

ATTACHMENT TO THERAPIST, THE WORKING ALLIANCE, AND EMOTIONAL  
PROCESSING OF TRAUMATIC MATERIAL IN SESSION AMONG VETERANS  
DIAGNOSED WITH POSTTRAUMATIC STRESS DISORDER

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In Partial Fulfillment

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Doctor of Philosophy

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by

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The undersigned, appointed by the dean of the Graduate School, have examined the dissertation entitled

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PROCESSING OF TRAUMATIC MATERIAL IN SESSION AMONG VETERANS  
DIAGNOSED WITH POSTTRAUMATIC STRESS DISORDER

presented by Tina Lunsford Peterman

a candidate for the degree of Doctor of Philosophy

and hereby certify that, in their opinion, it is worthy of acceptance.

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## DEDICATION

In loving memory of my father, Warren R. Lunsford, CMSGT, USAF (Ret.), for the gift of laughter; and my grandmother, Philomina Elizabeth Pfeiffer, for the gift of peace. I miss you.

This is dedicated to my husband, Paul H. Peterman, fellow scholar, lover and best friend. Thank you for your unwavering love, incredible patience, and calming presence throughout my undergraduate and graduate school years. Without you, this journey would have been impossible.

I also dedicate this to my children, Jessica, Elizabeth and Macie. You are the center of my world. Being your mother is the greatest honor I will ever know. And to my grandson, Jayden Paul Peterman, who brings me joy. May your way be bright and beautiful, little traveler.

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## ABSTRACT

Combat related posttraumatic stress (PTSD) continues to be a pervasive phenomenon, and world-wide PTSD rates are rising. Although a number of treatment approaches are utilized to address traumatic stress, veterans diagnosed with this disorder often have PTSD symptoms decades after the original combat trauma. Emotional processing appears to be a critical component in most effective treatments for PTSD. However, many veterans are unable to engage in this activity. Theory and research suggest that a secure attachment to the therapist and a strong working alliance will facilitate readiness to process emotional material in session. Sixty-eight self-selecting veterans diagnosed with combat-related PTSD were administered the Client Attachment to Therapist Scale (CATS), the Working Alliance Inventory-Short Form (WAI-SF), the Post-traumatic Checklist-Military Version (PCL-M), the University of Rhode Island Change Assessment scale (URICA), and a demographic questionnaire to examine the possible associations between adult attachment, the working alliance, and readiness to process traumatic material in session. Results suggest that fostering a strong, secure emotional bond may play a central role in working with veterans with posttraumatic stress. Veterans' attachment to their therapists appears to affect whether there will be agreement on the goals and tasks of therapy, as well as motivation to carry out these tasks. Motivational interviewing may be a useful tool to assist veterans in weighing the pros and cons of addressing their PTSD. Limitations of the study and future research were also discussed.

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## INTRODUCTION AND LITERATURE REVIEW

“In thy faint slumbers I by thee have watch'd,  
And heard thee murmur tales of iron wars...”

-- Shakespeare, King Henry IV (Part I), Act II, Scene III

Post-traumatic stress disorder (PTSD) has long been recognized in both the oral and literary traditions as a possible consequence of trauma. From Homer's *Iliad* to Shakespeare's *King Henry the IV*, the symptoms of PTSD have been part of common lore for thousands of years, although not always under the rubric of post-traumatic stress disorder (Shay, 1994). A number of books have also addressed this topic recently in the popular press (Coleman, 2006; Matsakis, 1996; O'Brien, 1990; Tick, 2005). However, almost three decades after its inception as a diagnosis in the *Diagnostic and Statistical Manual* of the American Psychiatric Association (1980), a complete understanding of PTSD by mental health practitioners is still evolving. Furthermore, PTSD continues to be a pervasive phenomenon (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995.).

Worldwide, PTSD rates are rising. In a study examining Global Burden of Disease (GBD) estimates, Michaud, Murray and Bloom (2001) cited GBD findings which project that war will be the 8<sup>th</sup> leading cause of disease and injury by the year 2020. In comparison, in 1990 war ranked 16<sup>th</sup> in GBD estimates (Murray & Lopez, 1996). The correlation between war and PTSD has been well documented in the literature. This has been the case with regard to nations (Goto, & Wilson, 2003; Lamott, 2005; Luce, Firth-Cozens, Midgley, & Burges, 2002; Schreuder, Kleijn, & Rooijmans, 2000; Shlosberg, & Strous, 2005), wars (Kaylor, King & King, 1987; Sutker, Davis, Uddo, & Ditta, 1995), gender (Fontana & Rosenheck, 2006; King, King, Gudanowski, & Vreven, 1995; Norris, Perilla, Ibañez, & Murphy, 2001; Paul, 1985; Rogers & Nickolaus,

1987), age (Dyregrov, Gjestad, & Raundalen, 2002; McIntyre & Ventura, 2003; Spiro, Schnurr, & Aldwin, 1994; Weintraub & Ruskin, 1999; Yehuda, Golier, Tischler, Stavitsky & Harvey, 2005), civilian status (Chauvin, Mugaju, & Comlavi, 1998; Neuner, Schauer, Roth, & Elbert, 2002; Yehuda, Elkin, Binder-Byrnes, Kahana, Southwick, Schmeidler, & Giller, 1996), non-combat military occupational specialties (McCarroll, Ursano, & Fullerton, 1995; Rogers, & Nickolaus, 1987) and among prisoners of war (Kluznick, Speed, Van Valkenburg & Magraw, 1986; Sutker & Allain, 1996).

Additionally, the long-term effects of PTSD are continuing to manifest in aging veterans from World War II, Korea, Vietnam, and Desert Storm (Beckham, Moore, Feldman, Hertzberg, Kirby, & Fairbank, 1998; McCranie, & Hyer, 2000; Schnurr, Ford, Friedman, Green, Dain, & Sengupta, 2000; Vasterling, Brailey, Constans, & Sutker, 1998). In some cases, PTSD symptoms do not begin to surface until veterans reach mid-life and beyond (Buffum & Wolfe, 1995; Lipton & Shaffer, 1986). Medical problems and retirement accompany advancing age, engendering a focus on mortality that veterans may not have thought about since they were in combat (Buffum & Wolfe, 1995). In addition, with retirement there is often a tendency to experience more time to ruminate on past traumatic experiences and less time to engage in activities to distract from PTSD symptomology. Increasing age also brings changes in cognition that affect the likelihood that traumatic memories will re-emerge (Buffum & Wolfe, 1995; Floyd, Rice, & Black, 2002).

The symptoms of PTSD are summarized in the fourth revised edition of the American Psychiatric Association's (2000) *Diagnostic and Statistical Manual*. They include reexperiencing the trauma through any one or a combination of the following:

intrusive memories of the traumatic event, recurrent nightmares, or flashback episodes in which it seems as if the traumatic event were actually reoccurring. In addition, PTSD often includes physical and psychological distress at external or internal reminders of the trauma. Somatic symptoms of distress are consistent with physiological responses in other anxiety disorders and may include shortness of breath, increased heart rate, and increased startle responses. Hypervigilance is also a symptom of PTSD, that is, a sense of constantly being alert to the possibility of danger to oneself and/or loved ones. In addition to hypervigilance and reexperiencing of the traumatic event through intrusive memories and/or nightmares, individuals suffering from PTSD often encounter symptoms of avoidance such as isolating from others, emotional detachment, a feeling of indifference, and, in severe cases, dissociation from reality (Hermann, 1992/1997). The psychological and somatic discomforts that accompany PTSD are important factors in the tendency for individuals to avoid these symptoms, thus perpetuating the disorder.

