Curr Psychol (2017) 36:110–118
DOI 10.1007/s12144-015-9390-2

An Exploratory Study of Attachments and Posttraumatic Stress in Combat Veterans

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Published online: 20 October 2015

Abstract The purpose of this exploratory study was to evaluate the potential value of comparing specific attachments to posttraumatic stress disorder (PTSD) symptomatology in combat veterans with a new measure of attachments. A case series of 22 combat veterans in a Veterans Affairs Medical Center clinic completed PTSD Checklist – Military Version (PCL-M), Trauma Symptom Inventory - 2nd Edition, and the Attachment and Clinical Issues Questionnaire (ACIQ) as part of a pilot study for a larger project. Descriptive statistics and Pearson correlations were used to examine the data. Although there were significant negative correlations between self-rated PTSD symptoms and avoidant ($r = -0.44$) and ambivalent ($r = -0.55$) attachment scores towards their mothers, suggesting a novel type of enmeshment, positive correlations were found between PTSD symptoms and avoidant partner attachments scores ($r = 0.47$). There were no significant correlations between the attachment scales to father and PTSD symptoms. The ACIQ Ambivalent Partner scale was only related to TSI-2 scales Intrusive Experiences ($r = -0.44$) and Defensive Avoidance ($r = -0.44$). An exploratory regression model using attachment variables identified from correlations and predicting PCL scores was significant ($R^2 = 0.48$); however, only Avoidant Partner scale contributed significant variance ($\beta = 0.42$, $p = 0.024$). The potency of the partner scale suggests a potential target for future research and intervention. These data point to new questions to be explored with larger samples and more sophisticated statistical techniques, and further highlighting the complexity of attachment and PTSD.

Keywords Combat · Veteran · Trauma · PTSD · Attachment

Research suggests that the prevalence rate of posttraumatic stress disorder (PTSD) in combat veterans is approximately 16 % (Gates et al. 2012). Between 2004 and 2009, the Veterans Health Administration spent approximately $1.4 billion on PTSD treatment (Congressional Budget Office 2012), PTSD research expenditures by the US government were $24.5 million in 2009 (Monegain 2011), and $45 million in research funding was more recently awarded to form the Consortium to Alleviate PTSD in a joint effort by the Department of Veterans Affairs and the Department of Defense (U.S. Department of Veterans Affairs, National Center for PTSD 2015). Despite increased research and treatment efforts related to PTSD in veterans, it remains unclear why some suffer a greater number and/or more severe PTSD symptoms than others following similar combat experiences. The relationship of attachments in significant social relationships is one area of research that has received relatively little attention in the literature. If found significant, the contribution of attachment factors to the risk for developing PTSD could provide researchers additional information with which to understand PTSD etiology, and thus inform prevention and policy. Additionally, identification of significant and maladaptive attachment factors in this population could allow clinicians to improve care of veterans by adding specific attachment issues as adjunct therapeutic targets to the treatment of PTSD. Thus, the purpose of the present investigation was to inform this complex issue by exploring attachment behaviors in combat

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veterans with PTSD symptoms using a new measure of attachments, the Attachment and Clinical Issues Questionnaire (ACIQ) (Lindberg and Thomas 2011; Lindberg et al. 2012).

A number of factors have been found to contribute to the development of combat-related PTSD. Previous research identified pre-deployment factors (intelligence, education, and military rank; Macklin et al. 1998; Zohar et al. 2009) and peri-deployment factors (longer and repeated deployments; Adler et al. 2005; Vasterling et al. 2010) that contribute to PTSD symptom severity, attesting to the complexity of the disorder. Further, post-deployment risk factors including unemployment, alcohol use, social support, and stress were related to PTSD (Possemato et al. 2014). Social supports from partner, family, and military peers were related to lower PTSD symptoms, and these factors are all relevant in studying and treating combat PTSD (Wilcox 2010). Notably, veterans with better social support from partners and peers reported less suicidal ideation (Jakupcak et al. 2010), highlighting the importance of social support variables to research and treatment of combat PTSD. Additionally, PTSD was linked to intimate partner violence (IPV) in a number of studies (see meta-analysis by Taft et al. 2011), further stressing the societal importance of evaluating social factors and combat PTSD. Thus, several different mechanisms seem to underlie posttraumatic stress reactions following combat, and interpersonal constructs related to adult attachments may add to this growing knowledge about the complex pathogenesis of combat PTSD.

