



Posttraumatic Stress Symptoms and Parenting Competence among Israeli Male Veterans: The Mediating Roles of Experiential Avoidance and Parental Reflective Functioning

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Accepted: 27 February 2022 / Published online: 24 March 2022

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Abstract

Although empirical studies have documented associations between posttraumatic stress symptoms (PTSS) and parenting among various high-risk populations, there is a relatively limited amount of research on paternal parenting among veterans. Moreover, the understanding of possible mechanisms which may account for this effect is severely lacking. This study examined associations between military related PTSS and parenting sense of competence (PSOC) among veteran fathers. Furthermore, we examined the mediating role of experiential avoidance (EA) and parental reflective functioning (PRF) in the association between PTSS and PSOC. Participants were 189 Israel Defense Forces (IDF) male combat veterans (mean age = 30.03) who completed a set of validated self-report questionnaires in a cross-sectional design study. Results showed negative associations between PTSS and PSOC-parental satisfaction but not parental efficacy. Furthermore, EA mediated the association between PTSS and parental satisfaction and efficacy; PRF- Pre mentalizing modes mediated the association between PTSS and parental satisfaction. Our findings imply that EA and PRF may serve as mechanisms of the association between PTSS and PSOC among veteran fathers. These findings are discussed in light of a psychological trauma perspective, and clinical implications to increase fathers' mentalization and psychological flexibility are suggested.

Keywords PTSD · Experiential avoidance · Parenting competence · Reflective functioning

Highlights

- We examined predictors of parenting sense of competence (PSOC) among veteran fathers.
- PTSS was negatively associated with parental satisfaction, but not parental efficacy.
- Experiential avoidance mediated the association between PTSS and PSOC.
- Pre mentalizing modes mediated the association between PTSS and parental satisfaction.

Over the last two decades, studies have documented the impact of war veterans' posttraumatic stress disorder (PTSD) or symptoms (PTSS) on their children's psychological difficulties and behavior problems (Kritikos et al., 2019). However, although theoretical models have

suggested that parental PTSS may have harmful effects on the ways in which parents treat their children, only a handful of studies have empirically examined veterans' parenting and particularly, parental competence (e.g., Laifer et al., 2019). Moreover, there is scarce exploration of possible mechanisms for the associations between PTSS and parenting among veterans (Levin et al., 2017). Given the high salience of war and its detrimental effects on the well-being of veterans' offspring, the present study aims to examine the links between PTSS and parenting competence among Israeli male veterans, and the mediating roles of experiential avoidance and parental reflective functioning (PRF).

The data that support the findings of this study are available from the corresponding author, upon reasonable request.

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Parenting

Many professionals agree that the quality of the parent–infant bond is an important agent for the child’s future mental health (Mesman et al., 2012). This recognition has led to a widespread investigation of various dimensions of parenting. Some scholars have focused mainly on the dimensions of sensitivity (warmth) and control (demandingness). Researchers have also added the dimension of autonomy support (Skinner, Johnson, & Snyder, 2005). Other scholars have suggested that parenting practices include two parenting dimensions: negative or coercive parenting and effective or positive parenting (Patterson, 2005). The different combinations of these dimensions have also been formulated to form distinct parenting styles (Baumrind, 2013). Until the mid-1980s, most studies focused on mothers, but trends have changed with time, and there is now greater interest in fathers’ parental roles (Zerach et al., 2012). However, the literature regarding fathering lags far behind the research on mothering.

One potentially significant parental factor that has received only limited scientific exploration among fathers, is parenting self-efficacy or sense of competence (PSOC). Parenting competence reflects an individual’s subjective experience of parenting efficacy and satisfaction with the parental role (Gibaud-Wallston & Wandersman, 1978; Johnston & Mash, 1989). Indeed, some studies found that parenting self-efficacy is associated with adaptive parenting behaviors and higher quality of parent–child relationships (Jones & Prinz, 2005). Moreover, various parenting interventions aimed to increase PSOC were associated with more effective parenting behaviors and decreased child behavior problems. Specifically, poorer PSOC predicted higher rates of internalizing, externalizing and attentional symptoms among children of veterans (Zalta et al., 2018). Because there are differences in the extent and characteristics of mothers’ and fathers’ engagement with their children (e.g., Baxter et al., 2007), and research shows that fathers get more involved with their children when they are more confident in their parenting skills (Trahan, 2018), the focus on fathers is of special importance.

On the long journey to understanding “why (posttraumatic) parents parent the way they do” (Belsky & Jaffee, 2006), we might be assisted with Belsky’s social-contextual model of determinants of parenting (Belsky, 1993; Taraban & Shaw, 2018). Belsky’s ecological model identifies three determinants of parenting: parents’ background and psychological resources, contextual sources of stress and support, and children’s characteristics. Indeed, a significant body of research validated Belsky’s parents’ characteristics determinant by indicating that fathers’ mental health has a significant impact on a variety of parenting domains. For example, both reviews and meta-analyses (e.g., Wilson & Durbin, 2010) have shown that

fathers’ depression hinders parental functioning (Dix & Meunier, 2009), and increases the risk of children’s externalizing and internalizing behaviors (Sweeney & MacBeth, 2016). It is rather surprising that fatherhood among men who have suffered from war-induced psychopathology has received relatively limited scientific focus (Christie et al., 2019). Given the high number of veteran fathers as well as the high prevalence of PTSD among male veterans, there is a dire need to fill this gap in knowledge. This study aimed to explore the contribution of veterans’ PTSS to PSOC.

The Effects of Veterans’ PTSS on Their Parenting

The most common outcome following participation in war is posttraumatic stress disorder (PTSD). PTSD is a stressor- and trauma-related disorder which is characterized by four distinct symptom clusters: intrusive re-experiencing of the traumatic event(s), avoidance of trauma reminders, hyperarousal, and persistent negative alterations in cognitions and mood (American Psychiatric Association, 2013). While the lifetime prevalence of PTSD among the general population is known to be between 6% to 8% (Koenen et al., 2017), in the aftermath of military service and participation in combat, about 6–25% of veterans in the armed forces are reported to suffer from PTSD (e.g., Stefanovics et al., 2020). It is also important to point out that many veterans may experience a range of symptom intensity below the threshold required to establish a diagnosis but still experience PTSS (Zerach & Levi-Belz, 2018).

To date, a number of empirical studies have explored the impact of veterans’ PTSS on aspects of paternal parenting. A recent systemic review concluded that PTSD is associated with increased parental stress and negative hostile and controlling parenting behaviors. A negative association between PTSD severity and parent–child relationship quality, as well as between PTSD severity and parenting satisfaction, has been found (Christie et al., 2019). Moreover, a recent meta-analysis reported a small but significant effect size between PTSD and negative parenting behaviors among military-serving parents (Kritikos et al., 2019). Notably, the association between PTSD and decreased parenting satisfaction (Cohen et al., 2011) and lower levels of positive parenting (Zerach et al., 2012) has been found among Israeli war veterans. Importantly, one study found PTSS was not associated with PSOC among treatment-seeking veterans (Zalta et al., 2018). However, another study found that treatment-seeking veterans’ PTSS, and particularly avoidance and numbing symptoms, were significantly associated with low levels of PSOC that also mediated the link to family functioning (Laifer et al., 2019).

Over the years, several theoretical and clinical explanations have been offered to explain the impact of PTSS on parenting and the relationship between veterans and their children. Recently, Creech and Misca (2017) reviewed the links between war-related PTSD and parenting through the lens of the cognitive-behavioral interpersonal theory of PTSD (C-BIT; Macdonald et al., 2016). Their model proposed that PTSD symptoms interfere with parent-child relationships, and when children accommodate to their parents' behaviors they may reinforce their fathers' disorder. For example, it has also been suggested that due to the cognitive bias regarding the non-safety of the world, the relationship between traumatized combat veterans and their children might be affected by entanglement, control, excessive closeness and over-protectiveness. This, in turn, might lead to the subjective experience of veterans as lacking self-efficacy as parents. Moreover, traumatized veterans may find it difficult to control their aggressive impulses, a situation which sometimes results in emotional outbursts and disturbances. This, in turn, may contribute to an atmosphere of fear, guilt and cautiousness by children in their homes (Sherman et al., 2016), and general overall family functioning (Laifer et al., 2019).