The long-term health effects of chronic PTSD on the body are well documented (David, Woodward, Esquenazi, & Mellman, 2004; Schnurr, & Jankowski, 1999; Wagner, Wolfe, Rotnitsky, Proctor, & Erickson, 2000) and these effects will continue to shape veterans' use of the medical health care system for decades to come. In addition, the deployment of American troops in Operation Iraqi Freedom and Operation Enduring Freedom (OIF/OEF) has also placed demands on the mental health care system for competent therapists to meet the needs of many of these men and women. Army soldiers and Marines participating in OEF forces have experienced multiple tours of duty in Iraq and/or Afghanistan, as well as extended deployments. According to a recent Mental Health Advisory Team survey, soldiers deployed longer than six months or serving

multiple tours of duty in combat operations in Iraq are more likely to experience a mental health problem (U.S. Department of Defense, 2007). The study also indicated that morale among Army soldiers declined the longer the length of deployment. Current tours of duty for U.S. Army soldiers in Iraq have increased from 12 to 15 months duration. In addition, soldiers rotate home for 12 months before they are eligible for redeployment. In contrast to current policy, the Mental Health Advisory Team recommended an 18 to 36 month rest stateside between combat tours (U.S. Department of Defense, 2007). According to recent military estimates, as many as 62% of soldiers and 66% of marines stationed in Iraq knew someone seriously injured or killed (U.S. Department of Defense, 2007). These factors combine to increase the prospect of mental health related problems among at risk military personnel.

#### PTSD Treatments

A number of approaches have been used in the treatment of PTSD with varying degrees of efficacy. A useful starting point in reviewing these various treatment strategies involves an integrative approach proposed by Horowitz (1978, 1986, 1997) that conceptualizes the course of post-traumatic stress disorder as a series of phases negotiated by the individual. These phases incorporate both immediate responses to a traumatic event and long term reactions. These long term reactions may be understood as having two possible trajectories, one involving adaptive resolution of the trauma and the other involving a maladaptive resolution (Peterson, Prout, & Schwarz, 1991). According to this model, the phases of adaptive resolution to PTSD may be outlined as follows: (1) Phase I *Outcry* – the immediate response to a trauma, this phase can include such reactions as fear, rage, sadness, dissociation, panic, and a stunned, dazed

incomprehension; (2) Phase II *Denial* – involves refusing to face the trauma and includes avoidance reactions such as denial and numbing. Also included in this phase is the possibility of maladaptive strategies of avoidance including substance abuse, withdrawal and/or fugue states; (3) Phase III *Oscillation* – in this phase, the individual shifts between denial/numbing and experiencing intrusive symptoms related to the traumatic event (e.g., intrusive memories, nightmares, flashbacks); (4) Phase IV *Working through* – involves facing the reality of what happened. During this phase the intrusions become less frequent and less intense. The denial and/or numbing lift and the individual may experience more somatic and affective symptoms of anxiety and depression; (5) *Relative completion of response* – although for some individuals completion of response is likely never fully completed, this stage is marked by experiencing a permanent alteration in personality as memories and adjusted beliefs related to the trauma are integrated and the person exhibits the ability to “get on with life.” A maladaptive resolution to PTSD follows the same path through the first three phases of the adaptive response, that is, *Outcry, Denial, and Oscillation*. However, in response to oscillation, the individual reaches resolution through one of five possible responses: (1) Generalization of the fear, (2) Generalization of the anger, (3) Generalization of withdrawal, (4) Dissociation, or (5) Embracing the trauma. Only the fifth response leads to adaptation and successful resolution (Epstein, 1990, as cited in Peterson, et al., 1991). The overarching goal of treatment for PTSD is to redirect the individual from maladaptive to adaptive responses. Strategies common to all therapeutic interventions include: (1) Supporting adaptive coping skills, (2) Normalizing the abnormal, (3) Decreasing avoidance, (4) Altering

attribution of meaning, and (5) Facilitating integration of the self (Schwarz & Prout, 1991).

One of the first treatment approaches to PTSD was proposed by Sigmund Freud (1917) in his writings on normal versus pathological grief (Strachey, 1974). Although post-traumatic stress disorder was not part of the lexicon of psychiatry in 1917, Freud recognized that certain experiences of loss could pose significant challenges in the ability of individuals to cope with and adjust to a new reality. Although not an ideal treatment for complex PTSD, modern psychodynamic psychotherapy is successful in addressing a single traumatic incident such as the loss of a body part through surgery or traumatic bereavement (Krupnick, 2002). Based on a 12-session treatment model, brief trauma-focused psychodynamic therapy focuses on structures of meaning that an individual creates in response to a trauma, as well as to life changes subsequent to it. In addition to finding meaning, brief psychodynamic therapy is also used as a vehicle for the patient to explore connections between trauma-related responses and family of origin issues. The goal of the therapist is to assist the patient in identifying how past developmental experiences have shaped responses to the trauma, as well as to the therapist and the therapeutic relationship (Krupnick, 2002; Weiss & Marmar, 1993).

Another early pioneer in psychiatry, Jean-Martin Charcot (van der Kolk, Weisaeth & van der Hart, 1996), was the first to posit a connection between trauma, “vehement emotions” and what he termed “hypnotic states,” that is, high suggestibility in patients who had sustained a traumatic experience. His student, Pierre Janet, extended the work of Charcot and discovered that dissociation was a response to traumatic memories (van der Kolk et al., 1996). Evidence suggests that dissociation serves as a defense mechanism

during and in the immediate aftermath of trauma by allowing the individual to maintain mental control when avoidance of the trauma is not possible (Cardeña & Spiegel, 1993; Hermann, 1992; Marmar, Weiss, Schlenger, Fairbank, Jordan, Kulka, & Hough, 1994; Spiegel, 2003). Dissociation also impedes the processing of emotions that help to successfully integrate the trauma into long-term memory, thus increasing vulnerability to the development of PTSD in at-risk individuals (Clohessy & Ehlers, 1999; Foa & Hearst-Ikeda, 1996). Although Janet originally hypothesized that “hysteria” and hypnosis were linked phenomena because the dissociation experienced during trauma appears similar to the experiences of hypnotized subjects, there is some debate in the literature in this regard (Faith & Ray, 1994; Fassler, Knox, & Lynn, 2006; Jiranek, 2000; Nash, Hulse, Sexton, Harralson, & Lambert, 1993; Silva & Kirsch, 1992). In modern psychiatry the term “hysteria” has been replaced with diagnostic labels such as somatization, borderline personality disorder, and post-traumatic stress (Butler, Duran, Jasiukaitis, Koopman, & Spiegel, 1996).

