IMPACT OF VETERANS' PTSD ON THEIR CHILDREN'S OUTCOMES:

INTERVENING EFFECTS OF FAMILY FUNCTIONING

A Dissertation

by

LAURA JANE OSBORNE

Submitted to the Office of Graduate and Professional Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Chair of Committee,	Douglas Snyder
Committee Members,	Robert Heffer
	Darrell Worthy
	William Rae
Head of Department,	Heather Lench

August 2019

Major Subject: Clinical Psychology

ABSTRACT

The associations among Veterans' PTSD symptoms, poorer family functioning, and negative child outcomes have been established in the extant literature. However, the influences of family processes on the association between Veterans' PTSD symptoms and negative child outcomes have not been examined in-depth. The present study aimed to disentangle the role of family processes which may potentially contribute to more efficacious prevention and intervention efforts targeting Veterans and their families. Data were provided by Veterans (N = 69) who were in a committed relationship and the primary caretaker of a child between the ages of 3-18 years. Veterans completed self-report measures assessing their psychological, family, and child's functioning.

Mediation analyses indicated that Veterans' parenting satisfaction mediated the association between Veterans' PTSD and negative child outcomes, suggesting that Veteran PTSD symptoms impact one's satisfaction and feelings of effectiveness as a parent, and that it is partially through one's satisfaction with the parenting role that the detrimental effects of PTSD impact child functioning. Hierarchical linear regression analyses provided additional support for the unique, significant contribution of parenting satisfaction on child functioning. Additionally, age of the child and the Veteran's satisfaction in the marriage or similar committed relationship emerged as significant moderators of the association between Veterans' PTSD and negative child outcomes. Specifically, this association was stronger for children who were 8.5 years of age or older, and for Veterans who reported low to average levels of relationship satisfaction.

Results from this current study are discussed within the Family Attachment Network framework. Implications for prevention and intervention efforts related to the role of family processes in modulating the effect of Veterans' PTSD symptoms on child functioning are also highlighted.

DEDICATION

With sincere gratitude, this dissertation is dedicated to the men and women, and their families, who bravely and tirelessly serve our country. Your selflessness does not go unnoticed. Thank you.

ACKNOWLEDGEMENTS

I would like to thank my committee members, Dr. Robert Heffer, Dr. Darrell Worthy, and Dr. William Rae, for their support throughout the course of this research. Special thanks to my advisor and committee chair, Dr. Douglas Snyder, for the guidance and wisdom provided throughout my graduate training.

Thanks, also, to my mother and father for their unwavering support and encouragement, and to my partner, Alex, for his immense patience and love.

CONTRIBUTORS AND FUNDING SOURCES

Contributors

This work was supervised by a dissertation committee consisting of Professor Douglas Snyder [chair], Professor Robert Heffer, and Professor Darrell Worthy of the Department of Psychological and Brain Sciences, and Professor William Rae of the Department of Educational Psychology.

The data analyzed, and additional supervision, were provided by Dr. Suzannah Creech, Research Psychologist, of the Central Texas Veterans Health Care System.

All other work conducted for the dissertation was completed by the student independently.

Funding Sources

There are no outside funding contributions to acknowledge related to the research and compilation of this document.

TABLE OF CONTENTS

Page

LIST OF FIGURES

Page

LIST OF TABLES

Page

1. INTRODUCTION

Since 2001, over 2.5 million service members have deployed in support of Operations Iraqi Freedom (OIF), Enduring Freedom (OEF), and New Dawn (OND). Recent military families have experienced the longest, most frequent, and most cumulative number of deployments in U.S. history (Tanielian & Jaycox, 2008). The increased deployment tempo and intensity experienced by OEF/OIF Veterans place them at greater risk for experiencing subsequent mental health problems. Specifically, frequency and intensity of deployments have been shown to be positively associated with the quantity and severity of mental health problems among military service members (Hoge, Auchterlonie, & Milliken, 2006). Following deployment, Veterans often face challenges during reintegration, including intrapersonal distress such as post-traumatic stress disorder (PTSD) and depression. A study of 1,700 Army and Marine personnel who had served in Iraq found that 15%–17% met criteria for major depression, generalized anxiety disorder, or PTSD (Hoge et al., 2006). Of prominence, it is estimated that as many as 1 in 4 (23%) OEF/OIF Veterans meet criteria for PTSD (Fulton et al., 2016). Reintegration challenges may also include difficulty relating to and connecting with immediate family members (e.g., children) and intimate partners. A Veteran's PTSD may result in irritability and low frustration tolerance leading to subsequent difficulty coping with children's expressions of emotion or troublesome behavior, as well as working with one's partner to redefine roles, expectations, and division of labor in the home.

The literature reviewed below first focuses on the impact of PTSD on individual and dyadic functioning, specifically intimate partner relationships and children, and then expands to include effects of PTSD on overall family processes. Given the complexity and interconnectedness of intra- and interpersonal variables that will be discussed, a theoretical framework designed specifically for military families will be presented for which the integration of these variables may be placed into context.

1.1. PTSD and Intimate Relationship Functioning

Within the context of reintegration, intimate relationships can be a source of support for the Veteran but can also be related to greater levels of distress, particularly when PTSD is present. For example, numerous studies have found a significant positive association between PTSD and relationship distress following deployment (e.g., Allen, Rhoades, Stanley, & Markman, 2010; Balderrama-Durbin et al., 2013; Renshaw, Rodrigues, & Jones, 2008). Moreover, increased rates of relationship dissolution have been identified among Veterans. Following the declaration of the Global War on Terrorism, between 2001 and 2004, divorce rates among active duty Army officers tripled, and rates among Army enlisted service members increased by 50% (Perry et al., 2006). More specifically, observed divorce rates are higher among Veterans with PTSD than Veterans without PTSD (Cook, Riggs, Thompson, Coyne, & Sheikh, 2004). Similarly, one study compared relationship distress between couples in which the Veteran was diagnosed with PTSD and couples in which the Veteran lacked a PTSD diagnosis. Seventy percent of dyads with a partner diagnosed with PTSD reported relationship distress compared to 30% of dyads without a partner diagnosed with PTSD.

Moreover, the severity of relationship distress was found to be significantly correlated with the severity of the PTSD diagnosis (Riggs, Byrne, Weathers, & Litz, 1998).

To better understand the influence of PTSD on relationship functioning, research has examined the impact of specific diagnostic clusters of PTSD. Consistently, data suggest that relationship functioning appears to be particularly impacted by the emotional avoidance/numbing cluster. This particular component of PTSD has been negatively associated with both relationship satisfaction and intimacy (e.g., Evans, McHugh, Hopwood, & Watt, 2003; Solomon, Dekel, & Mikulincer, 2008). Suppressed emotional expression with one's partner limits the development and maintenance of intimacy and closeness – both of which have been consistently associated with communication between partners (e.g., Gottman, 1991).

The Cognitive-Behavioral Interpersonal Theory of PTSD (see Dekel & Monson, 2010) emphasizes three processes that maintain PTSD symptoms and impair relationship functioning, including: (1) behavioral avoidance and accommodation; (2) cognitive processes and thematic content; and (3) emotional disturbances. These processes highlight the reciprocity of PTSD-related cognitions and behaviors that negatively impact relationship functioning, as well as partner behaviors and couple interactions that exacerbate or maintain PTSD symptoms. Arguably, this model is not isolated to interactions within a romantic relationship and is likely applicable to other interpersonal experiences such as children (e.g., Creech & Misca, 2017), as well as friends and extended family members.

Negative outcomes of PTSD and relationship distress experienced among military couples are prominent, particularly intimate partner violence (IPV). Research indicates that relationship aggression is temporally associated with deployment such that rates of violence within one's home and romantic relationship increase following deployment. Sayers, Farrow, Ross, and Oslin (2009) evaluated Veterans at a VA medical center and found that over half (54%) of the Veterans reported conflicts involving shouting, pushing, or shoving on at least one occasion within the last year. Moreover, Veteran PTSD has been shown to be a potent predictor of aggression within one's relationship. However, data from meta-analyses indicate that the rate of IPV within the Veteran population does not surpass that of the civilian population when controlling for mental health (Okuda et al., 2015; Taft, Watkins, Stafford, Street, & Monson, 2011). Interestingly, research has indicated that increased aggression is not only observed in the partner with PTSD. Jordan et al. (1992) compared 122 wives of PTSD Veterans to 252 wives of non-PTSD Veterans and found that wives of PTSD Veterans reported more violence on the part of the Veteran and admitted to committing more violence themselves. These findings highlight that Veteran PTSD is associated with increased rates of both perpetration *and* victimization of IPV.

The literature on IPV provides substantial support for the relation among PTSD, interpersonal distress, and aggressive behavior. It is important to note, however, that the term "IPV" is used inconsistently in the literature and can refer to any combination of physical or psychological aggression, as well as sexual coercion. Whereas physical aggression is overt in nature (e.g., kicking, slapping), thus more easily conceptualized

and identified, psychological aggression is less well-defined. In trying to distinguish psychological aggression from related constructs such as marital conflict, poor conflict management, and negative communication, researchers have highlighted the intention behind psychological aggression as a cornerstone distinguishing feature. Specifically, the Centers for Disease Control and Prevention defines psychological aggression as, "…a trauma to the victim caused by acts, threats of acts, or coercive tactics (including pure verbal and emotional acts such as humiliating, controlling the victim, getting annoyed if the victim disagrees, and also physically threatening acts, such as smashing objects)" (pp. 12-13; Saltzman et al., 1999). Psychological aggression includes features of premeditation, coercive intention, and manipulation, whereas constructs previously discussed (i.e. marital conflict, negative communication) lack the defining features of psychological aggression. It has been posited that those who experience psychological aggression in the absence of physical aggression are often unable to recognize the aggression as such, which then leads to prolonged exposure and higher prevalence rates (Follingstad & DeHart, 2000).

The subtler nature of psychological aggression versus physical aggression also lends itself to problematic long-term outcomes. Specifically, psychological aggression appears to be both an antecedent (Babcock, Costa, Green, & Eckhardt, 2004; Murphy & O'Leary, 1989) and a correlate of physical aggression for men and women (Capaldi & Crosby, 1997; Frye & Karney, 2006). Psychological aggression is also related to high marital conflict as well as low marital satisfaction (Katz, Marmar, & Beach, 2000). Compared to non-distressed couples, distressed couples are more likely to engage in

aggressive behaviors (verbal or nonverbal), engage in negative reciprocity, make more negative statements than positive statements, and have ineffective and aversive responses to conflict (Fincham, 2003).

IPV also demonstrates corrosive effects on family members outside of the romantic dyad. Specifically, Harkness (1993) found that family violence predicted greater distress in children than effects of parental PTSD. Additionally, Watkins, Taft, Hebenstreit, King, and King (2008) found that physical and psychological aggression perpetrated by both a female Veteran and her male partner were associated with increased child behavior problems. These findings suggest that the engagement in psychological aggression may facilitate the creation of an environment in which toxic interactions may contribute to, and be enhanced by, household members' adverse psychological functioning.

1.2. PTSD, Child Functioning, and Parent-Child Interactions

The negative effects of parental PTSD are not isolated to romantic relationships. Deleterious influences of parental psychological health on child functioning have been well documented. Notably, however, military children may be particularly vulnerable to the negative consequences of stress within the home (e.g., parental PTSD) as research has indicated that military children often experience greater levels of psychological distress compared to civilian children. Within the context of deployment, research has found military children are more likely to experience clinically significant levels of anxiety (Lester et al., 2010), and higher rates of reported depressive symptoms, suicidal ideation, and lower quality of life (Reed et al., 2011). Additionally, one study found

military children's scores on an assessment of psychosocial health and stress indicated a rate of risk that was 2.5 times higher than national norms (Flake, Davis, Johnson, & Middleton, 2009). Beyond psychological distress, military children also exhibit higher rates of behavior problems compared to civilian children. Specifically, higher rates of externalizing behaviors have been noted in younger children (e.g., Chartrand, Frank, White, & Shope, 2008), and higher rates of binge drinking, marijuana use, and prescription drug abuse were reported among adolescents with a currently or recently deployed parent (Acion, Ramirez, Jorge, & Arndt, 2013). Moreover, researchers have found that teens with a deployed parent were at increased risk for peer victimization and more likely to carry a weapon to school than their civilian peers (Gilreath, Astor, Cederbaum, Atuel, and Benbenishtv, 2014).

Differences between military and civilian children have been shown to persist even when controlling for parental deployment experiences and parental PTSD (Walsh et al., 2014) suggesting that variables specific to simply being raised in a military family may contribute to increased vulnerability for stress and psychosocial problems. Thus, experiencing additional stressors such as parental deployment and parental PTSD may further compound the likelihood of negative outcomes among children in military families. Furthermore, though many studies have conceptualized parental deployments as a catalyst for emotional and behavioral problems in children, research has suggested parental PTSD rather than deployment is more predictive of child functioning. Caselli and Motta (1995) found that combat exposure and PTSD accounted for 34% of the variance in child outcomes, yet when controlling for combat exposure, PTSD

independently accounted for 31% of the variance. Certainly, deployment separations are challenging for families, however these findings indicate that it is the presence of parental PTSD, rather than deployment per se, that impacts child functioning.