Although there is relatively strong evidence for the effects of veterans' PTSS on parenting stress and satisfaction, the findings regarding PSOC are equivocal. Because impaired PSOC increases parental distress (Sherman et al., 2015), understanding the mechanisms that might explain the link between PTSS and PSOC is a dire and timely need. Therefore, the present study aimed to examine the links between PTSS and PSOC among Israeli male veterans, controlling for the known co-occurring risk factor of alcohol use. Specifically, it has been suggested that combat veterans are a population at-risk for post-deployment alcohol consumption and alcohol use disorder (AUD) onset (Kelsall et al., 2015). Moreover, combat-related PTSS are known to increase ex-combatants' alcohol use and AUD (Feingold et al., 2019).

Moreover, we aimed to examine the mediating roles of two emotional regulation mechanisms which may be particularly pertinent to the link between PTSS and PSOC among traumatized veteran fathers: Experiential avoidance and parental reflective functioning.

The Mediating Roles of Experiential Avoidance and Parental Reflective Functioning

Experiential avoidance (EA) is the habitual attempt to disengage from experience of negative internal states such as painful memories, unwanted thoughts and even bodily sensations (Hayes et al., 1996; Chawla & Ostafin, 2007).

EA represents the lack of psychological flexibility and hinders one's ability to confront and become familiar with the perceived threat or danger. Thus, even if contrary to one's goals, the urge to avoid internal experiences in the short term may eventually increase their long-term frequency, severity, and accessibility (Maack et al., 2012).

Being a fundamental characteristic of posttraumatic reactions, EA may mediate the associations between PTSS and PSOC. On the one hand, EA is known to be associated with negative adaptation to trauma (e.g., Shepherd & Wild, 2014). Moreover, EA contributes to the development and maintenance of PTSD symptomatology above and beyond the severity of combat (Plumb et al., 2004) and the unique PTSD-avoidance symptoms (Meyer et al., 2013). On the other hand, EA might hinder veterans' ability to respond to emotionally intense parenting challenges in a balanced way. Moreover, traumatic reminders (e.g., shouting, crying) during parent-child interaction might end up with behavioral withdrawal (Hayes et al., 2012). Indeed, EA has been found to associate with both veterans' and spouses' lower relationship quality, as well as men's negative communication (Zamir et al., 2020). Importantly, service members' EA was associated with less observed positive engagement and with more distress avoidance during interaction with children, which may potentially serve as a mediator of the PTSS-Parenting link (Brockman et al., 2016).

Another proposed positive parental factor that might serve as a mechanism linking veterans' PTSS to PSOC is parental reflective functioning (PRF). PRF is commonly defined as the level of attunement towards one's child, one's parenthood and the parent-child relationship. Specifically, PRF incorporates the ability to see the child as a separate individual, to reflect on children's internal experience, and curiosity as to his or her perspective. Although most studies focused on mothers' PRF, there is a growing body of research addressing fathers' PRF, suggesting that it is correlated with higher parental competence (e.g., Pazzagli, et al., 2018).

The conceptualization of veterans' PRF as a mediator of the link between PTSS and PSOC capitalizes on understanding the traumatic experience, such as childhood abuse and neglect, and has the potential to alter individual capacity for parental reflectiveness (Luyten et al., 2017). Indeed, PRF might be a protective/vulnerability agent for the quality of parent-child relationships and child attachment styles (Rutherford et al., 2017), and a means to mitigate the intergenerational transmission of trauma (Katznelson, 2014). Furthermore, recent studies have also focused on parents' PRF as a means of fostering responsive and adaptive caregiving and as a protective factor for the parents, predominantly by fostering parental satisfaction (Rostad & Whitaker, 2016). Although some studies reported on mothers' PRF as associated with both their traumatic

experiences and parental stress and competence (e.g., Steele et al., 2020), and promising evidence has emerged for the effect of parenting intervention in veterans' PRF (DeVoe et al., 2016), still little is known regarding the role of PRF among fathers in general (e.g., Stover & Kiselica, 2014) and particularly among traumatized combat veterans.

Although no study has directly examined the association between EA and PRF, it is worth noting that these constructs might be positively associated. Specifically, some studies have found associations with related concepts such as emotional regulation and mentalization. For example, one study found mothers with higher tendencies to suppress their emotions, who also experienced more difficulties with emotional regulation, engaged in greater levels of pre-mentalizing (i.e., a non-mentalizing mode) (Schultheis et al., 2019). Another study found a negative correlation between EA and facets of mindfulness closely related to reflective functioning (Thompson & Waltz, 2010). Thus, we expect both mediators -- EA and PRF-Pre mentalizing dimension -- to be positively correlated.

In this study we explored the roles of two possible mechanisms- EA and PRF- for the proposed relationship between military service-related PTSS and PSOC among Israeli male combat veterans. We hypothesized that: (a) PTSS will be negatively associated with PSOC; (b) PTSS will be negatively associated with PRF and positively associated with EA; (c) EA will be negatively associated with PSOC and PRF will be positively associated with PSOC; and (d) PRF and EA will mediate the association between PTSS and PSOC.

Method

Participants

Participants included 189 Israel Defense Forces (IDF) male combat veterans. Israeli combatants in the IDF serve a mandatory military service of three years from the age of 18 to 21, with an addition of one year or more for officers. Most veterans also remain in reserve combat troops and will be called annually for a period of two weeks to a month to carry out various military missions. Inclusion criteria for this study were a minimum age of 20 years, veterans who served in combat troops and were released from military service within the previous 20 years and who were parents to at least one child. Of the 253 participants who gave their consent, 48 (18.9%) participants did not complete study questionnaires, 7 (2.7%) participants were removed due to fixed response sets, and 9 (3.5%) participants did not meet inclusion criteria. In sum, 189 (74.7%) veteran fathers comprised the study sample. As can be seen in Table 1, the veterans' mean age was 30.03 ($SD = 4.16$), and participants

Table 1 Veterans' socio-demographic characteristics

Variable		<i>N</i> (%)	<i>M</i> (<i>SD</i>)
Age at study*			30.03 (4.16)
Years of education			13.95 (2.07)
Length of marriage*			7.29 (4.46)
Number of children			1.86 (0.92)
Place of birth	Israel	105 (90.5%)	
	Asia/Africa	2 (1.7%)	
	Europe/America	9 (7.7%)	
Marital status	Single	2 (1.8%)	
	Married	103 (90.4%)	
	Divorced	6 (5.3%)	
	Other	3 (2.6%)	
Working status	Full-time job	71 (62.3%)	
	Part-time job	32 (28.1%)	
	Not working	11 (9.6%)	
Income**	Above average	43 (38.1%)	
	Average	19 (16.7%)	
	Below average	52 (45.6%)	
Religiosity	Traditional	19 (16.7%)	
	Secular	33 (28.9%)	
	Religious	60 (52.6%)	
	Other	2 (1.8%)	

Note. * In years; ** average monthly income was defined as 9200 NIS

had completed an average of 13.95 years of education ($SD = 2.07$). Most of the veterans were Israeli-born (88.4%), married (90.4%) with an average of 1.86 (0.92) children. Moreover, most of the veterans reported being religious Jews (52.6%), employed in a Full-time job (62.3%) and earning a below-average income (45.6%).

Procedure

Potential participants were recruited between January and May 2020 from several settings: volunteers who were active participants in combat veterans' websites and communities (specialized online forums in which veterans can discuss issues relating to combat experiences), students who participated in the study as partial fulfillment of a research participation requirement, and volunteers who responded positively to an advertisement for enrollment in the study. The investigators' research assistants posted a message briefly explaining that they were conducting a research project focusing on military service experiences and asked for possible volunteers. Individuals who agreed to participate received an explanation of the study's aims and a link to the related online survey through an online data-gathering website. Participants were advised that their active participation in the study by completing the

questionnaire indicated that they provided informed consent. Following completion of the survey, participants were sent a letter of thanks and were compensated with a voucher for coffee and pastry (approximate value of \$5 [USD]). Approval for this study was granted by the “[Masked] University” internal review boards.