Hypnosis has long been used as a treatment for PTSD. British and American military clinicians used it to treat soldiers diagnosed with “shell-shock” in World War I (Cardeña, 2000) and “battle fatigue” in World War II (Watkins, 2000). The rationale for using hypnosis is that it can be a useful adjunct to psychodynamic and cognitive-behavioral techniques. Both of these therapies encourage patients to confront traumatic memories and hypnosis appears to be uniquely able to facilitate this process. Additionally, given the fact that many individuals experience dissociation during and/or immediately after a traumatic event, hypnosis may produce a similar response and thus assist in integrating traumatic memories (Cardeña, Maldonado, van der Hart, & Spiegel,

2000). The usefulness of hypnosis as a treatment modality may stem in part from its efficacy in allowing patients to reexperience their intense affective responses to trauma, a phenomenon called “abreaction” by Josef Breuer in the 19<sup>th</sup> century (Sachs & Peterson, 1996). Hypnosis is hypothesized to assist patients in accessing memories that have been “walled off” from conscious processing, which is viewed by some as an essential task of recovery (Sachs & Peterson, 1996).

Another treatment used to assist patients in processing traumatic memories is cognitive-behavioral therapy. The empirical literature has identified the efficacy of cognitive-behavioral approaches in the treatment of PTSD in both civilian (Van Etten & Taylor, 1998) and military populations (Monson, Schnurr, Resick, Friedman, Young-Xu, & Stevens, 2006). A number of treatment approaches are subsumed under the aegis of cognitive-behavioral therapy. These include but are not limited to the following: (1) Acceptance and Commitment Therapy, (2) Dialectical Behavior Therapy, (3) Cognitive Processing Therapy, and (4) Prolonged exposure therapy. The earliest theoretical underpinnings of cognitive-behavioral therapy are found in Albert Ellis’ Rational Emotive Therapy developed in the 1950’s to counter the psychoanalytic and humanistic therapies that represented the zeitgeist of the mental health profession at the time (Haaga & Davison, 1993). Ellis wrote that his original title of Rational Therapy (RT) – which he coined in 1955 and later changed to Rational Emotive Therapy (RET) in 1961 – has always contained a behavioral component; hence, his renaming of this therapy Rational Emotive Behavior Therapy (Ellis, 1999). Ellis maintained that, unlike contemporary cognitive behavioral therapy, Rational Emotive Behavioral Therapy (REBT) does not try to modify clients’ world views through the use of Socratic dialogue

(Ellis & Bernard, 1983). The major tenets of REBT are: (1) Humans are happiest when they establish goals and purposes and actively strive to attain these; (2) Given that humans are goal-directed, the word “rational” in Rational Emotive Behavior Therapy means strategies to assist individuals in achieving their goals. “Irrational” means factors that impede the achievement of one’s goals. Thus, rationality is relative in nature; (3) REBT primarily deals with disturbed human evaluations, emotions, and behaviors; (4) It emphasizes the importance of will and choice in human affairs, even though it accepts that some human behavior is partially determined by biological, social, and other forces; (5) Posits that cognitions, emotions, and behaviors are not experienced in isolation and often, particularly in the realm of psychological disturbance, overlap to a significant degree; and (6) How we perceive an event interacts with our cognitive evaluation of the event (Ellis & Dryden, 1987).

In addition to the work of Albert Ellis, cognitive therapy also became a vital component of Cognitive Behavioral Therapy (CBT). Originally, cognitive therapy was a treatment approach for depression introduced by Aaron Beck (1963, 1964). Beck posited that emotions and behaviors are determined by the way in which one thinks about the world, and these cognitive structures or schemas – which include both thoughts in one’s “stream of consciousness” as well as underlying attitudes and assumptions – are based on previous life experiences. Consequently, our reactions to situations are based largely on how a given situation interfaces with pre-existing thoughts, attitudes, and assumptions. The goal of cognitive therapy is to challenge distorted cognitive schemas and maladaptive assumptions that interfere with healthy functioning (Beck, Rush, Shaw, &

Emery, 1979). These tenets underlie the Cognitive Behavioral Therapy models briefly summarized here.

Cognitive Processing Therapy (CPT) was developed to address posttraumatic stress in survivors of rape and sexual assault (Resick & Schnicke, 1992). CPT is a twelve session manualized treatment that begins with psychoeducation in the first session to normalize PTSD symptoms experienced by the patient, as well as to obtain the patient's informed consent for treatment. Subsequent sessions consist of two important components: (1) Exposure – in which the patient writes an account of the traumatic incident at different times throughout the therapy, reading it aloud to the therapist each time in order to access emotional reactions to thoughts and memories about the trauma; and (2) Cognitive therapy – to address “stuck points,” i.e. areas identified in the trauma narratives in which the patient struggles with distorted cognitions and beliefs about the self, and the self in relation to others as a consequence of trauma. The therapist challenges these maladaptive thoughts and beliefs through the use of Socratic questioning, a technique in which the patient provides his or her own answers and insights to distorted thoughts and beliefs (Resick & Schnicke, 1993). The ultimate objective is a better quality of life for the patient through reduction of PTSD symptoms, higher functioning, and more adaptive coping.

Similar to CPT, Prolonged Exposure Therapy also emphasizes the importance of exposure in addressing the symptoms of post-traumatic stress. Conceptualizing “pathological fear structures” as the core element in anxiety disorders (Foa & Kozak, 1986), Prolonged Exposure Therapy (PE) is designed to address the components of these structures, specifically: (1) information about the feared stimulus, (2) information about

somatic and behavioral responses to the stimulus, and (3) information about the meanings attributed to the stimulus and stimulus responses. Foa and Kozak (1986) have postulated that in anxiety disorders excessive responses to these components, particularly avoidance, physiological, and meaning responses, serve to perpetuate anxiety. In addition, Foa, Steketee and Rothbaum (1989) theorized that generalization of the feared stimulus to previously neutral stimuli also serves to maintain anxiety. Thus, the focus of PE is to decrease avoidance by instructing the patient to confront traumatic memories through in vivo and imaginal experiences. Prolonged Exposure Therapy is a 9 to 12 session treatment modality that involves preparation of the patient through psychoeducation about PTSD and about the treatment components of PE in the first two sessions. The patient is also encouraged to share specific problem areas that elicit avoidance in the second session. These are rated on a hierarchical subjective unit of distress scale. It is this hierarchy that guides the therapy for the remaining sessions. The patient is also taught techniques such as breathing exercises to facilitate relaxation and stress management. In the third session, the therapist and patient engage in the first imaginal exposure, addressing the most distressing aspect of the trauma or, if multiple traumas have occurred, the most distressing traumatic event. The patient is instructed to recount the trauma in the present tense, as if it were re-occurring. The exposure typically lasts about 45 minutes, after which the patient discusses with the therapist his or her reactions to the session. Particular emphasis is placed on the patient's thoughts and feelings while undergoing exposure therapy. Processing of the patient's reactions to the traumatic memory helps to ground the patient in the present and also serves to calm the patient as the session nears completion. The remainder of the sessions follows this format, with

homework assigned to the patient in between sessions designed to continue processing of traumatic memories through in vivo exposure, and daily listening to an audiotape of the session just completed. In the final session, the therapist reviews with the patient any progress that has been made, in addition to instructing the patient to identify once again a hierarchy of distress and addressing any problem areas remaining (Foa & Rothbaum, 1998; Riggs, Cahill, & Foa, 2006).