Attachment variables have been explored in prior research on the development of PTSD. The fundamental assumption in attachment theory is that an internal working model of a secure base helps one cope in times of stress (Cassidy and Shaver 2008). Infant and adult research have suggested that secure attachments provide a protective factor against stress in general, and against the development of posttraumatic stress in particular (Van Ijzendoorn et al. 1999). Using the Revised Adult Attachment Scale (RAAS; Collins and Feeney 2004; Collins and Read 1990) to evaluate attachments and PTSD in a Danish college student sample, secure attachments were related to fewer PTSD symptoms, and dismissive and fearful attachments related to more PTSD symptoms (O'Connor and Elklit 2008). Another study found higher attachment security related to fewer PTSD symptoms using the Adult Attachment Projective (AAP; George and West 2001) in a sample of posttrauma adults admitted to a hospital emergency department (Benoit et al. 2010). Thus, relationships among secure attachment patterns and PTSD have been observed in non-combat samples.

Research with veterans suggesting that secure attachments are involved in PTSD is somewhat more equivocal. Whereas one study found a relationship between secure attachment style and fewer PTSD symptoms in active duty service members (Escolas et al. 2012), other studies did not find relationships between secure attachment and PTSD (Harari et al. 2009; Nye et al. 2008). Using the Adult Attachment Interview (AAI; see Hesse 1999) with Vietnam veterans, Nye et al. (2008) found no differences in level of secure attachment with veterans diagnosed with PTSD compared to those not diagnosed with PTSD. Instead, the authors found that unresolved/disorganized AAI scores related to the trauma loss (referencing the combat experience) were related to more PTSD avoidance and numbing symptomatology. Thus secure attachments were not a key factor in describing the relationship between attachment and PTSD symptoms; but insecure (disorganized) attachments were related. Similarly, using the AAI with a sample of combat veterans, Harari et al. (2009) found no differences between levels of secure attachment in combat veterans diagnosed with PTSD versus combat veterans not diagnosed with PTSD. In contrast, studies by Ein-Dor et al. (2010) and Renaud (2008) found associations between avoidant and ambivalent attachment patterns and PTSD when the attachment questions targeted partner relations specifically, suggesting that insecure partner attachments may be more salient in veterans than secure ones. This distinction is salient as an insecure attachment is not necessarily the inverse of a secure one (Lindberg and Thomas 2011); rather, the independent attachment constructs reflect different dimensions, not mutually exclusive categories and measuring attachment would thus be most precise when the relevant constructs are thus not categorical.

Also focusing on insecure attachments, a study using the PTSD Checklist-Military and the Experiences in Close Relationships Scale-Short Form (ECR-S; Wei et al. 2007) with Iraq and Afghanistan veterans found significant correlations between PTSD symptoms and both attachment anxiety and attachment avoidance (Clark and Owens 2012). A study using the Experiences of Close Relationships Scale-Revised (ECR-R; Fraley et al. 2000) with Iraq and Afghanistan veterans found fearful-disorganized attachments most related to posttraumatic stress symptoms (Currier et al. 2012). Further, another study found that although veterans with PTSD had significantly higher levels of attachment insecurity towards romantic partner, such was not significant in predicting PTSD severity (Ghafoori et al. 2008). Thus, although civilian studies suggest that attachment security is protective against PTSD, studies with veterans have more often found that attachment *insecurity* is a risk factor for PTSD.

