto one underlying adverse child functioning factor.



### ***Adverse intimate relationship functioning***

Similarly, adverse relationship functioning was measured using a list of seven challenges common to military and veteran couples. The list begins with the prompt, "Have you experienced any of the following relationship issues with your spouse/partner within the last 30 days?" Items include difficulties with mood changes, daily family routines, balancing household responsibilities, and sexual challenges. Response options included 0 (no), indicating that this particular difficulty does not occur in their relationship, or 1 (yes), indicating that a particular difficulty does occur. This list demonstrated excellent internal consistency in this study ( $\alpha = .96$ ), and exploratory factor analysis indicated that these items loaded together onto one underlying adverse relationship functioning factor.

### ***Analysis***

SAS version 9.4 (SAS Institute, 2013) was used for the following analyses. Initial analyses confirmed no significant differences in study variables by recruitment and data collection methods with one exception. Individuals recruited to participate through an agency serving homeless veterans reported more physical health symptoms. Bivariate relationships between variables were examined using Pearson correlations for continuous variables and chi-square tests for dichotomous variables. Responses on outcome variables were summed inclusively and dichotomized to create binary outcomes representing the overall presence or absence of adverse functioning. Given the underlying binary distribution of the outcome variables, this method is a valid means to understand overall risk in this population (DeCoster, Iselin, & Gallucci, 2009). Multiple logistic regression was used to model the odds of reporting any challenges with children compared with no challenges and any challenges in the spousal relationship compared with no challenges.

Additionally, there were missing data in both the spousal relationship and child models, primarily accounted for by participants who did not respond to questions regarding PTSD or physical health symptoms. In the relationship models 139 cases contained missing values. In the child models 101 cases contained missing values. A number of steps were taken to be certain that missing data did not impact our findings in a meaningful way. In addition to the final models presented here, we ran a number of additional models where missingness was included as a response category, both in our independent and dependent variables. Results of these models indicated that missingness in our independent variables had no impact on our outcomes. Additionally, none of our independent variables was significantly related to missingness in our outcomes, with one exception. Veterans of Hispanic or Latino race/ethnicity, a variable that was included as a control in these analyses, were significantly less likely to answer adverse relationship functioning questions. The most



notable finding from these efforts at analyzing the pattern of missingness was that those who did not answer questions related to our independent variables were much more likely to also skip questions related to our outcome variables.

## Results

For these analyses two subsets of the larger survey dataset were used: all veterans who reported being married or in a serious relationship, totaling 448 respondents (hereafter referred to as the relationship sample), and all veterans who reported having at least one child, totaling 513 respondents (hereafter referred to as the child sample). Because these two samples involved different groups of respondents, demographic characteristics are presented separately in [Table 1](#). It should be noted, however, that individuals who reported both being in a relationship and having at least one child are therefore represented in both samples, although the outcome data they contribute are unique to each sample. Both samples had significantly more men (87% in the relationship sample and 84.9% in the child sample) than women, with most participants in early to middle age. In both samples, White (38.5% and 29.1%, respectively) and Latino (27.0% and 27.8%, respectively) participants were the two largest racial/ethnic groups. Most participants in both groups reported experiencing at least one deployment during their military career (80.7% and 76.9%, respectively). In both groups slightly more veterans reported that they had not completed college (59.5% and 65.4%, respectively) compared with those who had completed a college education or beyond. Mean rates of PTSD symptoms in both samples were below the clinical cut point of 50 on the PCL (Weathers & Ford, 1996). Mean rates of physical symptoms reported on the PHQ-15 were in the moderate range for both samples (Kroenke et al., 2010). Demographically, both samples were similar to national data on veterans, although these samples were slightly younger and had a larger representation of Latino participants (National Center for Veterans Analysis and Statistics, 2013).