Eye Movement Desensitization and Reprocessing (EMDR) was proposed as a therapy for PTSD by Frances Shapiro (1989). The exposure component of EMDR is shorter than that experienced by the patient when undergoing Prolonged Exposure Therapy (Lee, Taylor, & Drummond, 2006). In EMDR the patient is instructed to remember the most distressing aspect of the trauma in detail, including somatic responses, thoughts, and emotions in addition to the memories associated with the event. While remembering, the patient is told to repeat a negative self-statement associated with the trauma. The therapist moves his or her index finger laterally back and forth in the patient's field of vision, about 12 inches from the patient's face. These movements are done rapidly with one back and forth cycle repeated every second. Patients follow these movements with their eyes. After 12 to 24 movements a "set" is completed. Patients are then asked to let their mind "go blank" and to take a deep breath, followed by a positive self-statement that they wish to use to replace the previous negative statement. This process is repeated until patients are able to experience a decrease in subjective units of distress (SUDS) associated with the trauma (Lipke & Botkin, 1992). Shapiro propounded that the lateral movements of the eyes resulted in a "biochemical rebalancing in the patient's central nervous system" that allowed for a "release of information

dysfunctionally locked in the CNS,” (Shapiro, 1995; p. 30; van den Hout, Muris, Salemink & Kindt, 2001). Subsequent studies have found that quick or saccadic eye movements appear to enhance episodic memory (Christman, Garvey, Propper, & Phaneuf, 2003) and diminish the visuospatial component of working memory (Andrade, Kavanagh, & Baddeley, 1997).

There is considerable debate in the literature as to the efficacy of EMDR (McNally, 1999). In 1998, reviewers with the American Psychological Association’s Division 12 Task Force on Psychological Interventions found that EMDR was most likely effective in the treatment of PTSD (Chambless, et al., 1998). Critics contend that EMDR is simply exposure therapy at best or a placebo effect at worst (Perkins & Rouanzoin, 2002). Nevertheless, supporters of the method state that EMDR is effective in addressing PTSD resulting from a variety of traumas including sexual assault survivors, burn victims, natural disaster, physical abuse, mental abuse, death of a significant other, and combat (Carlson, Chemtob, Rusnak, Hedlund, & Muraoka, 1998; Konuk, Knipe, Eke, Yuksek, Yurtsever, & Ostep, 2006; Lipke & Botkin, 1992; McCann, 1992; Rothbaum, 1997; Wilson, Becker, & Tinker, 1995, 1997).

One of the major symptom clusters of PTSD, as outlined in the *DSM-IV-TR*, is avoidance (APA, 2000). Acceptance and Commitment Therapy (ACT) addresses avoidance through the use of various techniques such as accepting one’s thoughts as simply thoughts and not as determinants of behavior. Additionally, ACT encourages “mindfulness,” or experiencing internal events “in the moment,” a technique described in the work of Jon Kabat-Zinn (1990). This is important because a basic assumption of ACT is that it is necessary for the person diagnosed with PTSD to fully experience those

thoughts, emotions and memories that he or she is actively seeking to avoid. Acceptance and Commitment therapy also assesses a person's core values, and the extent to which an individual is living a life congruent with and committed to those values (Walser & Hayes, 2006). Thus, ACT represents an idiosyncratic approach to trauma by seeking to improve the quality of life for individuals as they define it for themselves (Bach & Hayes, 2002; Orsillo & Batten, 2005).

Another technique that emphasizes mindfulness as part of its treatment focus is Dialectical Behavior Therapy (DBT). A therapy originally devised for the treatment of patients diagnosed with Borderline Personality Disorder (BPD), this therapy's utilization of problem-solving, role-play, and psychoeducation is in keeping with traditional cognitive-behavioral techniques. However, DBT also emphasizes the importance of establishing a dialectic between an individual's maladaptive thoughts, behaviors, and affect regulation strategies, and the use of acceptance and validation in the therapeutic relationship to challenge these coping styles and replace them with more adaptive modes of functioning. This is accomplished through "paradoxical interventions." Linehan (1993) states that these interventions are designed to address the dialectic within the patient's mind by exploring opposing thoughts, emotions and behaviors and demonstrating that both can be true at the same time. This is done in order to reach a synthesis between the polarities of maladaptive coping strategies with opposing thoughts, emotions and behaviors in order to effect positive change. There is an emphasis on the crucial role of the therapeutic relationship in accepting the individual "where he or she is at," while at the same time challenging the person to change, that is central to the work of DBT and

sets it apart from other cognitive-behavioral therapies (Linehan, 1993; Sneed, Balestri, & Belfi, 2003; Wagner, 2005; Wagner & Linehan, 2006).

A common element in many of the approaches described above – especially those that appear to be the most effective – are techniques that not only address maladaptive thoughts, beliefs and assumptions held by the client, but also those interventions that allow a client to experience affects associated with the trauma. Therapy ideally provides the client with ample opportunities to process trauma-related emotions, as well as techniques to assist the client in pairing these emotions with traumatic memories in order to facilitate cognitive integration. Thus, emotional processing is vital in the resolution of post-traumatic stress.

### Emotional Processing

Although emotional distress is often a motivating factor for seeking help in therapy (Whelton, 2004), disclosure about affect is often a difficult task, particularly for individuals diagnosed with posttraumatic stress disorder. Emotional experiencing in session has been postulated to facilitate change through the following mechanisms: (1) *Discharge* of emotions works as a “safety valve” to bring about psychic homeostasis in the individual; (2) *Emotional insight* is obtained when individuals successfully experience emotions in order to make unconscious material available to conscious awareness. This in turn facilitates identification and processing of maladaptive schema and cognitive distortions that can be addressed by “corrective emotional experiences” in therapy; (3) *Emotions can be adaptive* in helping the individual to experience personal growth and awareness and to achieve healthier interpersonal functioning; and (4) *Exposure* to difficult affective experiences in therapy facilitates extinction or habituation

of maladaptive fear responses, thus decreasing avoidance and increasing quality of life for the patient (Greenberg & Safran, 1987). However, facilitating emotional experiencing may not be indicated for clients who experience emotion regulation deficits. In these situations, it is important to teach adaptive emotion regulation strategies first before engaging in emotional processing in session (Wiser & Arnow, 2001).

Emotions do not exist independently of cognitions, rather they function together in order to make meaning of traumatic experiences (Ehlers & Clark, 2000; Reed & Enright, 2006; Tuval-Mashiach, Freedman, Bargai, Boker, Hadar, & Shalev, 2004). Leahy (2002) proposed a cognitive model of emotions that incorporates not only the emotions themselves, but the thoughts individuals have in relation to the emotions (e.g., “My emotions will be uncontrollable if I express them, so I must keep them under control”). According to the model, when an emotion such as fear, anger or sadness is activated it is attended to and labeled by the individual.