Measures

Combat experiences

Combat experiences were examined by the 18-item Combat Experiences Scale (CES; Hoge et al., 2004), which comprises conventional modern combat-related experiences to which an individual may have been exposed (e.g., being attacked or ambushed, shooting or directing fire at the enemy, handling or uncovering dead bodies or body parts). Respondents were asked to indicate which events they had experienced at any time during a deployment; this resulted in a total number of combat experiences, ranging from 0 to 18. In the current sample, the Cronbach’s alpha value for the CES items was 0.85.

Posttraumatic stress symptoms

Participants’ PTSS were assessed with the Posttraumatic Stress Disorder Checklist (PCL-5; Weathers et al., 2013), which includes the 20 PTSD symptoms listed in the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*; American Psychiatric Association, 2013). Participants were asked to rate how often they suffered from each symptom in the previous month, on a 5-point scale ranging from 0 (*not at all*) to 4 (*extremely*). Specifically, participants were asked about their reactions to any very stressful experiences in their military service (e.g., “I have recurrent dreams and nightmares about a stressful experience from my service”). We operationalized PTSS both as a continuous variable and as a total symptom severity score (range: 0–80) by summing the scores of the 20 items. Participants were also identified as having PTSS if they exceeded the PCL-5 cut-off point of 33 (Wortmann et al., 2016). Preliminary results show impressive psychometric properties for the PCL-5. For example, its convergent validity was proved when the PCL-5 was positively associated with other PTSD measures such as the PDS or DAPS (Blevins et al., 2015). The PCL-5 reliability for veterans was Cronbach’s $\alpha = 0.95$.

Alcohol use disorder

The Alcohol Use Disorders Identification Test (AUDIT; Saunders et al., 1993) is a 10-item measure designed to identify individuals at risk for alcohol use disorders. The

measure contains three subscales assessing alcohol consumption (items 1–3), drinking behaviors (items 4–6), and alcohol-related problems (items 7–10), over the last 12 months. Scores were calculated by summing the scores for the 10 AUDIT questions, ranging from 0 to 40, with higher scores indicating more problematic alcohol consumption. The AUDIT demonstrates high internal consistency, factorial convergent and criterion validity (DeMartini & Carey, 2012; Tomás et al., 2017). The Cronbach’s alpha value for the AUDIT items was 0.88.

Experiential avoidance

Acceptance and Action Questionnaire-II (AAQ-II; Bond et al., 2011), designed to measure participants’ EA (also termed ‘psychological inflexibility’) in their daily life. The questionnaire comprises 7 statements such as “emotions create problems in my life”. Subjects were asked to indicate their agreement with each item on a 7-level scale ranging from “never true” (1) to “always true” (7). A composite score was created so that higher scores indicate a higher level of EA (high psychological inflexibility). This is the most commonly used measurement for EA, and has proved good psychometric properties (Brockman et al., 2016). The internal reliability of the AAQ-II questionnaire in the present study was 0.93.

Parental reflective functioning

Parental Reflective Functioning Questionnaire (PRFQ; Luyten et al., 2017). The PRFQ consists of 18 items that participants are asked to rate regarding their child. The scale is divided into three subscales: (1) *Pre-mentalizing modes* (PRF-PM) reflects parents’ difficulties in understanding and interpreting the child’s mental experience and internal world (e.g., “When my child is fussy, he or she does that just to annoy me”); (2) *Certainty about mental states* (PRF-CM) reflects a parent’s struggle to recognize the opacity and lack of easy appearance of mental states (e.g., “I always know why my child acts the way he or she does”); (3) *Interest and curiosity in mental states* (PRF-IN) reflects a parent’s curiosity about the child’s mental state and subjective perspective and thus, optimal reflective functioning (e.g., “I am often curious to find out how my child feels”). Each statement is rated using a 7-point Likert-type scale from “1 - *strongly disagree*” to “7 - *strongly agree*”. The questionnaire showed good psychometric properties in terms of internal consistency (Rutherford et al., 2013) and factor structure (Luyten et al., 2017). Internal consistency (Cronbach’s alpha) was 0.88, 0.78, and 0.71 for the pre-mentalizing, certainty, and interest and curiosity subscales, respectively.

Parenting sense of competence

Parenting Sense of Competence Scale (PSOC; Gibaud-Wallston & Wandersman, 1978; Johnston & Mash, 1989). The PSOC assesses parents' confidence in their ability to parent. The scale consists of 16-items tapping parents' competence in two dimensions: parental efficacy (or skill-knowledge) and parental satisfaction (value-comforting; Gibaud-Wallston & Wandersman, 1978). Each statement is rated using a 6-point Likert-type scale from "1 = *strongly disagree*" to "6 = *strongly agree*". Total scores range from 16 to 96, with higher sum scores indicating greater sense of competence in parenting. The PSOC showed good psychometric properties in terms of internal consistency, test-retest reliability, and convergent validity with measures of parental distress among veterans' populations (Bui et al., 2017). Internal consistency (Cronbach's alpha) was 0.88, and 0.83 for parenting satisfaction and efficacy subscales, respectively.

Socio-demographics

Socio-demographics were collected from all participants for the following variables: age, country of birth, education, religiosity, income, length of relationship with partner, and number of children.

Data Analysis

Data analysis was divided into five stages. First, descriptive statistics and rates of PTSS and AUD were calculated. Second, the associations between the study variables were examined with a series of Pearson correlation analyses. Third, the data were screened for missing values. The percentage of missing values in the studied variables ranged from 15.3% to 36%. The data was missing completely at random (MCAR), Little's $\chi^2(8) = 3.71, p = 0.88$. Estimation of missing data has been conducted via a maximum likelihood (ML) module with AMOS software (Version 26; Arbuckle, 2012). Fourth, in order to test the serial mediation model, a structural equation modeling (SEM; Hoyle & Smith, 1994) strategy utilizing AMOS software (Version 21; Arbuckle, 2012) and the maximum likelihood method, has been employed. The criteria for SEM models fit were: (a) a χ^2 test, (b) the root mean square error of approximation (RMSEA), (c) the comparative fit index (CFI), (d) the normed fit index (NFI), (e) Tucker Lewis Index (TLI), and (f) Standardized Root Mean Square Residual (SRMR). In a model for which the chi-square value was non-significant, CFI, TLI and NFI > 0.95, and the RMSEA and SRMR ranged from 0.00 and 0.08. To assess significance of indirect paths, a bootstrapped confidence interval for the *ab* indirect effect was utilized, employing Hayes' procedures

(2017). Five thousands bootstrapped samples were obtained to estimate indirect effects of each mediator. We computed bias corrected, accelerated 95% confidence intervals (CIs) to measure statistical significance for each mediator's 'ab' paths and the two-step mediation. A 'CI' that does not include zero reflects evidence of a significant indirect effect or significant mediation.

Results

Prevalence of PTSS and AUD

Regarding the PCL-C-5, 14 participants (8.9%) exceeded the recommended cutoff score of 33 for PTSD. There were 20 participants (12.5%) who reported fully symptomatic self-reported probable PTSD following stressful experiences in military service, according to the *DSM-5* diagnostic criteria (APA, 2013). The AUDIT-10 suggested cutoff was set to equal or lower than a sum score of 7 (low-risk), 8–15 (risky or hazardous level), 16–19 (high-risk or harmful level), and higher than 20 (high risk with high likelihood of dependence) (Saunders et al., 1993). Accordingly, the prevalence of low-risk in our sample was 88.7% ($n = 134$), risky or hazardous level prevalence was 8.6% ($n = 13$); high-risk or harmful level prevalence was 0.7% ($n = 1$); and high risk with high likelihood of dependence prevalence was 2% ($n = 3$).

Associations Between The Study Variables

As may be seen in Table 2, the results partially confirmed our hypothesis. PTSS was negatively associated with parental satisfaction, but not parental efficacy. PTSS was also positively associated with PRF-PM but not with PRF-CM or PRF-IN. furthermore, experiential avoidance was negatively associated with parental satisfaction and efficacy. Interestingly, PRF-PM was negatively associated with parental satisfaction, and PRF-CM and PRF-IN were positively associated with parental efficacy. We note a positive association between PTSS and total sum of alcohol misuse. Alcohol misuse was positively associated with experiential avoidance and PRF-PM, and negatively associated with PRF-IN, parental satisfaction and efficacy. Preliminary analyses performed before we examined the hypotheses, showed that parental satisfaction and efficacy among veterans was not correlated with any of our demographic variables, including age, family status, income level, length of marital relationship or education level.