One possible confounding factor with existing research is that commonly used measures of attachment (e.g., the AAI and ECR) identify global, internal models of attachment and do not differentiate attachments towards specific people. For example, it is possible that one displays a preoccupied relationship with one's mother but an avoidant relationship with one's romantic partner, or any other number of attachment-target combinations. Attachment research has historically focused on attachment towards mother; however, studies have suggested differential attachments are developed toward father (e.g., Madigan et al. 2011) and towards adult romantic

partners (e.g., Bernier and Matte-Gagné 2011). The Attachment and Clinical Issues Questionnaire (ACIQ; Lindberg et al. 2012; Lindberg and Thomas 2011) was created to address the issues of multiple attachment relations and contains specific attachment scales for mother, father, and partner. Lindberg and Thomas (2011) measured the different attachment patterns to mother, father, and partner as continuous variables and found them to be independent (Lindberg et al. 2012), rather than all reflecting the same internal model. This approach is therefore different from relying on single, over-arching attachment models, and may be more relevant in complex clinical populations (Lindberg et al. 2015a; Lindberg et al. 2015b).

The purpose of this exploratory analysis was to examine relationships between independent attachments towards mother, father, and romantic partner and PTSD symptoms with a sample of combat veterans in order to inform future, larger studies. The ACIQ attachment-specific scales were used to identify possible different attachment patterns to mothers, fathers, and partners with combat veterans that have not been explored elsewhere in the literature.

Materials and Methods

Participants and Procedures

This study was approved by the IRB and Office of Research Integrity of the University and affiliated VA medical center and participation was voluntary. The welfare and privacy of human subjects were protected and maintained. Participants for this study were male combat veterans presenting for PTSD assessment ($n = 7$) or treatment ($n = 15$) at a Veterans Affairs Medical Center (VAMC) mental health clinic in the mid-Appalachian region. Only males were recruited due to the low base rates of females in the combat veteran population (e.g., 11 % as of 2008; U.S. Department of Veterans Affairs, Office of Policy and Planning 2009), and the desire to not have gender confounds with such small numbers that could not be adequately tested in this study. This was a convenience sample and participants were not reimbursed for participation, which involved over an hour of time. Additionally, all efforts were made to emphasize the anonymity of participation. To further emphasize confidentiality, medical records were not reviewed as part of the protocol, and more active methods of recruitment were not utilized; if participants had other appointments and could not participate, those participants could not schedule a future visit to participate if they were interested due to the above restrictions. All the above factors severely limited the sample size.

Following the scheduled clinical appointment for each potential participant, he was invited to participate in the study by the clinician working with the veteran. If the veteran indicated interest, he was then introduced to the research team for more detailed description of the study and informed consent if the veteran wished to participate. For those who agreed to participate, consent was obtained and the Attachment and Clinical Issues Questionnaire (ACIQ), Trauma Symptom Inventory, 2nd Edition (TSI-2), and the PTSD Checklist – Military Version (PCL-M) were administered in a randomized counterbalanced order. Participant descriptive statistics are presented in Table 1.

Measures

Trauma A dimensional approach to PTSD measurement was used over a categorical one, as previous research has suggested

Table 1 Sample Descriptive Statistics

Variable	Mean (SD) or *n* (%)
Age	49.64 (16.26)
Caucasian	22 (100 %)
Male	22 (100 %)
Education	
Less than High School	2 (9 %)
High School Graduate	5 (23 %)
Some College	9 (41 %)
Bachelor's Degree	5 (23 %)
Marital Status[a]	
Married	14 (64 %)
Divorced	4 (18 %)
Never Married	2 (9 %)
Widowed	0 (0 %)
Current Relationship[b]	
Yes	2 (9 %)
Branch	
Army/National Guard	12 (55 %)
Marines	5 (23 %)
Air Force	3 (14 %)
Navy	2 (9 %)
War Era	
Vietnam	12 (55 %)
OEF/OIF	10 (45 %)
Time since Combat[a]	
1 to 3 years	5 (23 %)
3 to 5 years	1 (5 %)
5 to 10 years	2 (9 %)
> 10 years	12 (55 %)