At the bivariate level, scores on the PCL-C ( $r = .43$ ,  $p < .0001$ ) and the PHQ-15 ( $r = .39$ ,  $p < .0001$ ) were significantly correlated with reports of adverse relationship functioning. Similarly, scores on the PCL-C ( $r = .28$ ,  $p < .0001$ ) and the PHQ-15 ( $r = .27$ ,  $p < .0001$ ) were significantly correlated with reports of adverse child functioning. Chi-square tests were used to examine associations between dichotomous variables. At the bivariate level, experiencing deployment was not significantly associated with either reports of adverse relationship or child functioning. There were significant differences in reports of adverse relationship functioning by education status ( $\chi^2 = 5.33$ ,  $p = .02$ ), where 44.6% of college graduates reported difficulty with spousal relationships compared with 59.7% of noncollege graduates. Further, there were significant differences in reports of adverse child functioning by

**Table 1.** Sample characteristics for relationship and child models.

Characteristic	Relationship sample			Child sample				
	<i>n</i>	%	Mean (SD)	Minimum	Maximum	Mean (SD)	Minimum	Maximum
<b>Gender</b>								
Male	385	87.5						
Female	55	12.5						
<b>Age, yr</b>								
21–25	11	2.5						
26–30	68	15.2						
31–40	118	26.3						
41–50	70	15.6						
51–60	83	18.5						
61–70	72	16.1						
Over 71	26	5.80						
<b>Race/ethnicity</b>								
American Indian/Alaskan Native	11	2.5						
Asian	23	5.2						
Black or African American	85	19.1						
Native Hawaiian/Pacific Islander	3	0.7						
White (not Hispanic)	171	38.5						
Hispanic or Latino	120	27.0						
Other	31	4.0						
<b>Education</b>								
Less than college education	261	59.5						
College or higher	178	40.6						
<b>Number deployments</b>								
None	83	19.3						
One or more	348	80.7						
PTSD	376		41.93 (21.2)	17	85	43.52 (20.8)	17	85
Physical health symptoms	369		9.14 (6.57)	0	27	9.48 (6.47)	0	27

gender ( $\chi^2 = 11.45$ ,  $p = .0007$ ), where 61.43% of female veterans reported child difficulties compared with 39.69% of male veterans.

Multivariate logistic regression was used to examine the association between PTSD and physical health symptoms, deployments, and control variables with veteran reports of adverse relationship and child functioning. Results for the relationship model are presented in Table 2. The model included only veterans who reported being married or in a significant relationship. Experiencing increased PTSD symptoms was positively associated with an increase in the odds of reporting adverse relationship functioning (odds ratio [OR] = 1.043; 95% confidence interval [CI], 1.022, 1.065). Further, experiencing increased physical symptoms was associated with an increase in the odds of reporting adverse relationship functioning (OR = 1.081; 95% CI, 1.012, 1.154). Standardized coefficients, which allow for direct comparison between the impact of two independent variables, indicate that PTSD symptomatology ( $b = .4907$ ) was a stronger predictor of relationship functioning than physical health symptomatology ( $b = .2785$ ). When controlling for mental and physical health symptoms, the number of deployments experienced by a veteran was not associated with any change in the odds of reporting adverse relationship functioning in this sample.

The child model included only veterans who reported having at least one child. These results are also presented in Table 2. Similar to the relationship model, veterans who reported higher levels of PTSD symptomatology were also more likely to report concerns about adverse child functioning (OR = 1.019; 95% CI, 1.004, 1.034). Additionally, veterans who reported increased physical health symptoms were more likely to report concerns about adverse child functioning (OR = 1.048; 95% CI, 1.002, 1.098). Using standardized coefficients, PTSD symptomatology ( $b = .2177$ ) was a stronger predictor of child functioning than physical health symptoms ( $b = .1705$ ). The gender of