Multiple Mediation Analysis

In order to test our multiple mediation hypotheses, we used the Hayes, Preacher, and Myers' (2011) multiple step

Table 2 Descriptive statistics and bivariate correlations between the study variables

	1	2	3	4	5	6	7	8	9
1. Combat exposure	–								
2. PTSS	0.38***	–							
3. Alcohol misuse	0.10	0.46***	–						
4. Experiential avoidance	0.13	0.62***	0.39***	–					
5. PRF-Pre-mentalizing	0.18*	0.41***	–0.25**	0.47***	–				
6. PRF-Certainty	0.23*	0.09	–0.01	–0.05	0.05	–			
7. PRF-Interest	0.12	–0.08	–33***	–0.07	–0.08	0.34***	–		
8. Parental satisfaction	–0.15	–0.40***	–0.20*	–0.61***	–0.66***	0.01	0.05	–	
9. Parental efficacy	0.10	–0.10	–0.27**	–0.17*	–0.1	0.44***	0.70***	0.02	–
<i>M</i>	5.10	13.60	3.60	14.11	2.44	3.81	5.19	40.0	33.37
<i>SD</i>	4.06	14.82	4.62	8.63	1.11	1.03	1.16	8.07	8.31

Note. PTSS posttraumatic stress symptoms, PRF parental reflective functioning

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

mediation methodology, which employs a bootstrapped confidence interval for the indirect effects (Model 6; Hayes, 2017). Because we integrated two outcome variables in the final model (parental satisfaction and efficacy) and four variables as mediators (EA, PRF-CM, PRF-PM and PRF-IN), we chose to examine this model via SEM. Specifically, we examined: (a) whether PTSS are directly related to parental satisfaction and efficacy; (b) whether PTSS are indirectly related to parental satisfaction and efficacy via EA and PRF dimensions. The analysis was statistically controlled for combat exposure and alcohol misuse.

We first confirmed the existence of a significant direct relation between PTSS and parental satisfaction and efficacy. The direct path from PTSS to parental satisfaction was significant ($b = -0.22$, $z = -6.68$, $p < 0.001$). However, the direct path from PTSS to parental efficacy was not significant ($b = 0.01$, $z = 0.24$, $p = 0.80$). We note that the direct path from alcohol misuse to parental efficacy was also significant ($b = -0.49$, $z = -4.18$, $p = 0.00$), as well as the correlation between PTSS and alcohol misuse ($r = 0.47$, $p = 0.00$). This model significantly explained 19% of the variance in parental satisfaction and 9% in parental efficacy. Following the trimming of non-significant paths, the model fits the observed data well, $\chi^2(6) = 3.73$, $p = 0.71$, $NFI = 0.97$, $CFI = 1.00$, $RMSEA = 0.00$.

Next, as illustrated in the final model depicted in Fig. 1 and Table 3, the direct paths from PTSS to parental satisfaction and efficacy became non-significant when all the mediators were included in the model. The total indirect effects to parental satisfaction and efficacy were found to be significant. Specifically, PTSS was significantly associated with higher levels of experiential avoidance, which in turn was associated with lower levels of parental satisfaction and efficacy. Furthermore, PTSS was significantly associated with higher levels of PRF- pre-mentalizing modes, which in turn was associated with lower levels of parental satisfaction. It is important to note the significant indirect path

between alcohol misuse and parental efficacy via PRF-interest and curiosity in mental states ($b = -0.34$, $SE = 13$, $CI\ 90\%$, -0.59 , -0.17 , $p < 0.00$), and the significant indirect path between combat exposure and parental efficacy via PRF- certainty about mental states ($b = -0.05$, $SE = 0.03$, $CI\ 90\%$, 0.01 , 0.11 , $p < 0.05$). We also noted a significant positive association between the two mediators EA and PRF- pre-mentalizing modes. Following the trimming of non-significant paths, the mediational model showed excellent fit to the observed data, ($\chi^2(23) = 27.58$, $p = 0.23$, $NFI = 0.96$, $CFI = 0.99$, $RMSEA = 0.003$), and significantly explained 59% of the variance in parental satisfaction and efficacy.

Discussion

In this study we sought to explore the associations between PTSS and PSOC among Israeli male veterans, and the mediating roles of experiential avoidance and PRF. Our main findings indicate that PTSS was negatively associated with parental satisfaction, but not parental efficacy. Furthermore, PTSS has an indirect effect on parental satisfaction and efficacy through experiential avoidance. PTSS was also significantly associated with higher levels of PRF-pre mentalizing modes, which in turn was associated with lower levels of parental satisfaction. Thus, this is the first study to show that non U.S. combat veterans who endorsed PTSS experienced parenting difficulties, which might be explained by experiential avoidance and parental reflecting abilities.

It is important to consider our general pattern of results in the context of the COVID-19 pandemic- the period in which data were collected. Thus, besides the globally significant behavioral health implications of the COVID-19 pandemic, recent reports show veterans may be at risk for increased rates of emotional problems during the pandemic (Murphy

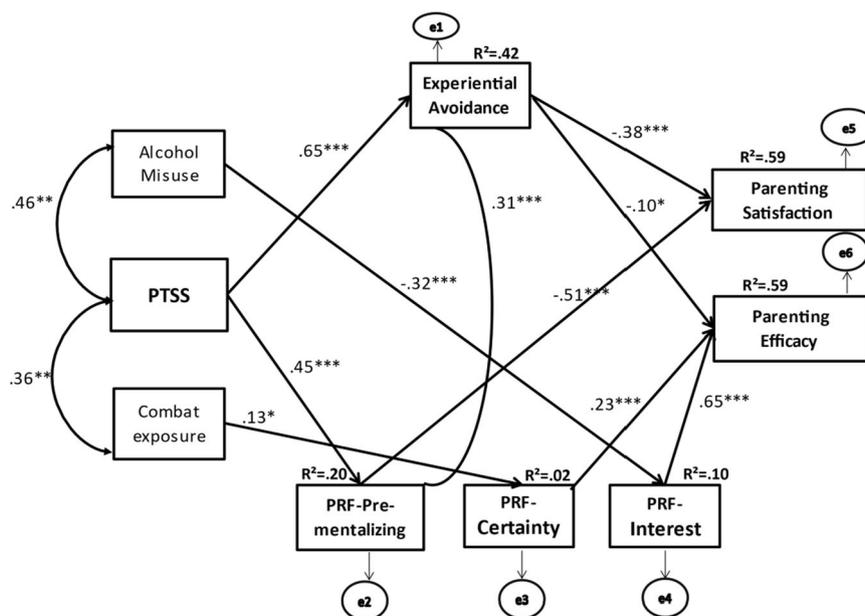


Fig. 1 A Multiple Mediation Integrated Model for Parental Satisfaction and Efficacy by PTSS, Parental Reflective Functioning Domains and Experiential Avoidance. *Note.* Rectangles indicate measured variables and small circles reflect residuals (e). Bold numbers above or near endogenous variables represent the amount of variance explained (R^2). Unidirectional arrows depict hypothesized

directional links. Standardized maximum likelihood parameters are used. Bold line estimates are statistically significant and non-significant paths are not presented. PTSS = Posttraumatic stress symptoms; PRFQ = Parental reflective functioning. $N = 189$; $*p < 0.05$, $**p < 0.01$, $***p < 0.001$

et al., 2020). However, rates of alcohol misuse remain stable, and even decreased during this period (Davis et al., 2021; Na et al., 2021). Moreover, the COVID-19 pandemic also poses a threat to family relations, including the parent–child relationship (Prime et al., 2020). Thus, veterans who cope with PTSD and other psychological disorders might be at increased risk for exacerbation of preexisting conditions and heightened parenting stress, thereby negatively impacting child and family functioning (James Riegler et al., 2020).