$N = 22$

OEF/OIF Operation Enduring Freedom/Operation Iraqi Freedom

[a] $n = 20$

[b] For those not currently married ($n = 6$), number currently in an intimate partner relationship

that posttraumatic stress reactions are continuously distributed (see Broman-Fulks et al. 2006). The PTSD Checklist – Military Version (PCL-M; Weathers et al. 1993) is a measure of overall PTSD symptoms as defined by the *Diagnostic and Statistical Manual of Mental Disorders*, *Fourth Edition* (*DSM-IV*; American Psychiatric Association 1994) experienced over the past month, specifically related to a "stressful military experience." The PLC-M total score ranges from 17 to 85, with a recommended cutoff score of 50 and diagnostic efficiency reported at 0.90 for PTSD according to the Clinician Administered PTSD Scale (Weathers et al. 1993; Blanchard et al. 1996). This measure was selected as it provides a total score reflecting overall PTSD severity in line with *DSM-IV-TR* criteria and specifically ties symptoms to a military experience. The PCL has a reported Cronbach's alpha =0.86 (for this sample, $\alpha = 0.93$), and high positive correlations with other commonly accepted measures of PTSD (e.g., Impact of Events Scale, $r = 0.90$; Keane et al. 2004).

The Trauma Symptom Inventory, 2nd Edition (TSI-2; Briere 2011) was used as a second measure of trauma-based symptoms. The TSI-2 measures a variety of traumatic stress responses above and beyond those included in the formal PTSD diagnosis, including dissociative symptomatology. There are 30 scales in the TSI-2, which include two validity scales, four factor scores, 12 clinical scales, and 12 clinical subscales. Raw scores are converted to T-scores ($M = 50$, $SD = 10$) based on gender and age, and a cutoff score of 65 is recommended for clinical significant scale elevations (Briere 2011). The TSI-2 measures a variety of symptoms that commonly follow trauma exposure, but are not necessarily included in the *DSM-IV* PTSD diagnosis. Cronbach's coefficient alphas were calculated for the 12 clinical scales in the standardization sample and range from 0.74 through 0.94 (α for this sample could not be calculated as only factor and clinical scale scores were included in the database; Briere 2011).

Specific to this study, the TSI-2 TRAUMA factor and the clinical scales that comprise it were used. The TRAUMA factor reflects symptoms grossly consistent with but not specifically anchored to *DSM-IV* PTSD criteria (the Anxious Arousal, Intrusive Experiences, and Defensive Avoidance scales), with the addition of a scale measuring a variety of dissociation processes (Dissociation scale; Briere 2011). Both the PCL-M and TSI-2 were used for this study in order to cover the range of PTSD symptomology both specific to the *DSM-IV* and trauma symptoms that are more generalized.

Attachment Attachment was measured with the Attachment and Clinical Issues Questionnaire (ACIQ), which contains 239 items that comprise 29 scales (Lindberg and Thomas 2011; Lindberg et al. 2012). The scales tested in this study were the attachment scales measuring avoidant, anxious resistant, codependent/preoccupied, and secure attachments to mother, father, and partner. Of note, questions in the mother and father attachment scales are worded to refer back to the respondent's childhood, but partner scale questions refer to the current or most recent romantic relationship. Raw scores for ACIQ scales are converted to Standard Scores ($M = 100$, $SD = 15$). The ACIQ was selected for this study as the scales differentiate attachment patterns towards mother, father, and partner. Studies on the ACIQ have shown average overall coefficient $\alpha = 0.79$, with the attachment scales averaging $\alpha = 0.85$ (Lindberg and Thomas 2011). The average for this sample was $\alpha = 0.84$. The ACIQ demonstrated superior validity to the Experiences in Close Relationships Questionnaire (ECR; Brennan et al. 1998) in that it predicts to whom one turns in times of stress, is a better predictor of adult relationship satisfaction, and is also more sensitive to measures of mother and father warmth or sensitivity during childhood (Lindberg et al. 2012). Finally, the ACIQ includes symptom validity scales to identify invalid profiles, and is fairly immune to issues of social desirability (Fugett et al. 2014).