Once the individual recognizes the emotion, one of two responses may be chosen: (1) the individual may normalize the emotion and subsequently accept and express the emotion, experience validation of the emotion, and learn from the experience; or (2) the individual may pathologize the emotion and engage in cognitive avoidance, which involves such maladaptive coping strategies as dissociation, bingeing, use of alcohol or drugs, or emotional numbing. The emotion, and/or the event that gave rise to the emotion, is not adequately processed and the individual comes to believe that the emotion cannot be controlled and thus will be perpetuated indefinitely. In response to these beliefs the individual may engage in excessive rumination and worry about the emotion, and may avoid circumstances that could trigger emotional responses. The individual may also

blame others for what he or she is feeling. A consequence of these beliefs and behaviors is to have negative interpretations about emotions such that one may feel guilty for having a particular emotion, or feel that one's emotional life is somehow different from that of others. Additional negative interpretations include a simplistic understanding of emotions or a sense that emotions are incomprehensible and therefore not to be trusted or accepted.

Another model that examines the interplay of cognitions and emotions after experiencing trauma is proposed by Ehlers and Clark (2000). In this model, the role of cognitions perpetuates symptoms of posttraumatic stress through negative appraisals of the trauma. Specifically, as a result of the trauma and its aftermath, individuals with PTSD continue to perceive serious threats in the present. This can happen in a number of ways such as overgeneralizing the danger inherent in the traumatic event to current everyday activities; exaggerating the probability of a traumatic incident occurring again; and perceiving one's reactions during and after the trauma as having long-term implications regarding one's sense of self and how one interacts with others. In addition, appraisals of symptoms of posttraumatic stress (e.g., intrusive memories, irritability, a need for safety, and somatic symptoms such as shortness of breath and increased heart rate) elicit fears of continuing threats to one's physical, psychological, and emotional well-being. Common affective reactions to these negative cognitions often include feelings such as fear, guilt, shame and sadness. In response to these thoughts and feelings, the individual engages in maladaptive behaviors that serve to perpetuate PTSD symptoms, such as avoidance.

Models that incorporate cognitions and emotions when conceptualizing individuals' responses to trauma provide a useful means of identifying elements that may respond to therapeutic interventions. Research has demonstrated that successful therapy incorporates both emotional and cognitive interventions with regard to trauma (Brewin, 2001; Foa & Kozak, 1986; Pennebaker, & Beall, 1986; Whelton, 2004; Williams, Stiles, & Shapiro, 1999), and that different therapeutic modalities address these issues in unique ways (Mackay, Barkham, Stiles, & Goldfried, 2002; Wisner & Goldfried, 1993).

Thus, the patient's readiness to engage in a process of examining this traumatic material, including both affect and cognitions about affect in session appears to be a critical aspect of successful treatment (Watson & Bedard, 2006). The Transtheoretical Model may provide a useful way of conceptualizing and measuring this important component in therapy.

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### Stages of Change

In 1977, James Prochaska and his students began to investigate the commonalities among the most popular forms of psychotherapy. The results of this investigation eventually became known as the Transtheoretical or Stages of Change Model (Prochaska, 1984). Prochaska and his students examined 24 theories of psychotherapy and identified three core elements of change common across all treatment modalities investigated. These elements were the processes of change, the stages of change, and the levels of change. The stages of change include: (1) *Precontemplation* – clients in this stage have no intention of making any changes and often do not even recognize that they have a problem; (2) *Contemplation* – in this stage, clients are aware of the problem but have not determined to take action yet. It is not uncommon for individuals to remain in this stage

for some time before moving into the next stage; (3) *Preparation* – individuals in this stage are intending to change their behavior within the next month. Often, they have unsuccessfully tried to modify their behavior during the past year. At this stage, individuals take small steps in an attempt to change, but are not clear about what they need to do; (4) *Action* – in this stage, clients dedicate the time and the energy necessary to make real changes in their lives. They modify their environment and their behaviors in order to address their problems. Individuals in this stage are successful in addressing their problem for 1 day to 6 months; and (5) *Maintenance* – in this stage clients continue to work on their problem and to solidify gains they have made in the action stage (Prochaska & DiClemente, 1992; Prochaska, DiClemente, & Norcross, 1992).

This model posits that certain processes of change are effective in various stages of change. Therapeutic interventions are ideally geared to the process and the stage of change when addressing clients' problems. For example, cognitive, experiential and psychoanalytic techniques are deemed most effective in the precontemplation and contemplation stages, and existential and behavioral interventions are believed to be more effective in the action and maintenance stages of change (Prochaska & DiClemente, 1992).

The Transtheoretical Model (TTM) has been applied to a variety of mental health concerns including smoking (Prochaska & DiClemente, 1983), substance abuse (Velasquez, von Sternberg, DODRILL, Kan, & Parsons, 2005), intimate partner violence (Edwards, Houry, Kembell, Harp, McNutt, Straus, et al., 2006; Frasier, Slatt, Kowlowitz, & Glowa, 2001), predicting termination of therapy (Brogan, Prochaska, & Prochaska, 1999; Callaghan, Hathaway, Cunningham, Vettese, Wyatt, & Taylor, 2005), more severe

psychiatric diagnoses (McConaughy, DiClemente, Prochaska, & Velicer, 1989), and PTSD and anger management (Rosen, Murphy, Chow, Drescher, Ramirez, Ruddy, et al., 2001). However, the TTM has been the topic of some controversy in the literature. For example, Littell and Girvin (2002) have critiqued the model, stating that the stages of change proposed by the model are not discrete and participants can be categorized in more than one category at any given time. If individuals can exist in more than one stage at a time, the very construct of stages tend to be meaningless (Sutton, 1996). Another critique of the model is that movement between stages does not take place in a sequential manner (Littell & Girvin, 2002). Finally, the TTM posits that it measures discrete stages of change; however the variables that constitute readiness to change within each stage are not discrete but continuous in nature (Littell & Girvin, 2002), calling into question the validity of discrete stages of change. Other researchers have questioned the clinical utility of the model because of its inability to predict future outcome (Blanchard, Morgenstern, Morgan, Labouvie, & Bux, 2003).

Among the very few studies that have applied the Transtheoretical Model to clients diagnosed with PTSD, some findings also call into question this approach. A study by Rooney, Hunt, Humphreys, Harding, Mullen and Kearney (2007) investigated the assumptions of the TTM in 50 veterans diagnosed with PTSD. The veterans participated in a two day preparation session consisting of psychoeducation and motivation followed by cognitive-behavioral group therapy twice weekly for 14 weeks. In addition, participants engaged in a one day review and booster session at 3 months post-treatment. Study participants also took part in four individual therapy sessions in addition to group therapy. Contrary to investigators' expectations, the study results

indicated that as participant ratings of the positive aspects of engaging in therapy decreased over time, their readiness to change increased. Rooney et al. (2005) also stated that the percentage of participants in later stages of change did not appear to change significantly in the time from the preparation program to the beginning of therapy. Overall, the results of the study indicated a lack of consistent correlations among variables in the TTM, difficulties in assigning individuals to a specific stage of change, and high correlations between stages of change subscales. Thus, there was little support for the TTM. Despite these potential limitations, other research points to the utility of the Transtheoretical Model in patients diagnosed with posttraumatic stress disorder. In a study examining PTSD patients' readiness to address alcohol abuse and anger, 102 male combat veterans in a 45-60 day residential rehabilitation program for chronic, combat-related PTSD completed a number of measures, including the University of Rhode Island Change Assessment Scale, a measure based on the Transtheoretical Model. Study results supported the use of the TTM to recovery from combat-related PTSD and to anger management. Results indicated that veterans diagnosed with combat-related PTSD entered the rehabilitation program at different points of recovery for PTSD-related problems such as alcohol abuse or poor coping skills for managing anger. The study indicated that the TTM is also a useful construct for assessing both general readiness for treatment as well as motivation to address specific problems in therapy such as alcohol abuse and anger (Rosen, Murphy, Chow, Drescher, Ramirez, Ruddy, & Gusman, 2001). The conflicting results of these two studies, together with the paucity of research on the use of the TTM for assessing readiness to change among populations diagnosed with PTSD indicate a need for further research in this area.