Although systemic reviews and meta-analyses have documented the effects of PTSS on different domains of parenting (e.g., Christie et al., 2019), only limited scientific attention has been given to PSOC. Because PSOC was operationally defined as “parenting satisfaction and efficacy,” our results lend further support to the link between veterans’ PTSS and parenting satisfaction that has been documented in both U.S (Creech et al., 2016) and Israeli (Cohen et al., 2011) military samples. Thus, due to the presence of PTSS, veterans might experience their parental role as less valuable and comforting. It is possible that PTSD cluster D symptoms (negative alterations in mood and cognition) might erode veterans’ ability to experience parenting as satisfying. Specifically, “negative” symptoms such as reduced ability to feel positive emotions and diminished interest in significant activities that are known to linked with reduced parental satisfaction (Samper et al.,

2004), might increase veterans’ frustration for not feeling the reinforcing aspects of parenting that withstand its demanding and Sisyphean characteristics.

It is important to note that future studies should examine whether parenting efficacy, that was not found to correlate significantly with PTSS in the present study, is indeed not related to PTSS. Given that one study found PTSS was not associated with PSOC among treatment-seeking veterans (Zalta et al., 2018), it is suggested that parenting efficacy might be an holistic component that is more affected by fathers’ general self-esteem. Alternatively, parenting efficacy might be less affected by war-related PTSS, as compared to other PTE related PTSS. Last, the effect of alcohol use, a well-known comorbid condition of PTSD (Pietrzak et al., 2011), on parenting efficacy might provide another path to the explanation of parental difficulties, because alcohol use might be defined as “self-medication” (Khantzian & Albanese, 2008), aimed at decreasing the frequency or valence of an aversive emotional stimulus (Cooper et al., 2016). However, when the supposed ‘remedy’ comes from the outside, it might take a toll on veterans’ experience of themselves as lacking personal parenting abilities, such as the ability to calm-down and educate offspring to emotional regulatory strategies.

One of the important contributions of this study is the examination of mechanisms for the explaining why PTSS might impact PSOC. We found that PTSS was associated

Table 3 Bootstrapped unstandardized point estimate for direct and indirect effects and 95% confidence intervals for predicting parenting efficacy and parenting satisfaction by PTSS through multiple mediators of parental reflective functioning domains and experiential avoidance

Parental Satisfaction			
	Point estimate	SE	BCa 95% CI (lower, upper)
Direct effect of PTSS	0.01	0.01	(0.01, 0.01)
Total indirect effect of PTSS	-0.24	0.08	(-0.59, -0.33)***
Indirect via experiential avoidance	-0.10	0.02	(-0.14, -0.06)***
Indirect via PRF- Pre-mentalizing	-0.06	0.03	(-0.11, -0.02)*
Indirect via PRF- Certainty	0.01	0.01	(-0.01, 0.01)
Indirect via PRF- Interest	-0.01	0.01	(-0.02, 0.01)
Parental efficacy			
Direct effect of PTSS	-0.01	0.01	(0.01, 0.01)
Total indirect effect of PTSS	-0.07	0.02	(-0.07, -0.01)*
Indirect via experiential avoidance	-0.04	0.02	(-0.07, 0.01)*
Indirect via PRF- Pre-mentalizing	-0.01	0.01	(-0.03, 0.01)
Indirect via PRF- Certainty	0.01	0.01	(-0.01, 0.01)
Indirect via PRF- Interest	0.01	0.03	(-0.02, 0.06)

Note. BCa bias corrected and accelerated, CI confidence Intervals, PTSS posttraumatic stress symptoms, PRFQ parental reflective functioning. Confidence intervals that do not include 0 (null association) are significant

* $p < 0.05$; *** $p < 0.001$

with higher levels of EA, which in turn was associated with lower levels of parental satisfaction and efficacy. While one study found that EA mediated the link between service members' PTSS and observed negative and positive aspects of parenting (Brockman et al., 2016), this is the first study to show EA's mediating effect on PSOC. Thus, both actual parenting behaviors and the subjective experience of parenting competence are directly and indirectly associated with EA. As EA has been found to characterize veterans with PTSD (Meyer et al., 2013), we may carefully state that it might also impact interpersonal domains such as parenting.

Two explanations for these results are suggested. First, EA represents the urge to avoid painful and unwanted internal experiences. Indeed, many trauma exposed parents describe the need to avoid trauma reminders as difficult and problematic (Sherman et al., 2015). However, long term 'success' in avoiding one's thoughts/feelings is often neither rewarding nor effective. Thus, veterans might also end up accumulating experience that they lack competence to deal with difficult emotions and thoughts about their actual parenting, as compared to other fathers or their internal 'ideal' father. Second, the need to avoid emotional pain

might reinforce a 'vicious circle' regarding veteran's parenting. When avoidance becomes a default, one may not want to try to experience success in day-to-day parenting activities (e.g., going with the kid to a noisy birthday party). In turn, he might experience this as further evidence of parental incompetence. This line of thought is closely connected to Creech and Misca's (2017) model in which veterans' PTSS negatively impacts the parent-child relationship, and when children accommodate to their parents' behaviors, they may reinforce their fathers' disorder.

Another promising positive parental factor that might serve as a mechanism linking veterans' PTSS to PSOC is PRF. We found that PTSS was associated with higher levels of PRF-pre-mentalizing modes, which in turn was associated with lower levels of parental satisfaction. Although PRF has been found to be affected by childhood traumatic experiences (Cristobal et al., 2017), and to be associated with higher parental competence (Pazzagli, et al., 2018), this is the first study to examine PRF among traumatized combat male veterans. Thus, we may suggest that military related PTSS might also increase veterans' pre-mentalizing modes, which represent the most problematic characteristic of PRF (sometimes termed non-mentalizing), and might reduce their parenting satisfaction. Alternatively, possible psychological intervention aiming to improve mentalization abilities such as mentalization-based group intervention (Sourander et al., 2021), might improve fathers' PRF, and in turn their satisfaction from parenting.

To the best of our knowledge, only one study has examined traumatic experiences, PRF and PSOC in parallel among a sample of mothers high on BPD features (e.g., Steele et al., 2020). Therefore, our study presents these preliminary results for the possibility of problematic PRF among veteran fathers, to account for the effect of PTSS on parental satisfaction. It is possible that fathers who have been traumatized during their military service and who are much immersed in their own subjective mental pain, are less available to invest efforts in understanding their children's mental states. Moreover, fathers' tendency toward EA and negative communication (Zamir et al., 2020), might hinder the capacity to improve their reflective skills and even get proper psychological intervention (e.g., DeVoe et al., 2016) to confront difficulties in parental reflectiveness.

This study has several limitations which should be acknowledged. First, this is a cross-sectional designed study. Thus, any causality should not be inferred, and the directionality of mediation effects should only serve as a basis for future prospective and experimental studies. Second, as noted, only a minority of our sample met the clinical cut-off criteria for PTSD or AUD. Thus, in general, this sample should be treated as a relatively low-risk sample, and future studies should validate this pattern of results with higher-risk veterans' samples. Third, the data relied on

retrospective self-report measures, which are known to be biased. Specifically, the PRFQ and PSOC, despite being practical, validated and widely used, have alternative, objective ways of assessment such as direct observation and in-depth interviews (Fonagy et al., 1991a). Fourth, unfortunately due to technical reasons we did not assess the age of fathers' children. Thus, we can not really draw conclusions regarding differential parenting experience vis-à-vis different children's ages and developmental phases. Fifth, the essential information regarding exact years since veterans were released from military service is not available to us. As Israeli male veterans are recruited for 3–4 years of mandatory service in the I.D.F, based on their mean age ($M = 30.03$, $SD = 4.16$) we can only assume that most of them were released between eight to nine years prior to the study. Last, we depended on a non-representative, volunteer sample that may not reflect accurate rates of PTSS among veterans.

