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Effects of Partner Attachment Quality on PTSD Severity with Combat-Exposed Veterans

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Abstract

Posttraumatic stress disorder (PTSD) as a response to a traumatic stressor encompasses re-experiencing, avoidance, and hyperarousal. Although many individuals will experience a traumatic stressor in the course of a lifetime, only a fraction fully develop PTSD. The purpose of this dissertation was to inform the question as to why some develop PTSD as a response to combat exposure and others do not. This study used the PTSD Checklist – Military Version (PCL-M), Trauma Symptom Inventory - 2 (TSI-2) and the Attachment and Clinical Issues Questionnaire (ACIQ) to test if secure partner attachments predict PTSD severity, anger, and somatization. These models were not statistically significant. However, exploratory analysis revealed that poorer peer relationships and a withdrawal pattern of social engagement significantly predict PTSD according to the TSI-2 TRAUMA factor score, $R^2 = .41$, $F\ (2, 19) = 6.56$, $p = .007$. These results suggest that better peer relationships may buffer the negative effects of combat exposure. Treatment implications and future research questions are discussed.

Keywords: PTSD, attachment, veteran, peer, combat

Effects of Intimate Partner Attachment Quality on PTSD Severity with Combat-Exposed Veterans

The conflicts of Operations Iraqi Freedom, Enduring Freedom, and New Dawn have led to multiple deployments of many American military personnel. The rise in number of combat deployments is related to an increase in prevalence of posttraumatic stress disorder (PTSD). A report by the Congressional Research Service (Fischer, 2010) noted that the prevalence of PTSD was about three times higher with soldiers who deployed to a combat zone than those who did not. Also, more than one deployment increases a soldier's exposure to traumatic stimuli, and an increasing percentage of U. S. troops have deployed more than once. The Department of Defense has spent millions on programs like the United States Army's 36 Warrior Transition Units, which target returning troops' mental health (Schoomaker, 2009). Similarly, the Department of Veteran's Affairs (VA) has been spending increasing amounts of financial resources on service connected disability compensation for PTSD and direct trauma treatments once soldiers are discharged from active duty.

Additionally, deployed American troops must cope with long periods of separation from their spouses and families. Divorce rates among military personnel have historically been higher than those of the general population. For example, one study reviewing National Longitudinal Survey of Youth data with young adults found that the divorce rate proportion in 1983 for enlisted military members was .14, which was significantly higher than the civilian counterpart proportion of .08 (Lundquist, 2007). More recent census data suggest that this trend has continued into more contemporary times (Sutton, 2010). Various programs, such as the Family Covenant program in the

United States Army, have been created to address military family needs, further filtering financial resources.

Moreover, a veteran who has combat-related PTSD will likely bring additional stressors into intimate relationships, such as emotional numbing, avoidance behaviors, and disturbed sleep. However, the relationship between PTSD and marital satisfaction is unclear: PTSD could contribute to relationship dissatisfaction just as marital satisfaction could buffer PTSD presentation and severity. The quality of partner attachment may better explain presentations of PTSD with military trauma. Therefore, this question warrants an examination of the relationship between quality of attachment to partner and PTSD symptom severity in veterans who seek mental health services for treatment of combat-based trauma. The importance of this research relates to the millions of dollars spent on PTSD compensation and treatment, the financial and labor resources spent on marital problems with military personnel, and the high level of military attrition related to both PTSD and marital problems.

PTSD

The diagnosis of posttraumatic stress disorder was added to the *Diagnostic and Statistical Manual, 3rd Edition* in 1980 (*DSM-III:* American Psychiatric Association [APA], 1980). The criteria lumped together a variety of specific trauma-based syndromes. Examples of kinds of trauma previously identified include traumatic neurosis, fright neurosis, concentration camp syndrome, war sailor syndrome, rape trauma syndrome, battered women's syndrome, Vietnam veterans syndrome, shell shock, and abused child syndrome (van der Kolk, Weisaeth, & van der Hart, 2007). Despite the variety of traumatic experiences that can lead to maladaptive psychological reactions, the

basis for the diagnosis of PTSD for the *DSM-III* came from males who were either severe burn victims or Vietnam Veterans; formal field trials were not conducted until after the publication of the *DSM-III* (van der Kolk et al., 2007). Although the group of burn victims and veterans may not reflect symptom constellations of other traumatic stress reactions (e.g., survivors of incest or disaster), the current *DSM* criteria for PTSD may adequately describe the posttraumatic stress reactions seen with combat veterans.

Current Diagnosis. The PTSD diagnosis has changed little since the *DSM-III*. In the current *DSM-IV-TR*, the A criterion, which defines the stressor, requires that one has experienced a traumatic event involving threatened death or serious injury, or some threat to the physical integrity of self or others (APA, 2000). Additionally, the person must respond to the stressor with "fear, helplessness, or horror," as listed in the A2 criterion (APA, 2000). This criterion separates PTSD from the majority of other psychiatric conditions in that a cause, in this case one or more external stressors, is identified. The A criterion represents the heart of the PTSD diagnosis and is the most changed criterion from the *DSM-III*, in that the criterion initially required the event to be "outside the range of usual human experience" and "disturbing to most people," (APA, 1980, PTSD criterion A).

Therefore, although the stressor criterion has become less subjective, the adequacy of the criterion is currently under debate as the release date for the *DSM-V* nears. For example, the current stressor criterion is both too broad in that it can encompass nearly any event (e.g., those within the range of usual human experience), and too narrow in that many who do not react with fear, helplessness or horror can nonetheless fully meet the remaining criteria of PTSD but because of this omission, not

the actual diagnosis (Brewin, Lanius, Novac, Schnyder, & Galea, 2009). With combat veterans the most common responses to combat are anger or a switch to military training behaviors (Adler, Wright, Bliese, Eckford, & Hoge, 2008), thus not qualifying the A2 criterion. However, the main idea remains in that a highly disturbing, external event occurred that caused a traumatic stress reaction; nonetheless, operationalizing the nature of the event is still ambiguous and difficult.

Once the traumatic criterion has been established, three groups of inclusion criteria must be met. The re-experiencing symptoms included in the B criteria are most commonly identified with PTSD and include re-experiencing across five domains: memory, dreams, reliving, increased psychological distress, and increased physiological arousal (Wilson, 2004). Although this symptom cluster is most commonly associated with PTSD, notably the nightmares and flashbacks, only one of five of these criteria is required for the diagnosis (APA, 2000).

Though the re-experiencing symptoms are most commonly associated with PTSD, the avoidance and emotional numbing C criteria are considered the core maintaining features of the disorder, and at least three out of seven of these symptoms must be present to meet diagnosis (APA, 2000). PTSD manifestations represent natural, combined psychogenic and organic responses to a traumatic event. The event is by definition unpleasant, and the re-experiencing symptoms illicit similar unpleasant emotional, cognitive, and biological reactions that occurred in response to the historic event. Therefore, the purpose of the avoidance/numbing behaviors for the traumatized individual is to function as a method of coping with the unpleasantness by attempting to not experience it again.

Finally, symptoms of hyperarousal (D criteria) encompass the anxiety component of the disorder. These symptoms are mainly physiological and are driven by the activation of the sympathetic nervous system (the fear response). There are five of these symptoms, and at least two must be met for PTSD inclusion requirements. All of the B, C, and D inclusion criteria must persist for at least one month and cause impairment in adaptive functioning (APA, 2000).

Other formal diagnoses represent varying forms of traumatic stress reactions. For example, acute stress disorder (ASD) includes similar criteria to PTSD, but duration of symptoms is two days to one month (APA, 2000). Some consider ASD as a precursor to the more chronic reaction of PTSD. An even more acute reaction to a traumatic event is described by brief psychotic disorder with marked stressor, which includes psychotic symptoms as a response to a traumatic event, but only lasting one day to one month (APA, 2000). Finally, the anxiety disorder not otherwise specified (Anxiety NOS) can be used in cases where full PTSD criteria are not met. Some refer to this form of PTSD as posttraumatic stress syndrome or sub-threshold PTSD. Thus, a maladaptive reaction following a traumatic event can range in duration, severity, and symptom presentation per the *DSM-IV-TR*.

Those who experience a traumatic event may respond in other maladaptive patterns that are not completely consistent with the PTSD cluster of symptoms. Complex trauma, or disorders of extreme stress not otherwise specified (DESNOS), generally involves traumas that are chronic and repetitive, such as detainment as a prisoner of war or victim of domestic violence (Herman, 1997). These survivors experience a different form of PTSD, in that the repeated traumas may result in deeper reactions that alter

schemata or personality structures. Seven clusters of symptoms have been identified with complex trauma, including alterations in the following: affect and impulse control, physiological regulation, consciousness, perception of perpetrator, perception of self, relationships, and systems of meaning (Ford & Courtois, 2009). These symptoms are currently listed under the associated features of PTSD in the *DSM-IV-TR* but do not at this time constitute a stand-alone diagnosis (i.e., full PTSD criteria must still be met).

With respect to the veteran population, complex traumatic reactions would most prominently result from prisoner of war experiences and extended combat exposure related to lengthy deployments. One study used the Minnesota Multiphasic Personality Inventory – 2nd Edition with a sample of military veterans (Miller, Kaloupek, Dillon, & Keane, 2004). The researchers identified three subtypes of PTSD: those who underreport symptoms, those who internalize (e.g., depression), and those who externalize (e.g., aggression, substance abuse, and impulsivity). It is important to recognize these complex posttraumatic stress reactions that deviate from the classic PTSD symptom constellations, as many "gold standard" assessment tools commonly used in PTSD research (e.g., the Clinician Administered PTSD Scale) do not contain items related to complex traumatic reactions. Arguably two of the most important psychiatric symptoms related to PTSD are anger and somatization.

Anger. One of the most salient reactions to a traumatic event for combat veterans is an increase in the frequency and intensity of anger. Anger is given a brief mention in the *DSM-IV-TR* PTSD criteria with the "irritability or outbursts of anger" criterion, as listed under the hyperarousal criteria (APA, 2000, p. 468). However, this criterion does not adequately capture the nature of the anger experienced by veterans – anger which

may actually begin as the initial response to the stressor on the battlefield, instead of the fear, helplessness, or horror required by the A2 criterion. In other words, the anger response may be the sole criterion that prevents a veteran from meeting full *DSM-IV-TR* PTSD criteria.

The anger experienced in war can be so intense that Shay (1994) suggests it is life altering. Shay refers to this battlefield anger as the *berserk state*, referencing an all-encompassing and beast-like frenzied rage that for veterans begins by targeting the enemy but then generalizes, "once a person has entered the berserk state, he or she is changed *forever*," (Shay, 1994, p. 98). If this extreme form of anger is in fact a driving force behind PTSD in veterans, then it should be given more attention in the examination of combat PTSD than solely being a single *DSM* criterion.

Research has given some attention to the various forms of anger associated with combat PTSD. For example, on study by Chemtob, Hamada, Roitblat, and Muraoka (1994) used a Vietnam veteran sample to compare levels of anger from numerous different measures among those with PTSD, those who have combat exposure but no PTSD, and those without combat exposure or PTSD. The PTSD veterans endorsed significantly higher levels of anger, even when controlling for trait anger, than the other groups (Chemtob et al., 1994). This difference in anger could not be attributed to mere combat exposure or psychiatric pathology, as both of those two groups endorsed significantly lower levels of anger.

Anger could also be related to various demographic variables. However, a robust study by Novaco and Chemtob (2002) found that anger accounted for 40% of the variance of PTSD severity above the effects of age, education, and intensity and severity

of combat experience. When taken together, these two studies suggest that Vietnam-era combat veterans with PTSD are very angry people; thus, anger management would be a recommended ancillary focus for the treatment of combat PTSD. Additionally, the relationship among PTSD, attachment, and anger warrants further investigation as no research was found examining those potential connections.

Somatization. In addition to anger, there is a very robust relationship between altered physiology and PTSD. The physiological effects of trauma have been extensively studied and generally focus on the functioning of the hypothalamus-pituitary-adrenal (HPA) axis, ultimate changes in cortisol levels, the functions of the limbic system, and changes in the neocortex (van der Kolk, 2007). A constant state of hyperarousal resultant from PTSD translates to a constant activation of the fear response, which essentially becomes toxic to the body. Moreover, the individual suffering from PTSD grows to fear his/her own body's physiological response (van der Kolk & McFarlane, 2007), adding to the effects of an already overused fear-response system. Clearly, biological reactions are important in understanding and treating PTSD, especially in chronic manifestations of the disorder.