Examples of attachment scale items are: My mother was there when I needed to talk about a problem [secure]; Arguments with my mother were a love-hate kind of thing [ambivalent]; When I got really mad at my mother, I felt cold and rejecting towards her [avoidant]; When my mother felt sad for days, I did too [codependent-enmeshed] (Lindberg and Thomas 2011). Because the scales measure qualitatively different constructs (Lindberg et al. 2012), new patterns of attachment behaviors can be elucidated. For example, a respondent may score high on the scale measuring avoidant attachment to partner, but score low on the scale measuring avoidant attachment to mother. These independent measures to different attachment figures allows for the analysis of mixed or disorganized attachments (Lindberg and Thomas 2011), whereby a respondent may score high on seemingly incompatible scales towards a given individual. These relationships might otherwise be missed using single, broad categories (e.g., secure; for examples and discussion of mixed profiles see Lindberg et al. 2015b; Lindberg et al. 2015a). Thus, this specificity permits more precise measurements of attachments. Additionally, use of dimensional measurements of attachment behaviors is consistent with this study's dimensional measurement of PTSD symptomatology.

Results

The mean sample scores indicated moderate levels of PTSD in the sample according to both the PCL-M ($M = 58.91$, $SD = 13.65$) and TSI-2 TRAUMA factor score ($M = 75.27$, $SD = 13.45$). Although PTSD diagnosis was not the focus of this study, and caution should be used in making diagnostic conclusions from the PCL-M, 18 of the subjects (82 %) were at or above the recommended PTSD cutoff on the PCL-M (50). There was not a significant difference in PTSD severity between veterans of the Vietnam cohort compared to veterans

of Iraq/Afghanistan cohort according to both the PCL-M, t (20) = 0.28, *ns* and the TSI-2 TRAUMA factor score, t (20) = 1.39, *ns.* Due to the small sample size, which limits interpretation of the t-tests, correlations were also run between PCL-M and TSI-2 TRAUMA scores and age, and both were not significant: PCL-M r = 0.09, *ns*; TSI-2 TRAUMA r = 0.33, *ns*. The correlations among the attachment scales and the PCL-M total score, TSI-2 factor score, and four TSI-2 clinical scales comprising the TRAUMA score are presented in Table 2.

Significant negative correlations among the PCL-M Total scores and scores on the Ambivalent Mother and Avoidant Mother scales were found. In contrast, significant positive correlations were found between the Avoidant Partner scale and the PCL-M total score. Finally, none of the ACIQ scales measuring attachments towards father were significant. Significant negative correlations were also found between the Ambivalent Partner scale of the ACIQ and both the Intrusive Experiences and Defensive Avoidance scales of the TSI-2. For additional information to better inform future hypotheses, two post-hoc and exploratory linear regressions were calculated based on the initial correlation results. First, age, education level, and time since combat were included as predictor variables to PCL-M total score to evaluate those variables as possible contributing factors to PTSD symptom severity. The model was not significant, $F(3, 15) = 0.04$, *ns*. A second model was run predicting PCL-M total from the three scales that were significantly correlated to the measure: Avoidant Partner, Avoidant Mother, and Ambivalent Mother. The second model was significant, $F(3, 18) = 5.62$, $p = 0.007$, and explained 48.4 % of the variance. Only Avoidant Partner contributed significantly (standardized beta =0.42, $p = 0.024$). Post-hoc power analysis (3 predictors, observed $R^2 = 0.48$, $p = 0.05$, and $n = 22$) found an observed power of 0.94, providing evidence that the model was adequately powered based on convention of >.80.