Children of Veterans with PTSD have demonstrated higher rates of self-reported anxiety (Chandra et al., 2010), as well as parent-reported anxiety (Lester et al., 2016), when compared to children of parents without PTSD. Children of Veterans with PTSD have also demonstrated difficulties in academic performance, peer relations, and mood regulation (Harkness, 1991). Moreover, clinical experiences with children of Vietnam Veterans with PTSD were described as involving significant presentations of depression, distress, and feelings of self-doubt (Jordan et al., 1992). Researchers have also found that children of Veterans with PTSD demonstrate more aggressive behaviors compared to children from control groups (Ahmadzadeh & Malekian, 2004). It is important to note, however, that other studies have found no differences between children of Veterans with PTSD and children from various control groups regarding emotional distress (Davidson & Mellor, 2001; Souzzi & Motta, 2004), social development (Ahmadzadeh & Malekian, 2004), and self-esteem (Davidson & Mellor, 2001). The discrepancies in findings may potentially indicate variability among key factors that moderate or mediate the association between Veteran PTSD and negative child outcomes and that warrant further investigation.

Extending beyond child-specific functioning, research findings have also demonstrated the impact of parental PTSD on parent-child dyadic functioning. Veterans with PTSD have demonstrated poorer attachment with their children (Renaud, 2008),

and qualitatively described experiencing negative evaluations of themselves as parents and feelings of unworthiness as a parent (Sherman, Larsen, Straits-Troster, Erbes, & Tassey, 2015). Detachment between the Veteran parent and child has been linked to the emotional numbing component of PTSD. Ruscio, Weathers, King, and King (2002) found that avoidance and numbing symptoms of PTSD were most correlated with impaired parent–child relationships. The authors suggest that the emotional numbing, detachment, and avoidance behaviors may directly impact the Veteran's ability to parent by diminishing the Veteran's ability to engage the child at a level of normal interactions required to develop and sustain a close, secure relationship.

Moreover, avoidance and numbing symptoms explained the strongest relative associations with parenting satisfaction when considered alongside other PTSD symptom clusters (Samper, Taft, King, & King, 2004). In samples of female Veterans, total PTSD symptoms and PTSD hyperarousal symptoms have been associated with decreased parenting satisfaction (Berz, Taft, Watkins, & Monson 2008; Gold et al., 2007). Qualitative interviews with Veterans identified specific challenges associated with parenting satisfaction, including difficulty reconnecting with children, adapting expectations from military to family life, and co-parenting (Walsh et al., 2014). Gewirtz, Polusny, DeGarmo, Khaylis, and Erbes (2010) also found that increases in PTSD symptoms were associated with other parenting challenges, specifically poorer parenting behaviors (less positive parenting, more inconsistent discipline, less supervision). PTSD was predictive of these challenges independent of couple adjustment, such that poor parenting was not due to problematic co-parenting or marital discord. Poor parenting

behaviors have been shown to have a particularly potent effect on both parenting satisfaction and child psychosocial problems, above and beyond the effects of PTSD (Creech, Trotman, Michaelson, Benzer, & Copeland, 2017). Whereas poor parenting behaviors may be an artifact of parental PTSD, these findings highlight the unique impact of dyadic and family processes on child functioning.

Finally, it should be noted that deployment and parental PTSD appear to increase the risk of more severe parenting problems such as child maltreatment. The rate of child abuse in military families has been shown to increase following Veterans' return from deployment as compared with levels both before and during deployment (Rentz et al., 2007). Additionally, Leen-Feldner, Feldner, Bunaciu, and Blumenthal (2011) found the likelihood of engagement in moderate to severe physical aggression with one's children was greater for parents with PTSD than parents without PTSD. Moreover, Lauterbach et al. (2007) found the emotional numbing symptoms of PTSD were most predictive of parent perpetrated aggression toward their child(ren). Although abusive behavior is overtly damaging and may be the most identifiable example of parenting difficulties, the parenting behaviors described above, such as disengagement and poor parenting behaviors, can create longstanding situations which likely contribute to negative child outcomes beyond the experience of post-deployment reintegration.

1.3. PTSD and Family Functioning

Family systems theory predicts that a family might respond to increased stress in one of four ways (Kerr & Bowen, 1988). First, family members may distance from one another. Second, an individual member may sacrifice their own level of functioning for

the sake of family functioning. Third, the family can become conflicted (i.e., family dysfunction). Fourth, the family can bond together in an adaptive way and move forward. Within the military literature, Veterans' family units have been identified as particularly vulnerable to the effects of Veteran PTSD symptoms. Research has demonstrated a strong, negative association between PTSD symptoms and general family functioning. Researchers have posited that unhealthy family functioning is an area in which the problematic effects of Veterans' PTSD symptoms manifest, particularly in relation to the family's ability to experience appropriate emotional responses and engage in effective problem-solving.

In one study, Davidson and Mellor (2001) compared responses from Veterans, with and without PTSD, and their children, to civilian adults and their children regarding family functioning. Results showed that, compared to Veterans without PTSD and the civilian control group, Veterans with PTSD described their families has having more difficulty with effective problem-solving; responding to problems with appropriate affect; communicating in an indirect, vague, and less healthy style; and being less interested and involved in other family members' lives. Interestingly, Veterans with PTSD did not differ from the comparison groups on issues regarding behavior control. Children of Veterans with PTSD, compared to the other groups, reported greater difficulty among their family members regarding effective problem-solving and affective responsiveness. These children also reported their families as experiencing clinical levels of dysfunction whereas children of Veterans without PTSD reported their families as experiencing borderline levels of dysfunction. Conversely, civilian children reported

their families as functional. These results suggest that it is the symptoms of PTSD that are related to family dysfunction and may be interrupting the Veterans' ability to parent and interact effectively with other family members (partners and children alike). Moreover, again highlighting the potency of PTSD relative to combat experiences, PTSD was found to mediate the association between combat experiences and family dysfunction.

The association between PTSD and family functioning has also indicated variance in predictive directionality. Specifically, Evans, Cowlishaw, and Hopwood (2009) conducted a longitudinal study of Veterans in a PTSD treatment program and assessed their PTSD symptoms and family functioning pre-, peri-, and post-treatment. They found that the avoidance symptoms of PTSD were most strongly associated with poor family functioning. Interestingly, family functioning was found to significantly predict PTSD symptoms following treatment and at 6-months post-treatment, whereas PTSD symptoms were not predictive of family functioning across timepoints. Although research suggests that the association between PTSD and family functioning is bidirectional, these findings indicate that poor family functioning influences PTSD symptoms, particularly those within the avoidance cluster. This exacerbation of avoidance behaviors likely has a negative reciprocal impact on family interactions and attachment, impacting one's ability to interact, communicate, and engage effectively with family members. Thus, it is possible that family functioning may also serve as a mediator through which PTSD impacts family members' functioning. For example, research has demonstrated that family communication patterns, preparations for

maintaining parent-child relationships during deployment, and pre-deployment planning are associated with better child outcomes during and after deployment (Houston et al., 2013; Wilson, Wilkum, Chernichky, MacDermid Wadsworth, & Broniarczyk, 2011). Although these studies are not PTSD-specific, the findings indicate that greater levels of family connectedness may serve as a protective factor for negative child outcomes during periods of stress.

1.4. Secondary Traumatization

To better understand the way in which PTSD impacts loved ones, researchers have proposed the theory of "secondary traumatization," or secondary traumatic stress, which posits that the trauma experienced by an individual becomes a chronic stressor experienced by family members which subsequently manifests into symptoms of traumatization for the family members (Figley, 1983; Solomon et al., 1992). This transmission has been identified for both intimate partners and children of Veterans.

Wives of Veterans with PTSD demonstrate increased somatization, depression, anxiety, loneliness, hostility (Solomon et al., 1992), tension and stress (Jordan et al., 1992), and psychiatric symptoms (Dirkzwager, Bramsen, Ader, & van der Ploeg, 2005). Additionally, the level of distress experienced by the wives has been found to be associated with the severity of the Veterans' symptoms (Beckham, Lytle, & Feldman, 1998; Riggs et al., 1998). The transmission of secondary stress to one's spouse has been shown to be particularly problematic for child functioning. Specifically, spouses' secondary PTSD symptoms have been found to mediate the effect of Veteran PTSD symptoms and child secondary traumatic stress symptoms (Herzog et al., 2011).

To better explain the transmission of trauma between partners, Goff and Smith (2005) developed the Couple Adaptation to Traumatic Stress (CATS) Model. This model assumes that a Veteran's level of functioning or trauma symptoms will mobilize a systemic response with the potential to result in the development of secondary traumatic stress symptoms in the partner. Because the model is continuous, symptoms of secondary trauma in the partner may intensify symptoms of primary trauma in the spouse. Of note, the CATS Model proposes that adaptation to traumatic stress in the couple dyad is dependent on the systemic interaction of the three primary concepts: Individual level of functioning, predisposing factors and resources, and couple functioning. Arguably this model may be applied to the parent-child dyad, as well.

As previously discussed, PTSD is related to numerous deleterious effects on child functioning. As conceptualized within the theory of secondary traumatic stress, Rosenheck and Fontana (1998) suggest that the traumatic experiences of the parent can be transmitted to the child in one of three ways. First, the child can be directly traumatized by the parent's behavior (such as through violence). Second, the transmission may occur through the child's identification with the parent. And, third, the impact of the parental trauma on the child may occur indirectly as a result of nonspecific dysfunction within the family.

As described by Dekel and Solomon (2006), the literature reveals two primary applications of the concept of secondary traumatization. The first relates to symptoms of PTSD and other mental health conditions found at the individual level in wives and children of Veterans with PTSD. The second refers to any distress that characterizes the

relationship of those with PTSD, including relationship adjustment and parenting satisfaction. Although secondary traumatization is not a focus of the present study per se, the conceptualization and rationale for the impact of PTSD on children and family processes can be better understood within this framework.

1.5. Family Attachment Network

Given the myriad number of variables associated with individual, dyadic, and family functioning, as well as the bidirectional influence of many factors, Riggs and Riggs (2011) developed the Family Attachment Network model to provide a framework with which to better understand the interplay among intra- and interpersonal factors that impact each individual within the family, dyadic and family interactions, and the family system more broadly. Bearing in mind the unique experiences and stressors endured by military families, this model describes the adaptation of military families during deployment and adjustment during post-deployment reintegration. This model is also helpful in understanding the contextual, interpersonal, intrapersonal, and familial variables that impact Veterans and their families, beyond the scope of deployment or reintegration.

The Family Attachment Network model integrates components of both attachment and family systems theories. The model assumes that attachment and family processes operate and interact concurrently at the individual, dyadic, and family levels. Regarding attachment, this model considers attachment as a factor underlying intra- and interpersonal processes and outcomes. The model utilizes a diathesis-stress framework in which individuals' differences in attachment will affect the psychological functioning of

individuals, which in turn affects family processes, particularly during times of stress (e.g. deployment, reintegration). Drawing upon the extant attachment literature, this model assumes that attachment is developed in early relationships and provides a template that is used to cope with stress, regulate emotions, and interactions in close relationships (Bowlby, 1990). Individuals who are securely attached demonstrate adaptive coping strategies, high self-efficacy, and better psychological well-being. This allows for more sensitive and responsive parenting which contributes to secure attachment in their children. Conversely, insecure attachment creates a vulnerability for intra- and interpersonal dysfunction and distress, particularly during times of stress (e.g., deployment, reintegration). Parental distress (i.e., PTSD) may contribute to marital and family conflict which can then interfere with parenting. The interference with parenting and family routines will likely impact the child who may respond with fear or acting-out behaviors (Pincus, House, Christenson, & Adler, 2011).

Parents' individual attachment is previously developed within their respective families of origin and, upon partnering, is reciprocally affected by their marital relationship. However, within the context of military families, attachment among children may be particularly vulnerable to the effects of deployment and reintegration as the development or maintenance of attachment relationships is occurring during periods of stress. Addressing this vulnerability, the model suggests that the quality of parenting and family processes are additive risk or protective factors for child outcomes. As outlined in Figure 1, the Family Attachment Network model argues that attachment will influence coping, psychological well-being, parenting, and family processes and serves

as a foundation from which subsequent intra- and interpersonal functioning can be better understood using a family system perspective.