**Table 2.** Multivariate logistic regression results for relationship and child models.

	Relationship		Child	
	OR	95% CI	OR	95% CI
Male (vs. female)	.615	.245, 1.543	.388*	.205, .734
Age	.858	.711, 1.035	1.041	.881, 1.229
Graduated college (vs. no college)	.674	.382, 1.188	.969	.600, 1.562
Race (vs. White)				
American Indian/Alaskan Native	.210	.029, 1.539	3.399	.994, 11.62
Asian	.346	.091, 1.318	1.495	.468, 4.782
Black or African American	1.201	.543, 2.659	1.105	.646, 1.890
Native Hawaiian/Pacific Islander	999.9	.001, 999.9	.001	.001, 999.9
Hispanic or Latino	.941	.476, 1.861	1.290	.747, 2.227
Other	.368	.066, 2.060	1.154	.315, 4.219
PTSD	1.043*	1.022, 1.065	1.019*	1.004, 1.034
Physical health symptoms	1.081*	1.012, 1.154	1.048*	1.002, 1.098
Number of deployments	.730	.353, 1.512	.628	.374, 1.054
$R^2$		.3721		.1796

Note. \*Statistically significant OR at the .05 level.

the veteran was also a significant predictor, as male veterans were significantly less likely to report concerns about adverse child functioning compared with female veterans (OR = .388; 95% CI, .205, .734). Finally, similar to the relationship model, when controlling for physical and mental health symptoms, the number of deployments a veteran experienced was not significantly associated with child functioning.

## Discussion

Several interesting findings emerged from this study. Overall, most veterans in this sample did not report significant PTSD symptoms or severe physical health symptoms. Our first hypothesis regarding the independent association between deployments, PTSD symptoms, and physical health symptoms with child and relationship functioning was partially confirmed. Both PTSD and physical health symptoms contributed independently to explaining the variation in reports of adverse child and relationship functioning; number of deployments, however, was not significantly associated with either outcome. Our second hypothesis regarding the strength of the association between PTSD and physical health symptoms and our outcomes was confirmed. Although both PTSD symptoms and physical health were independently related to our outcomes, PTSD symptoms were a stronger predictor of both child and relationship functioning compared with physical health symptoms.

Previous empirical evidence from research with military families has suggested that number of deployments experienced by a family should impact outcomes for both children (Chandra et al., 2010; Flake et al., 2009) and spousal relationships (McLeland et al., 2008). However, this evidence was drawn largely from studies conducted with active duty or reserve families. There has been some evidence that the negative impact of deployment persists into the reintegration phase (Lester et al., 2010), but there is little information about whether these effects will persist after separation from the military. The results presented here suggest that when considered alongside physical and mental changes experienced by veterans, the association between deployment and adverse outcomes for children and relationships does not appear to persist after transition out of military service.

Rather than deployments, these findings suggest that physical and mental health symptomatology may be the most strongly associated with child and relationship functioning in veteran families. For spousal relationships, each additional point on the PTSD symptom scale was associated with a 4.3% increase in reported relationship challenges. Similarly, each additional point on the physical health symptom scale was associated with an 8.1% increase in reports of relationship challenges. For children, each additional point on PTSD symptom scale was associated with a 1.9% increase in reported challenges, and an additional point on the physical health symptom scale was

associated with a 4.8% increase in challenges. The independent association between the physical and mental health of veterans and their reports of adverse relationship and child functioning is consistent with previous research, which has found that these stressors can have a negative effect on military family functioning. However, particularly for child functioning, these findings have not been previously demonstrated among the veteran population.

Further, as hypothesized, PTSD symptoms appeared to be more strongly associated with both outcomes compared with physical health symptoms, although both physical and mental health were independently meaningful. To our knowledge this finding is also novel, because no previous studies have directly compared the impact of veterans' physical and mental health on their family functioning. However, this result is consistent with theoretical expectations that mental health symptoms may be more ambiguous and harder for family members to understand, which may lead to greater psychological difficulty coping with these symptoms in loved ones (Gorman et al., 2010b).