Table 2 Correlations for Scores on the PCL-M, TSI-2, and Attachment Scales of the ACIQ

			TSI-2 TRAUMA Clinical Scales			
ACIQ Scales	PCLTotal	TRAUMA	AA	IE	DA	DIS
SECpart	0.04	0.22	0.27	0.28	0.20	0.03
AVOIDpart	**0.47***	0.11	0.12	−0.05	0.12	0.16
CODpart	−0.34	−0.29	−0.12	−0.25	−0.26	−0.38
AMBpart	−0.03	−0.42	−0.32	**−0.44***	**−0.44***	−0.27
SECmom	0.35	0.15	0.26	0.25	0.13	0.16
AVOIDmom	**−0.44***	−0.04	0.09	−0.11	0.10	−0.22
CODmom	−0.09	0.02	0.18	−0.07	0.08	−0.03
AMBmom	**−0.55****	−0.19	−0.09	−0.31	−0.11	−0.29
SECdad	0.24	−0.28	−0.21	−0.19	−0.35	−0.15
AVOIDdad	−0.25	−0.02	−0.00	−0.13	0.12	−0.07
CODdad	0.05	−0.25	−0.17	−0.31	−0.24	−0.14
AMBdad	−0.33	−0.06	−0.05	−0.16	0.05	−0.07

These ACIQ attachments are then divided into the following different attachment figures: Mom = Attachments to mother, Dad = Attachments to Father, and Part = Attachments to Partners

PCLTotal PTSD Checklist Total Score; *TRAUMA* TSI-2 TRAUMA factor score; *AA* TSI-2 Anxious Arousal scale; *IE* TSI-2 Intrusive Experiences scale; *DA* TSI-2 Defensive Avoidance scale; *DIS* TSI-2 Dissociation scale. ACIQ scale prefixes: *SEC* Secure, *Avoid* Avoidant, *AMB* Ambivalent/Anxious Resistant, *COD* Codependent/Preoccupied

*$p < 0.05$

** $p < 0.01$

Discussion

Using the figure-specific, continuous-variable attachment scales of the ACIQ, a unique picture of combat veteran attachments was suggested. First, as scores on the Avoidant Mother and Ambivalent Mother scales increased, PTSD symptoms decreased. In contrast, as scores on Avoidant Partner scale increased, PTSD symptoms increased. Finally, there were no significant correlations among father attachment scales and PTSD symptoms. Thus, the common avoidance features of PTSD did not extend to all attachment figures in a consistent fashion. Initial conceptualizations of attachment theory posited that an overarching internal working model would be relatively stable across different figures (Bretherton and Munholland 1999; Weiss 1994), and some studies have reported correlations between childhood attachments and adult attachment styles (e.g., Ho et al. 2010). However, the differential attachment results in this exploratory study are consistent with a growing body of research demonstrating that attachments to different figures have been found to be independent (Bernier and Matte-Gagné 2011; Lindberg et al. 2015b; Lindberg et al. 2015a; Lindberg et al. 2012; Lindberg and Thomas 2011; Madigan et al. 2011).

In this study, the moderate negative correlation results between Ambivalent Mother (example item: "My feelings for my mother were confusing") and the *DSM*-based measure of PTSD suggest that those most likely to suffer from PTSD also reported that they had conflicting attachment behaviors towards their mothers in times of stress during childhood. Additionally, the negative correlations between the PCL-M and the Avoidant Mother scale (example item: "When I was angry with my mother, I avoided her") but lack of correlation with Secure Mother (example item: "When I was upset, my mother helped me deal with it") suggests that although those scoring higher on this measure of PTSD did not overtly avoid their mother during childhood times of stress, they did not turn towards their mother in times of stress during childhood either. This reported combination of attachment behaviors in times of stress suggests that these veterans did not learn to effectively

request or use emotional support early in life (questions on the ACIQ parent attachment scales are worded to refer back to childhood), potentially leaving them more vulnerable to stressors by not having developed effective attachment coping mechanisms.