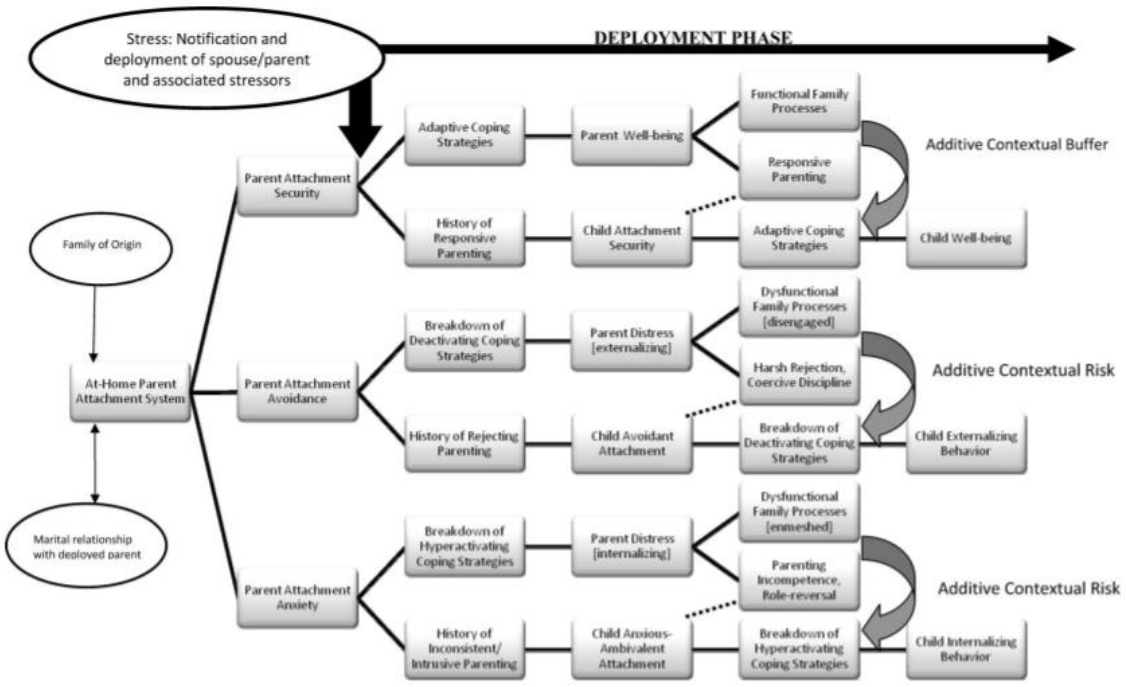


Figure 1. Family Attachment Network. Reprinted from "Risk and Resilience in Military Families Experiencing Deployment: The Role of the Family Attachment Network" by S.A. Riggs and D. S. Riggs, 2011, *Journal of Family Psychology*, *25*(5), p. 677. Copyright 2011 by the American Psychological Association.

From the family systems perspective, Riggs and Riggs (2011) highlight the interconnectedness of multiple levels within the family system, which include individual members, the marital subsystem, the parental subsystem, and the complete nuclear family system. The family system also interacts with and is affected by external systems

and factors, including the military unit, combat stress, economic resources, the socio-cultural context, and families of origin (see Figure 2).

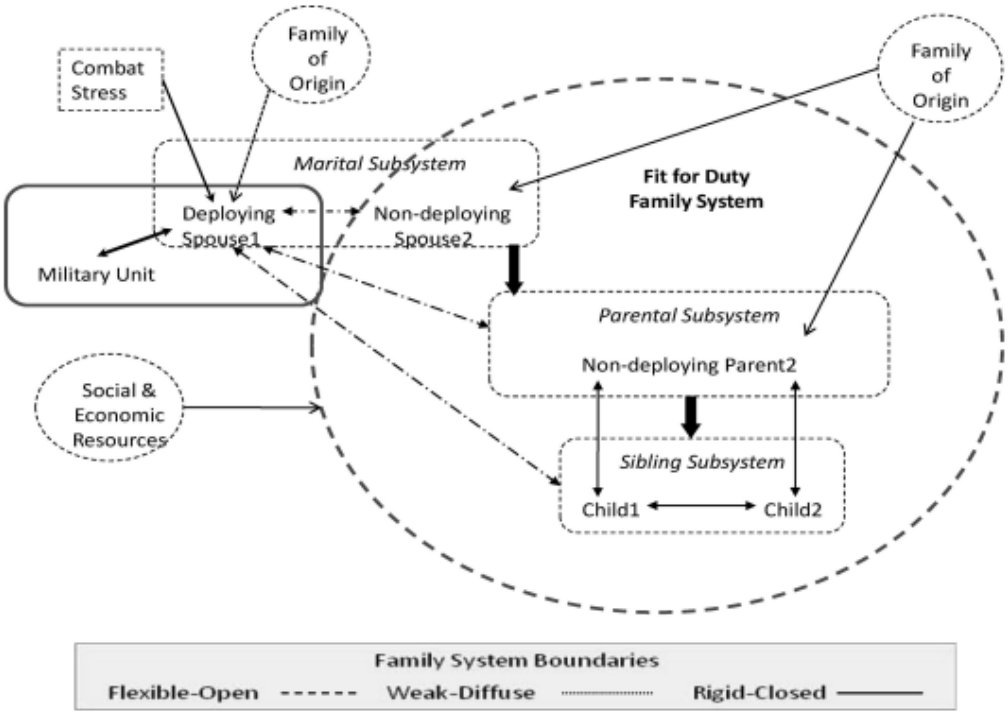


Figure 2. Deployment Adaptation: The Fit for Duty Family System. Reprinted from "Risk and Resilience in Military Families Experiencing Deployment: The Role of the Family Attachment Network" by S.A. Riggs and D. S. Riggs, 2011, *Journal of Family Psychology, 25*(5), p. 679. Copyright 2011 by the American Psychological Association.

The model proposes that stressful experiences affect the whole family, although the impact of the stressful experience on family members and relationships is mediated by family processes. Regarding military families, the nature of deployment and the physical and emotional challenges encountered by the Veteran may make adaptive family processes during reintegration much more challenging. The challenges

experienced by the Veteran interact reciprocally with all levels of the family system. For example, symptoms of PTSD such as hostility and re-experiencing can be upsetting to family members and contribute to psychological distress among spouses and children. Moreover, psychological distress experienced by a parental figure disrupts the parent-child relationship and has been shown to be associated with increased externalizing and internalizing problems in children (Chandra et al., 2010). However, the association between an individual's intrapersonal distress and the family system is bidirectional. Continuing with the PTSD example, the Veteran's PTSD may be triggered by tension within the household that is caused by a disorganized or chaotic home environment, which in turn can exacerbate problematic family functioning.

The Family Attachment Network proposes that attachment is a foundational factor that affects the way in which individuals and families respond when faced with a stressful experience, and these responses will impact the various individuals and dyadic relationships within a family as well as the family processes more broadly. The model acknowledges that numerous variables, particularly parental psychological functioning, family functioning, and child functioning and outcomes, work simultaneously and at different levels of the family system, making it challenging to identify pathways in which different outcomes emerge within military families.

Providing support for the mediating effects of family processes within the proposed model, Cummings, Keller, and Davies (2005) assessed the effects of marital problems and parenting behaviors on the association between paternal depressive symptoms and child adjustment using a community sample. They found that marital

conflict, but not parenting behaviors, mediated this association. Alternately, Katz and Low (2004) found that co-parenting behaviors that are hostile-withdrawn in nature mediated the association between marital violence and children's anxiety and depressive symptoms. Lastly, one study found that the association between parental conflict and internalizing and externalizing problems in adolescents was mediated by the adolescents' level of triangulation into parental disagreements (Grych, Raynor, & Fosco, 2004). These studies highlight examples of various pathways in which facets of family functioning affect child outcomes.

To date, much of the research on military families has examined the impact of PTSD on children and family functioning, yet relatively little research has investigated variables that mediate or moderate the associations among those variables. Furthermore, given the unique stressors and experiences of military families, it is possible that mediating and moderating variables function differently as compared to civilian families, particularly when considered within the context of deployment.

Utilizing this model, the current study examined the effects of family processes on the association between Veterans' PTSD and child functioning. Specifically, the current study examined numerous facets of family processes, including: presence of psychological aggression between parents, parental relationship satisfaction, parenting satisfaction, parenting behaviors, and general family functioning.

Whereas previous research has identified strong, negative associations between PTSD, and child and family functioning, the potential mediating effects of family processes have not been explored. The Family Attachment Network model posits that

family processes mediate the association between parental distress and child functioning. For example, poor parenting behaviors or a breakdown in general family functioning may serve as a mediating mechanism by which a child's functioning is adversely impacted by parental PTSD. The current study hypothesized that the presence of poor family functioning will mediate the positive relation between Veterans' PTSD and their children's negative outcomes such that the climate of family interactions (family processes) serves as a primary mechanism by which parental PTSD negatively impacts child functioning. Moreover, as established in the extant literature, it was hypothesized that Veterans' PTSD symptoms would be predicted by the quantity of deployments experienced.

Furthermore, the age of the child was hypothesized to moderate the impact of parental PTSD on child functioning. Previous literature has attempted to identify an age range during which military children are particularly vulnerable to experiencing emotional and behavioral problems, although it is important to note that much of this research has assessed child functioning in relation to parental deployment and not specifically to parental PTSD. Moreover, results have been relatively inconclusive. Whereas some research has indicated that younger children are more resilient to the effects of parental deployment, other research has indicated younger children are more vulnerable to the effects of parental deployment (e.g., Card et al., 2011; Chartrand et al., 2008; Flake et al., 2009; Gorman, Eide, & Hisle-Gorman, 2010).

From a developmental perspective, young children rely on parents to support their developing behavioral and emotional regulatory capacities, and disruption within

the family system may be especially difficult for younger children (Walsh et al., 2014). For example, Flake et al. (2009) found that one third of children (ages five to 12) with a deployed parent were classified as "high risk" for having mental health problems. Similarly, Gorman et al. (2010) found that mental health outpatient visits for children ages three to eight increased during a parent's deployment, even though other outpatient visits (i.e., for physical health problems) decreased. More specifically, the authors found rates of behavioral and stress disorder diagnoses increased by 19 percent and 18 percent, respectively, among these children. Furthermore, when military spouses were asked the age of the child they were most concerned about, 36 percent listed their preschool-aged child (Department of Defense, 2010). Therefore, the current study hypothesized that younger children within military families would be more vulnerable to the negative effects of parental PTSD because their attachment, coping strategies, and cognitive systems are less developed than those of older children.

These proposed areas of investigation are clearly outlined in the following five hypotheses:

(1) Consistent with the prior literature, the number of previous deployments will be positively related to Veterans' level of reported PTSD symptoms and negatively associated with healthy family processes.

(2) Consistent with the prior literature, Veterans' PTSD symptoms will be positively related to negative child outcomes and negatively related to healthy family processes.

(3) The positive relation between Veterans' PTSD symptoms and negative child outcomes will be mediated by family processes (i.e., parental relationship satisfaction, parenting satisfaction, general family functioning, and positive parenting behaviors), such that a mechanism by which Veterans' PTSD is related to negative child outcomes is through distressed or unhealthy family processes within the marital and family systems.

(4) The association between Veterans' PTSD symptoms and negative child outcomes will be moderated by the age of the child such that the association will be greater for children who are younger.

(5) The positive relation between Veterans' PTSD symptoms and negative child outcomes will be moderated by family processes (i.e., parental relationship satisfaction, parenting satisfaction, general family functioning, and positive parenting behaviors), such that the association will be weakened when healthy family processes are endorsed at higher levels.

2. METHOD

2.1. Participants

A total of 125 Veterans were recruited for this study at events for returning troops held at a Veterans Administration (VA) medical center in New England. Participants were recruited between July of 2013 and August of 2014 at events held at the VA medical center (e.g., "Yellow Ribbons"), a weekly VA returning Veterans clinic, and at a weekly table in the main lobby of the VA hospital. Participants were given the option to complete the assessment online or using paper-and-pencil. Participants were assessed twice: the initial assessment and one month later using the same assessment battery. Of the 125 Veterans recruited, 111 Veterans met inclusion criteria. Inclusion criteria were: (a) participant was a Veteran, (b) participant was a parent or primary caregiver to an index child between the ages of 3-18, and (c) the index child was also residing with the Veteran for two or more days per week. The index child for the study was the Veteran's oldest child age 18 or under. From the subset that met inclusion criteria, the current study selected participants who reported being in a current, committed relationship and completed all measures assessing variables of interest. These selection criteria yielded a sample of 69 Veterans that served as the basis for the current study.

Of the 69 participants assessed in the current study, 78% were male (n = 54) and 22% were female (n = 15). Among these Veterans, the average age was 36.9 (SD = 9.2, range 18-59 years). The average years of education was 14.1 (SD = 2.4, range 7-19 years), with 30% of the participants graduating from high school or earning a GED, 55%

attending college, and 15% attending graduate school. A majority (81%) of the Veterans were Caucasian, followed by 8% African American, 4% American Indian, 4% other, 3% multiracial, and 1% Asian. All participants reported being in a romantic relationship at the time of assessment.

Regarding military status, 64% reported no longer serving in the military. Of the 36% who reported active or reserve service, 30% (n = 21) reported serving in the National Guard, 4% (n = 3) were in the Reserves, and only one participant was Active Duty. Although participants varied in their military status, the term Veteran was inclusive of all participants for the current study (i.e., not just participants who had experienced a deployment, or those who had detached from the military). The average number of deployments was 2.2 (SD = 2.2). Fifteen percent of the participants reported never being deployed, 29% had been deployed once, 23% had been deployed twice, and 29% experienced three or more deployments. Thirty percent of the participants experienced a deployment within five years from the date they completed the survey.

A majority (44%) of participants reported having one child who was living with them at least two days per week, 33% reported two children, 15% reported three children, and 7% reported four or more children. Target children (the oldest child under the age of 18) were an average age of 8.5 years (SD = 5.0, range 1-17 years). The median age was 8 years with 35 children (52%) between the ages of 2 and 8 (mean = 4.5, SD = 2.5) and 32 children (48%) between the ages of 9 and 17 (mean = 12.97, SD = 2.8). Two participants did not report the age of their child. Information regarding child gender was not collected.