The term *somatization* has historically referred to a physiological manifestation of psychological distress, also previously known as hysteria. The assumption is that no biological cause to the physiological symptoms can be found, thus psychological etiologies are presumed (American Psychological Association, 2007). For the purpose of this study, somatization will be used to refer to all physiological symptoms, especially those manifested with anxiety.

As with the relationship between anger and PTSD, there is little research on the relationship between somatization and PTSD with combat veterans. A study by Vedantham et al. (2001) examined physiological symptoms in a sample of Canadian bus drivers. The researchers found higher levels of health problems and lower self-ratings of health in the PTSD group, as compared to two other groups: those with a history of trauma exposure but no PTSD, and those with no history of trauma exposure. The PTSD group endorsed significantly higher number of the following types of health complaints: back pain, gastrointestinal problems, headaches, confusion, hot/cold flashes, and bronchitis (Vedantham et al., 2001).

Specific to combat veterans, a number of studies also support high levels of somatization relating to PTSD. Most notably, Koenen, Stellman, Sommer, and Stellman (2008) examined a number of measures of functioning with a sample of Vietnam veterans. Those participants with chronic PTSD showed a significantly greater number of non-specific health complaints than their non-PTSD peers (Koenen et al., 2008). Although the Koenen et al., study also found poorer levels of family relationships with the PTSD participants, no studies were found examining the relationship of attachment to somatization with combat-based PTSD. Further research is needed to determine if such a relationship exists.

Resiliency and Risk Factors. Although the formal diagnosis of PTSD has only existed since 1980, prevalence rates for the disorder have far surpassed those of more long-standing diagnostic labels, such as schizophrenia. This may not be surprising considering the frequency at which humans experience traumatic events. For example, one study by de Vries and Olff (2009) used a Dutch sample and found a lifetime

prevalence rate of 80.7% for experiencing any trauma and a lifetime prevalence rate of 7.4% for PTSD. This prevalence rate for PTSD is similar to that of the 8% as listed in the *DSM-IV-TR* (APA, 2000). Researchers Kessler, Sonnega, Bromet, Hughes, and Nelson (1995) examined prevalence and found that 60.7% of males and 51.2% of females will experience potentially traumatic situations across the lifetime, but only about 5% of males and 10% of females actually develop PTSD. Specific to combat veterans, the experience of combat and related atrocities provides a range of potential traumatic experiences that could meet the A criterion. PTSD prevalence rates for soldiers returning from the war in Iraq have been estimated at 14% at one year postdeployment (Hoge & Castro, 2006), which is nearly double the rate estimates in the general population.

A notable disparity is that although such high percentages of people experience traumatic events, only a fraction develops PTSD. This disparity has led to a natural focus on resiliency and risk factors to developing PTSD. For example, one study found that trait self-enhancement, or a disposition to make extremely positive self evaluations, prevents the development of PTSD with college students who experienced a mean of 4.40 potentially traumatic events over the course of four years (Gupta & Bonanno, 2010). Other factors that have been related to the development of PTSD include fear of anxiety (Reuther, Davis, Matthews, Munson, & Grills-Taquechel, 2010) and exposure to prior traumas (Bleich, Gelkopf, Melamed, & Solomon, 2006). A meta-analysis of 68 studies identified seven predictors of PTSD development: peritraumatic dissociation, peritraumatic emotional responses, posttrauma social support, perceived life threat at the time of the stressor, prior psychological maladjustment, prior traumas, and family history of psychopathology (Ozer, Best, Lipsey, & Weiss, 2008). Thus, a variety of intrapsychic,

personality, and environmental factors have been associated with the development of PTSD following a traumatic event.

Risk factors have also been studied specifically with respect to the combat veteran population. For example, longer deployments (Adler, Huffman, Bliese, & Castro, 2005), repeated deployments (Vasterling et al., 2010), and lower pre-trauma intelligence (Macklin et al., 1998) have been suggested as risk factors for PTSD development with combat veterans. These studies reinforce the idea that certain individuals are more prone to develop PTSD following trauma than others even when the stressor (combat deployment) remains relatively constant. Moreover, characteristics of the stressor itself (e.g. aspects of deployment) may contribute to PTSD.

In addition to mediating the relationship between trauma and development of PTSD, other factors may moderate the severity of PTSD symptom presentation for those who do meet full criteria. For example, in one study using a sample of college students, self-compassion was correlated to severity of avoidance symptoms (Thompson & Waltz, 2008). Another study (Koenen, Stellman, Stellman, & Sommer, 2003) examined a sample of Vietnam veterans over a period of 14 years. The results suggested that extent of combat exposure was the greatest risk factor for PTSD but that perceived social support moderated chronicity of symptoms.

The majority of these risk factors represent individual or personality characteristics of the person exposed to the traumatic event. However, relationships are mentioned as factors: posttrauma social support in Ozer et al. (2008) and perceived social support in Koenen et al. (2003). These findings suggest that relationship exudes

some effect on PTSD with combat veterans, and arguably the most important relationship in adulthood is one's spouse or committed, intimate partner.

Marital Satisfaction

One of the most important social relationships in adulthood is that with an intimate partner. The construct of marital satisfaction encompasses the degree to which a partner in a committed, intimate relationship is happy with that relationship. The following factors have been identified in this construct: perception of spouse's personality, communication and interactional patterns, stage of relationship, conflict management, sexual functioning, parenting, mental health, and individual factors (McCabe, 2006). Some of the following research indicates a relationship between marital satisfaction and PTSD presentation.

Military Relationships. A variety of research has targeted predictors of marital satisfaction, and more globally, predictors of divorce. Divorce is valuable to study in that it represents an easily measured, usually absolute opposite of the marital satisfaction construct. From a series of longitudinal studies, Gottman (1994) found that the presence of contempt, or intentional psychological insult and demeaning of a partner, was predictive of whether a conflict would end badly, which in turn was ultimately predictive of divorce. On the other hand, Gottman found that repairs to emotional insults and a greater proportion of positive than negative interactions were predictors of higher marital satisfaction.

Although this research is robust and useful, marital ecology in the military may present as much more complex. Military culture is such that a soldier endures numerous stressors on a chronic basis. These stressors include general job requirements, training

requirements, combat, frequent change of command and location, and separation from family (Etzion, Eden, & Lapidot, 1998). Job stress commonly spills over into home life and can negatively affect a marriage. For example, Schultz, Cowan, Cowan, and Brennan (2004) gave questionnaires to a sample of couples to be completed after work and before bedtime. Results of the study showed that a more negatively charged workday was related to higher levels of angry marital behavior in females and more withdrawn behavior in males. The withdrawn behavior in males is consistent with the avoidance/emotional numbing symptoms of PTSD.

PTSD and Marital Satisfaction. Although marriage and romantic relationships with service members presents a higher level of overall stress, previous research has explored the relationship between marital satisfaction and combat veterans diagnosed with PTSD above and beyond the normal stress of a military marriage. For example, Cook, Riggs, Thompson, Coyne, and Sheikh (2004) conducted a correlational study to examine the relationship between marital functioning based on Dyadic Adjustment Scale scores and PTSD symptoms from the PTSD Checklist in a sample of World War II, ex-prisoner of war (ex-POW) survivors with PTSD. The ex-POW participants with PTSD endorsed poorer marital functioning than the ex-POW participants without PTSD, a significant proportion of this difference was explained by the emotional numbing present in the PTSD symptom constellation.

It is possible that the nature of captivity and World War II produced a cohort effect with the Cook et al. (2004) study. However, similar results were found in a study of current, active duty members of the United States Army (Allen, Rhoades, Stanley, & Markman, 2010). In this quasi-experimental design PTSD severity, as measured by the

PTSD Checklist, was negatively correlated with the marital satisfaction. The researchers found that PTSD symptoms related to poorer relationship functioning in numerous areas. Although marital satisfaction is related to severity and presentation of PTSD, marriage factors are far from perfect predictors. Attachment quality, as a more specific construct, may better explain this relationship.

Attachment

At the most basic level, attachment in human infants can be defined as the development of strong emotional bonds to a caregiver (American Psychological Association, 2007). Bowlby is considered the father of attachment theory and originated his theory based on three influences: high infant mortality rates in hospitals and orphanages, Lorenz's studies with imprinting, and Harlow's work with rhesus monkeys (van der Horst, LeRoy, & van der Veer, 2008). Bowlby stated that the infant attachment to caregiver serves three functions: proximity maintenance, a safe haven from danger, and a secure base for exploration. By the end of World War II, Bowlby had laid the groundwork for his research on attachment theory (Bretherton, 1992). Perhaps the most prominent feature of Bowlby's work is that attachment is adaptive for infant functioning in its context.

Attachment Quality in Infants. In 1950 Ainsworth joined Bowlby's research team in London, thus changing the vector of her entire career (Bretherton, 1992). Ainsworth is most famous for her Strange Situation Test in which infants were repeatedly separated and reunited with an attachment figure. From this research differences in attachment style were identified. Infants showed distress when the attachment figure left

the room. However, it was the infant's reunion behavior when the caregiver returned that was of most interest.

From the strange situation test research three categories of attachment quality were identified. With *secure attachment*, the child showed distress when the caregiver left but happiness on his/her return (Ainsworth, Belhar, Waters, & Wall, 1978). These babies used the caregiver as a secure base to explore the environment and had confidence that the caregiver will be available if necessary (Ainsworth et al., 1978). Ainsworth originally noted that about 65% of children showed a secure attachment and this attachment style can be considered the healthiest style.

The remaining two attachment styles fall under the insecure category. The first was labeled *anxious-ambivalent attachment* and included 10% of the sample. In this style, a child was distressed when the caregiver left but remained distressed on return. Instead of finding comfort with the caregiver's return, the child acted out with anger, resistance, and refusal to return to exploration of the environment (Ainsworth et al., 1978). The second insecure style was labeled *avoidant attachment*, accounting for about 20% of the sample. These children did not show distress when the caregiver left and avoided or ignored the caregiver on return (Ainsworth et al., 1978). Later, a third type of insecure attachment was identified. Main and Solomon (1990) focused on the infants who were previously difficult to classify due to contradictory behaviors on reunion. This category is labeled *disorganized attachment*.

The history of attachment research is intimately tied to anxiety. Harlow stressed the rhesus monkeys in his work, and Ainsworth's strange situation test was based on stressing the child by having the caregiver leave the room and then by having strangers

attempt to soothe the child. There have been numerous other examinations aimed at describing the relationship between attachment and anxiety. For example, Bowlby (1973) hypothesized that the collective manifestations of anxiety disorders are directly related to attachment-figure availability. Additionally, research by Warren, Huston, Egeland, and Sroufe (1997) found that resistant (anxious/avoidant) attachment qualities in infancy were more related to anxiety disorder presentations in adolescence when compared to secure or avoidant attachment styles. In fact, much of the function of attachment involves who one seeks when stressed, as seen from the experiments of Harlow and Ainsworth.

Adult attachment. Later research shows that attachment styles are not simply left behind in childhood. Rather, a child's first attachment serves as a model for all later attachments. In other words, it has been suggested that a child's attachment style during infancy is predictive of attachment style in adulthood although the attachment figure usually changes to an intimate partner. However, three differences have been identified between the nature of infant-parent attachment and adult-intimate-partner attachment: symmetry of need and response, view of attachment figure as superior or equal, and relative quantity of presence of attachment figure (Weiss, 1994). In other words, the infant's attachment figure is superior across a variety of measures, but the target of an adult attachment in an intimate dyad is assumed equal across those dimensions.

Although the attachment systems in infancy are different than those in adulthood, the two are related. For example, the infant's attachment has been considered an internal working model for later life attachments. These internal working models later serve to regulate, interpret, and predict the behaviors, cognitions, and emotions of the attachment

target (Bretherton & Munholland, 1999). Therefore, although qualitative differences exist between infant and adult attachments, the two are linked throughout life by these internal, relationship schemata. In contrast, a factor analysis by Lindberg and Thomas (2011) suggested that it is the attachment figure, not the attachment style via stable internal working models, that matters and attachment figures change throughout the course of the lifetime.