To conclude, although many veterans who struggle with posttraumatic symptoms are also fathers, only limited empirical attention has been paid to veterans as fathers (Sherman et al., 2015). Importantly, our study is the first to suggest two psychological mechanisms- EA and PRF- to account for the link between PTSS and PSOC. Our results suggest that besides the much-needed psychotherapy directed to confront trauma residues, there is a dire need to build psychological intervention directly to improve parenting among veteran fathers. For example, DeVoe et al. (2016) presented promising results regarding the effects of 'Strong Families Strong Forces Parenting Program' to enhance parental reflective capacity when caring for very young children. Thus, promoting adaptive PRF may enhance male veterans' coping with the stressful uncertainty which may be embedded in the parent-child relationship. Moreover, the well-validated, third wave cognitive-behavioral therapy of 'Acceptance and Commitment Therapy' (ACT; Hayes et al., 1999), provide promising results for the treatment of PTSD (Donahue et al., 2017) and positive parenting (Moyer et al., 2018). Thus, targeting EA as a mechanism linking PTSS to PSOC might be a path for change in veterans' families' quality of life and a target for mitigation of the intergenerational transmission of trauma (Katznelson, 2014).

Compliance with Ethical Standards

Conflict of Interest The author declares no competing interests.

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References

- American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.). Washington, DC.
- Arbuckle, J. (2012). Amos 21 reference guide. *Chicago: Small Waters Corporation*.
- Baumrind, D. (2013). Is a pejorative view of power assertion in the socialization process justified? *Review of General Psychology*, 17(4), 420–427. <https://doi.org/10.1037/a0033480>.
- Baxter, J., Gray, M., Alexander, M., Strazdins, L., & Bittman, M. (2007). Mothers and fathers with young children: Paid employment, caring and wellbeing. *FaHCSIA Social Policy Research Paper*, (30). Available at SSRN: <https://ssrn.com/abstract=1728567> or <https://doi.org/10.2139/ssrn.1728567>.
- Belsky, J. (1993). Etiology of child maltreatment: A developmental ecological analysis. *Psychological Bulletin*, 114(3), 413–434. <https://doi.org/10.1037/00332909.114.3.413>.
- Belsky, J., & Jaffee, S. R. (2006). The multiple determinants of parenting. In D. Cicchetti & D. J. Cohen (Eds.), *Developmental psychopathology: Risk, disorder, and adaptation* (pp. 38–85). John Wiley & Sons.
- Blevins, C. A., Weathers, F. W., Davis, M. T., Witte, T. K., & Domino, J. L. (2015). The posttraumatic stress disorder checklist for DSM-5 (PCL-5): Development and initial psychometric evaluation. *Journal of Traumatic Stress*, 28(6), 489–498. <https://doi.org/10.1002/jts.22059>.
- Bond, F. W., Hayes, S. C., Baer, R. A., Carpenter, K. M., Guenole, N., Orcutt, H. K., ... & Zettle, R. D. (2011). Preliminary psychometric properties of the Acceptance and Action Questionnaire-II: A revised measure of psychological inflexibility and experiential avoidance. *Behavior Therapy*, 42(4), 676–688. <https://doi.org/10.1016/j.beth.2011.03.007>.
- Brockman, C., Snyder, J., Gewirtz, A., Gird, S. R., Quattlebaum, J., Schmidt, N., Pauline, M. R., Elish, K., Schrepferman, L., Hayes, C., Zettle, R., & DeGarmo, D. (2016). Relationship of service members' deployment trauma, PTSD symptoms, and experiential avoidance to post-deployment family reengagement. *Journal of Family Psychology*, 30(1), 52–62. <https://doi.org/10.1037/fam0000152>.
- Bui, E., Zakarian, R. J., Laifer, L. M., Sager, J. C., Chen, Y., Cohen, S., ... & Ohye, B. (2017). Psychometric properties of the Parenting Sense of Competence Scale in treatment-seeking post-9/11 veterans. *Journal of Child and Family Studies*, 26(2), 464–470. <https://doi.org/10.1007/s10826-016-0580-9>.
- Campbell, S. B., & Renshaw, K. D. (2016). Combat veterans with PTSD and their partners: Interpersonally based behaviors and cognitions as mechanisms of distress. In: S. MacDermid Wadsworth & D. Riggs (Eds.), *War and Family Life* (pp. 55–75). Springer.
- Campbell, S. B., & Renshaw, K. D. (2016). Military couples and posttraumatic stress: Interpersonally based behaviors and cognitions as mechanisms of individual and couple distress. *In War and family life* (pp. 55–75). Springer, Cham.
- Chawla, N., & Ostafin, B. (2007). Experiential avoidance as a functional dimensional approach to psychopathology: An empirical review. *Journal of Clinical Psychology*, 63, 871–890. <https://doi.org/10.1002/jclp.20400>.
- Christie, H., Hamilton-Giachritsis, C., Alves-Costa, F., Tomlinson, M., & Halligan, S. L. (2019). The impact of parental posttraumatic stress disorder on parenting: A systematic review. *European Journal of Psychotraumatology*, 10(1), 1550345. <https://doi.org/10.1080/20008198.2018.1550345>.
- Cohen, A.-L., Kantner, J., Dixon, R. A., & Lindsay, D. S. (2011). The intention interference effect: The difficulty of ignoring what you intend to do. *Experimental Psychology*, 58(6), 425–433. <https://doi.org/10.1027/1618-3169/a000110>.
- Cooper, M. L., Kuntsche, E., Levitt, A., Barber, L. L., & Wolf, S. (2016). Motivational models of substance use: A review of theory and research on motives for using alcohol, marijuana, and tobacco. In K. J. Sher (Ed.), *The Oxford Handbook of Substance*