2.2. Measures

2.2.1. PTSD

The PTSD Checklist is a 17-item measure corresponding to the 17 symptoms of PTSD outlined in the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM–IV-TR; American Psychiatric Association, 2000); items also correspond to the three clusters of PTSD: re-experiencing, avoidance/numbing, and hyperarousal (Weathers, Huska, & Keane, 1991). For each item, respondents rate how much they have been "bothered by the problem in the past month." Items are rated on a five-point Likert scale from 1 ("not at all") to 5 ("extremely") with scores ranging from 17-85 and higher scores indicating greater symptom severity. Cut-off scores ranging from 36-44 are suggested for use in VA primary care settings. The PCL demonstrates good internal consistency ($\alpha = .91$) and is highly correlated with other PTSD measures such as the Clinician-Administered PTSD Scale (CAPS; Weathers, Blake, & Schurr, 2015). Diagnostic cutoffs were not utilized, but rather PTSD symptoms were assessed as a continuous variable given that the influence of PTSD symptom severity was a target for the current analyses. In the present sample, the PCL had an internal consistency of $\alpha = .98$.

2.2.2. Child Functioning

The Pediatric Symptoms Checklist (PSC; Jellinek et al., 1988) is a widely used screener that assesses parents' perspectives on their child's cognitive, behavioral, and emotional functioning. Parents complete 35 items reflecting a range of emotional and behavioral problems (e.g. "has trouble sleeping" or "feels sad, unhappy"). Parents are

asked to rate each item using a 3-point scale (0 = never, 1 = sometimes, 2 = often). Items are summed to create a scale total ranging from 0-70 with higher scores reflect greater psychosocial problems/impairment. For children 6 and older, a cut-off score of 28 is used, whereas a score of 24 is used for younger children. In the current study, cut scores were not utilized, but rather the measure was utilized as a continuous variable. The PSC demonstrates good internal consistency ($\alpha = .86$) and it has been used and validated in military populations (Aranda, Middleton, Flake, & Davis, 2011; Flake et al., 2009). In the present sample, the PSC had an internal consistency of $\alpha = .95$.

2.2.3. Parenting Satisfaction

The Kansas Parental Satisfaction Scale (KPS; James et al., 1985) is a 3-item measure that assesses respondents' satisfaction with their parenting ("How satisfied are you with yourself as a parent?"), their child's behavior ("How satisfied are you with your child's behavior?"), and their relationship with their child ("How satisfied are you with your relationship with your child?"). For each item respondents are asked to report their satisfaction on a 7-point Likert scale from 1 ("extremely dissatisfied") to 7 ("extremely satisfied") with summed scores ranging from 3-21 and higher scores indicating greater satisfaction. The KPS demonstrates good internal consistency ($\alpha = .84$) and is significantly correlated with parents' self-esteem and marital satisfaction. In the present sample, the KPS had an internal consistency of $\alpha = .87$.

2.2.4. Relationship Satisfaction

The Quality of Marriage Index (QMI; Norton, 1983) is a 6-item measure assessing one's marital satisfaction. Respondents are asked to report their agreement on

five items (e.g., “My relationship with my partner makes me happy”) using a 7-point scale from 1 (“very strongly disagree”) to 7 (“very strongly agree”) with scores ranging from 5-35 on these five items. The sixth item asks respondents to indicate their level of happiness in their relationship using a 10-point scale from 1 (“very unhappy”) to 10 (“very happy”). The QMI demonstrates good internal consistency (α = .94) and is correlated with other measures of marriage satisfaction such as the Kansas Marital Satisfaction Scale (KMS; Schumm et al., 1986)

In the current measure, items that included reference to marriage were altered to reference one’s “relationship” to be more inclusive on non-married partnerships. The current measure also omitted the sixth item. Scores from items 1-5 were summed with higher scores indicating greater satisfaction with the relationship. In the present sample, the QMI had an internal consistency of α = .88.

2.2.5. Psychological Aggression

The revised Conflict Tactics Scale (CTS2) is the most widely used assessment tool for measuring intimate partner violence (Straus & Douglas, 2004). The scale includes 78 items (39 items assessing perpetration and 39 items assessing victimization) and 5 subscales assessing various forms of intimate partner violence, including: Negotiation, Psychological Aggression, Physical Assault, Sexual Coercion, and Injury. For each item, respondents are asked to indicate how often, in the past year, each behavior occurred. Items are rated using an 8-point scale (1 = *Once in the past ye*ar; 2 = *Twice in the past year;* 3 = *3-5 times in the past year*; 4 = *6-10 times in the past year*; 5 = *11-20 times in the past year*; 6 = More than 20 times in the past year; 7= Not in the past

year, but it did happen before; 8 = *This has never happened*). The scale measures both the severity of the behavior (none, minor only, or severe) as well as the mutuality of the behavior between partners (male partner only, female partner only, or both aggressive). The full scale CTS2 demonstrates good internal consistency across subscales (α = .79-.95). Concurrent validity, as measured by the correlation between the scales on short form and long form, ranged from α = .77 to .89 across subscales.

The current measure utilized the short form of the CTS2 which includes a total of 20 items (two items per subscale assessing perpetration and two items per subscale assessing victimization). For this study, presence of psychological aggression within the relationship was assessed using four items, "*I insulted or swore or shouted or yelled at my partner*," "*My partner insulted or swore or shouted or yelled at me*," "*I destroyed something belonging to my partner or threatened to hit my partner*," and "*My partner destroyed something belonging to me or threatened to hit me*," with the first two items indicating less severe aggression and the latter two items indicating more severe aggression. The recommended scoring method is to use frequency scores which indicate how often psychological aggression occurred in the last year. Items containing a range of scores are recoded using the midpoint of the provided range (e.g. "3 to 5 times" is recoded as a score of 4). Scores of 7 and 8, indicating that aggression has not happened in the last year or never happened, are recoded as a score of 0. In the present sample, the Psychological Aggression subscale had an internal consistency of α = .61.

2.2.6. Family Functioning

The Family Assessment Device (FAD; Epstein, Baldwin, & Bishop, 1983) was developed based on the McMaster Model of Family Functioning and measures the structural, organizational, and transactional characteristics of one's family. The measure includes 7 subscales: affective involvement, affective responsiveness, behavioral control, communication, problem-solving, roles, and general family functioning. It is used as a screening tool to identify families experiencing problems as well as to identify particular domains in which families are experiencing challenges. The FAD includes 60 items that are scored using a 4-point Likert scale from 1 ("strongly agree") to 4 ("strongly disagree"). The FAD demonstrates adequate internal consistency ($\alpha = .78$) and is moderately correlated with other assessments of family functioning such as the Family Adaptability and Cohesion Evaluation Scales (FACES-II; Olsen, Portner, & Lavee, 1985).

For the current study, only the General Family Functioning subscale was included. This subscale includes 12 items such as "*In time of crises we can turn to each other for support*," "*We avoid discussing our fears and concerns*," and "*We don't get along well together*." Item scores are summed (with some items being reverse scored) and then divided by the number of items in the scale. Scores range from 1-4 with scores of 2 or more indicating problematic family functioning. In the present sample, the General Family Functioning subscale had an internal consistency of $\alpha = .94$.

2.2.7. Parenting Behaviors

Parenting behaviors were assessed using the 9-item Alabama Parenting Questionnaire – Short Form (APQ-SF; Elgar, Waschbusch, Dadds, & Sigvaldason, 2007). Items on the APQ-SF map onto constructs related to child externalizing disorders (e.g. "You threaten to punish your child and then do not punish him/her"). The APQ-SF has three subscales: Positive Parenting, Inconsistent Discipline, and Poor Supervision. The Positive Parenting subscale contains items that reflect greater positive involvement with children, such as the extent to which parents use praise or compliment their child. The Inconsistent Discipline subscale contains items reflecting inconsistency in the use of discipline such as letting the child out of a punishment early, or not following through with a punishment. The Poor Supervision subscale contains items reflecting one's awareness and monitoring of their child's activities, such as knowing where and with whom their child is, and adherence to curfew. Of note, it is recommended that this subscale be omitted with younger children. Given that younger children were included in the current study, the Poor Supervision subscale was omitted.

Items are rated on a 5-point scale from 1 ("never") to 5 ("always") with summed scores ranging from 9-45. Higher scores on each scale indicate greater frequency of the assessed parenting behaviors. The APQ-SF demonstrates adequate internal consistency across the subscales (α = .57-.62) and is correlated with other measures assessing the relation between parenting practices and child symptoms such as the Conners' Parent Rating Scale (CPRS-R; Conners, Sitarenios, Parker, & Epstein, 1998). In the present sample, the APQ-SF had an internal consistency of α = .48.

3. RESULTS

Prior to analyses, all measures were examined for missing data. Participants were removed from the sample if they omitted responses on more than 15% of items on any measure. For the remaining participants (n = 69), scores for each measure were summed and divided by the number of items with a response. This created an "averaged" score for each participant on each variable of interest. Subsequently these averaged scores were standardized. The following analyses utilized the standardized "averaged" scores for each participant.

Bivariate correlations among variables are shown in Table 1. PTSD symptoms were positively related to negative child outcomes (r = .31, p < .05) and psychological aggression (r = .27, p < .05), and negatively related to general family functioning (r = -.44, p < .01) and parenting satisfaction (r = -.29, p < .05). Negative child outcomes were negatively related to general family functioning (r = -.23, p = .05) and parenting satisfaction (r = -.50, p < .01). General family functioning was positively related to relationship satisfaction (r = .49, p < .01) and parenting satisfaction (r = .48, p < .01), and negatively related to psychological aggression (r = -.38, p < .01). All other correlations were non-significant.

Potential demographic covariates such as parent age, gender, years of education, number of prior deployments, and age of the child were examined to determine their relation to the primary variables of interest including PTSD symptoms, negative child outcomes, and variables of family processes (KPS, CTS, QMI, FAD, and APQ). Gender effects of the child could not be evaluated because that information was not collected

during the assessment. Number of previous deployments was negatively related to parenting satisfaction (r = -.27, p < .05) and was positively related to psychological aggression (r = .25, p = .05). Age of the target child was positively related to parenting behaviors (r = .41, p < .01). Number of deployments and age of the target child were assessed as covariates in the mediation analyses. All other potential covariates evaluated were not significantly related to the primary variables of interest.

3.1. Direct Effects of Deployment Frequency on Intra- and Interpersonal Distress

The number of deployments was evaluated as a relevant contextual factor due to its known association with PTSD and family processes. The number of deployments was expected to be positively associated with parental PTSD symptoms and interpersonal distress as measured by factors assessing family processes (Hypothesis 1). Regression analyses confirmed that as the number of deployments increased, there was a significant increase in the likelihood of engaging in psychological aggression [β = .25, t(69) = 2.05, p = .05], and a significant decrease in reported parenting satisfaction [β = -.27, t(69) = -2.23, p < .05]. Lastly, as the number of deployments increased, there was a non-significant positive trend with PTSD symptoms [β = .23, t(69) = 1.89, p = .06]. The number of deployments was not significantly related to other variables assessing family processes.

3.2. Direct Effects of Veteran PTSD on Child Psychosocial Problems

Prior to conducting mediation analysis, simple regression was used to examine the direct effect of parental PTSD symptoms on negative child outcomes. Consistent with prior literature, the regression analysis replicated the positive relation between

parental PTSD symptoms and negative child outcomes in the current sample [β = .18, $t(69) = 2.63$, $p = .01$] (Hypothesis 2). That is, parental PTSD symptoms accounted for 9% of the variance in negative child functioning, constituting a medium effect.

3.3. Mediation Analyses

The mediation model proposed by Preacher and Hayes (2004), and described in further detail below, was used to test if family processes (as measured by the KPS, CTS, QMI, FAD, and APQ) mediate the relation between parental PTSD and negative child outcomes (Hypothesis 3).

Preacher and Hayes (2004) proposed that testing indirect effects using the bootstrap test is superior to the commonly used causal step approach proposed by Barron and Kenny (1986). Research has shown that the causal step approach is among the lowest in power (i.e., least likely approach to detect the effect of the mediating variable) and because it lacks quantification of the intervening variable, indirect effects are simply inferred by the results of the set of hypothesis tests (Fritz & MacKinnon, 2007; Hayes, 2009; MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002).

As recommended by Zhao, Lynch, and Chen (2010), the mediation approach proposed by Preacher and Hayes (2004), and the mediation analyses program "PROCESS" developed by Hayes (2012) for SPSS, were utilized for the current study. The PROCESS output identifies the direct, indirect, and total effect of the mediation model, unlike traditional SPSS output using the Barron and Kenny approach. Although the approach is different, the identification of paths *a* [independent variable (IV) to the mediator], *b* [mediator to dependent variable (DV)], and *c* (IV to DV) remains consistent

with traditional mediation models. As described by Zhao and colleagues (2010), this approach to mediation includes two steps:

1. Determine if an indirect effect *a* x *b* exists and is significant. Mediation is indicated if this indirect effect is significant.
2. Determine if the direct effect *c* is significant, which indicates the type of mediation or nonmediation one has:
    a. If *a* x *b* is significant but *c* is not, one has indirect-only mediation
    b. If *a* x *b* is not significant but *c* is, one has direct-only mediation
    c. If neither *a* x *b* nor *c* is significant, one has no effect (nonmediation)
    d. If both *a* x *b* and c are significant, determine the sign of *a* x *b* x *c* by multiplying the three coefficients, or by multiplying by the mean of *a* x *b* from the bootstrap output. If *a* x *b* x *c* is positive, it is complementary mediation; if *a* x *b* x *c* is negative, it is competitive mediation.