Categorizations of attachment in adult, intimate relationships are divided into three groups: secure, avoidant, and ambivalent (Feeney, 1999). One study linked adult attachment style to marital satisfaction and found that couples with secure husbands showed less conflict and more positive interactions than those with insecure husbands (Cohn, Silver, Cowman, Cowman, & Pearson, 1992). However, although marital satisfaction and adult attachment are related, due to the role of attachment during stress, attachment may better describe PTSD presentations than marital satisfaction.

Attachment and trauma. In childhood, the relationship between attachment and anxiety is first seen when an infant is separated from the parent, and an anxiety reaction is initiated. The classic Ainsworth task demonstrates that even a securely attached infant can show an anxious reaction when first separated from the mother. At the extreme end this anxiety becomes clinical in the formal diagnosis of separation anxiety disorder (APA, 2000). It follows that attachment in adults is also related to an anxiety response. One study by Silove, Momartin, Marnan, Steel, and Manicacasagar (2010) using a sample of Bosnian refugees found a relationship between PTSD and adult separation anxiety disorder but not between PTSD and either grief or depression. Therefore, one cannot dismiss the relationship between anxiety and attachment processes in adults.

Marital satisfaction is an important contributor in distinguishing who develops PTSD and how severe it becomes. Although marital satisfaction includes a number of factors above and beyond attachment, the construct does suggest an additional predictor related to relationship. Attachment is related to one's satisfaction within any intimate relationship. Additionally, attachment theory suggests that early attachment to one's caregiver is a model for later attachments to an intimate partner. In other words, a dysfunctional attachment to one's caregiver in childhood may predict a dysfunctional attachment in adult intimate relationships. Developmentally, this construct may show a more powerful relationship to psychological maladjustment than the adult relationship itself.

Although a number of studies examine the relationship between sexual abuse and attachment, a small amount of research exists on the relationship between attachment and PTSD in adults. A study by Benoit, Bouthillier, Moss, Rousseau, and Brunet (2010) examined scores from the Adult Attachment Projective and Impact of Events Scale-Revised with a sample of participants admitted to a hospital emergency room following trauma exposure. Results indicated that higher levels of attachment security were related to fewer PTSD symptoms.

Although the Benoit et al. (2010) and a number of other studies show variations on this negative relationship of secure attachment to PTSD, the research on combat veterans is contradictory. For example, one study by Nye et al. (2008) found no difference between attachment styles of Vietnam veterans diagnosed with PTSD and a non-clinical sample of veterans. The study used three interview measures: the Adult Attachment Interview (AAI) as a measure of attachment, the Clinician Administered

PTSD Scale (CAPS) as a measure of PTSD, and the Structured Clinical Interview for *DSM-IV-TR* Diagnoses (SCID-IV) as a measure of psychopathology.

In another study Harari et al., (2009) compared a sample of veterans with PTSD to a sample of trauma-exposed veterans without PTSD using the AAI and the CAPS to measure attachment and PTSD. Results showed that although unresolved state of mind related to deployment was correlated with PTSD, secure attachment rates did not differ between the PTSD and non-PTSD samples. Results of these two studies both suggest that combat veterans with PTSD show the same rates of secure attachment as non-clinical samples. Therefore, secure attachment should not predict lower levels of PTSD symptomology.

One problem with both the Nye et al. (2008) and the Harari et al., (2009) studies is the use of the AAI. The measure has been criticized in that it actually measures an overall state of mind with respect to attachment, as opposed to actual attachment behaviors (Hesse, 1999). This state of mind thus does not distinguish attachment to father or mother from attachment to intimate partner (Lindberg & Thomas, 2011; Lindberg, Fugett, & Thomas, 2012). Therefore, although secure attachment does not buffer PTSD in existing research, one cannot be sure as to whether the attachment state of mind is in reference to a parent, an intimate partner, or a friendship. Additionally, as mentioned previously, not all who experience a maladaptive response to trauma meet full criteria for PTSD. Therefore, the sole reliance on the Clinician Administered PTSD Scale will exclude those who do not meet full PTSD criteria but still show some form of trauma-based psychopathology.

One way to remedy such measurement shortfalls is to use additional tests. A study by Elwood and Williams (2007) hypothesized that intimate partner attachment moderates the relationship between interpersonal trauma and PTSD symptom development. The researchers used the Beck Anxiety Inventory, Beck Depression Inventory – II, Purdue PTSD Scale – Revised, and Experiences in Close Relationships Scale (ECR), which measures romantic attachment style, with a sample of undergraduates who experienced interpersonal trauma. Results of the study suggest that higher levels of insecure attachment are related to higher levels of symptomology (anxiety, depression, and PTSD). However, these results from a sample of undergraduate victims of interpersonal violence likely do not generalize to the combat-exposed veteran population. Moreover, the ECR has been shown to not have very good psychometric fidelity in that it measures a variety of different clinical issues, such as anxiety, and does not predict attachment phenomena very well (Lindberg, Fugett, & Thomas, 2012). Further research on combat-based PTSD and attachment to intimate partner is necessary to better understand the relationship between the two variables with combat veterans.

In summary, the probability that any individual will encounter an extremely stressful event over the course of his/her lifetime is high. However, only about a fifth of those will develop what would meet criteria for PTSD, according to the *DSM-IV-TR*. Those who serve in the military and experience combat are at an increased risk of PTSD. Still, many who do experience combat will not develop PTSD. This disparity between trauma exposure and PTSD has been partly described by many different individual, environmental, and social variables. Considering the importance of an intimate relationship in adulthood and the role of attachment during stress, intimate-partner

attachment may describe the trauma-exposure versus PTSD gap. Currently, there is little research examining this relationship with combat veterans.

A small amount of research exists on the relationship between adult intimate partner attachment and combat PTSD. Studies by Nye et al. (2008) and Harari et al., (2009) did not find significant differences between PTSD veterans and non-clinical veterans with respect to secure attachment, but the conclusions of the studies are unclear due to use of tests which are too vague with respect to attachment and too narrow with respect to PTSD. Another study, by Elwood and Williams (2007), found a relationship between insecure attachment and symptom presentation, but the study used undergraduate participants who had experienced interpersonal violence. Therefore, a gap in the research literature exists in that no studies were found using a veteran sample, attachment measures focused on intimate partner, and PTSD measures testing a variety of possible trauma outcomes.

The purpose of this study is to address some of the limitations of the existing literature regarding combat veterans. It is hypothesized that 1) higher secure attachment to intimate partner and better peer relationships will predict less severe PTSD, and 2) because posttraumatic stress reactions can include more varied symptoms than those represented in the current PTSD criteria, intimate partner attachment will also be an important predictor to anger and somatization (above and beyond the effects of age) among the combat veteran population. More than one measure of trauma outcomes will be used, along with an attachment measure that distinguishes different quality of attachment behaviors toward different people (e.g., toward mother, father, romantic partner).

Method

Participants

Adult military veterans who had experienced combat trauma and presented to the outpatient mental health clinic of a VA medical center were recruited for this study. Inclusion criteria included the following: male sex, combat veteran status, presentation for PTSD Clinical Team intake or currently in treatment in any of the mental health treatment teams at the VAMC, age at least 18 years, and a willingness to participate. There were also five exclusion criteria: primary language not English, literacy level estimated as below a fifth-grade reading level, active and acute psychosis, currently a danger to self or other, and deemed incompetent per overt mental status examination. Formal PTSD diagnosis was not a necessary inclusion criterion, and comorbid psychiatric diagnoses were not excluded.

A series of demographic items already exist at the end of the ACIQ. Three additional items were added: current military status, military branch, and length of time since traumatic combat exposure. These items span ACIQ item number 240 through 261 and can be found in the ACIQ located in Appendix B.

A total of 22 participants volunteered to complete the study. Participants ranged in age from 25 to 72 years ($M = 49.64$, $SD = 16.26$). With respect to military branch, 12 of the respondents served in the U.S. Army or Army National Guard, five served in the U.S. Marine Corps, three served in the U.S. Air Force, two served in the U.S. Navy, and zero served in the U.S. Coast Guard. Sixteen identified their current military status as retired, three as completing requirements in the inactive ready reserves, two as active duty, zero identified with currently in the drilling reserves, and one did not answer the

item. Additionally, 12 participants were Vietnam veterans and 10 were Iraq/Afghanistan veterans. As veterans were filtered to the researcher by VA clinicians, no data was accrued on how many veterans declined participation, nor the reasoning for such.

Measures

PTSD Checklist – Military Version. The PTSD Checklist – Military Version (PCL-M) is a 17-item assessment tool that directly uses the 17 PTSD diagnostic criteria as items (see Appendix A for a full copy of the measure). Each item is rated on a scale of severity from 1 through 5, for a total score ranging from 17 through 85 (VA National Center for PTSD, 2010). All items are referenced back to a traumatic event that the respondent identifies at the start of the measure. Although diagnosis cannot be made based on PCL-M scores alone, a cutoff score of 45 has been suggested in identifying those who may have PTSD. For diagnosing veterans presenting to a VA PTSD specialty mental health clinic setting, a higher cutoff score of 56 is suggested (VA National Center for PTSD, 2010). This measure is available for use in the public domain via the National Center for PTSD.

The PCL has a reported Cronbach's $\alpha = .86$, specificity = .94, and high positive correlations with other commonly accepted measures of PTSD (e.g., Impact of Events Scale, $r = .90$; Keane, Street, & Stafford, 2004). Furthermore, all items are to be responses to "stressful military experiences," thus connecting symptoms to specific experiences that presumably occurred as part of the combat experience. The measure takes approximately five to 10 minutes to complete. This measure was used for this study as it is a common measure used by VA clinicians and in research, the items directly

correlate with PTSD criteria in the *DSM-IV-TR*, and the items refer directly to a stressful military experience.

Trauma Symptom Inventory – 2nd Edition. The Trauma Symptom Inventory, 2nd Edition (TSI-2; Briere, 2011) was used to assess presenting symptom clusters in participants. The self-report measure consists of 136 items which reflect presenting symptoms over the past six months. Items are rated from 0 (*hasn't happened at all*) to 3 (*happened often*) (Briere, 2011). The measure takes approximately 20 to 30 minutes to complete.

Although the TSI-2 does not link reported symptoms to a specific traumatic event, it is a valuable tool in the assessment of PTSD in that it assesses a broad range of posttraumatic responses. The measure contains two validity scales to assess overreporting and underreporting as well as eight critical items that measure behaviors related to severe psychiatric disturbance or risk of harm to self or other (Briere, 2011). New to the second edition of the TSI are four index scores: Posttraumatic Stress (TRAUMA; classic *DSM* PTSD symptom cluster and dissociation), Self-Disturbance (SELF; difficulties with self-awareness and negative self-schema), Externalization (EXT; anger and tension reduction behaviors), and Somatization (SOMA; Briere). The TSI-2 also contains the following 12 clinical scales: Anxious Arousal, Depression, Anger, Intrusive Experiences, Defensive Avoidance, Dissociation, Somatic Preoccupations, Sexual Disturbance, Suicidality, Insecure Attachment, Impaired Self-Reference, and Tension Reduction Behaviors. Each scale's raw score is converted to a T-score, with a mean of 50 and standard deviation of 10.

The standardization sample for the TSI-2 consisted of 678 individuals who were chosen based on U.S. census data (Briere, 2011). Age and gender were found to be important variables, and score conversion with the TSI-2 takes these demographics into account. Internal consistencies for the 12 clinical scales were calculated using Cronbach's coefficient alpha, and range from .74 through .94 (Briere, 2011). No studies were found at the time of this review using the instrument due to its recent publication. This test was used for this study as it measures a variety of psychiatric problems in addition to PTSD, specifically with scales measuring anger and somatic complaints, which were two constructs of interest for this research.

Attachment and Clinical Issues Questionnaire. The Attachment and Clinical Issues Questionnaire (ACIQ) contains 239 items (see Appendix B) which produce a total of 29 scales (see Appendix C), with attachment scales measuring avoidant, anxious resistant, codependent/preoccupied, and secure attachments to mother, father, and partner (Lindberg & Thomas, 2011). Additionally, the ACIQ contains two validity scales related to faking good and faking bad and is relatively immune from social desirability as measured by the Marlow Crowne scale, as well as a random response indicator (Lindberg & Thomas, 2011).