Finally, in our child model, results indicated that female veterans were more likely to endorse adverse child functioning compared with male veterans. A number of factors may explain this finding. First, there is the possibility that women are more likely than men to report child and family challenges. Some research with military populations has indicated that this may in fact be the case (Vogt, Pless, King, & King, 2005). Additionally, there is the possibility that children of female veterans may have been more negatively impacted by their parents' service compared with children of male veterans. This explanation appears consistent with attachment theory, which suggests that disruptions in a child's bond with his or her primary caregiver, most often the mother, could be particularly detrimental (Bowlby, Ainsworth, Boston, & Rosenbluth, 1956). Previous empirical findings comparing the effects of male and female military service on child outcomes have been inconclusive (Applewhite & Mays, 1996; Gorman, Eide, & Hisle-Gorman, 2010; Kelley, Herzog-Simmer, & Harris, 1994), but some recent research indicates that children of female service members may experience more depressive symptoms during or after combat deployments (Sullivan et al., 2015). Regardless, this result points to the need to better understand the long-term implications of maternal military service on child functioning, particularly in light of the increase in the number of women serving in our Armed Forces (Department of Defense, 2012).

Results from this study must be interpreted in light of a number of limitations. This is a cross-sectional survey, and as a result causality cannot be inferred from these findings. Because of the cross-sectional nature of our data, we cannot be certain whether service members were in a significant relationship or had children when they experienced deployments. As a result, we do not know whether the spouses or children of veterans had any direct experience with deployment. However, because deployment has previously been

hypothesized to have long-lasting effects on service members, the findings of this study are nevertheless relevant because they demonstrate that these effects may not impact beyond that of mental and physical health. Additionally, because these analyses relied on a nonrandom, heterogeneous sample of veterans from Los Angeles County, these results may not be generalizable outside that community. However, with the exception of a higher proportion of Hispanic or Latino veterans, the demographics of the veteran population are relatively similar to national demographics, which suggests that these results may be applicable to the larger veteran community (National Center for Veterans Analysis and Statistics, 2013). Further, PTSD symptoms were the only mental health variable included in these models. Although PTSD is a common mental health diagnosis among this population, veterans experience a number of mental health difficulties, including depression and substance use, which should be considered in future research. Additionally, due to limitations in the data, a number of other variables may influence findings, which we were unable to include in models, such as ages of children, years married, and a more nuanced measure of deployment. Models were also impacted by missing data, which may limit the generalizability of these findings. However, as describe earlier, efforts were made to examine missingness, which indicated that missing data did not impact our findings in any meaningful way. Finally, the adverse child and intimate relationship functioning scales used as outcome measures in these models need further validation.

Despite these limitations, the findings presented here contribute to the existing body of literature in several meaningful ways. First, these analyses examined a number of potential stressors for veteran families simultaneously and are, to our knowledge, the first to suggest that ongoing mental health difficulties may be more detrimental than physical difficulties to the functioning of veteran families. Second, these findings suggest that the experience of deployments alone may not create lasting difficulties for veteran families. Instead, these results indicate that the mental and physical health challenges that veterans experience may be the most problematic.

These results have a number of meaningful implications both for future research and for social workers and other clinical practitioners working with military families. These results highlight the need for longitudinal research, which follows military families through the transition out of military service and beyond, to more clearly understand how these stressors continue to impact family functioning. Further, research conducted with veterans would benefit from more nuanced examinations of the impact of deployment. Additionally, these results highlight the dual importance of both the physical and mental health symptoms of veterans. Most veterans in this sample did not report elevated rates of PTSD or physical health problems; however, these results highlight the importance of continued support for the individuals and families dealing with these difficulties. Although PTSD may be more

strongly associated with adverse child and relationship functioning, both appear to impact families well beyond separation from military service. Assessing and treating these symptoms before service members transition out of the military appears to be increasingly important given the long-term impact these symptoms may have not only on the service member but on their families as well. Finally, these results suggest that the children and spouses of veterans may continue to need support and services long after their family members' separation from the military. Improving our ability to identify veteran families in our communities and target needed services toward the entire family system appears to be increasingly important in light of these findings.

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