For the current analyses, the outcome variable was negative child outcomes as determined from the PSC and the predictor was parental PTSD symptoms as measured by the PCL. Mediators were entered independently and included: parenting satisfaction (KPS), relationship satisfaction (QMI), general family functioning (FAD), parenting behaviors (APQ), and psychological aggression (CTS).

Results revealed an overall positive effect of parental PTSD symptoms on negative child outcomes [$\beta = .18$, $t(69) = 2.63$, $p = .01$; see Figure 3]. Second, there was also a significant negative effect of parental PTSD on parenting satisfaction such that

greater parental PTSD symptoms predicted decreased levels of parenting satisfaction [β = -.05 $t(69)$ = -2.45, $p < .05$]. Third, parenting satisfaction significantly predicted negative child outcomes [β = -1.46, $t(69)$ = -4.09, $p < .01$], after controlling for the effects of parental PTSD symptoms [β = .11, $t(69)$ = 1.63, p = .11]. Finally, the direct effect of parental PTSD symptoms became nonsignificant with the addition of parenting satisfaction in the model, demonstrating at least partial mediation.

To assess for the significance of the mediation effect, PROCESS automatically generates an estimate of the confidence interval for the indirect effect. Confidence intervals provide a range of scores in which the mean score of the population parameter is likely to be contained. If the confidence interval contains 0 (zero), significant differences between groups cannot be determined and the null hypothesis cannot be rejected. Moreover, PROCESS automatically utilizes the bootstrapping method to determine the confidence interval. Bootstrapping is a nonparametric resampling method that approximates the sampling distribution from the available data. Bootstrapping methods are recommended when either the sample size or predicted effect size is restricted (MacKinnon, Lockwood, & Williams, 2004). For the current analysis, a total of 5,000 iterations of sampling were used to examine the indirect effect of parental PTSD symptoms on negative child outcomes through the mediating mechanism of parenting satisfaction. Results demonstrated that the indirect effect of parental PTSD symptoms on negative child outcomes through parenting satisfaction was significant with a 95% confidence interval of .01 to .22.

As noted above, and outlined by Zhao et al. (2010), once paths *a*, *b*, and *c*, are determined to be significant, one must determine the type of mediation. To do so, one multiplies the coefficients from the three paths. If *a* x *b* x *c* is positive, it is complementary mediation; if *a* x *b* x *c* is negative, it is competitive mediation. Results from the current study indicated complementary mediation which overlaps with Baron and Kenny's (1986) partial mediation. This indicates that, although parenting satisfaction is a mechanism through which PTSD symptoms impact negative child outcomes, this association is not completely explained by parenting satisfaction alone.

Considering the cross-sectional nature of the data, and prior evidence suggesting the bidirectional relation between PTSD and negative child outcomes, a second competing model was examined whereby negative child outcomes predicted parental PTSD symptoms with parenting satisfaction as a mediator of this effect. Within this competing model, the indirect effect of negative child outcomes on parental PTSD symptoms was not mediated by parenting satisfaction such that the confidence interval contained zero.

3.4. Moderation Analyses

Moderation analyses were conducted to examine the effects child age and variables assessing family processes (KPS, CTS, QMI, FAD, and APQ), on the association between parental PTSD symptoms and negative child outcomes (Hypotheses 4 and 5). Results indicated that child age significantly moderated the association between parental PTSD symptoms and negative child outcomes [$\beta = .05$, $t(67) = 2.05$, $p = .05$; see Table 2]. Moreover, one can interpret the moderating effects of child age at

differing levels within this sample. For children whose age was one standard deviation below the mean age of 8.5 years (3.5 years), there was a non-significant positive association between parental PTSD and negative child outcomes [β = .04, $t(67)$ = .24, p > .05]. However, there was a significant positive association between parental PTSD symptoms and negative child outcomes for children who were 8.5 years of age (the mean age) [β = .29, $t(67)$ = 2.38, p < .05] or one standard deviation above the mean age of 8.5 years (13.5 years) [β = .53, $t(67)$ = 3.38, p < .01; see Table 3]. The effect of parental PTSD symptoms on negative child outcomes was stronger for children who were 8.5 years of age and older.

Of the variables assessing family processes, parental relationship satisfaction significantly moderated the association between Veteran PTSD and negative child outcomes [β = 0.20, $t(69)$ = 1.96, p = .05; see Table 4]. Additionally, one can interpret the moderating effects of relationship satisfaction at differing levels. At low levels of relationship satisfaction (one standard deviation below the mean), there was a significant positive association between Veteran PTSD and negative child outcomes [β = .55, $t(69)$ = 3.50, p < .01]. At average levels of relationship satisfaction, there was a significant positive relationship between Veteran PTSD and negative child outcomes [β = .37, $t(69)$ = 3.12, p < .01]. At higher levels of relationship satisfaction (one standard deviation above the mean), there was not a significant association between Veteran PTSD and negative child outcomes [β = .18, $t(69)$ = 1.22, p > .05; see Table 5]. When low or average levels of relationship satisfaction were reported, the association between

Veteran PTSD and negative child outcomes was strengthened. The remaining variables assessing family processes were not found to be significant moderators.

3.5. Hierarchical Linear Regression Analyses

Hierarchical linear regression analyses were also conducted to examine the incremental prediction from variables assessing family processes over parental PTSD symptoms on child functioning. Interpersonal variables were entered separately given that each variable assessed a unique component of family processes. Considering the interplay between intrapersonal and interpersonal functioning on child outcomes as described in the Family Attachment Network model and previous literature, these analyses intended to examine the incremental impact of family environment on child functioning, above and beyond the effects of psychological functioning of the Veteran parent. Age of the target child, parent age, and parent gender were entered as covariates. In all analyses, Block 1 included age of the child, and age and gender of the parent. Block 2 included parental PTSD symptoms. Variables assessing family processes were entered separately into Block 3, including KPS, QMI, FAD, CTS, and APQ. Results revealed that child age, Veteran age, and Veteran gender did not contribute significantly to the regression model [$F(3, 62) = 2.07$, $p < .05$] and accounted for 9% of the variation in child outcomes. Introducing Veteran PTSD symptoms explained an additional 13% of variation in child outcomes [$F(4, 61) = 4.34$, $p < .01$]. Adding parenting satisfaction into the model explained another 12% of the variation in child outcomes [$F(5, 60) = 6.13$, $p < .01$; see Table 6]. Other variables assessing family processes did not demonstrate significant incremental contributions to the model.

4. DISCUSSION

The extant literature has demonstrated the associations among Veteran PTSD symptoms, poorer family functioning, and negative child outcomes. However, the influences of family processes on the association between Veteran PTSD symptoms and negative child outcomes have not previously been examined. The present study aimed to disentangle the role of family processes which may potentially contribute to more efficacious prevention and intervention efforts targeting Veterans and their families.

Replicating previous findings, initial analyses found that the number of deployments was significantly related to facets of family functioning, including increased parental psychological aggression and decreased parenting satisfaction. Surprisingly, the number of deployments was found to produce only a modest impact on Veteran PTSD symptoms. However, in the current study, Veterans were asked to report the total number of deployments they had experienced and were not asked to indicate how many were combat-related. Therefore, it is possible that this linkage between number of deployments and PTSD symptoms was not as strongly associated due to variance in the nature of deployments, compared to other studies that have found a much stronger association. Separately, consistent with previous findings, Veteran PTSD symptoms significantly predicted negative child outcomes and accounted for 9% of the variance in child functioning.

Subsequent mediation analyses demonstrated that greater parenting satisfaction explained a significant portion of the association between Veteran PTSD symptoms and negative child outcomes. Findings suggest that Veteran PTSD symptoms impact one's

satisfaction and feelings of effectiveness as a parent, and that it is partially through one's satisfaction with their parenting role that the detrimental effects of PTSD impact child functioning. Because research suggests a bidirectional relation between Veteran PTSD and child functioning, the possibility that child psychosocial problems lead to increased Veteran PTSD symptom presentation was examined. This reverse mediation model was not supported, lending greater confidence to the primary model despite the cross-sectional nature of the data.

Hierarchical linear regression analyses further highlighted the unique, significant contribution of parenting satisfaction on child functioning. Specifically, parenting satisfaction explained an additional 12% of the variance in child outcomes, above and beyond Veteran PTSD and demographic covariates (parent age, parent gender, and age of child).

The significant mediation and hierarchical regression findings related to parenting satisfaction are consistent with the Family Attachment Network framework proposed by Riggs and Riggs (2011) which posits that family processes are a mechanism through which Veteran PTSD impacts children within military families. This framework emphasizes the role of attachment (e.g., secure vs. insecure) in understanding individual psychological functioning, and notes that children in military families are particularly vulnerable to the effects of parental PTSD and family dysfunction given that their attachment relationships are often developed or maintained during periods of stress (i.e., deployment, reintegration). Veteran PTSD, particularly the emotional numbing symptoms, likely impact the Veteran's ability to parent and engage the child in a way

that fosters the development and maintenance of a meaningful relationship marked with features of secure attachment. These challenges may subsequently lead to the Veteran parent feeling unable or unsatisfied with their ability to fulfill traditional parenting obligations. This dissatisfaction may ultimately impair children's functioning, as research has linked the emotional numbing symptoms of PTSD to children's reports of feeling uncared for (Frederickson, Chamberlain, & Long, 1996).

Additionally, age of the child and family processes were evaluated as potential moderators of the effect of Veteran PTSD on negative child outcomes. Within the present study, age of the child was found to be a significant moderator. More specifically, the effect of parental PTSD symptoms on negative child outcomes was stronger for children who were 8.5 years of age (mean age of children in this sample) and older. Although this finding did not support Hypothesis #4, this finding is in-line with other studies suggesting that the impact of Veteran PTSD symptoms is more robust for older children. It is worth noting, however, that studies have been unable to consistently identify a particular age range that is more vulnerable to the effects of parental PTSD. The discrepancies across studies regarding child age warrant further investigation. Understanding the impact of parental PTSD symptoms within a developmental context will prove useful for both prevention and intervention efforts.

Moreover, parental relationship satisfaction was found to significantly and positively moderate the association between Veteran PTSD on negative child outcomes. Specifically, the effect of parental PTSD on negative child outcomes was found to be strengthened at low and average levels of relationship satisfaction. Lower levels of

relationship satisfaction could suggest a breakdown in healthy dyadic functioning and may be indicative of a more distressed family environment. Research has identified the crucial role emotional expression plays in the development and maintenance of intimate relationships, and the ability of the dyad to communicate is strongly associated with overall relationship satisfaction (e.g., Gottman, 1991). As conceptualized by Galovski and Lyons (2004), Veterans with PTSD experience challenges associated with communication, primarily as a function of the emotional numbing symptoms (Solomon et al., 2008), which cultivates ambiguity surrounding role expectations. This uncertainty and discomfort leads to an escalating and recurring pattern of detachment, isolation, conflict, and withdrawal, and subsequently adds to marital discord, strains connections with children, and prohibits full integration into the family structure. The moderation findings from the current study suggest that lower levels of relationship satisfaction may signal a family is at risk and that both assessment and intervention efforts should be inclusive of family-level variables, particularly those regarding child functioning.

Taken together, the results indicate that increasing Veterans' satisfaction with facets of interpersonal interactions and family environment are important areas for future research endeavors and intervention. Satisfaction within these domains may be increased by teaching Veterans skills toward being more effective in interpersonal interactions (e.g., parenting skills, communication skills). Given that parenting satisfaction has been found to be associated with poor parenting behaviors which in turn are related to poorer child outcomes (Creech et al., 2017), future studies may want to examine the moderating effect of parenting behaviors within the mediation model assessed in the current study.

Specifically, it is possible that parenting behaviors may moderate the mediating effect of parenting satisfaction on negative child outcomes (i.e., moderated mediation). Until then, the current findings highlight the influence of Veteran satisfaction regarding parenting and intimate relationship processes. Integration of current findings with prior empirical work indicates that family-level interventions should be a particularly prominent focus for intervention and treatment – for both Veteran PTSD and child functioning – as is currently being done by the Veterans Health Administration (VHA).

In recognizing that more than half of US military personnel are married and more than 42% have dependent children, over the last decade the VHA has been supporting initiatives to implement more family-centered approaches to treating PTSD (Deputy Assistant Secretary of Defense, 2015). Family-centered research and practice at the VHA has previously been limited to family education, family therapy, and couples therapy because VHA policy mandates that family services may only be provided in service of the Veteran's treatment plan. However, there is growing interest in attending to parenting as it relates to the Veteran's mental health and quality of life (e.g., Casselman & Pemberton, 2014; Pemberton, Kramer, Borrego, & Owen, 2013; Tsai, David, Edens, & Crutchfield, 2013), and particularly to the influence of PTSD on parent-child functioning (Sherman et al., 2015). Moreover, Veterans' reports indicate concern about their parenting abilities, in addition to a strong desire for improving parenting skills and communication with their child(ren). In one study, parents expressed concern about their ability to parent effectively and reported that they perceived parenting as being more stressful following deployment (Khaylis et al., 2011). Parent Veterans have

also reported a desire to communicate with children about PTSD but also perceived barriers to doing so (Sherman et al., 2015). Additionally, in one study, Veterans described experiencing negative evaluations of themselves as parents, and feelings of unworthiness as a parent (Sherman et al., 2016). Taken together, interventions to increase Veterans' confidence regarding their parenting abilities, effective parenting strategies, and communication skills are likely to be well-received and beneficial for Veteran parents.