The 29 scales of the ACIQ were developed and tested over 18 years and derived from the following: three years of patient observation in outpatient and 12-step recovery groups, a thorough review of attachment literature, and clinical research on addictions (Lindberg & Thomas, 2011). In addition to the attachment scales, the ACIQ includes clinical scales measuring shame, mistrust, jealousy, withdrawal, control, denial of feelings, anxiety, anger, perfectionism, abusiveness, and rumination.

Initial studies on the ACIQ have shown average overall coefficient α = .79, with the attachment scales averaging α = .85 (Lindberg & Thomas, 2011). The attachment scales have also been shown as predictors of divorce as well as a mediating role in clinical issues when divorce is controlled (Lindberg, McMillion, & Thomas, 1999). The ACIQ has also been found to predict toward whom one turns in times of stress, marital satisfaction, and measures of parental warmth (Lindberg, Fugett, & Thomas, 2012). Further, it correlates with scores on the Beck Depression Inventory (Taylor & Lindberg, 2006), alcohol dependence against controls (Lindberg & Lindberg, 2007), and eating disorders (Lindberg, Thomas, & Smith, 2004). This measure was used for this study as it specifically extrapolates attachment quality towards distinct attachment figures (mother, father, partner), thus addressing shortfalls of other attachment measures (e.g., the AAI and ECR).

Procedure

Data were collected from the Huntington VAMC PTSD clinic. Evaluating PTSD clinicians routinely screen for the characteristics of this study's inclusion and exclusion criteria; therefore, determination of these criteria did not add time to the PTSD intake. At the end of the consult (normally about 90 minutes in length), the clinicians asked each veteran if he would like to speak with a graduate student regarding a study. Those veterans who agreed were invited to the student co-investigator's office for more information.

Additionally, combat veterans already receiving treatment in the mental health clinics were asked following their regularly scheduled sessions if they would be interested in speaking with the graduate student running the study. If agreeable, those

veterans were invited to the research room for more information. An IRB-approved verbal consent script was then read to each veteran, and if he agreed to participate, he was given a copy to take with him.

The participants were given the measures in a double randomized, counterbalanced order. The three test measures were numbered so that they could be connected to each other. The code was a number in the order of which the participant volunteered. The anonymous, completed test materials were kept locked in the principal investigator's office at the VAMC. Following completion of the three tests, the participants were thanked and allowed to ask any final questions. All data were analyzed using SPSS 19.0.

Results

Veterans from different war eras have arguably experienced qualitatively different combat deployments. For example, Vietnam era veterans fought guerillas in a jungle environment, were potentially exposed to Agent Orange, and were not received well on return to the United States. In contrast, Iraq veterans fought in a desert environment, would have had a higher probability of experiencing traumatic brain injury, and have experienced a much more amiable return home. Therefore, in order to test for any significant differences between this study's participants of different war eras, an independent sample *t*-test was run between Vietnam veterans and Iraq/Afghanistan veterans on PTSD severity according to the PCL-M. There was not a significant difference in PTSD severity of the two groups, $t\ (20) = .28$, *ns*. A second independent sample *t*-test was run comparing PTSD severity according to the TSI-2 TRAUMA factor score and was also found to be not significant, $t\ (20) = 1.39$, *ns*. Thus, no cohort effects

were found regarding PTSD severity and war era did not need to be accounted for by covariation for the main tests of this study.

Comparison of the PCL-M and TSI-2

Because two measures of PTSD were used for this study, an exploration of the measures was conducted to examine relationships of the measures and determine which was best to use for testing the hypotheses of this research. Two measures of PTSD severity were used in this study, the PCL-M and the TSI-2 TRAUMA factor, and descriptive statistics for the measures are listed in Table 7. The PCL-M specifically directs the respondent to rate current symptoms in reference to a specific traumatic event when answering the items, and symptoms are rated over the past month. The TSI-2 TRAUMA factor score does not refer the respondent to a specific event (thus can include all traumas over the course of a lifetime) and refers to the prior six months. Additionally, the PCL-M is more face valid but only includes 17 items, whereas the TSI-2 is less face valid and includes 40 items, 10 of which reflect dissociative symptoms not directly included in the PCL-M. Although the civilian version of the PCL was used in validity studies of the TSI-2 (Briere, 2011), very basic correlation studies between these measures of PTSD were needed to inform which measure to use in this study's analyses. The correlations are listed in Table 1 below. Higher correlations were seen between the TSI-2 Dissociation scale and all aspects of the PCL-M, which was unexpected because the Dissociation scale contains items not inclusive in formal *DSM-IV-TR* PTSD diagnosis, but correlates higher to those symptoms (i.e., the PCL) than the other TSI-2 scales that are generally based on the PTSD criteria.

Table 1

Scale correlations between PCL-M and TSI-2 TRAUMA

		TRAUMA	AA	IE	DA	DIS
PCL Total	Pearson *r*	.59**	.50*	.56**	.42	.68**
	Sig. (2-tailed)	.004	.017	.006	.052	.000
PCL B	Pearson *r*	.59**	.54*	.56**	.47*	.62**
	Sig. (2-tailed)	.004	.010	.007	.027	.002
PCL C	Pearson *r*	.50*	.37	.47*	.32	.63**
	Sig. (2-tailed)	.019	.089	.027	.146	.002
PCL D	Pearson *r*	.54*	.50*	.52*	.37	.61**
	Sig. (2-tailed)	.010	.019	.013	.087	.003

Note. PCL B = the 5 re-experiencing PCL items; PCL C = the 7 avoidance/emotional numbing PCL items; PCL D = the 5 hyperarousal PCL items; AA = TSI-2 Anxious Arousal scale; IE = TSI-2 Intrusive Experiences scale; DA = TSI-2 Defensive Avoidance scale; DIS = TSI-2 Dissociation scale.

* $p < .05$ (2-tailed), ** $p < .01$ (2-tailed).

To further explore these relationships, a partial correlation was run between PCL-M total score and TSI-2 TRAUMA factor controlling for Dissociation. With Dissociation included, the correlation is positive and significant, $r = .59$, $p = .004$. When Dissociation was controlled, the relationship became negative and nonsignificant, $r = -.03$, *ns*. This suggests that Dissociation is driving the relationship between the PCL-M and the TSI-2 TRAUMA factor. For the purposes of this study, the TSI-2 TRAUMA score will be used as a main measure of PTSD symptom severity, except for Hypothesis 1, which will examine both TSI-2 TRAUMA and PCL-M.

Additionally, there is a difference in level of mean PTSD severity with this sample based on which measure is used. The mean PCL-M Total score for the sample is

58.91, which is about three points above the suggested cutoff for diagnosing PTSD in a VA PTSD specialty mental health clinic (VA National Center for PTSD, 2010). However, the mean TSI-2 TRAUMA factor score for the sample is 75.27, which is a standard deviation above the suggested cutoff score (Briere, 2011). In other words, the sample shows more pathology according to the TSI-2 than the PCL-M. This result is likely an artifact of low sample size, but for the purpose of this study both PTSD scores will be used for hypothesis 1.

Total PTSD Severity

The main hypothesis for this study is that a higher level of secure attachment to intimate partner and better peer relationships (according to the ACIQ) will predict less severe PTSD (according to the PCL-M and TSI-2 TRAUMA factor score). A standard multiple regression was used to test the predictive power of Secure Partner and Peer Relationships on total PTSD symptom severity. The analysis was run two times: once using PCL-M scores as a measure of PTSD severity, and once using the TSI-2 TRAUMA factor score as a measure of PTSD severity. The significance level for all tests was set *a priori* at $p = .05$, but because two regressions were run for hypothesis 1, a Bonferonni correction was calculated, changing the significance levels to $p = .025$.

Because of the correlation between the Dissociation scale and the PCL-M, two separate regression equations were calculated to examine if there is a difference based on the PTSD measure used. Descriptive statistics for these scales are listed in Table 2 below. It is again notable that the mean score for PTSD severity is approximately two standard deviations above the standardized mean (or 10 T points above the recommended cutoff for identifying clinical PTSD), but mean PTSD severity score according to the

PCL-M is at the suggested cutoff for a clinical population. The mean score for Secure Partner attachment is at the Standard Score mean, suggesting an average level of secure partner attachment in this sample. Moreover, the mean score for Peer Relationships is nearly two standard deviations below the standardized mean, suggesting very poor peer relationships with this sample.

Table 2

Descriptive statistics for PCL-M, TSI-2 TRAUMA, and Standard Scores of ACIQ scales

Scale	Mean	Standard Deviation
PCL-M Total	58.91	13.65
TSI-2 TRAUMA factor	75.27	13.45
SECPART	100.95	16.56
PEER	76.05	15.49

In the first regression, using the PCL-M, the overall model was not significant and explained 16.1% of the variance, $R^2 = .161$, F (2, 19) = 1.82, *ns*. Neither of the predictor variables was significant within the model: Secure Partner ($\beta = .05$, *ns*), and Peer Relationships ($\beta = -.35$, *ns*). Using the PCL-M, the first hypothesis is not supported, and a higher quality of relationships with intimate partner and peers is not predictive of less severe PTSD symptoms.

However, in the second regression, using the TSI-2 TRAUMA factor score, the overall model was significant and explained 35.2% of the variance, $R^2 = .352$, F (2, 19) = 5.17, $p = .016$. Peer Relationships was a significant contributor to the model, ($\beta = -.48$, $p = .008$), but Secure Partner was not ($\beta = .21$, *ns*). Therefore, using the TSI-2 TRAUMA factor score to measure PTSD, the first hypothesis is supported, but it is the quality of peer relationships, *not* secure attachment to partner, that drives this result. In order to

further examine the connection between Secure Partner, Peer Relationships, and PTSD severity, correlations were run, as listed in the Table 3 below.

Table 3

Correlations of Secure Partner, Peer, and PTSD scales

		SECPART	PEER	PCLTotal	TRAUMA
SECPART	Pearson *r*	1	.06	.04	.22
	Sig. (2-tailed)		.799	.871	.321
PEER	Pearson *r*	.06	1	-.40	-.54**
	Sig. (2-tailed)	.799		.068	.010
PCLTotal	Pearson *r*	.04	-.40	1	.59**
	Sig. (2-tailed)	.871	.068		.004
TRAUMA	Pearson *r*	.22	-.54**	.59**	1
	Sig. (2-tailed)	.321	.010	.004	

Note. * $p < .05$ (2-tailed), ** $p < .01$ (2-tailed).

There were not significant correlations between Secure Partner and Peer Relationships, PCL-M, and TRAUMA. These results suggest that secure attachments to intimate partner when taken by themselves and not in the context of other measures of partner attachments are relatively unimportant with respect to PTSD severity, supporting results found by the Nye et al. (2008) and Harari et al., (2009) studies. Additionally, the correlation between Peer Relationships and PTSD as measured by the PCL-M was not significant; however, this correlation is significant when using the TSI-2 TRAUMA factor score to measure PTSD. One reason for the difference in correlations between Peer Relationships and the two measures of PTSD is that, as shown earlier, the sample

reports a higher level of PTSD severity according to the TRAUMA factor than according to the PCL-M.

Anger and Somatization

Secure attachment quality towards one's intimate partner does not predict PTSD symptoms. However, the second hypothesis is that secure partner attachment will predict anger symptoms, as well as somatization above the effects of age. These symptom clusters of anger and somatization are not adequately represented in the PTSD criteria; thus, there still may remain a relationship to secure partner attachment despite the lacking of such a relationship to PTSD. Descriptive statistics for the two regression equations related to Anger and Somatic Preoccupations are listed in Table 4. For anger severity, a correlation was run between TSI-2 Anger and PTSD severity: Anger and PCL-M r = .303, *ns*, and Anger and TRAUMA r = .755, $p < .001$. Therefore, there was a significant relationship between anger symptoms and PTSD severity according to the TSI-2 but not according to the PCL-M. Following, a simple linear regression was run to test the ability of Secure Partner to predict Anger. Secure partner attachment did not significantly predict severity of anger symptoms, F (1, 20) = 1.12, *ns*. Therefore, the second hypothesis is not supported with regards to anger, even though anger severity is highly correlated to PTSD severity.