Although there was a significant positive correlation between the Avoidant Partner scale and the PCL-M scores, the Ambivalent Partner scale was not correlated, again suggesting a different attachment pattern of shutting down in times of stress by avoiding any kind of controversies, arguing, and confrontations. This finding is consistent with prior research (Ein-Dor et al. 2010; Renaud 2008), but also suggests an additional hypothesis to evaluate in future studies: whether avoidant attachments towards partner prevented trauma processing or if combat exposure fundamentally changed ones attachment to partner behaviors to align with avoidance. There were no significant correlations between any of the three secure attachment scales and PTSD severity, which also supports previous research on the relationship between secure attachment and PTSD with veterans (Harari et al. 2009; Nye et al. 2008). Additionally, there were no significant correlations between PTSD symptoms and the father attachment scales, which is consistent with the attachment literature that shows that mother attachments are generally more predictive than father attachments (see Cassidy and Shaver 2008 for several examples of this).

On the TSI-2, no attachment scale was correlated to the TRAUMA score; however, higher levels of ambivalent partner attachment were positively correlated with higher levels of intrusive experiences and defensive avoidance per the respective TSI-2 scales. This suggests that hypervigilance and dissociative symptoms may not be as salient to partner attachments as avoidance and re-experiencing symptoms of PTSD. More specific analyses examining PTSD symptom domains and attachment styles might be further explored in future studies. Moreover, in the current study, the two PTSD measures showed different attachment pattern results. This discrepancy might be due to a number of factors. First, the PCL-M measures level of distress over the past month for each of the *DSM-IV* PTSD symptoms, whereas the TSI-2 TRAUMA score is a composite of four 10-item scales, one of which measures dissociation (which is under-represented in the PCL-M). The TSI-2 (which is not directly tied to *DSM* symptoms) prompts the respondent to think about the past six months (as opposed to the past month on PCL-M), and respondents rate how often symptoms occurred (as opposed to how distressing the symptoms were to them). Additionally, the PCL-M score is a raw score, whereas the TSI-2 scores are T-scores stratified by age and sex. Thus, the two measures provide different information, and future studies might further explore this discrepancy as well as evaluate PTSD symptoms per the gold standard Clinician Administered PTSD Scale-5 (CAPS-5; Weathers et al. 2013) using the new *DSM-5* criteria. Moreover, this study used symptom ratings as opposed to dichotomous diagnostic categorizations, an approach that might lead to different results. Finally, symptom validity was not accounted for here due to the exploratory nature of the study and the small sample size, and additional research might evaluate overreporting given the high baserates of PTSD overreporting that have been documented in some veteran samples (Freeman et al. 2008).

Using regression, the three attachment scales that were significantly correlated to PCL-M scores were entered as independent variables predicting PTSD symptom severity per the PCL-M. The model was significant, supporting the general hypothesis that specific attachment qualities would predict PTSD severity in the sample. Only the Avoidant Partner scale contributed unique variance to the model. This result suggests that partner avoidance is the prominent attachment factor in the complex presentations of combat PTSD. Avoidance of reminders of trauma events is a cardinal symptom of PTSD (American Psychiatric Association 1994), and other studies have supported the idea that avoidance may also manifest specifically in romantic partner relationships for veterans diagnosed with PTSD (Evans et al. 2010; Evans et al. 2003). This is consistent with the notion that attachment styles change throughout life, and might imply that couples counseling could benefit these veterans. In a recent study by Hoyt and Renshaw (2014), Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) veterans who reported greater disclosure of positive experiences from combat to those who did not share the combat experience (e.g., partners), reported fewer PTSD symptoms. This further highlights how high quality relationships (as opposed to avoidant ones) may benefit those suffering with PTSD symptoms. Conversely, although IPV rates among military are reportedly similar to civilian rates, significantly higher rates of IPV have been found between veterans with combat PTSD related to both Vietnam and Iraq/Afghanistan conflicts (Finley et al. 2010; Taft et al. 2011). As additional research is completed on the complex relationships between combat PTSD and IPV, attachment variables might be relevant to consider as potential moderating factors.