A number of researchers have speculated that a secure attachment to the therapist is critical in terms of the client's ability to process emotional material in session (Della Selva, 1993; Farber, Lippert, & Nevas, 1995; Mallinckrodt, 2000; Mallinckrodt, Porter, & Kivlighan, 2005). As noted earlier, therapeutic techniques such as Prolonged Exposure Therapy are posited to enhance the patient's ability to process traumatic material in session, which in turn assists the patient in reaching a successful resolution of PTSD. Thus, an understanding of the interplay between attachment and client readiness to disclose in session is useful when conceptualizing effective trauma therapy.

#### Attachment and Readiness to Disclose

Among all the possible variables that might explain readiness to disclose emotional material about the trauma within the therapeutic setting, attachment theory might provide a very useful framework. John Bowlby's (1969/1982, 1973, 1980a) seminal work on the infant-caregiver bond has provided the foundation for a rich research literature on attachment theory. According to Bowlby, the evolutionary basis for infant attachment is proximity to the caregiver, particularly in frightening situations. Attachment to the caregiver serves a variety of functions for the infant. First, proximity to the parent ensures comfort, protection, and ultimately, survival. Second, sensitive responding to the infant's cues for attention conveys to the child that he or she is worthy of care, thus laying the foundation for positive self-esteem. Bowlby identified this representation of the self as valuable and efficacious as an internal working model of self. Third, the attachment bond socializes the child through interactions with the parent, thereby providing a template for future social relationships. A mental representation of the primary attachment in the context of interpersonal relationships was classified by

Bowlby as an internal working model of others. Fourth, the maternal-infant bond is crucial for recognition and regulation of emotions, which ideally will assist the child in learning strategies for self-comfort when the attachment figure is unavailable. Fifth, the attachment bond provides a “secure base” from which the infant can engage in active exploration of the environment, with the knowledge that the attachment figure is readily available should an alarming or dangerous situation present itself (Ainsworth, 1963). Thus, a secure attachment is a crucial component in learning and cognitive development (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969/1982; Marvin & Britner, 1999; Moss, St. Laurent, & Parent, 1999). Finally, Holmes (2003) has suggested that a secure attachment may provide psychological structure for the infant, a means whereby thoughts, behaviors and feelings may be integrated into coherent patterns of meaning.

Mary Ainsworth and her colleagues (1978) identified three types of attachment styles utilizing a laboratory procedure known as the Strange Situation. In order to assess the attachment strategies used by infants during interactions with their caregivers, a mildly stressful situation was created in which children were briefly separated from their mothers and their reactions upon reunion with their caregivers were carefully monitored. Ainsworth et al. identified three attachment patterns: (1) *Secure (category B)*, in which the infant was mildly distressed during separation from the mother but greeted her joyously upon return. The securely attached child was able to be comforted, and readily returned to exploring the room and playing with toys; (2) *Insecure-Avoidant (category A)*, in which the infant gave little or no indication of being distressed at the mother’s absence, and avoided the parent upon return; and (3) *Insecure-ambivalent/resistant (category C)*, in which the infant was highly distressed when separated from the

caregiver, and was difficult to console by the parent upon return. Infants classified as ambivalent simultaneously displayed both anger at their caregiver and a desire for maternal contact. Unlike their securely attached peers, the insecure-ambivalent infants were less inclined to leave their mothers, showing an unwillingness to explore the room or play with toys.

A small percentage of the infants in the Ainsworth study displayed anomalous behaviors and were given the designation “unclassifiable.” Sylvia Bell, in her doctoral dissertation, was the first to identify an infant in the Ainsworth study as unclassifiable, although she later “forced” the infant into the insecure-avoidant category (Bell, 1970; as cited in Main and Solomon, 1990, p. 125). It was not until Main and Solomon (1990) systematically investigated this population that a fourth attachment category, *disoriented/disorganized (Category D)*, was created. According to Main and Solomon (1990) the secure, avoidant and ambivalent attachment templates are adaptive in that they are strategies that assist the infant in emotion regulation – particularly negative emotions – and in promoting proximity to the caregiver. They described the attachment behaviors of infants classified as either avoidant or ambivalent as methods for obtaining care in less than optimal circumstances. In response to a caregiver who rejects cues for comfort and protection, the avoidantly attached infant learns to ignore the parent and to inhibit displays of distress. An ambivalent attachment strategy is utilized by the infant whose caregiver is unpredictable in his or her responses; thus, the child increases attachment related behaviors such as overt signs of emotional distress or clinging to the parent. Disorganized attachment, on the other hand, represents the inability of the infant to strategize effective means for self-regulation of emotions or to maintain a supportive

relationship with the primary caregiver (DeOliveira, Bailey, Moran, & Pederson, 2004). Disorganized attachment includes but is not limited to such behaviors as the expression of strong avoidance reactions together with equally strong proximity seeking behaviors; approaching a caregiver with the head averted; expressions of distress followed by movements away from the caregiver; apprehension with regard to the parent, often indicated by fearful expressions or frozen immobility; disorganized, disoriented movements; and dazed, confused affect.

Frightened or frightening behavior on the part of the caregiver sets up an approach/avoidance conflict within the infant that typifies the disorganized attachment paradigm. Frightening behavior from a caregiver can range from quietly coming up from behind and startling the infant, to actual physical and/or sexual abuse. Caregivers may also display behavior consistent with being frightened of the infant, including frozen immobility, a “dead stare,” and contact avoidance. Thus, when confronting behavior from a caregiver who is frightening or frightened, the infant is faced with the predicament of seeking comfort and protection from the very individual who is the source of his or her distress (Lyons-Ruth & Jacobvitz, 1999). This puts the child at risk for later psychopathology because disorganized behavior becomes part of the child’s cognitive map for interpersonal relationships. Emotion dysregulation may result from the chronic activation of an attachment paradigm due to stress, together with the infant’s inability to alleviate distress within the caregiving relationship. DeOliveira et al. (2004) posit a model of emotion socialization that includes the primary caregiver’s own style of emotional regulation and ability to accurately mirror an infant’s emotions. These modeling behaviors on the part of the caregiver are important contributors to a child’s

emerging understanding of emotions and emotional behavior. This cognitive model of emotions combined with the child's temperament leads to the development of an idiosyncratic style of emotion regulation that recapitulates the initial maternal-infant interaction.