In addition to anger, a second variable examined was Somatic Preoccupations. A correlation was run between TSI-2 Somatic Complaints and PTSD severity: Somatic Complaints and PCL-M r = .674, p = .001, and Somatic Complaints and TRAUMA r = .589, p = .004. Therefore, there was a significant relationship between somatization

symptoms and severity of PTSD with both measures of PTSD, which supports van der Kolk's (2007) claim that "the body keeps the score" regarding traumatic stress.

Table 4

Descriptive statistics for age, TSI-2 scales, and Secure Partner scale

Scale	Mean	Standard Deviation
Age	49.64	16.26
TSI-2 Anger	72.91	14.60
TSI-2 Somatic Complaints	64.45	12.36
SECPART	100.95	16.56

Considering the increasing number of somatic problems that people experience with senescence, it was deemed necessary to control for age-based ailments into the statistical model. Therefore, a hierarchical multiple regression was used to assess the ability of Secure Partner to predict Somatic Complaints, above and beyond the effects of age. In step 1 of the analysis, age was not found to significantly predict somatization, R^2 = .05, F (1, 20) = .95, *ns*. This was an interesting result, suggesting that, against conventional wisdom, there is not an increase in somatic complaints with age. Following, adding Secure Partner in step 2 explained an additional 1.6% of the variance with the model, ΔR^2 = .02, F change (1, 19) = .33, *ns*. In the final model age (β = .24, *ns*) contributed less to the predictive value than did Secure Partner (β = -.12, *ns*), but both variables were nonsignificant. Therefore, neither age nor Secure Partner attachments are important predictors to somatization symptoms, which are nonetheless highly correlated to PTSD severity.

As secure partner to romantic partner was not important with respect to PTSD and related symptoms in this sample of combat veterans, further novel analysis was warranted

to explore whether other types of attachment styles towards one's partner might predict the symptoms that combat veterans experience. Therefore, a series of correlations was run between the four attachment styles towards romantic partner, withdrawal, the measures of PTSD, and the subscales of the TRAUMA factor on the TSI-2.

Exploratory Analyses

The hypotheses of this study were not supported in that a secure attachment to one's intimate partner does not predict less severe PTSD symptomology, anger severity, or somatic complaints severity. In other words, combat veterans are not "turning towards" their partners to process their combat exposure. However, the regression model using the TRAUMA factor in hypothesis 1 found that peer relationships are a significant contributor to the model with respect to predicting PTSD severity. Due to the unexpected relationships of Secure Partner and Peer Relationships to PTSD severity found in hypothesis 1, exploratory correlational analyses were run to further examine other types of attachments and PTSD symptoms. Table 5 lists the Pearson's correlations and significance levels of the relationships among the PCL-M, the TSI-2 TRAUMA factor, and the four ACIQ Partner attachment scales.

The most prominent correlation is between the Secure Partner scale and the Codependent/Enmeshed Partner scale on the ACIQ, $r = .70$, $p < .001$. As the veterans are more securely attached to their intimate partner, they become more enmeshed as well. The only other significant correlations is between Avoidant Partner and the PCL-M, $r = .47$, $p = .028$, but this relationship is not seen with the TSI-2 TRAUMA factor. In other words, with an increase in PTSD severity, veterans become more avoidant of their partner, which makes sense considering the prominent role that avoidance symptoms play

in general with PTSD. It is unclear why this correlation is not significant with respect to the TSI-2 TRAUMA factor score.

Table 5

Correlations between partner attachment scales and PTSD

		PCLTotal	TRAUMA	SECPART	AVPART	CODPART	AMBPART
PCLTotal	Pearson *r*	1	.59**	.04	.47*	-.34	-.03
	Sig. (2-tailed)		.004	.871	.028	.123	.902
TRAUMA	Pearson *r*	.59**	1	.22	.11	-.29	-.42
	Sig. (2-tailed)	.004		.321	.635	.187	.055
SECPART	Pearson *r*	.04	.22	1	-.20	.70**	-.22
	Sig. (2-tailed)	.871	.321		.374	.000	.331
AVPART	Pearson *r*	.47*	.11	-.20	1	-.26	.40
	Sig. (2-tailed)	.028	.635	.374		.244	.065
CODPART	Pearson *r*	-.34	-.29	.70**	-.26	1	.26
	Sig. (2-tailed)	.123	.187	.000	.244		.239
AMBPART	Pearson *r*	-.03	-.42	-.22	.40	.26	1
	Sig. (2-tailed)	.902	.055	.331	.065	.239	

Note. * $p < .05$ (2-tailed), ** $p < .01$ (2-tailed).

Moreover, the correlation between Ambivalent Partner and the TRAUMA factor score is negative and approaching significance. The Ambivalent Partner attachment scale includes items related to conflict within the relationship. Thus, the higher the level of PTSD symptoms with this sample, the less conflict the participants engage in with their partner, which may suggest a withdrawal pattern during times of stress.

A second set of correlations was run among the attachment scales and the Withdrawal scale of the ACIQ and the four TSI-2 clinical scales that comprise the

TRAUMA factor (see Table 6) in an attempt to extrapolate any more specific relationships between partner attachments and the PTSD subscales. Additionally, the ACIQ Withdrawal scale was added due to the importance of a withdrawal pattern of relating to others that was found in the study by Schultz, Cowan, Cowan, and Brennan (2004) as mentioned previously. There were no significant correlations between Secure, Avoidant, or Codependent/Enmeshed and any of the TRAUMA scales, suggesting that these attachment styles towards one's partner are not related to the presentation of PTSD-cluster symptoms.

Table 6

Correlations between partner attachment scales, Withdrawal, and TRAUMA scales

		AA	IE	DA	DIS
SECPART	Pearson *r*	.27	.28	.20	.03
	Sig. (2-tailed)	.221	.203	.382	.910
AVPART	Pearson *r*	.12	-.05	.12	.16
	Sig. (2-tailed)	.589	.831	.581	.482
CODPART	Pearson *r*	-.12	-.25	-.26	-.38
	Sig. (2-tailed)	.590	.270	.236	.086
AMBPART	Pearson *r*	-.32	-.44*	-.44*	-.27
	Sig. (2-tailed)	.150	.041	.042	.223
WITHDRAW	Pearson *r*	.58**	.36	.50*	.41
	Sig. (2-tailed)	.005	.096	.019	.057

Note. AA = Anxious Arousal; IE = Intrusive Experiences; DA = Defensive Avoidance; and DIS = Dissociation.
* $p < .05$ (2-tailed), ** $p < .01$ (2-tailed).

However, there were significant and negative correlations between Ambivalent Partner and both Intrusive Experiences ($r = -.44$, $p = .041$) and Defensive Avoidance ($r =$

-.44, p = .042). The ambivalent attachment style represents a lack of partner conflict and general withdrawal style of relating: instead of engaging a fight, one simply gives in and withdrawals. Thus, the less engaged one is with his partner, the more re-experiencing symptoms and avoidance he has. Furthermore, the ACIQ Withdrawal scale significantly correlated with two of the TSI-2 TRAUMA factor scales; Anxious Arousal (r = .58, p = .005) and Defensive Avoidance (r = .50, p = .019). This finding tends to support the overall idea that avoidance (APA, 2000) and withdrawal patterns of relating (Schultz, Cowan, Cowan, & Brennan, 2004) perpetuate the recovery of one's natural posttraumatic stress reaction.

From the results of hypothesis 1 regarding peer relationships, the exploratory correlations, and the literature on withdrawal patterns of relating to others, a new model is proposed. It is hypothesized that Peer Relationships and Withdrawal will significantly predict PTSD according to the TSI-2 TRAUMA factor. A standard multiple regression was run. The model was significant and explained 40.8% of the variance, R^2 = .41, F (2, 19) = 6.56, p = .007. Within the model Peer Relationships was a significant contributor (β = -.35, p = .046), but Withdrawal was not (β = .27, *ns*). Although the main hypotheses of this study were not supported regarding secure partner attachment, this model suggests that combat veterans who process their experiences with other peers who have themselves also experienced war experience less posttraumatic stress symptomology.

Discussion

Attachments. The purpose of this study was to investigate the relationships between secure attachment to intimate partner and PTSD symptoms in a clinical sample of combat veterans. For the primary hypothesis a regression model was used to explore

the predictive ability of Secure Partner and Peer Relationships on overall PTSD symptom severity. When PTSD was measured by the PCL-M, the model was not significant. However, when the TSI-2 TRAUMA factor score was used, which includes a Dissociation scale not necessarily tapped by the PCL (but highly correlated to the measure), the model was significant. Further analysis revealed that the Peer Relationships were driving that relationship, not Secure Partner as was hypothesized. The difference between the results using the PCL-M and the TSI-2 TRAUMA factor score may be explained in part by the fact that the sample size was small and power thus adversely affected. Additionally, the sample showed more pathology with the TSI-2 than with the PCL-M, although the reason for this difference is unclear. More importantly, the quality of peer relationships, not a secure attachment to one's partner, seems to drive the severity of PTSD with respect to these models.

The results of this analysis are consistent with the existing research on combat trauma by Nye et al. (2008) and Harari et al. (2009): Both studies found no difference between secure attachments in clinical PTSD samples as compared to non-clinical samples. This study hypothesized that using a more specific measure of attachment would find such a relationship. In fact, using the more specific ACIQ did not find the hypothesized relationship between secure partner attachment and PTSD symptomology.

Beyond the problem of low power in this study, one way of explaining why there was no relationship between secure partner attachment and PTSD symptoms is that veterans are not processing their war experiences with their partners. The underlying assumption is that exposure to the experiences via talking about them will lead to less intense PTSD symptoms. Therefore, within the context of a secure partner attachment in

which a veteran turns toward his partner regarding the stress caused by combat exposure, the veterans of this sample can have secure partner attachments while still not processing their traumatic war experiences. In other words, whether a veteran talks to his partner about his trauma may be mediating the relationship between partner attachment and PTSD symptom severity; however, such a mediational model was not examined in this study.

This explanation fits nicely with the results seen from the exploratory analyses. Peer relationship quality is significantly related to PTSD: The better the relationships a combat veteran has with peers, the fewer PTSD symptoms he endorses. Therefore, it is likely that the processing of traumatic material that is not occurring with intimate partner is occurring with the peer group. It is commonly stated by veterans that only other combat veterans can understand their experiences; so it is likely that the peer group is key to the processing of combat, thus lessening the severity of PTSD symptomology due to trauma exposure. When a withdrawal pattern of interaction is added to peer relationships in a regression model, the model is significant and robust, suggesting that a withdrawal style of interacting with others and a lack of peer relationships maintain the symptoms of PTSD.

In the second hypothesis PTSD symptoms and anger were correlated, but secure partner attachments did not predict anger symptoms. Because anger is so prevalent in the combat veteran population, as suggested by Shay (1994), anger reactions generalized to the intimate partner relationship would likely lead to less secure attachment styles. However, that relationship was not seen with these data. It is possible that anger symptoms are more related to other, insecure attachment styles, such as an ambivalent or

codependent style of partner attachment, but these relationships were not analyzed here. Therefore, more research is needed to determine the relationship between attachment and anger.

Additionally, the Somatic Complaints scale, consisting of aches, pains, and general somatic complaints, was analyzed. Again, the variable was moderately correlated with PTSD symptoms, supporting van der Kolk's notion that "the body keeps the score," (2007). However, neither age nor secure partner attachment was a significant predictor of these somatic complaints. A larger sample may add more clarity to this result as well.

Finally, an avoidant partner attachment, a withdrawal style of relationship, and a lower level of conflictual ambivalent partner attachment seem to be related to higher levels of posttraumatic stress pathology. This is consistent with the idea that the maintaining variable of PTSD, a disorder of recovery, is avoidance. A larger sample size may add clarity to this finding and more complex statistical models would better inform these relationships.