There are several limitations and cautions that should be considered when interpreting these data. One difficulty in interpreting these and other results is that the design was not longitudinal. Therefore it is unclear whether certain attachment patterns are risk factors to developing PTSD, or if PTSD inherently alters the nature of one's attachment behaviors in these contradictory ways. This issue is problematic in existing literature as well (Taft et al. 2011), and prospective and longitudinal studies would be required to further examine trajectory of attachment patterns in the course of PTSD development. Further, considering the complexity of factors contributing to PTSD that was not evaluated here, these results should be interpreted as tentative.

The most obvious limitation was the small sample size that limited both the types of analyses that could be completed and the strength of conclusions drawn from the results. Thus, caution should be taken in interpreting the null findings given the small sample size. Inclusion of veterans from both the Vietnam and OEF/OIF war eras for this study is potentially confounding. For the purposes of this study, *t*-tests, correlations, and regression all suggest that war era was not confounding the results. However, collapsing the cohorts may have still affected outcomes that were not detected due to the sample size, and future hypothesis-testing studies might better control for cohort effects or focus on specific war era veterans. Participants in this study were Caucasian male veterans of the Vietnam and Iraq/Afghanistan wars. Therefore, these results may not generalize to others outside of these cohorts (e.g., females, non-Caucasians, and veterans of other war eras), particularly considering the small sample size, and additional data with larger samples and more diverse populations are necessary to test the hypotheses generated by these data. Additionally, other psychiatric diagnoses and risk factors delineated in the PTSD literature (depression, concussion, substance use disorders, etc.) were not explored here, thus future studies might compare attachment to those other risk factors to more thoroughly evaluate the relationship between attachment and PTSD. Finally, these data were based on self-report, and observational and experimental data need to be collected to advance these findings. However, as noted at the beginning of this brief report, these are initial data and point to the need to further explore these issues. Nonetheless, the strength of the significant correlations and the moderate regression effect size support the value of further research on the topic with these instruments beyond this initial report.

In conclusion, this study sought to explore if specific attachments have differential relationships with severity of posttraumatic stress with combat veterans. Unique correlations between male combat veterans' attachments to partner, mother, and father and PTSD symptoms were found. The relationship between lower levels of avoidant and ambivalent attachments to mother and higher levels of PTSD might indicate a type of early enmeshment to mother that could have left some Veterans more vulnerable to the negative effects of the stress they experienced on the battle field later in life, thus increasing risk for development of psychiatric disorders such as PTSD. Further, higher scores on avoidant attachments to current partners suggest poor current support-seeking skills, possibly leaving combat veterans doubly vulnerable when responding to trauma upon return home. Another possibility for future studies to evaluate is that the development of PTSD led to a change in the veterans' current attachments patterns towards romantic partners. Thus, this study is valuable in terms of informing hypotheses for additional research using larger samples and more advanced statistical analyses.

Acknowledgments This research is the result of work supported with resources, facilities, and patients at the Huntington VA Medical Center. The study was also supported in part by resources of the W.G. "Bill" Hefner VA Medical Center, the Mid-Atlantic Mental Illness Research Education and Clinical Center, and the Department of Veterans Affairs Office of Academic Affiliations Advanced Fellowship Program in Mental Illness Research and Treatment.

Compliance with Ethical Standards This study was reviewed and approved by the Marshall University Institutional Review Board. The welfare and privacy of human subjects were protected and maintained.

Conflict of Interest There are no conflicts of interest to disclose.

Disclaimer The views expressed in this article are those of the authors and do not necessarily reflect the position or policy of the Department of Veterans Affairs, the Department of Defense, or the U.S. government.

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