Despite the relatively nascent focus on family- and parent-centered treatments, several approaches appear promising. The Parent Management Training Oregon model (PMTO), is based on Patterson's Social Interaction Learning model and provides parents with didactic information and practice regarding key parenting skills (Patterson, 2005; Reid, Patterson, & Snyder, 2002). After Deployment: Adaptive Parenting Tools (ADAPT) is an adaptation of the PMTO model for military families and targets issues related to parental post-deployment reintegration. ADAPT aims to assist parents in developing skills related to contingency management, limit setting, positive involvement, monitoring children's activities, and effective family problem solving (Gewirtz, Erbes, Polusny, Forgatch, & DeGarmo, 2011). Another promising treatment that may be especially suitable for the Veteran population is Parent-Child Interaction Therapy (PCIT), a manualized parent-training intervention. PCIT is classified as an empirically supported treatment and has been supported for use in military families with preschoolers. PCIT was developed for parents whose children are in the 2-to-8-year-old age range but has demonstrated effectiveness with children up to age 12 (Chaffin et al.,

2004; Eyberg, Nelson, & Boggs, 2008). The effectiveness of PCIT in reducing children's behavior problems has been supported in several studies, including follow-ups 1 to 6 years later (Eyberg et al., 2001; Hood & Eyberg, 2003; Schuhmann, Foote, Eyberg, Boggs, & Algina, 1998). In these studies, improvements were seen not only in the child's behavior but also in parent–child interactions and parenting stress levels. Demonstrating the impact of improved parenting behaviors, increased parental sensitivity has been found to be positively associated with improved social and emotional outcomes in children (Lester et al., 2016). Lastly, addressing relationship satisfaction, the VHA current utilizes couple-based interventions such as Cognitive-Behavioral Conjoint Therapy (CBCT) which has demonstrated effectiveness in decreasing Veteran PTSD symptoms increased relationship satisfaction (Monson et al., 2011). An alternative family-level intervention is multifamily group therapy (MFGT) in which multiple families participate in therapy concurrently. This intervention includes a primary focus on developing family coping skills and psychoeducation regarding mental illness (e.g., PTSD). An adaptation for military families includes relationship building, an area in which Veterans with PTSD often experience difficulty, and focuses on enhancing trust, intimacy, and communication between Veterans and their partners (Sherman, Perlick, & Straits-Troster, 2012). The results of the current study support the value of treatments targeting family-level processes. Family-centered treatments offer promising intervention strategies for families in which Veteran PTSD and negative child outcomes are present (or likely to develop) by strengthening positive family processes.

Beyond approaches to intervention, prevention efforts are also promising. Of note, Families Over Coming Under Stress (FOCUS) is a family-centered resiliency training program for military families that experience stress related to deployment. The program includes eight structured family training sessions that target communication, emotional regulation, managing trauma or loss, problem solving, and goal setting. Program evaluations found that parents reported fewer symptoms of anxiety and depression, healthier family functioning, and decreased behavioral and emotional problems for children (Lester et al., 2012). Utilizing this program prior to deployment appears to be promising in ameliorating the negative impact of deployment related to intra- and interpersonal functioning. Development of additional prevention programs for military families should be a continued focus for research endeavors, particularly outside the score of deployment as many stressors are unrelated to or extend beyond the scope of deployment.

Despite novel findings and implications for future interventions, this study is not without limitations. First, the sample size was both relatively small and homogenous which likely limits the generalizability of the findings. The small sample size also precluded more complex analyses from being conducted, and lack of power may have resulted in some facets of family processes failing to demonstrate significant impact. Future studies with a larger, more representative sample may investigate additional mediating and moderating effects of family processes.

The current study was also limited by suboptimal measures to assess the variables of interest. Specifically, some variables of interest were assessed using a subset

of items from a larger measure which limited the range of response breadth and depth for the respective variable (e.g., Family Assessment Device). Moreover, some items within various measures were incongruent with the target construct. For example, one of the three items on the Parenting Satisfaction measure assesses one's satisfaction with their child's behavior which likely relates more closely to assessing child behavior problems than one's satisfaction with being a parent. Future studies may benefit from utilizing more targeted and comprehensive measures of individual and family functioning.

Additionally, data were cross-sectional in nature, limiting definitive conclusions regarding causal linkages, and were restricted to Veteran reports. Research has found that Veterans' mental health symptoms are associated with a 171% increase in the likelihood of reported negative child outcomes, and Veterans with higher PTSD symptoms are likely to report concerns about adverse child functioning (Waliski, Blevins, Spencer, Roca, & Kirchner, 2013). Thus, it is possible that in the current study reports of poor child and family functioning were reported at higher rates as a function of the Veterans' PTSD symptoms. Ideally, future studies should include report measures from all family members (children and intimate partners) to account for the potential influences of PTSD across ratings. As was done by Davidson and Mellor (2010), comparing parent and child reports of intrapersonal and family functioning may also illuminate important areas of discrepancy which could serve as targets for intervention.

Having multiple informants would also allow for more in-depth and reliable analyses of intra- and interpersonal functioning for each family member and the family unit. In the current analyses, intrapersonal functioning of non-Veteran parents was not

assessed and thus, their influence on child functioning could not be assessed. To date, child functioning has commonly been examined as it relates to deployment, however, research has indicated that parental PTSD is a stronger predictor of child functioning, even when controlling for deployment. While other research demonstrates increases in services sought for children during deployment (e.g., increase in child medical treatment), it should be noted that stress and depression of the at-home caregiver (most commonly the mother) increases substantially during deployment. Beyond deployment, military spouses continue to demonstrate increased levels of anxiety and depression (Chandra et al., 2010; Flake et al., 2009; Lester et al., 2010). Given the known effects of parental psychopathology on child functioning, considerations of the non-Veteran parent's mental health should continue to be assessed and integrated into the mediational model utilized in the present study.

Moreover, gender of the child was not assessed. Literature has identified gender differences among children – for example, boys are more likely to display externalizing symptoms whereas girls are more likely to display internalizing symptoms (e.g., Leadbeater, Kuperminc, Blatt, & Hertzog, 1999). Although the outcome measure in the current study assessed both internalizing and externalizing symptoms, important gender differences not evaluated in this study could potentially inform intervention strategies for use with military children. Considering the Family Attachment Network's emphasis on attachment, it is also possible that child outcomes may vary depending on gender congruence of Veteran parent and child (e.g., male parent and male child versus male parent and female child). Similarly, age of the child during the parent's last deployment

was unavailable for a large proportion (50%) of the current sample. Future studies may benefit from examining the potential effects of child age at time of deployment on the association between parental PTSD and child outcome. Understanding the potentially varying impact of deployment and parental PTSD across child development would help direct intervention and prevention efforts.

Lastly, assessing the influence of family processes among female Veterans should be a focus for future research. Less research, in general, has focused on the impact of PTSD on family processes and child functioning in female Veteran families. The sample within the current study was comprised of 22% female Veterans. It is possible that family processes may function differently when assessed using a larger sample of females, particularly when considering differences in rates of PTSD. For example, one study found that females who deployed in support of Operation Desert Storm demonstrated PTSD rates twice those of their male counterparts, even when controlling for combat exposure (Wolfe, Erickson, Sharkansky, King, & King, 1999). Although these females' PTSD may have been a result of childhood, sexual, or other trauma, research has indicated that it is the presence of PTSD, rather than the source of the trauma, that impacts family and child functioning, as previously discussed. Another subgroup that has received less attention is single parents within the military and Veteran community. The contextual factors experienced by these families vary drastically from those of two-parent households or parents who share custody. For example, when the parent deploys, the child(ren) would not remain under the care of a primary caretaker but rather would likely be cared for by extended family, which may also include relocation,

temporary change of school, loss of local social support, and so forth. Moreover, single parents report significantly higher PTSD symptoms than partnered parents (Vaughn-Coaxum et al., 2015). As such, the influence of family processes within these family units warrant investigation.

Despite these limitations, this is only known study to investigate the mediating and moderating effects of family processes in the well-documented linkage between Veteran PTSD and negative child outcomes. Consistent with the Family Attachment Network, the findings of the current study highlight family processes as important variables influencing negative child outcomes. Previous studies have utilized family processes as either predictor or outcome variables, however these findings suggest that these processes provide a causal pathway through which one can better understand the effect of parental PTSD on child functioning. Research efforts should further investigate the mediating and moderating functions of family processes. Better understanding of these family-level experiences will inform current treatment and prevention efforts for ameliorating parental PTSD symptoms and negative child outcomes within our nation's military families.

REFERENCES

Acion, L., Ramirez, M. R., Jorge, R. E., & Arndt, S. (2013). Increased risk of alcohol and drug use among children from deployed military families. *Addiction, 108*, 1418–1425.

Ahmadzadeh, G. H., & Malekian, A. R. M. E. N. (2004). Aggression, anxiety, and social development in adolescent children of war veterans with PTSD versus those of non-veterans. *Journal of Research in Medical Sciences, 9*(5), 231-234.

Allen, E. S., Rhoades, G. K., Stanley, S. M., & Markman, H. J. (2011). On the home front: Stress for recently deployed Army couples. *Family Process, 50*(2), 235-247.

American Psychiatric Association. (2000). Diagnostic and statistical manual, 4th edn, Text Revision (DSM-IV-TR). *American Psychiatric Association, Washington*.

Aranda, M. C., Middleton, L. S., Flake, E., & Davis, B. E. (2011). Psychosocial screening in children with wartime-deployed parents. *Military Medicine, 176*(4), 402-407.

Babcock, J. C., Costa, D. M., Green, C. E., & Eckhardt, C. I. (2004). What situations induce intimate partner violence? A reliability and validity study of the Proximal Antecedents to Violent Episodes (PAVE) Scale. *Journal of Family Psychology, 18*(3), 433–442.

Balderrama-Durbin, C., Snyder, D. K., Cigrang, J., Talcott, G. W., Tatum, J., Baker, M., ... & Smith Slep, A. M. (2013). Combat disclosure in intimate relationships: Mediating the impact of partner support on posttraumatic stress. *Journal of Family Psychology*, *27*(4), 560-568.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173.

Beckham, J. C., Lytle, B. L., & Feldman, M. E. (1996). Caregiver burden in partners of Vietnam War veterans with posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology*, *64*, 1068-1072.

Berz, J. B., Taft, C. T., Watkins, L. E., & Monson, C. M. (2008). Associations between PTSD symptoms and parenting satisfaction in a female veteran sample. *Journal of Psychological Trauma*, *7*(1), 37-45.

Bowlby, J. (1980). *Attachment and loss: Vol. III*. New York, NY: Basic Books.

Capaldi, D. M., & Crosby, L. (1997). Observed and reported psychological and physical aggression in young, at-risk couples. *Social Development*, *6*(2), 184–206.

Card, N. A., Bosch, L., Casper, D. M., Wiggs, C. B., Hawkins, S. A., Schlomer, G. L., & Borden, L. M. (2011). A meta-analytic review of internalizing, externalizing, and academic adjustment among children of deployed military service members. *Journal of Family Psychology*, *25*(4), 508-520.

Caselli, L. T., & Motta, R. W. (1995). The effect of PTSD and combat level on Vietnam veterans' perceptions of child behavior and marital adjustment. *Journal of Clinical Psychology*, *51*(1), 4-12.

Casselman, R. B., & Pemberton, J. R. (2015). ACT-based parenting group for veterans with PTSD: Development and preliminary outcomes. *The American Journal of Family Therapy*, *43*(1), 57-66.

Chaffin, M., Silovsky, J. F., Funderburk, B., Valle, L. A., Brestan, E. V., Balachova, T., ... & Bonner, B. L. (2004). Parent-child interaction therapy with physically abusive parents: Efficacy for reducing future abuse reports. *Journal of Consulting and Clinical Psychology*, *72*(3), 500-510.

Chandra, A., Lara-Cinisomo, S., Jaycox, L. H., Tanielian, T., Burns, R. M., Ruder, T., & Han, B. (2010). Children on the homefront: The experience of children from military families. *Pediatrics*, *125*(1), 16-25.

Chartrand, M. M., Frank, D. A., White, L. F., & Shope, T. R. (2008). Effect of parents' wartime deployment on the behavior of young children in military families. *Archives of Pediatrics & Adolescent Medicine*, *162*, 1009-1014.

Conners, C. K., Sitarenios, G., Parker, J. D., & Epstein, J. N. (1998). The revised Conners' Parent Rating Scale (CPRS-R): factor structure, reliability, and criterion validity. *Journal of Abnormal Child Psychology*, *26*(4), 257-268.