- Use Disorders*, Vol. 1. <https://doi.org/10.1093/oxfordhb/9780199381678.013.017>.
- Creech, S. K., Swift, R., Zlotnick, C., Taft, C., & Street, A. E. (2016). Combat exposure, mental health, and relationship functioning among women veterans of the Afghanistan and Iraq wars. *Journal of Family Psychology*, 30(1), 43–51. <https://doi.org/10.1037/fam0000145>.
- 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. <https://doi.org/10.3389/fpsyg.2017.01101>.
- Davis, J. P., Prindle, J., Castro, C. C., Saba, S., Fitzke, R. E., & Pedersen, E. R. (2021). Changes in alcohol use during the COVID-19 pandemic among American veterans. *Addictive Behaviors*, 122, 107052. <https://doi.org/10.1016/j.addbeh.2021.107052>.
- DeVoe, E. R., Paris, R., & Acker, M. (2016). Prevention and treatment for parents of young children in military families. In *Parenting and children's resilience in military families* (pp. 213–227). Springer, Cham.
- DeMartini, K. & Carey, K. (2012). Optimizing the use of the AUDIT for alcohol screening in college students. *Psychol Assess*, 24(4), 954–963. <https://doi.org/10.1037/a0028519>.
- Dix, T., & Meunier, L. N. (2009). Depressive symptoms and parenting competence: An analysis of 13 regulatory processes. *Developmental Review*, 29(1), 45–68. <https://doi.org/10.1016/j.dr.2008.11.002>.
- Donahue, J. J., Khan, H., Huggins, J., & Marrow, T. (2017). Post-traumatic stress symptom severity and functional impairment in a trauma-exposed sample: A preliminary examination in the moderation role and valued living. *Journal of Contextual Behavioral Science*, 6(1), 13–20. <https://doi.org/10.1016/j.jcbs.2017.01.003>.
- Feingold, D., Zerach, G., & Levi-Belz, Y. (2019). The association between moral injury and substance use among Israeli combat veterans: The mediating role of distress and perceived social support. *International Journal of Mental Health and Addiction*, 17(2), 217–233. <https://doi.org/10.1007/s11469-018-0012-8>.
- Fonagy, P., Steele, H., Moran, G., Steele, M., & Higgitt, A. (1991a). The capacity for understanding mental states: The reflective self in parent and child and its significance for security of attachment. *Infant Mental Health Journal*, 13, 200–217. <https://doi.org/10.1017/S0954579497001399>.
- Gibaud-Wallston, J., & Wandersman, L. P. (1978). *Development and utility of the Parenting Sense of Competence Scale*. Paper presented at the annual meeting of the American Psychological Association, Toronto, Ontario, Canada.
- Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Press.
- Hayes, A. F., Preacher, K. J., & Myers, T. A. (2011). Mediation and the estimation of indirect effects in political communication research. *Sourcebook for political communication research: Methods, measures, and analytical techniques*, 23(1), 434–65.
- Hayes, S. C., Wilson, K. G., Gifford, E. V., Follette, V. M., & Strosahl, K. (1996). Experimental avoidance and behavioral disorders: A functional dimensional approach to diagnosis and treatment. *Journal of Consulting and Clinical Psychology*, 64, 1152–1168. <https://doi.org/10.1037/0022-006X.64.6.1152>.
- Hayes, S. C., Bissett, R., Korn, Z., Zettle, R. D., Rosenfarb, I., Cooper, L., & Grundt, A. (1999). The impact of acceptance versus control rationales on pain tolerance. *The Psychological Record*, 49(1), 33–47.
- Hayes, S. C., Pistorello, J., & Levin, M. E. (2012). Acceptance and commitment therapy as a unified model of behavior change. *The Counseling Psychologist*, 40(7), 976–1002. <https://doi.org/10.1177/0011000012460836>.
- Hoge, C. W., Castro, C. A., Messer, S. C., McGurk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine*, 351, 13–22. <https://doi.org/10.1056/NEJMoa040603>.
- Hoyle, R. H., & Smith, G. T. (1994). Formulating clinical research hypotheses as structural equation models: a conceptual overview. *Journal of consulting and clinical psychology*, 62(3), 429–440. <https://doi.org/10.1037/0022-006X.62.3.429>.
- James Riegler, L., Raj, S. P., Moscato, E. L., Narad, M. E., Kincaid, A., & Wade, S. L. (2020). Pilot trial of a telepsychotherapy parenting skills intervention for veteran families: Implications for managing parenting stress during COVID-19. *Journal of Psychotherapy Integration*, 30(2), 290–303. <https://doi.org/10.1037/int0000220>.
- Johnston, C., & Mash, E. J. (1989). A measure of parenting satisfaction and efficacy. *Journal of Clinical Child Psychology*, 18, 167–175. https://doi.org/10.1207/s15374424jccp1802_8.
- Jones, T. L., & Prinz, R. J. (2005). Potential roles of parental self-efficacy in parent and child adjustment: a review. *Clinical Psychological Review*, 25(3), 341–363. <https://doi.org/10.1016/j.cpr.2004.12.004>.
- Katznelson, H. (2014). Reflective functioning: A review. *Clinical Psychology Review*, 34(2), 107–117. <https://doi.org/10.1016/j.cpr.2013.12.003>.
- Kelsall, H. L., Wijesinghe, M. S. D., Creamer, M. C., McKenzie, D. P., Forbes, A. B., Page, M. J., & Sim, M. R. (2015). Alcohol use and substance use disorders in Gulf War, Afghanistan, and Iraq War veterans compared with nondeployed military personnel. *Epidemiologic Reviews*, 37(1), 38–54. <https://doi.org/10.1093/epirev/mxu014>.
- Khantzian, E. J., & Albanese, M. J. (2008). *Understanding addiction as self medication: Finding hope behind the pain*. Rowman & Littlefield Publishers.
- Koenen, K., Ratanatharathorn, A., Ng, L., McLaughlin, K., Bromet, E., Stein, D., & Kessler, R. (2017). Posttraumatic stress disorder in the World Mental Health Surveys. *Psychological Medicine*, 47(13), 2260–2274. <https://doi.org/10.1017/S0033291717000708>.
- Kritikos, T. K., DeVoe, E. R., & Emmert-Aronson, B. (2019). The effect of a parenting intervention on relationship quality of recently deployed military service members and their partners. *American Journal of Orthopsychiatry*, 89(2), 170–180. <https://doi.org/10.1037/ort0000344>.
- Kritikos, T. K., Comer, J. S., He, M., Curren, L. C., & Tompson, M. C. (2019). Combat experience and posttraumatic stress symptoms among military-serving parents: A meta-analytic examination of associated offspring and family outcomes. *Journal of Abnormal Child Psychology*, 47(1), 131–148. <https://doi.org/10.1007/s10802-018-0427-5>.
- Laifer, L. M., Blackburn, A. M., Goetter, E. M., Ohye, B. Y., Simon, N. M., & Bui, E. (2019). Potential mediating role of parenting competence in the relationship between posttraumatic stress disorder and family functioning post-9/11 veteran parents. *Journal of Child and Family Studies*, 28(7), 1843–1849. <https://doi.org/10.1007/s10826-019-01405-9>.
- Levin, Y., Bachem, R., & Solomon, Z. (2017). Traumatization, marital adjustment, and parenting among veterans and their spouses: A longitudinal study of reciprocal relations. *Family Process*, 56(4), 926–942. <https://doi.org/10.1111/famp.12257>.
- Luyten, P., Mayes, L. C., Nijssens, L., & Fonagy, P. (2017). The parental reflective functioning questionnaire: Development and preliminary validation. *PLoS ONE*, 12(5), e0176218. <https://doi.org/10.1371/journal.pone.0176218>.
- Maack, D. J., Tull, M. T., & Gratz, K. L. (2012). Experiential avoidance mediates the association between behavioral inhibition and posttraumatic stress disorder. *Cognitive Therapy and*