PTSD Treatment. These results have several implications for the treatment of PTSD. A number of effective, individual, evidence-based treatments (EBTs) for PTSD exist: Eye Movement Desensitization and Reprocessing (EMDR), Prolonged Exposure (PE), Cognitive Processing Therapy (CPT), and Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) (Foa, Keane, Friedman, & Cohen, 2009). Considering the results of this study regarding peer relationships and withdrawal patterns of interpersonal interactions, better treatment outcomes may be achieved when a group treatment is used in conjunction with these individual EBTs.

Currently, group treatments are still under investigation with respect to their overall effectiveness, which group modalities are best (e.g., CBT versus interpersonal), and what qualities of group PTSD treatments are most beneficial (e.g., supportive, open, closed, structured, peer-led, etc.). Current treatment guidelines suggest that "group therapy is recommended as a useful component of treatment for PTSD," but recognize that more research is needed to flesh out the specifics of such treatment (Foa et al., 2009, p. 578). Specific group treatments that do seem helpful are CBT approaches, CPT, Seeking Safety, and interpersonal group treatments. However, again, more research is needed on these treatments.

Another implication of these findings would suggest mobilizing a quality social support network outside of the formal therapy session. Addictions treatment is perhaps the forerunner in this approach, using peer sponsors to help the addict cope with real life pressures and issues by providing a peer attachment of sorts to guide and support the addict. A similar approach may be beneficial with combat veterans, especially considering the importance of patterns of relating to others seen in these results. Military veterans have historically been excellent at creating and maintaining various groups of peers socially, as seen with such organizations as the American Legion, Veterans of Foreign Wars (VFW), Marine Corps League, Navy Enlisted Reserves Association (NERA), and countless others. However, one might hypothesize that veterans with PTSD are specifically not engaged in these groups because of the nature of their ailments. Thus, a more formal system of social support is implicated.

Limitations. The main limitation of this study is the small number of participants, which adversely affects the power of the analyses conducted. The small

sample size limited the types of analyses that could be run, as well as the number of predictor variables used in the regression equations. Thus, it is possible that certain relationships were not detected in this study that could be clinically significant. However, despite the low power, moderate effect sizes were seen in many of the results, suggesting a statistical strength of the significant results that were found.

A second limitation is that aspects of the traumatic experience (i.e., the combat exposure) were not examined. In other words, an underlying assumption was that combat exposure in and of itself is traumatic; however, some combat experiences are by nature more traumatic than others. These differing combat trauma intricacies are neither defined nor examined in this study, and such data would likely yield more robust and interesting results.

Future Directions. This study adds to the current research and informs the general question as to what the relationship is among traumatic combat exposure, posttraumatic stress symptomology, and attachment. In the process new questions arise that could be informed by future research. Perhaps the most relevant question is whether adult attachments are stable through the familial separation and combat stress related to combat deployment. It is possible that attachment styles prior to deployment can buffer or facilitate the development of posttraumatic stress symptomology. Likewise, the deployment experience could actually alter previous attachment styles. One way this question could be best answered is by administering the measures of this study at pre-deployment, post-deployment, and follow-up.

Regarding treatment of PTSD, additional questions arise as well. As previously stated, numerous evidence-based treatments for PTSD currently exist. What remains

unknown is how such treatments affect attachments if at all. It is possible that improvements in PTSD severity could actually generalize to alter attachment patterns, as such are related to avoidance and withdrawal patterns of coping. Likewise, it may also be possible that following successful PTSD treatment, disruptions in attachments remain unaddressed, thus suggesting ancillary treatment targeting various relationship ruptures resulting from traumatic exposure. This type of question could also be addressed by administering the measures of this study before and after PTSD treatment.

Finally, results of this study underline the importance of a social support network in the recovery of PTSD with combat veterans. Although veterans returning from combat do not necessarily "turn towards" their romantic partners to process their combat experiences, they likely process combat with others like them who have "been there" and also experiences war. Therefore, peer support groups and in unit peer-facilitated support groups are likely paramount to the recovery of combat-based posttraumatic stress. This relationship could be further explored with additional research targeting peer support groups and social engagement.

Importance. This study adds to existing literature on attachment and combat PTSD. Secure partner attachments are not significantly predictive of less severe PTSD symptoms. It is essential not to take these results as undermining the importance of secure attachments to overall psychological health and well-being. However, the nature of PTSD is such that peer relationships play an important role in the development of and/or treatment of PTSD in combat veterans.

Tables

Table 7

Descriptive statistics for PCL-M and TSI-2 scales

Scale	Minimum	Maximum	Mean	Std. Deviation
PCL-M Total	25	83	58.91	13.65
RL	43	65	48.05	6.84
ATR	28	100	76.41	24.07
SELF	48	91	69.18	12.50
TRAUMA	44	98	75.27	13.45
EXT	39	100	74.55	16.53
SOMA	37	84	65.45	11.58
AA	48	89	71.50	10.00
AAA	47	86	68.77	11.08
AAH	44	87	70.50	11.26
D	50	98	71.23	13.51
ANG	40	97	72.91	14.60
IE	40	95	78.27	12.37
DA	41	86	70.41	11.30
DIS	48	100	72.50	17.78
SOM	37	84	64.45	12.36
SOMP	22	75	59.14	13.63
SOMG	38	85	66.14	12.38
SXD	40	81	56.45	11.95
SXDSC	41	89	57.27	13.70
SXDDSB	42	83	54.32	10.93
SUI	45	100	73.68	20.95
SUII	44	100	70.55	20.96
SUIB	47	100	70.45	22.73
IA	45	85	63.91	9.53
IARA	44	81	65.86	10.42
IARS	42	85	59.82	10.96
ISR	43	91	66.36	13.86
ISRRSA	48	100	73.77	17.07
ISROD	37	77	55.32	12.30
TRB	41	100	74.45	19.95

Appendix A

PCL-M

Instructions: Below is a list of problems and complaints that veterans sometimes have in response to stressful military experiences. Please read each one carefully, then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

	Not at all	*A little bit*	*Moderately*	*Quite a bit*	*Extremely*
1. Repeated, disturbing *memories, thoughts, or images* of a stressful military experience?	1	2	3	4	5
2. Repeated, disturbing *dreams* of a stressful military experience?	1	2	3	4	5
3. Suddenly *acting or feeling* as if a stressful military experience *were happening again* (as if you were reliving it)?	1	2	3	4	5
4. Feeling *very upset* when *something reminded you* of a stressful military experience?	1	2	3	4	5
5. Having *physical reactions* (e.g., heart pounding, trouble breathing, sweating) when *something reminded you* of a stressful military experience?	1	2	3	4	5
6. Avoiding *thinking about or talking about* a stressful military experience or avoiding *having feelings* related to it?	1	2	3	4	5
7. Avoiding *activities or situations* because *they reminded you* of a stressful military experience?	1	2	3	4	5
8. Trouble *remembering important parts* of a stressful military experience?	1	2	3	4	5
9. *Loss of interest* in activities that you used to enjoy?	1	2	3	4	5
10. Feeling *distant or cut off* from other people?	1	2	3	4	5
11. Feeling *emotionally numb* or being unable to have loving feelings for those close to you?	1	2	3	4	5
12. Feeling as if your *future* somehow will be *cut short*?	1	2	3	4	5
13. Trouble *falling or staying asleep*?	1	2	3	4	5
14. Feeling *irritable* or having *angry outbursts*?	1	2	3	4	5
15. Having *difficulty concentrating*?	1	2	3	4	5
16. Being "*superalert*" or watchful or on guard?	1	2	3	4	5
17. Feeling *jumpy* or easily startled?	1	2	3	4	5

PCL-M for DSM-IV (11/1/94) Weathers, Litz, Huska, & Keane National Center for PTSD - Behavioral Science Division

Appendix B

ACIQ

Thank you for agreeing to fill out this survey for Marshall University. Do not put your name on this, as all responses will be confidential. (We are interested in averaging your responses with others at this point in time).

The word "partner" refers to your most important spouse, fiancé, steady date or a significant romantic interest in your life. If you are not currently involved in such a relationship, think about your most significant past partner and answer the questions with that relationship in mind. If you never had a steady or meaningful relationship in your life, leave the questions on partners blank.

Questions about your family, mother, and father refer to the family you grew up in. When answering questions about members of your family, think about who or what was true, typical, or most important while you were growing up (during the school age years). If you didn't have a mother or father figure, leave those questions blank. Although it may seem as if you are answering the same questions over and over, you are not. It is just that the same question is asked about different people.

Write your answers on the scoring sheets by filling in the appropriate circle. When you get to item 201, please start on the next answer sheet with # 1. Please use the following scale to estimate how often these statements apply to you.

A = never B = sometimes C = often D = always

1. When my mother felt sad for days, I did too.
2. When it comes to anger, those close to me have a short fuse.
3. If I don't trust other people then I will not be disappointed.
4. I like to withdraw from people when I am stressed.
5. I satisfy my partner's sexual needs.
6. I feel scared.
7. I felt bad when I did not include my father in things.
8. I need a close relationship with my partner.
9. When I had an argument with my mother, I got very angry.
10. Some people deserve to be hit.
11. The same thoughts run through my head for days.
12. I am worthless.
13. When I have an argument with my partner, I get very angry.
14. My father had hostile feelings towards me.
15. Family rules were unclear.
16. I liked being taken care of by my mother.
17. I go to great lengths to prevent my partner from being angry with me.
18. My family followed rules.
19. I worry that my partner will find somebody else.
20. It was good to keep your feelings to yourself in our family.
21. I had a safe secure relationship with my father.
22. I like to be the best at things.
23. I change my feelings to make my partner happy.

A = never B = sometimes C = often D = always

24. I feel better about myself when I win.
25. A higher power/God is important to me.
26. My partner and I have a special sexual connection.
27. I was more committed than my mother in our relationship.
28. My family did things the same way each time.
29. I had a good relationship with my father.
30. I tried to please my mother.
31. I feel good when I change my partner for his/her own good.
32. I feel fearful.
33. I do not amount to much as a person.
34. My father tried to change me for my own good.
35. I can usually depend on other people when I need them.
36. I like to get away from everyone when there is too much confusion.
37. My mother got angry with me.
38. I try to figure out what my partner wants.
39. I created an image of who I thought I was supposed to be in my own family.
40. It is important for me to be right.
41. I tried to like the same things that my mother did.
42. My father and I were close in every way.
43. I feel like a punching bag for other people.
44. My family made decisions the same way every time.
45. I feel uncomfortable with my friends.
46. I am distracted in conversations with others because I am thinking about something else that is important.
47. I feel like hitting those people who are close to me.
48. When I was stressed, I liked to stay away from my father.
49. It was good to keep feelings from my family.
50. It is important for me to know what my partner is doing.
51. I feel resentful because I can not pursue my own interests.
52. I needed a close relationship with my father.
53. My partner makes me angry.
54. I went to great lengths to get my mother to like me.
55. A disagreement with my partner ends in a shouting match.
56. I like to be alone when I am troubled.
57. I had a safe secure relationship with my mother.
58. I feel guilty for not taking care of my family's duties.
59. My partner gets hostile feelings towards me.
60. I say I am fine when I am really not.
61. Being by myself without my father was painful.
62. When my partner feels sad for days, I do too.
63. After an argument with my father, I tried to avoid him.
64. I try harder in our relationship than my partner.

A = never B = sometimes C = often D = always

65. I feel tense.
66. I miss what others say because I am working on something else in my head.
67. I went to great lengths to prevent my mother from being angry with me.
68. I had the greatest father in the world.
69. I like to do things right or not do them at all.
70. I am turned on if I see a pornographic movie.
71. People in my family had firm expectations for how we were supposed to feel.
72. It is important for me to achieve.
73. I wish others would not call or talk to me when I am upset.
74. When it comes to anger I am patient.
75. When someone is mean to me I feel like hitting them.
76. I liked being taken care of by my father.
77. Other people should work hard.
78. I worry about what my partner is doing during the day.
79. I am turned on sexually when I see someone in a magazine half undressed.
80. It is good to trust other people.
81. Being by myself without my partner is painful.
82. My anger is a good cover-up for other feelings that I have.
83. If I am really upset, my partner is not good at helping me deal with it.
84. I trust other people.
85. My mother did not fully understand me.
86. I have a hard time getting my mind off of problems.
87. I say I am happy when I really am not.
88. Other people feel better about themselves when they win.
89. I tried to please my father.
90. After an argument with my partner, I try to avoid him/her.
91. It was important to look good in my family.
92. I worry about being left alone without my partner.
93. I was more committed than my father in our relationship.
94. When it comes to anger, I have a short fuse.
95. I tried harder in our relationship than my mother.
96. My family believed that family rules should not change.
97. My partner is there when I need to talk about a problem.
98. When I got angry with my father, I liked to get away from him for awhile.
99. I do not want others to know what is going on in my life.
100. My feelings for my father were confusing.
101. A higher power/God is not important to me.
102. When I was stressed, I liked to stay away from my mother.
103. My church/place of worship is important to me in my life.
104. When I had an argument with my father, I got very angry.
105. My partner and I are close in every way.
106. I am afraid of losing control.
107. I tried to like the same things my father did.