Cook, J. M., Riggs, D. S., Thompson, R., Coyne, J. C., & Sheikh, J. I. (2004). Posttraumatic stress disorder and current relationship functioning among World War II ex-prisoners of war. *Journal of Family Psychology*, *18*(1), 36−45.

Creech, S. K., & Misca, G. (2017). Parenting with PTSD: A review of research on the influence of PTSD on parent-child functioning in military and veteran families. *Frontiers in Psychology*, *8*, 1101.

Creech, S. K., Trotman, A., Michaelson, G., Benzer, J. K., & Copeland, L. A. (2017). Parenting Behaviors and PTSD Symptoms Predict Child Psychosocial Problems and Parenting Satisfaction in a Sample of US Veterans and Service Members. *Military Behavioral Health*, *5*(4), 374-383.

Cummings, E.M., Keller, P. S., & Davies, P. T. (2005). Towards a family process model of maternal and paternal depressive symptoms: Exploring multiple relations with child and family functioning. *Journal of Child Psychology and Psychiatry*, *46*(5), 479-489.

Davidson, A. C., & Mellor, D. J. (2001). The adjustment of children of Australian Vietnam veterans: is there evidence for the transgenerational transmission of the effects of war-related trauma? *Australian and New Zealand Journal of Psychiatry*, *35*(3), 345-351.

Dekel, R., & Monson, C. M. (2010). Military-related post-traumatic stress disorder and family relations: Current knowledge and future directions. *Aggression and Violent Behavior*, *15*(4), 303-309.

Dekel, R., & Solomon, Z. (2006). Secondary traumatization among wives of Israeli POWs: the role of POWs' distress. *Social Psychiatry and Psychiatric Epidemiology*, *41*(1), 27-33.

Department of Defense (2010). Report on the impact of deployment of members of the armed forces on their dependent children. (Retrieved from: http://download.militaryonesource.mil/12038/MOS/Reports/Report_to_Congress_on_Impact_of_Deployment_on_Military_Children.pdf).

Deputy Assistant Secretary of Defense (2015). *2014 demographics*: *Profile of the military community*. Washington, D. C.: Office of the Deputy Assistant Secretary of Defense Retrieved from: http://download.militaryonesource.mil/12038/MOS/Reports/2014-Demographics-Report.pdf.

Dirkzwager, A. J., Bramsen, I., Adèr, H., & van der Ploeg, H. M. (2005). Secondary traumatization in partners and parents of Dutch peacekeeping soldiers. *Journal of Family Psychology*, *19*(2), 217.

Elgar, F. J., Waschbusch, D. A., Dadds, M. R., & Sigvaldason, N. (2007). Development and validation of a short form of the Alabama Parenting Questionnaire. *Journal of Child and Family Studies*, *16*(2), 243-259.

Epstein, N. B., Baldwin, L. M., Bishop, D. S. (1983). The McMaster family assessment device. *Journal of Marital and Family Therapy*. *9*(2), 171-180.

Evans, L., Cowlishaw, S., & Hopwood, M. (2009). Family functioning predicts outcomes for veterans in treatment for chronic posttraumatic stress disorder. *Journal of Family Psychology*, *23*(4), 531.

Evans, L., McHugh, T., Hopwood, M., & Watt, C. (2003). Chronic posttraumatic stress disorder and family functioning of Vietnam veterans and their partners. *Australian and New Zealand Journal of Psychiatry*, *37*(6), 765-772.

Eyberg, S. M., Funderburk, B. W., Hembree-Kigin, T. L., McNeil, C. B., Querido, J. G., & Hood, K. K. (2001). Parent-child interaction therapy with behavior problem children: One and two year maintenance of treatment effects in the family. *Child & Family Behavior Therapy*, *23*(4), 1-20.

Eyberg, S. M., Nelson, M. M., & Boggs, S. R. (2008). Evidence-based psychosocial treatments for children and adolescents with disruptive behavior. *Journal of Clinical Child & Adolescent Psychology*, *37*(1), 215-237.

Figley, C. R. (1993). Coping with stressors on the home front. *Journal of Social Issues*, *49*(4), 51-71.

Fincham, F. D. (2003). Marital conflict correlates, structure, and context. *Current Directions in Psychological Science*, *12*(1), 23-27.

Flake, E. M., Davis, B. E., Johnson, P. L., & Middleton, L. S. (2009). The psychosocial effects of deployment on military children. *Journal of Developmental & Behavioral Pediatrics, 30*(4), 271-278.

Follingstad, D. R., & DeHart, D. D. (2000). Defining psychological abuse of husbands toward wives: Contexts, behaviors, and typologies. *Journal of Interpersonal Violence, 15*(9), 891–920.

Frederikson, L. G., Chamberlain, K., & Long, N. (1996). Unacknowledged casualties of the Vietnam War: Experiences of the partners of New Zealand veterans. *Qualitative Health Research*, *6*(1), 49–70.

Fritz, M. S., & MacKinnon, D. P. (2007). Required sample size to detect the mediated effect. *Psychological Science*, *18*(3), 233-239.

Frye, N. E., & Karney, B. R. (2006). The context of aggressive behavior in marriage: A longitudinal study of newlyweds. *Journal of Family Psychology*, *20*(1), 12–20.

Fulton, J. J., Calhoun, P. S., Wagner, H. R., Schry, A. R., Hair, L. P., Feeling, N., ... & Beckham, J. C. (2015). The prevalence of posttraumatic stress disorder in Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) Veterans: A meta-analysis. *Journal of Anxiety Disorders*, 31, 98-107.

Galovski, T., & Lyons, J. A. (2004). Psychological sequela of combat violence: A review of the impact of PTSD on the veteran's family and possible interventions. *Aggression and Violent Behavior, 9*(5), 477-501.

Gewirtz, A. H., Erbes, C. R., Polusny, M. A., Forgatch, M. S., & DeGarmo, D. S. (2011). Helping military families through the deployment process: Strategies to support parenting. *Professional psychology: Research and practice*, *42*(1), 56-62.

Gewirtz, A. H., Polusny, M. A., DeGarmo, D. S., Khaylis, A., & Erbes, C. R. (2010). Posttraumatic stress symptoms among National Guard soldiers deployed to Iraq: Associations with parenting behaviors and couple adjustment. *Journal of Consulting and Clinical Psychology*, *78*(5), 599.

Gilreath, T. D., Astor, R. A., Cederbaum, J. A., Atuel, H., & Benbenishty, R. (2014). Prevalence and correlates of victimization and weapon carrying among military- and nonmilitary-connected youth in Southern California. *Preventive Medicine*, *60*, 21-26.

Goff, B. S. N., & Smith, D. B. (2005). Systemic traumatic stress: The couple adaptation to traumatic stress model. *Journal of Marital and Family Therapy*, *31*(2), 145-157.

Gold, J. I., Taft, C. T., Keehn, M. G., King, D. W., King, L. A., & Samper, R. E. (2007). PTSD symptom severity and family adjustment among female Vietnam veterans. *Military Psychology*, *19*(2), 71.

Gorman, G. H., Eide, M., & Hisle-Gorman, E. (2010). Wartime military deployment and increased pediatric mental and behavioral health complaints. *Pediatrics*, *126*, 1058-1066.

Gottman, J. M. (1991). Predicting the longitudinal course of marriages. *Journal of Marital and Family Therapy*, *17*(1), 3-7.

Grych, J. H., Raynor, S. R., & Fosco, G. M. (2004). Family processes that shape the impact of interparental conflict on adolescents. *Development and Psychopathology*, *16*(3), 649-665.

Harkness, L. L. (1991). The effect of combat-related PTSD on children. *National Center for PTSD Clinical Newsletter*, *2*(1), 12–13.

Harkness, L. L. (1993). Transgenerational transmission of war-related trauma. In *International Handbook of Traumatic Stress Syndromes* (pp. 635-643). Springer US.

Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, *76*(4), 408-420.

Hayes, A. F. (2012). PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling.

Herzog, J. R., Everson, R. B., & Whitworth, J. D. (2011). Do secondary trauma symptoms in spouses of combat-exposed national guard soldiers mediate impacts of soldiers' trauma exposure on their children? *Child and Adolescent Social Work Journal*, *28*(6), 459-473.

Hoge, C., Auchterlonie, J., & Milliken, C. (2006). Mental health problems, use of mental health services, and attrition from military service after returning from deployment to Iraq or Afghanistan. *Journal of the American Medical Association*, *295*, 1023.

Hood, K. K., & Eyberg, S. M. (2003). Outcomes of Parent-Child Interaction Therapy: Mothers' reports of maintenance three to six years after treatment. *Journal of Clinical Child and Adolescent Psychology*, *32*(3), 419-429.

Houston, J. B., Pfefferbaum, B., Sherman, M. D., Melson, A. G., & Brand, M. W. (2013). Family communication across the military deployment experience: Child and spouse report of communication frequency and quality and associated emotions, behaviors, and reactions. *Journal of Loss and Trauma*, *18*(2), 103-119.

James, D. E., Schumm, W. R., Kennedy, C. E., Grigsby, C. C., Shectman, K. L., & Nichols, C. W. (1985). Characteristics of the Kansas Parental Satisfaction Scale among two samples of married parents. *Psychological Reports*, *57*(1), 163-169.

Jellinek, M. S., Murphy, J. M., Robinson, J., Feins, A., Lamb, S., & Fenton, T. (1988). Pediatric Symptom Checklist: screening school-age children for psychosocial dysfunction. *The Journal of Pediatrics*, *112*(2), 201-209.

Jordan, K., Marmar, C., Fairbank, J., Schlenger, W., Kulka, R., Hough, R., et al. (1992). Problems in families of male Vietnam veterans with posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology*, *60*, 916–926.

Katz, J., Arias, I., & Beach, S. R. H. (2000). Psychological abuse, self-esteem, and women's dating relationship outcomes: A comparison of the self-verification and self-enhancement perspectives. *Psychology of Women Quarterly*, *24*(4), 349–357.

Katz, L. F., & Low, S. M. (2004). Marital violence, co-parenting, and family-level processes in relation to children's adjustment. *Journal of Family Psychology*, *18*(2), 372-382.

Kerr, M. E., & Bowen, M. (1988). *Family evaluation*. WW Norton & Company.

Khaylis, A., Polusny, M.A., Erbes, C.R., Gewirtz, A.H., Rath, M. (2011). Posttraumatic stress, family adjustment, and treatment preferences among National Guard soldiers deployed to OEF/OIF. *Military Medicine*, *176*(2), 126-131.

Lauterbach, D., Bak, C., Reiland, S., Mason, S., Lute, M. R., & Earls, L. (2007). Quality of parental relationships among persons with a lifetime history of posttraumatic stress disorder. *Journal of Traumatic Stress*, *20*(2), 161-172.

Leadbeater, B. J., Kuperminc, G. P., Blatt, S. J., & Hertzog, C. (1999). A multivariate model of gender differences in adolescents' internalizing and externalizing problems. *Developmental Psychology*, *35*, 1268-1282.

Leen-Feldner, E. W., Feldner, M. T., Bunaciu, L., & Blumenthal, H. (2011). Associations between parental posttraumatic stress disorder and both offspring internalizing problems and parental aggression within the National Comorbidity Survey-Replication. *Journal of Anxiety Disorders*, *25*(2), 169-175.

Lester, P., Liang, L.J., Milburn. N., Mogil, C., Woodward, K., Nash, W. … & Beardslee, W. (2016). Evaluation of a family-centered preventive intervention for military families: Parent and child longitudinal outcomes. *Journal of the American Academy of Child and Adolescent Psychiatry.* 55(1), 14-24.

Lester, P., Peterson, K., Reeves, J., Knauss, L., Glover, D., Mogil, C., ... & Beardslee, W. (2010). The long war and parental combat deployment: Effects on military children and at-home spouses. *Journal of the American Academy of Child & Adolescent Psychiatry*, *49*(4), 310-320.

Lester, P., Saltzman, W. R., Woodward, K., Glover, D., Leskin, G. A., Bursch, B., ... & Beardslee, W. (2012). Evaluation of a family-centered prevention intervention for military children and families facing wartime deployments. *American Journal of Public Health*, *102*(S1), S48-S54.

MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research, 39*(1), 99-128.

MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods*, *7*(1), 83-104.

Monson, C. M., Fredman, S. J., Adair, K. C., Stevens, S. P., Resick, P. A., Schnurr, P. P., ... & Macdonald, A. (2011). Cognitive–behavioral conjoint therapy for PTSD: Pilot results from a community sample. *Journal of Traumatic Stress*, *24*(1), 97-101.

Murphy, C. M., & O'Leary, K. D. (1989). Psychological aggression predicts physical aggression in early marriage. *Journal of Consulting and Clinical Psychology, 57*(5), 579–582.

Norton, R. (1983). Measuring marital quality: A critical look at the dependent variable. *Journal of Marriage and the Family*, *45*(1), 141-151.

Okuda, M., Olfson, M., Wang, S., Rubio, J. M., Xu, Y., & Blanco, C. (2015). Correlates of intimate partner violence perpetration: Results from a National Epidemiologic Survey. *Journal of Traumatic Stress, 28*(1), 49-56.