- Research, 36(4), 407–416. <https://doi.org/10.1007/s10608-011-9362-2>.
- Macdonald, A., Pukay-Martin, N. D., Wagner, A. C., Fredman, S. J., & Monson, C. M. (2016). Cognitive-behavioral conjoint therapy for PTSD improves various PTSD symptoms and trauma-related cognitions: Results from a randomized controlled trial. *Journal of Family Psychology, 30*(1), 157–162. <https://doi.org/10.1037/fam0000177>.
- Mesman, J., van IJzendoorn, M. H., & Bakermans-Kranenburg, M. J. (2012). Unequal in opportunity, equal in process: Parental sensitivity promotes positive child development in ethnic minority families. *Child Development Perspectives, 6*(3), 239–250. <https://doi.org/10.1111/j.1750-8606.2011.00223.x>.
- Meyer, E. C., Morissette, S. B., Kimbrel, N. A., Kruse, M. I., & Gulliver, S. B. (2013). Acceptance and Action Questionnaire—II scores as a predictor of posttraumatic stress disorder symptoms among war veterans. *Psychological Trauma: Theory, Research, Practice, and Policy, 5*(6), 521–528. <https://doi.org/10.1037/a0030178>.
- Moyer, D. N., Page, A. R., McMakin, D. Q., Murrell, A. R., Lester, E. G., & Walker, H. A. (2018). The impact of acceptance and commitment therapy on positive parenting strategies among parents who have experienced relationship violence. *Journal of Family Violence, 33*(4), 269–279. <https://doi.org/10.1007/s10896-018-9956-5>.
- Murphy, D., Williamson, C., Baumann, J., Busuttill, W., & Fear, N. T. (2020). Exploring the impact of COVID-19 and restrictions to daily living as a result of social distancing within veterans with pre-existing mental health difficulties. *BMJ Military Health, bmjmilitary-2020-001622*. online ahead of print.
- Na, P. J., Norman, S. B., Nichte, B., Hil, M. L., Rose, M. I., Petraki, I. L., & Pietrzak, R. H. (2021). Prevalence, risk and protective factors of alcohol use disorder during the COVID-19 pandemic in US military veterans. *Drug and Alcohol Dependence, 108818*. <https://doi.org/10.1016/j.drugalcdep.2021.108818>.
- Patterson, G. R. (2005). The next generation of PMTO models. *The Behavior Therapist, 28*, 25–32.
- Pazzagli, C., Delvecchio, E., Raspa, V., Mazzeschi, C., & Luyten, P. (2018). The parental reflective functioning questionnaire in mothers and fathers of school-aged children. *Journal of Child and Family Studies, 27*(1), 80–90. <https://doi.org/10.1007/s10826-017-0856-8>.
- Pietrzak, R. H., Goldstein, R. B., Southwick, S. M., & Grant, B. F. (2011). Prevalence and Axis I comorbidity of full and partial posttraumatic stress disorder in the United States: Results from Wave 2 of the National Epidemiologic Survey on alcohol and related conditions. *Journal of Anxiety Disorders, 25*(3), 456–465. <https://doi.org/10.1016/j.janxdis.2010.11.010>.
- Plumb, J. C., Orsillo, S. M., & Luterek, J. A. (2004). A preliminary test of the role of experiential avoidance in post-event functioning. *Journal of Behavior Therapy and Experimental Psychiatry, 35*, 245–257. <https://doi.org/10.1016/j.jbtep.2004.04.011>.
- Prime, H., Wade, M., & Browne, D. T. (2020). Risk and resilience in family well-being during the COVID-19 pandemic. *American Psychologist, 75*(5), 631–643. <https://doi.org/10.1037/amp0000660>.
- Rostad, W. L., & Whitaker, D. J. (2016). The association between reflective functioning and parent-child relationship quality. *Journal of Child and Family Studies, 25*(7), 2164–2177. <https://doi.org/10.1007/s10826-016-0388-7>.
- Rutherford, B. R., Wall, M. M., Brown, P. J., Choo, T. H., Wager, T. D., Peterson, B. S., & Roose, S. P. (2017). Patient expectancy as a mediator of placebo effects in antidepressant clinical trials. *American Journal of Psychiatry, 174*(2), 135–142. <https://doi.org/10.1176/appi.ajp.2016.16020225>.
- Rutherford, H. J., Goldberg, B., Luyten, P., Bridgett, D. J., & Mayes, L. C. (2013). Parental reflective functioning is associated with tolerance of infant distress but not general distress: Evidence for a specific relationship using a simulated baby paradigm. *Infant Behavior and Development, 36*(4), 635–641. <https://doi.org/10.1016/j.infbeh.2013.06.008>.
- Samper, R. E., Taft, C. T., King, D. W., & King, L. A. (2004). Posttraumatic stress disorder symptoms and parenting satisfaction among a national sample of male Vietnam veterans. *Journal of Traumatic Stress, 17*(4), 311–315. <https://doi.org/10.1023/B:JOTS.0000038479.30903.ed>.
- Saunders, J. B., Aasland, O. G., Babor, T. F., De la Fuente, J. R., & Grant, M. (1993). Development of the alcohol use disorders identification test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption-II. *Addiction, 88*(6), 791–804. <https://doi.org/10.1111/j.1360-0443.1993.tb02093.x>.
- Schultheis, A. M., Mayes, L. C., & Rutherford, H. J. (2019). Associations between emotion regulation and parental reflective functioning. *Journal of Child and Family Studies, 28*(4), 1094–1104. <https://doi.org/10.1007/s10826-018-01326-z>.
- Shepherd, L., & Wild, J. (2014). Emotion regulation, physiological arousal and PTSD symptoms in trauma-exposed individuals. *Journal of Behavior Therapy and Experimental Psychiatry, 45*(3), 360–367. <https://doi.org/10.1016/j.jbtep.2014.03.002>.
- Sherman, A., Grabowecy, M., & Suzuki, S. (2015). In the working memory of the beholder: Art appreciation is enhanced when visual complexity is compatible with working memory. *Journal of Experimental Psychology: Human Perception and Performance, 41*(4), 898–903. <https://doi.org/10.1037/a0039314>.
- Sherman, L. E., Payton, A. A., Hernandez, L. M., Greenfield, P. M., & Dapretto, M. (2016). The power of the like in adolescence: Effects of peer influence on neural and behavioral responses to social media. *Psychological Science, 27*(7), 1027–1035. <https://doi.org/10.1177/0956797616645673>.
- Skinner, E., Johnson, S., & Snyder, T. (2005). Six dimensions of parenting: A motivational model. *Parenting: Science and Practice, 5*(2), 175–235. https://doi.org/10.1207/s15327922par0502_3.
- Sourander, J., Laakso, M. L., & Kalland, M. (2021). Mentalization-based families first group intervention for first-time parents: Parents' perspective. *Journal of Infant, Child, and Adolescent Psychotherapy, 20*(1), 77–90. <https://doi.org/10.1080/15289168.2021.1872148>.
- Steele, K. R., Townsend, M. L., & Grenyer, B. F. (2020). Parenting stress and competence in borderline personality disorder is associated with mental health, trauma history, attachment and reflective capacity. *Borderline Personality Disorder and Emotion Dysregulation, 7*, 1–14. <https://doi.org/10.1186/s40479-020-00124-8>.
- Stefanovics, E. A., Potenza, M. N., & Pietrzak, R. H. (2020). PTSD and obesity in US military veterans: Prevalence, health burden, and suicidality. *Psychiatry Research, 291*, 113242. <https://doi.org/10.1016/j.psychres.2020.113242>.
- Stover, C. S., & Kiselica, A. (2014). An initial examination of the association of reflective functioning to parenting of fathers. *Infant Mental Health Journal, 35*, 452–461. <https://doi.org/10.1002/imhj.21459>.
- Sweeney, S., & MacBeth, A. (2016). The effects of paternal depression on child and adolescent outcomes: A systematic review. *Journal of Affective Disorders, 205*, 44–59. <https://doi.org/10.1016/j.jad.2016.05.073>.
- Taraban, L., & Shaw, D. S. (2018). Parenting in context: Revisiting Belsky's classic process of parenting model in early childhood. *Developmental Review, 48*, 55–81. <https://doi.org/10.1016/j.dr.2018.03.006>.
- Thompson, B. L., & Waltz, J. (2010). Mindfulness and experiential avoidance as predictors of posttraumatic stress disorder avoidance symptom severity. *Journal of Anxiety Disorders, 24*(4), 409–415. <https://doi.org/10.1016/j.janxdis.2010.02.005>.

- Trahan, M. H. (2018). Paternal self-efficacy and father involvement: A bi-directional relationship. *Psychology of Men & Masculinity, 19*(4), 624–634. <https://doi.org/10.1037/men0000130>.
- Tomás, M. T. C., Costa, J. A. G., Motos-Sellés, P., Beitia, M. D. S. & Mahía, F. C. (2017). The utility of the alcohol use disorders identification test (AUDIT) for the analysis of binge drinking in university students. *Psicothema, 29*(2), 229–235.
- Weathers, F. W., Litz, B. T., Keane, T. M., Palmieri, P. A., Marx, B. P., & Schnurr, P. P. (2013). The PTSD Checklist for DSM-5 (PCL-5). Scale available from the National Center for PTSD at <http://www.ptsd.va.gov>.
- Wilson, S., & Durbin, C. E. (2010). Effects of paternal depression on fathers' parenting behaviors: A meta-analytic review. *Clinical Psychology Review, 30*(2), 167–180. <https://doi.org/10.1016/j.cpr.2009.10.007>.
- Wortmann, J. H., Jordan, A. H., Weathers, F. W., Resick, P. A., Donnanville, K. A., Hall-Clark, B., ... & Litz, B. T. (2016). Psychometric analysis of the PTSD Checklist-5 (PCL-5) among treatment-seeking military service members. *Psychological Assessment, 28*(11), 1392–1403. <https://doi.org/10.1037/pas0000260>.
- Zalta, A. K., Held, P., Smith, D. L., Klassen, B. J., Lofgreen, A. M., Normand, P. S., & Karnik, N. S. (2018). Evaluating patterns and predictors of symptom change during a three-week intensive outpatient treatment for veterans with PTSD. *BMC Psychiatry, 18*(1), 1–15. <https://doi.org/10.1186/s12888-018-1816-6>.
- Zamir, O., Gewirtz, A. H., Cheng, C. H., Zhang, N., & Lavee, Y. (2020). Psychological distress and communication quality in military couples after deployment to war. *Journal of Family Psychology, 34*(4), 383–391. <https://doi.org/10.1037/fam0000589>.
- Zerach, G., & Levi-Belz, Y. (2018). Moral injury process and its psychological consequences among Israeli combat veterans. *Journal of Clinical Psychology, 74*(9), 1526–1544. <https://doi.org/10.1002/jclp.22598>.
- Zerach, G., Greene, T., Ein-Dor, T., & Solomon, Z. (2012). The relationship between posttraumatic stress disorder symptoms and paternal parenting of adult children among ex-prisoners of war: A longitudinal study. *Journal of Family Psychology, 26*(2), 274–283. <https://doi.org/10.1037/a0027159>.