A = never B = sometimes C = often D = always

108. Some people deserve to be put in their place.
109. I say I am not angry when I really am.
110. My partner is sexually appealing to others.
111. When I was really upset, my mother was not good at helping me deal with it.
112. Some people deserve to be criticized.
113. A higher power/God guides my life.
114. I try to like the same things that my partner does.
115. I changed my feelings to make my mother happy.
116. Emotional extremes were frowned upon in my family.
117. I go to great lengths to get my partner to like me.
118. I have fun with friends.
119. When I was upset, my father helped me deal with it.
120. It is good to be suspicious about the motives of others.
121. I am easily turned on sexually.
122. My mother had hostile feelings towards me.
123. I wish others would leave me alone.
124. My partner does not fully appreciate me.
125. Sex is best when it is accompanied by warm feelings.
126. I had the greatest mother in the world.
127. I should work hard.
128. I worried about being left alone without my mother.
129. When I got really mad at my father, I felt cold and rejecting towards him.
130. Arguments with my mother involved a shouting match.
131. I hate it when my partner is around people who might flirt.
132. My friends know how I feel.
133. It is good to keep a stiff upper lip even when I hurt inside.
134. Once I start thinking about a problem, I think about it over and over again.
135. Basically I am good.
136. I have pressed for and gotten sex even though my partner wasn't interested at the time.
137. Being by myself without my mother was painful.
138. I am very concerned about details.
139. I went to great lengths to get my father to like me.
140. I am more strongly committed in our relationship than my partner.
141. I feel afraid, but do not know why.
142. I went to great lengths to prevent my father from being angry with me.
143. I tried to figure out what my mother wanted.
144. My partner does not understand me fully.
145. Others are turned on sexually when they see someone in a magazine half undressed.
146. I use a lot of energy trying to get people to do what I want them to do.
147. After an argument with my mother, I tried to avoid her.
148. I feel ashamed when I feel sad, rejected, fearful, lonely, dependent or hurt.
149. I feel comfortable with my friends.

A = never B = sometimes C = often D = always

150. I try to change my partner for his/her own good.
151. I needed a close relationship with my mother.
152. Other people like me.
153. If I have an argument with my partner, I want to run away from them for awhile.
154. It is hard to get some things out of my mind.
155. Keeping busy helps me ignore my feelings.
156. When I had an argument with my mother, I wanted to run away from her for awhile.
157. I changed my feelings to make my father happy.
158. I avoid people who do not do what I expect them to do.
159. My feelings for my partner are confusing.
160. My mother was there when I needed to talk about a problem.
161. When my father felt sad for days, I did too.
162. I enjoy playing or going out with my friends.
163. Sex with my current partner is good.
164. When I am upset, my partner helps me deal with it.
165. I think about every little detail of a problem, and then think about it again and again.
166. My mother and I were close in every way.
167. When bad feelings come to me, I want to be by myself.
168. It is hard to know what my partner wants.
169. Arguments with my mother were like a love-hate kind of thing where feelings went back and forth.
170. I feel better about myself when I lose.
171. I tried harder in our relationship than my father.
172. I get angry when others flirt with my partner.
173. My father was there when I needed to talk about a problem.
174. I go from one thing to another trying to be satisfied.
175. I am concerned with being moral.
176. I like sex.
177. I want to be alone.
178. My partner and I are equally committed in our relationship.
179. My mother tried to change me for my own good.
180. I think about sex with others.
181. It is easy to ask my friends for help.
182. I can think about the same person or thing for days.
183. When I got angry with my mother, I liked to get away from her for awhile.
184. I worry about little things.
185. My father did not fully understand me.
186. Sometimes I fear getting too close to my partner.
187. It was hard to know what my mother wanted.
188. I worried about being left alone without my father.
189. My mother was supportive when I had a problem.
190. My partner gets angry with me.
191. It is best to avoid situations that I can not control.

A = never B = sometimes C = often D = always

192. I attend a place of worship/church.
193. Family rules were clear.
194. When I am sick or upset, I like to be with my partner.
195. I had a good relationship with my mother.
196. My partner satisfies my sexual needs.
197. I repeat the same habits over and over.
198. I am a bad person.
199. My friends will always be there when I need them.
200. A disagreement with my mother ended in a shouting match.

GO TO NEXT ANSWER SHEET AND PUT QUESTION 201 ON 1, 202 ON 2 ETC.

A = never B = sometimes C = often D = always

201. When I had an argument with my father, I wanted to run away from him for awhile.
202. I feel bad when I do not include my partner in things.
203. When I was upset, my mother helped me deal with it.
204. If I get angry with my partner, I like to get away from him/her for awhile.
205. I felt good when I changed my father for his own good.
206. I feel ashamed when I have to stand up for myself.
207. I need to know where my partner is.
208. I wish others would come over and visit when I am upset.
209. When I got really mad at my mother, I felt cold and rejecting towards her.
210. I have a lot to be ashamed of.
211. My father was supportive when I had a problem.
212. When I get angry, I explode.
213. Arguments with my partner are like a love-hate kind of thing where feelings go back and forth.
214. I felt bad when I did not include my mother in things.
215. A disagreement with my father ended in a shouting match.
216. I use a lot of energy worrying about my problems.
217. My partner is supportive when I have a problem.
218. I talk about what turns me on sexually with my partner.
219. Arguments with my partner involve a shouting match.
220. My feelings for my mother were confusing.
221. I make my partner angry.
222. I feel that something bad is about to happen.
223. When I get really mad at my partner, I feel cold and rejecting towards him/her.
224. If people would just change a little bit then most of my problems would go away.
225. I try to please my partner.
226. I tried to figure out what my father wanted.
227. I avoid situations that I can not control.
228. When I was really upset, my father was not good at helping me deal with it.
229. It is important for me to know what my partner is doing.
230. When I am angry, I take it out on others.

A = never B = sometimes C = often D = always

231. My partner has a bad temper.
232. I have a lot of good friends.
233. When I was sick or upset, I liked to be with my mother.
234. I like being taken care of by my partner.
235. I hate it when someone does something the wrong way.
236. If someone treats you too well, it is wise to be suspicious of them.
237. If I was answering the above questions about my relationship with my mother, based on our present relationship, I would still respond the same way.
238. If I was answering the above questions about my relationship with my father, based on our present relationship, I would still respond the same way.
239. If I was answering the above questions about my relationship with my family, based on our present relationship, I would still respond the same way.
240. Your sex: a) Male b) Female
241. Your age: a) 17-21 b) 22-35 c) 36-49 d) 50-65 e) 66+
242. Did either of your parents die while you were growing up?
a) mother b) father c) both d) neither
243. Were your parents divorced? a) Yes b) No
244. If yes on parental death or divorce, how long ago was it? a)0-2yrs b) 3-5 c) 8-12 d) 13-20 e) 21+
245. If yes on parental death or divorce, who did you live with? a) mother b) father c) relative d) friends e) others
246. How long did you live in a single parent home? a) 0 b) 1-2 yrs c) 2-5 yrs d) 6-10 yrs e) 11+ yrs
247. How many brothers and/or sisters do you have?
a) 0 b) 1 c)2 d)3 e)4 or more
248. Were you the: a) oldest b)middle c) youngest
249. Your father's education a) 3-11 grade b) high school grad. c) some college d) college grad e) graduate school.
250. Your mother's education a) 3-11 grade b) high school grad. c) some college d) college grad e) graduate school.
251. Your race: a) Hispanic b) Black c) Native American d) White e) other
252. Are you married? a) Yes b) No c) Divorced d) widowed
253. If not married, are you currently in a relationship? a) Yes b) No
254. If yes, to the above questions(#252 or #253), how long? a) 0-6mo b) 7mo-1yr c) 1-2 yrs d) 2-4 yrs e) 5+ yrs
255. Your religion a) Christian b) Jewish c) Muslim d) other religion not listed e) no religion
256. Family income growing up a) $1,000 - $10,000 b) $11,000 - $20,000 c) $21,000 - $50,000 d) $51,000 - $100,000 e) $100,000+
257. Family income now a) $1,000 - $10,000 b) $11,000 - $20,000 c) $21,000 - $50,000 d) $51,000 - $100,000 e) $100,000+
258. Your education a) 3-11 grade b) high school grad. c) some college d) college grad e) graduate school.
259. In what branch of the US military were you serving when the identified traumatic

event(s) occurred? a) US Army b) US Air Force c) US Navy d) US Marine Corps e) US Coast Guard

260. How much time has passed since the traumatic event or events? a) less than a year b) 1 – 3 years c) 3 – 5 years d) 5 – 10 years e) more than 10 years.

261. What is your current military status? a) active duty b) drilling reservist/guards c) inactive ready reservist d) retired.

Appendix C

1 ABUSER SCALE (ABUSER) (6)

I feel like hitting those people who are close to me.

Some people deserve to be put in their place.

2 AMBIVALENT ATTACHMENT - FATHER (AMBDAD) (6)

My feelings for my father were confusing.

Arguments with my father were a love-hate kind of thing.

3 AMBIVALENT ATTACHMENT - MOTHER (AMBMOM) (8)

My feelings for my mother were confusing.

Arguments with my mother were a love-hate kind of thing.

4 AMBIVALENT ATTACHMENT - PARTNER (AMBPART) (9)

My feelings for my partner are confusing

Arguments with my partner are a love-hate kind of thing.

5 ANGER (9)

I feel resentful because I can not pursue my own interests.

When I get angry, I explode.

6 ANXIETY (ANX) (6)

I feel that something bad is about to happen.

I use a lot of energy worrying about my problems.

7 AVOIDANT ATTACHMENT - FATHER (AVDAD) (7)

After an argument with my father, I tried to avoid him.

When I got really mad at my father, I felt cold and rejecting towards him.

8 AVOIDANT ATTACHMENT - MOTHER (AVMOM) (9)

After an argument with my mother, I tried to avoid her.

When I got really mad at my mother, I felt cold and rejecting towards her.

9 AVOIDANT ATTACHMENT - PARTNER (AVPART) (9)

After an argument with my partner, I tried to avoid him/her.

When I got really mad at my partner, I felt cold and rejecting towards him/her.

10 CODEPENDENCE-ENMESHED MOTHER (CODMOM) (14)

I changed my feelings to make my mother happy.

When my mother felt sad for days, I did too.

11 CODEPENDENCE-ENMESHED FATHER (CODDAD) (15)

I changed my feelings to make my father happy.

When my father felt sad for days, I did too.

12 CODEPENDENCE-ENMESHED PARTNER (CODPART) (14)

I change my feelings to make my partner happy.

When my partner felt sad for days, I did too.

13 CONTROL (CTRL) (11)

I avoid situations that I can not control.

If people would just change a little bit then most of my problems would go away.

14 DENIAL (5)

It is good to keep a stiff upper lip even when I hurt inside.

I say I am happy when I really am not.

15 FAMILY RIGIDITY VS CHAOS (FAMRIGID) (5)

My family believed that family rules should not change.

Family rules were clear.

16 FAMILY SUPPRESSION OF FEELINGS (FSUP) (6)

People in my family had firm expectations for how we were supposed to feel.

It was good to keep your feelings to yourself in our family.

17 JEALOUSY SCALE (JEAL) (8)

I worry that my partner will find somebody else.

I get angry when others flirt with my partner.

18 OBSESSIVE-PREOCCUPIED THINKING (OB) (9)

Once I start thinking about a problem, I think about it over and over again.