Olsen, D. H., Portner, J., & Lavee, Y. (1985). Family Adaptability and Cohesion Evaluation Scales (FACES-II). *Minneapolis, University of Minnesota*.

Patterson, G. R. (2005). The next generation of PMTO models. *The Behavior Therapist*, *28*(2), 25-32.

Pemberton, J. R., Kramer, T. L., Borrego Jr, J., & Owen, R. R. (2013). Kids at the VA? A call for evidence-based parenting interventions for returning veterans. *Psychological Services*, *10*(2), 194-202.

Perry, W. J., Albright, M. K., Allison, G. T., Berger, S. R., Carter, A. B., ... & Rice, S. E. (2006). *The US Military: Under strain and at risk*. Publisher not identified.

Pincus, S. H., House, R., Christenson, J., & Adler, L. E. (2001). The emotional cycle of deployment: A military family perspective. *US Army Medical Department Journal*, *4*(5), 6-14.

Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers*, *36*(4), 717-731.

Reed, S.C., Bell, J.F., Edwards, T.C. (2011). Adolescent well-being in Washington state military families. *American Journal of Public Health*. *101*(9), 1676–1682.

Reid, J. B., Patterson, G. R., & Snyder, J. E. (2002). *Antisocial behavior in children and adolescents: A developmental analysis and model for intervention*. American Psychological Association.

Renaud, E. F. (2008). The attachment characteristics of combat veterans with PTSD. *Traumatology*, *14*(3), 1–12

Renshaw, K. D., Rodrigues, C. S., & Jones, D. H. (2008). Psychological symptoms and marital satisfaction in spouses of Operation Iraqi Freedom veterans: Relationships with spouses' perceptions of veterans' experiences and symptoms. *Journal of Family Psychology*, *22*(4), 586-594.

Rentz, E. D., Marshall, S. W., Loomis, D., Casteel, C., Martin, S. L., & Gibbs, D. A. (2007). Effect of deployment on the occurrence of child maltreatment in military and nonmilitary families. *American Journal of Epidemiology*, *165*, 1199-1206.

Riggs, D. S., Byrne, C. A., Weathers, F. W., & Litz, B. T. (1998). The quality of the intimate relationships of male Vietnam veterans: Problems associated with posttraumatic stress disorder. *Journal of Traumatic Stress*, *11*(1), 87−101.

Riggs, S. A., & Riggs, D. S. (2011). Risk and resilience in military families experiencing deployment: The role of the family attachment network. *Journal of Family Psychology*, *25*(5), 675-687.

Rosenheck, R., & Fontana, A. (1998). Transgenerational effects of abusive violence on the children of Vietnam combat veterans. *Journal of Traumatic Stress*, *11*(4), 731-742.

Ruscio, A. M., Weathers, F. W., King, L. A., & King, D. W. (2002). Male war-zone veterans' perceived relationships with their children: The importance of emotional numbing. *Journal of Traumatic Stress*, *15*(5), 351-357.

Saltzman, L. E., Fanslow, J. L., McMahon, P. M., & Shelley, G. A. (1999). Intimate partner violence surveillance: Uniform definitions and recommended data elements, version 1.0. *Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention*.

Samper, R., Taft, C., King, D., & King, L. (2004). Posttraumatic stress disorder symptoms and parenting satisfaction among a national sample of male Vietnam veterans. *Journal of Traumatic Stress, 17*(4), 311–315.

Sayers, S. L., Farrow, V. A., Ross, J., & Oslin, D. W. (2009). Family problems among recently returned military veterans referred for a mental health evaluation. *Journal of Clinical Psychiatry*, *70*(2), 163.

Schuhmann, E. M., Foote, R. C., Eyberg, S. M., Boggs, S. R., & Algina, J. (1998). Efficacy of parent-child interaction therapy: Interim report of a randomized trial with short-term maintenance. *Journal of Clinical Child Psychology*, *27*(1), 34-45.

Schumm, W.R., Paff-Bercen, L.A., Hatch, R.C., Obiorah, F.C., Copeland, J.M., Means, L.D., & Bugaighis, M.A. (1986) Concurrent and discriminant validity of the Kansas Marital Satisfaction Scale. *Journal of Marriage and the Family*, *48*(2), 381-387.

Sherman, M. D., Larsen, J., Straits-Tröster, K., Erbes, C., & Tassey, J. (2015). Veteran–child communication about parental PTSD: A mixed methods pilot study. *Journal of Family Psychology*, *29*(4), 595-603.

Sherman, M. D., Perlick, D. A., & Straits-Tröster, K. (2012). Adapting the multifamily group model for treating veterans with posttraumatic stress disorder. *Psychological Services*, *9*(4), 349-360.

Solomon, Z., Dekel, R., & Mikulincer, M. (2008). Complex trauma of war captivity: A prospective study of attachment and post-traumatic stress disorder. *Psychological Medicine*, *38*, 1427-1434.

Solomon, Z., Waysman, M., Levy, G., Fried, B., Mikulincer, M., Benbenishty, R., Florian, V. & Bleich, A. (1992). From front line to home front: A study of secondary traumatization. *Family Process*, *31*(3), 289–302.

Suozzi, J. M., & Motta, R. W. (2004). The relationship between combat exposure and the transfer of trauma-like symptoms to offspring of veterans. *Traumatology*, *10*(1), 17.

Straus, M. A., & Douglas, E. M. (2004). A short form of the Revised Conflict Tactics Scales, and typologies for severity and mutuality. *Violence and Victims*, *19*(5), 507-520.

Tanielian, T., & Jaycox, L. H. (2008). Invisible wounds of war. *Santa Monica, CA: Rand Center.*

Taft, C. T., Watkins, L. E., Stafford, J., Street, A. E., & Monson, C. M. (2011). Posttraumatic stress disorder and intimate relationship problems: A meta-analysis. *Journal of Consulting and Clinical Psychology*, *79*(1), 22.

Tsai, J., David, D. H., Edens, E. L., & Crutchfield, A. (2013). Considering child care and parenting needs in Veterans Affairs mental health services. *Evaluation and Program Planning*, *39*, 19-22.

Vaughn-Coaxum, R., Smith, B. N., Iverson, K. M., & Vogt, D. (2015). Family stressors and postdeployment mental health in single versus partnered parents deployed in support of the wars in Afghanistan and Iraq. *Psychological Services*, *12*(3), 241-249.

Waliski, A., Blevins, D., Spencer, H. J., Roca, J. V., & Kirchner, J. (2013). Family relationships, mental health, and injury among OEF/OIF veterans postdeployment. *Military Behavioral Health*, *1*(2), 100-106.

Walsh, T. B., Dayton, C. J., Erwin, M. S., Muzik, M., Busuito, A., & Rosenblum, K. L. (2014). Fathering after military deployment: Parenting challenges and goals of fathers of young children. *Health & Social Work*, *39*(1), 35-44.

Watkins, L. E., Taft, C. T., Hebenstreit, C. L., King, L. A., & King, D. W. (2008). Predictors of child behavior problems among children of female Vietnam veterans. *Journal of Family Violence*, *23*(3), 135-140.

Weathers, F. W., Blake, D. D., & Schnurr, P. P. (2015). Clinician-Administered PTSD Scale for DSM-5 (CAPS-5). US Department of Veterans Affairs. PTSD: National Center for PTSD. Professional.

Weathers, F. W., Huska, J. A., & Keane, T. M. (1991). PCL-C for DSM-IV. *Boston: National Center for PTSD-Behavioral Science Division*.

Wilson, S. R., Wilkum, K., Chernichky, S. M., MacDermid Wadsworth, S. M., & Broniarczyk, K. M. (2011). Passport toward success: Description and evaluation of a program designed to help children and families reconnect after a military deployment. *Journal of Applied Communication Research*, *39*(3), 223-249.

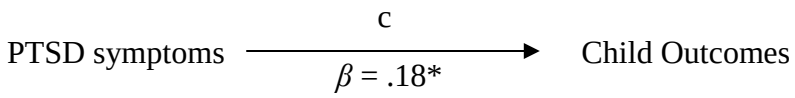
Wolfe, J., Erickson, D. J., Sharkansky, E. J., King, D. W., & King, L. A. (1999). Course and predictors of posttraumatic stress disorder among Gulf War veterans: a prospective analysis. *Journal of Consulting and Clinical Psychology*, *67*(4), 520-528.

Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, *37*(2), 197-206.

APPENDIX A

FIGURES

(a) Direct Effect



(b) Indirect Effect

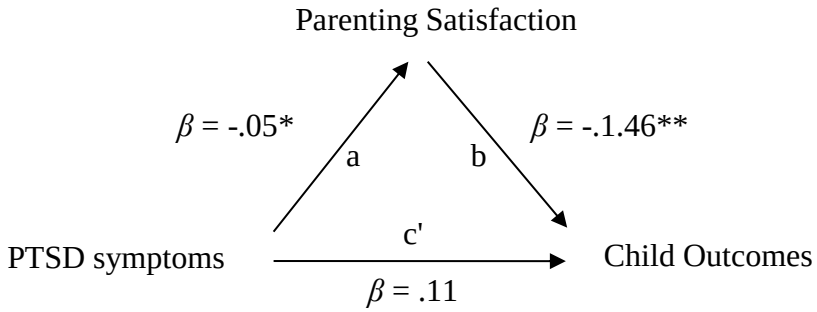


Figure 3. Mediation Analyses. Adapted from "SPSS and SAS Procedures for Estimating Indirect Effects in Simple Mediation Models" by K. J. Preacher and A.F. Hayes, 2004, *Behavior Research Methods, Instruments, & Computers*, *36*(4), p. 717-731. Copyright 2004 by Psychonomic Society, Inc.

Note: Path models for the direct (a) and indirect (b) effects of PTSD symptoms on negative child outcomes through parenting satisfaction. *$p < .05$, ** $p < .01$.

APPENDIX B

TABLES

Table 1
Summary of Correlations, Means, and Standard Deviations for Scores on Study Variables

	1	2	3	4	5	6	7
1. PTSD symptoms	--						
2. Child outcomes	.31*	--					
3. FAD	-.44**	-.23*	--				
4. QMI	-.19	.10	.49**	--			
5. CTS	.27*	.20	-.38**	-.22	--		
6. KPS	-.29*	-.50**	.48**	.06	-.18	--	
7. APQ	-.20	.05	-.04	-.03	.03	.14	--
M	39.83	11.74	3.18	25.99	14.68	17.35	22.06
SD	20.74	12.20	0.66	9.50	17.45	3.73	4.24
Range	17-85	0-57	1.7-4.0	5-35	0-54	3-21	12-34

Note: $N = 69$. PTSD = posttraumatic stress disorder; FAD = general family functioning; QMI = relationship satisfaction; CTS = psychological aggression; KPS = parenting satisfaction; APQ = positive parenting behaviors; *M* = mean score; *SD* = standard deviation. Unstandardized means and standard deviations for each measure are presented for ease of interpretation. Standardized scores were utilized in the analyses.
*$p < .05$. **$p < .01$.

Table 2
Moderating Effects of Child Age on Negative Child Outcomes

Predictor	β	*p*	95% CI	
Child age	.03	.25	-.02	.07
PTSD symptoms	-.13	.62	-.63	.37
Child Age x PTSD	.05	.05	.01	.10

Note: β = standardized beta weight; CI = Confidence Interval

Table 3
Conditional Effects of Child Age on Negative Child Outcomes

Child Age	β	*p*	95% CI	
One *SD* below mean	.04	.81	-.32	.40
At the mean	.29	.02	.05	.53
One *SD* above mean	.53	.00	.22	.84

Note: β = standardized beta weight; CI = Confidence Interval; *SD* = Standard Deviation

Table 4
Moderating Effects of Relationship Satisfaction on Negative Child Outcomes

Predictor	β	*p*	95% CI	
Relationship Satisfaction	.16	.35	-.07	.39
PTSD symptoms	.38	.04	.15	.62
Relationship Satisfaction x PTSD	.20	.05	.01	.39

Note: β = standardized beta weight; CI = Confidence Interval

Table 5

Conditional Effects of Relationship Satisfaction on Negative Child Outcomes

Relationship Satisfaction	*β*	*p*	95% CI	
One *SD* below mean	.55	.00	.24	.87
At the mean	.37	.00	.13	.61
One *SD* above mean	.18	.22	-.11	.47

Note: *β* = standardized beta weight; CI = Confidence Interval; *SD* = Standard Deviation

Table 6

Hierarchical Liner Regression

Model	Block 1			Block 2			Block 3		
Independent	$F(3, 62) = 2.07$, $R^2 = .09$			$F(4, 61) = 4.34$, $R^2 = .22$			$F(5, 60) = 6.13$, $R^2 = .34$		
	B	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Child Age	.03	.03	.16	.05	.03	.25	.02	.03	.11
Parent Age	-.01	.02	-.08	-.02	.02	-.20	.00	.02	-.01
Parent Gender	.67	.31	.27*	.70	.29	.28*	.60	.27	.24*
PTSD Symptoms				.38	.12	.37**	.22	.12	.22
Parenting Satisfaction							-.39	.12	-.39**
R^2							.34		
$\triangle R^2$							.12		
F for R^2 Change							10.59**		

Note: *B* = unstandardized beta weight; *SE B* = standard error; *β* = standardized beta weight. *$p < .05$, ** $p < .01$