In a study conducted by Schuengel, Bakermans-Kranenburg, and van Ijzendoorn (1999), the data from observations of interactions between 85 mother-infant dyads suggested that frightening maternal behavior predicted disorganized attachment for the infant. However, Schuengel and his colleagues hypothesized that infants who are able to ignore the frightening behavior of their caregiver may not become disorganized. This would involve a strategy similar to that of avoidant attachment in which the infant ignores the parent and the distress they are feeling. This is possible only when (1) the behavior of the caregiver is only a little frightening, or (2) when the slightly frightening behavior of the caregiver is a consistent pattern of interaction with the infant. In cases where caregiver behavior is highly frightening, the infant is unable to utilize any attachment strategy and disoriented/disorganized interactions result. Also, if mildly frightening maternal behavior is inconsistently presented to the infant, a state of disorganized attachment may also develop. The inconsistency of unresolved maternal behavior (i.e., behavior resulting from an unresolved history of trauma or loss in the mother's life) renders it difficult for the infant to adapt by ignoring the parent, resulting in second-generation effects of trauma.

A number of investigators have conceptualized models that incorporate the attachment paradigms first described by Ainsworth and her colleagues (Bartholomew & Horowitz, 1991; Mikulincer & Shaver, 2005; Shorey, Snyder, Yang, & Lewin, 2003).

Bartholomew and Horowitz (1991) suggested a model of adult attachment constructed along two dimensions: an internal model of the self on the vertical axis, and an internal model of others on the horizontal axis. Both axes are further defined with positive at one end of the axis and negative at the opposite end. Thus, a two-by-two grid is formed with four cells defining the four attachment styles. There is some variability among researchers regarding the nomenclature used to describe attachment patterns.

Bartholomew and Horowitz used the term *dismissing* to describe avoidant attachment; *preoccupied* to designate an anxious-ambivalent attachment; and *fearful* to describe a disoriented/disorganized attachment. These terms are based on internal working models of self and others. In the Bartholomew and Horowitz model, beginning in the lower left hand corner of the grid and reading clockwise, the cells are labeled dismissing, secure, preoccupied, and fearful. According to this model, an individual with a dismissing attachment style is dismissing of intimacy with others, and has a positive view of self and a negative view of others. An individual with a secure attachment is comfortable with both intimacy and autonomy, and has a positive view of self and others. A preoccupied attachment paradigm is characterized by preoccupation with interpersonal relationships, with a negative view of the self and a positive view of others. Finally, individuals with a fearful attachment style are fearful of intimacy and are socially avoidant. The fearful attachment paradigm is characterized by a negative view of self and a negative view of others.

Another model proposed by Mikulincer and Shaver (2005) utilizes the domains of hyperactivation and deactivation, secondary attachment strategies based on the unavailability of attachment figures when encountering real or imagined danger.

According to these authors, hyperactivating strategies are employed when the perception exists that the attachment figure will be available if only more effort is expended. This strategy involves exaggerating the threat, constant vigilance for cues of danger, and chronic activation of the attachment system. A fundamental feature of hyperactivation is the application of “emotion-focused coping,” defined as a preoccupation with internal cues of distress, together with a tendency to direct one’s attention to negative emotions and pessimistic thought patterns (Mikulincer & Shaver, 2005). The use of hyperactivation as a secondary attachment strategy results in a negative view of the self, characterized by critical self appraisals, rumination on personal failures, and a pervasive sense of worthlessness. This in turn leads to a negative view of others, characterized by the perception that people are both unreliable and untrustworthy, that their motives are suspect, that romantic relationships will ultimately fail, and that interpersonal conflict is inevitable. Mikulincer and Shaver postulate that relying on hyperactivating strategies may put an individual at risk for the development of psychopathology due to dysregulation of emotions, depression, anxiety, and cognitive disorganization.

The domain of deactivation in the Mikulincer and Shaver model is utilized when the attachment figure is perceived as absolutely unavailable. In this case, the individual denies attachment needs, minimizes the threat, and ignores thoughts or feelings that may activate attachment-related behaviors. The authors state that the deactivating strategy is the underlying characteristic of avoidant attachment. Deactivation strategies generally involve a negative view of others and a desire to maintain interpersonal distance, because emotional involvement is viewed as a possible source of stress and is therefore perceived as threatening. In addition, individuals who use deactivation as a secondary attachment

strategy tend to have a conscious sense of heightened self-esteem, a commitment to self-reliance, and a desire to deny the need for social support. As in hyperactivation, deactivating strategies also pose a risk for a decline in psychological functioning, particularly in cases of adversity and prolonged stress. In such situations, deactivation inhibits the ability to problem-solve or to establish emotional and social support. Furthermore, chronic reliance on deactivating strategies prevents the individual from engaging in effective caregiving, as this necessitates emotional intimacy and an empathic awareness of others' needs.

When the model described by Mikulincer and Shaver (2005) is mapped onto the Bartholomew and Horowitz (1991) model, it becomes apparent that the fearful model of self, depicted in the lower right-hand corner of the grid, is at the intersection of the dimensions of hyperactivation and deactivation. This prompts the question: How can an individual with a fearful model of self (i.e. fearful of intimacy and socially avoidant) experience hyperactivation and deactivation of attachment at the same time? One possible answer to this question may be found in the literature on post-traumatic stress disorder. In her classic work on the effects of trauma, Judith Herman (1992/1997) describes individuals' propensity to experience hyperarousal after a traumatic incident, what Herman has called the "first cardinal symptom of post-traumatic stress." Symptoms of hyperarousal include startle reactions and hypervigilance for the return of danger. This hypervigilance may be similar to the hyperactivation experienced by individuals with an anxious attachment style. In addition, Herman describes the "third cardinal symptom" of post-traumatic stress: Constriction. Symptoms of constriction include emotional detachment, a feeling of indifference, and, in severe cases, dissociation from reality. It is

possible that this emotional detachment may be similar to the deactivation of attachment when a secure base is unavailable. It is notable that in the literature on post-traumatic stress disorder, individuals who experienced trauma in their family of origin are more likely to suffer from post-traumatic stress disorder (PTSD) than their more securely attached peers. For example, while trauma is a predictor of the development of PTSD, only 18% of women and 10% of men who have experienced trauma develop this anxiety disorder, according to a national survey completed in 1995 (Kessler, Sonnega, Bromet, & Nelson, 1995). One of the risk factors for PTSD is insecure attachment. A study by Dieperink, Leskela, Thuras and Engdahl (2001) found that insecurely attached prisoners of war were more likely to develop posttraumatic stress than those who were securely attached. Trauma severity, weight loss during captivity (a measure of trauma) and attachment style were all factors in the development of PTSD; however, attachment style was found to be the strongest predictor. A secure attachment style may be protective in the face of trauma because an individual with this attachment style may be more likely to utilize social support, and may have an internal resilience unavailable to people with insecure attachments.