I am distracted in conversations with others because I am thinking about something else that is important.

19 PEER RELATIONS (PEER) (7)

My friends will always be there when I need them.

My friends know how I feel.

20 PERFECTIONISM (PERF) (10)

I like to be the best at things.

I like to do things right or not do them at all.

21 RELIGION (RELG) (5)

I attend a place of worship/church.

A higher power/God is important to me.

22 SEXUAL AROUSAL (SAR) (6)

I am turned on if I see a pornographic movie.

I am easily turned on sexually.

23 SECURE FATHER (SECDAD) (6)

My father was there when I needed to talk about a problem.

When I was upset, my father helped me deal with it.

24 SECURE MOTHER (SECMOM) (7)

My mother was there when I needed to talk about a problem.

When I was upset, my mother helped me deal with it.

25 SECURE PARTNER (SECPART) (5)

My partner is there when I need to talk about a problem.

When I am upset, my partner helps me deal with it.

26 SHAME (10)

I feel ashamed when I feel sad, rejected, fearful, lonely, dependent or hurt.

I do not amount to much as a person.

27 SEXUAL INTIMACY (SEXINT) (6)

I talk about what turns me on sexually with my partner.

Sex is best when it is accompanied by warm feelings

28 MISTRUST (MTR) (6)

It is good to be suspicious about the motives of others.

If I don't trust other people then I will not be disappointed.

29 WITHDRAW/ENGAGEMENT (WITHDRAW) (9)

I like to withdraw from people when I am stressed.

I do not want others to know what is going on in my life.

Appendix D

MARSHALL UNIVERSITY
www.marshall.edu

Office of Research Integrity
Institutional Review Board
401 11th St., Suite 1300
Huntington, WV 25701

FWA 00002704

IRB1 #00002205
IRB2 #00003206

September 26, 2011

Billy Rutherford, Psy.D.
VAMC

RE: IRBNet ID# 241855-1
At: Marshall University Institutional Review Board #1 (Medical)

Dear Dr. Rutherford:

Protocol Title:	[241855-1] Effects of Partner Attachment Quality on PTSD Severity with Combat-Exposed Veterans	
Expiration Date:	September 26, 2012	
Site Location:	VA	
Submission Type:	New Project	APPROVED
Review Type:	Expedited Review	

In accordance with 45CFR46.110(a)(7), the above study and informed consent were granted Expedited approval today by the Marshall University Institutional Review Board #1 (Medical) Chair for the period of 12 months. The approval will expire September 26, 2012. A continuing review request for this study must be submitted no later than 30 days prior to the expiration date.

If you have any questions, please contact the Marshall University Institutional Review Board #1 (Medical) Coordinator Trula Stanley, MA, CIC at (304) 696-7320 or stanley@marshall.edu. Please include your study title and reference number in all correspondence with this office.

Appendix E

Marshall University IRB	
Approved on:	9-26-11
Expires on:	9-26-12
Study number:	241855

Consent to Participate in Research – Verbal Presentation

Hello, my name is Robert Shura, and I am a psychology doctoral student at Marshall University. You have been chosen at random to be in a study about psychological problems encountered following exposure to war. This study involves research. The purpose of this research study is to examine how relationships may contribute to psychological problems resulting from exposure to war. This will take about an hour-and-a-half of your time. If you choose to be in the study, you will be expected to complete three paper-and-pencil questionnaires: 1. the PTSD Checklist, Military Version, 2. The Trauma Symptom Inventory, 2nd Edition, and 3. The Attachment and Clinical Issues Questionnaire. You will not write your name on any of the measures.

The only foreseeable risk of this study is potential discomfort that may occur in completing some of the items. However, if an item is too upsetting, you do not have to answer it. There are no foreseeable benefits to you for participating in this study. There is no cost or payment to you. If you have questions while taking part, please stop me and ask. You will remain anonymous.

If you have questions about this research study you may call the Principle Investigator Bill Rutherford at 304-429-6755, ex: 3714 and he will answer your questions. If you feel as if you were not treated well during this study, or have questions concerning your rights as a research participant call the Marshall University Office of Research Integrity (ORI) at (304) 696-4303.

Your participation in this research is voluntary, and you will not be penalized or lose any benefits if you refuse to participate or decide to stop. May I continue?

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Curriculum Vitae

Robert Desmond Shura, M.S.
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EDUCATION

Marshall University, Huntington, WV 08/2008-present
Current student, Doctor of Psychology: Clinical Psychology – **APA accredited**
Dissertation: *Effects of Partner Attachment Quality on PTSD Severity with Combat-Exposed Veterans*
Dissertation status: proposed 05/2011; IRB approved 09/26/2011.

Capella University 07/2008
Master of Science: Clinical Psychology
Integrated Project: *Group Therapy for Male Survivors of Complex Trauma*

Pennsylvania State University, University Park, PA 12/2004
Bachelor of Arts: Psychology, Anthropology, Religious Studies, International Studies
- Minor in Spanish.

La Universidad de Salamanca, Salamanca, Spain Spring 2001
Study abroad student, 15 credits

Tel Aviv University, Israel Summer 2000
Study abroad student, 6 credits

Penn State Altoona College, Altoona, PA 1999-2001
Division of Undergraduate Studies

PRACTICA EXPERIENCE

VA Primary Care Outpatient Clinic 08/2011-05/2012
Prestonsburg, KY
Doctoral Practicum
Supervisors: Jonathan Hoopes, Ph.D. and Roslyn Feierstein, Ph.D., ABPP
- Individual therapy: PTSD (CPT), depression, and TBI (CogSMART).
- Group therapy: ongoing depression group.
- Assessment: neuropsychological assessment, diagnostic clarity, and intake assessments.
- Didactics: Motivational Interviewing (VA local training) - 16 hours; Advanced MMPI-2/MMPI-2-RF (VA training with Roger Greene, Ph.D.) – 16 hours.

VA Medical Center 08/2010-08/2011
Huntington, WV
Doctoral Practicum
Supervisors: Roslyn Feierstein, Ph.D., ABPP and Clifton Hudson, Ph.D.

- Individual therapy: EMDR, CPT, biofeedback, CBT, and supportive therapy.
- Participation in PTSD Clinical Team (PCT): intake assessment and therapy.
- Assessments: neuropsychological screening and full batteries, AD/HD, cognitive testing, pre-surgery evaluations (chronic pain, morphine pump, spinal cord stimulator, organ transplant, bariatric surgery, and penile implant), diagnostic clarity, and response-bias/malingering.
- Didactics: Bariatric surgery (Chief of Surgery) – 1 hour; Rorschach (Chief of Mental Health) – 20 hours.

Marshall University Psychology Clinic 01/2010-08/2010
Huntington, WV
Doctoral Practicum
Supervisors: Jennifer Tiano, Ph.D., Thomas Linz, Ph.D., and Marianna Footo-Linz, Ph.D.

- Individual and couples therapy with primarily a college student population.
- Assessment: AD/HD and learning disabilities.
- Outreach and consultation: area Head Start Program (state-funded preschool) and community psychoeducation programming.

Blair Family Solutions, LLC 10/2007-06/2008
Altoona, PA
Master's Practicum
Supervisors: R. Scott Lambert, M.A. and Jade Biesinger, M.S.W.

- Conducted Structural Family Therapy, Mobile Therapy, and Behavioral Specialist Consultant work with Behavioral Health Rehabilitation Services (BHRS) and Family-Based models.
- Assessment: cognitive and socio-emotional functioning testing.
- Client population: children and adolescents age 3-18 for complex trauma, attachment disorders, Autism-spectrum, and AD/HD.
- Contributed to data collection for standardization updates for Trauma Symptom Review for Adolescents (TSRA) and Trauma Symptom Inventory-2 (TSI-2) in collaboration with PAR Inc. and John Briere, Ph.D.

WORK EXPERIENCE

Blair Family Solutions, LLC. 05/2012-06/2012; 12/2008-01/2009
Altoona, PA
Psychological Associate

- Conducted psychological evaluations, re-evaluations, and assessment in a private setting with a child and adolescent population.

Blair Family Solutions, LLC. 06/2008-08/2008
Altoona, PA
Group Therapist/Family Mobile Therapist

- Facilitated an 8 week, 4 day per week, 6 hour per day group of 11 child and adolescent male victims of complex trauma in a summer therapeutic activity program (STAP) format.
- Conducted present-centered trauma group therapy, psychoeducation groups, skill building activities, as well as community, social, and physical activities.
- Supervised two bachelor-level staff who aided with group.
- Conducted program outcome testing.
- Maintained treatment planning.
- Conducted in-home, family systems therapy with co-therapist.

Cove Forge Behavioral Health 06/2006-02/2007
Williamsburg, PA
Child Care Supervisor.

- Duties included: coordinating staff, supervising the shift, monitoring client and staff safety, continual communication between all shifts and positions, and all duties of the Mental Health Specialist.

Cove Forge Behavioral Health 05/2005-06/2006
Williamsburg, PA
Mental Health Specialist.

- Duties included: facilitating focus groups, supporting ropes therapy groups and clinical groups, involvement in staff and client safety, monitoring client daily routines, continuous involvement in client progress, and proper documentation with a male, adolescent MH/MR population in a resident treatment facility setting. Treatment modalities included behavioral techniques (token economy) and Reality Therapy/Choice Theory.

United States Navy Reserves
Inactive Ready Reserves 03/2011-03/2013
Drilling Reserves 03/ 2005-03/2011
Ebensburg, PA

- Petty Officer 2nd class (E-5) with NMCB 23 det. 0523; builder (Seabees).
- Training and application through real-world use of tactical construction skills.
- Assistant Annual Training coordinator; Assistant Master-at-Arms
- Mobilization to Iraq in support of Operation Iraqi Freedom: 01/2009-11/2009
    - Served as projects crew leader and combat lifesaver; earned the Seabee Combat Warfare Device and a Navy/Marine Corps Achievement Medal.

TRAININGS/CERTIFICATIONS

EMDR Basic Training; EMDR Institute, 50 hours	2011
Child Traumatic Grief CBT online training, MUSC, 6 hours	2011
Cognitive Processing Therapy, regional VA training; VAMC Memphis, 23 hours	2011
TF-CBT online training, MUSC, 10 hours	2010

Level I training in Gottman Method Couples Therapy, Gottman Institute, 11 hours 2009

SCHOLARSHIP AND GRANT AWARDS

Marshall University Research Corporation Summer Thesis Grant 2011
Bayard D. Kunkle Scholarship 2000
Minnie Patton Stayman Scholarship 2000
Blair County Academic Excellence Scholarship 1999

PROFESSIONAL ASSOCIATIONS

Student member of:
International Neuropsychological Society (INS)
American Psychological Association Division 40 (Clinical Neuropsychology)
American Psychological Association Division 56 (Trauma Psychology)
International Society of Traumatic Stress Studies (ISTSS)
American Psychological Association (APAGS)
Pennsylvania Psychological Association (PPAGS) 2007-2009

TEACHING EXPERIENCE

Marshall University: Teaching Assistant with full course responsibility.
Supervisor: Stephen Mewaldt, Ph.D., Psychology Department Chair

- Psy 311, Child Development Spring, 2012
- Psy 311, Child Development Fall, 2011
- Psy 311, Child Development Spring, 2011
- Psy 201, General Psychology Fall, 2010

RESEARCH EXPERIENCE

Marshall University
Dissertation: *Effects of Partner Attachment Quality on PTSD Severity with Combat-Exposed Veterans*
Committee: Marc Lindberg, Ph.D. (chair), April Fugett-Fuller (co-investigator, statistics advisor), Ph.D., Billy Rutherford, Psy.D (principal investigator).

- Use of the PTSD Checklist-Military version, Trauma Symptom Inventory-2, and Attachment and Clinical Issues Questionnaire to study the effects of intimate partner attachment on PTSD severity and symptom presentation. Data collection conducted with PTSD Clinical Team intakes with male Veterans at a VAMC.

PUBLISHED WORKS/PRESENTATIONS

Shura, R. (2009). Thinking about drug use. *Behavior Analysis Digest International, 21*, p. 3.
Shura, R. (2008). *Complex traumatic reactions with a population*. Presentation for Psychology Awareness Week hosted by Marshall University Psi Chi.