In addition to playing an important role in whether or not an individual develops posttraumatic stress disorder, attachment appears to be an integral factor in patient exploration of their presenting concerns in session (Della Selva, 1993; Farber, Lippert, & Nevas, 1995; Mallinckrodt, 2000; Mallinckrodt, Porter, & Kivlighan, 2005; Sable, 1997). Bowlby (1988) speculated that the attachment relationship between the therapist and the patient may provide a secure base from which patients can explore their intrapersonal and interpersonal issues. Mallinckrodt, Gantt, and Coble (1995) identified attachment patterns

in the psychotherapy relationship. Attachment-related items that pertained to the therapeutic relationship were generated by a panel of experienced therapists. These items, in turn, were given to 130 clients whose responses were factor analyzed. Results indicated the following three attachment dimensions that may be present in the therapeutic alliance: (1) *Secure* – in which clients perceive the therapist as emotionally available and responsive; (2) *Avoidant-Fearful* – in which clients are reluctant to disclose personal issues and perceive the therapist as likely to be disapproving and rejecting if displeased; and (3) *Preoccupied-Merger* – in which clients long to be “at one” with the therapist and wish to be their therapist’s “favorite” client.

Additional studies have supported the construct of attachment as an important component of the therapeutic relationship. For example, Mikulincer and Nachshon (1991) found that secure and ambivalent individuals were more likely to self-disclose to others than avoidant individuals. Sable (1997) has written that secure attachment facilitates the ability of individuals to not only explore their world but to turn to others for support and comfort when necessary. Results from a study by Mallinckrodt et al (2005) indicate that clients who are able to quickly form a secure attachment to their therapist are more likely to engage in deeper exploration of their presenting concerns in therapy sessions than clients who maintain an insecure attachment to their therapist. Another interesting result of this study indicates that attachment to therapist and the working alliance are two different constructs.

### Working Alliance

The idea of the working alliance has a long history in psychology. In his paper on the fate of the ego in psychoanalysis, Sterba (1934) identified a relationship between that

part of the patient's ego that is most strongly identified with the instinctive drive and that part of the patient's ego that is centered in reality. Sterba posits that it is this relationship between the two aspects of the patient's ego, together with identification with the analyst, that constitute change in psychotherapy. Sterba's work provides an early model of the working alliance. Zetzel (1956) also identified the working alliance from a psychoanalytic perspective, hypothesizing that positive transference (i.e., attributing to the therapist the positive feelings and perceptions that the patient has for individuals from his or her past) constitutes a viable working alliance. From these early beginnings, the working alliance gradually came to be identified by Bordin (1979) as a construct consisting of three somewhat overlapping elements: (1) *Bond* – defined as the dynamic, interpersonal relationship between therapist and client; (2) *Goals* – the objectives to be attained in counseling; and (3) *Tasks* – the ways in which these goals will be achieved in therapy. This concept of the working alliance is differentiated from attachment in the therapy relationship, in that attachment refers to the type of bond that exists between therapist and client and is usually broadly designated as either secure or insecure.

The premise that the therapist serves as an attachment figure and as a “secure base” from which the client is able to explore psychological material has been explored by researchers in the literature on attachment relationships between adults in psychotherapy (Della Selva, 1993; Farber, Lippert, & Nevas, 1995; Mallinckrodt, 2000; Mallinckrodt, Gantt, & Coble, 1995; Mallinckrodt, Porter, & Kivlighan, 2005; Parish & Eagle, 2003; Sable, 1997). In addition, these authors suggest that attachment behaviors such as proximity seeking in situations of perceived threat and protest when the attachment figure is not available are also demonstrated in the therapeutic alliance. Parish

and Eagle (2003) indicated in their study that the longer the duration of therapy, the more likely the client is to perceive the therapist as emotionally responsive to his or her needs, and to be more available as a secure base. This study also found that longer duration of therapy was positively associated with a secure attachment style and negatively associated with an insecure attachment style. Perceptions of the therapist as a secure base and as being available to the client when distressed were also associated with a strong working alliance. Clients' perceptions of improvement in the working alliance appeared to be linked with improvements in their social support network, which in turn were associated with a decrease in symptom distress (Mallinckrodt, 1996).

In addition to the therapeutic bond, perceived client-counselor agreement on the goals and tasks of therapy underlies the theoretical construct of the working alliance. However, recent studies of perceived agreement versus actual agreement on the goals and tasks of therapy have yielded interesting results. For example, in a study of 30 therapist-client dyads across several time intervals, results indicated that therapist-client dyads in long-term therapy seemed to have similar feelings about each other and congruent perceptions regarding the tasks and goals of therapy. This was not the case with dyads in the study who were involved in short-term therapy. Moreover, therapist-client dyads in long-term therapy also seemed to have similar emotional responses to the course and content of the sessions, whereas dyads in the short-term therapy condition did not (Horn-George & Anchor, 1982). Thus, the length of therapy may play a key role in the quality of the working alliance. Bachelor (1995) found in a study of 34 clients across three phases of therapy, that clients' perceptions of the working alliance could be identified as one of three types: (1) *Nurturant* – in which clients perceived the working alliance as one

in which the therapist was empathic, respectful, attentive, and non-judgmental; (2) *Insight-oriented* – in which clients saw the working alliance as the medium through which they could realize their interest in understanding themselves better, particularly in terms of the underlying elements that perpetuated their presenting concerns; and (3) *Collaborative* – in which the working alliance was perceived by clients as one in which they would be actively involved in therapy.

Clients' experiences of the working alliance are not only affected by their perceptions of the role and the long- or short-term length of therapy, but also by the personal history that each client brings to counseling. Paivio and Patterson (1999) found that experiences of childhood physical and emotional abuse and neglect, as well as Axis II diagnoses have a negative effect on the ability of clients to establish early therapeutic alliances. However, only Axis II diagnoses had a negative effect on the therapeutic alliance late in therapy. Experiences of childhood abuse and neglect did not have a negative impact on the working alliance late in therapy, nor did it have an adverse effect on therapy outcome. Thus, the negative effects on the working alliance early in therapy for survivors of child abuse and neglect dissipated over the course of therapy. An understanding of this dynamic is important because many individuals who have trauma experiences with subsequent development of post-traumatic stress disorder have come from families in which childhood abuse and/or neglect was prevalent (Dieperink et al., 2001; Mikulincer, Florian, & Weller, 1993).

Clients' emotional expression is facilitated within the context of a good working alliance by therapists' increased levels of empathy and greater responsiveness to clients' emotional expression, as well as minimum interruptions of the client's processing in

therapy. This in turn allows for greater client exploration, verbalization and elaboration of emotional experiences in session. Clients who gave low ratings of the working alliance tended to target their emotions towards the therapist rather than towards their presenting concerns, which impeded their progress in therapy (Iwakabe, Rogan & Stalikas, 2000). Therefore, it is a crucial task in counseling for the therapist to identify not only the emotions being expressed by the client, but also the target(s) of the emotions in order to create a more effective working alliance and a sense of safety in the therapeutic dyad. By attending to these emotional factors therapists can assist their clients in realizing a positive therapy outcome.

The working alliance is not a static phenomenon but a dynamic interaction between therapist and client. For example, Brossart, Willson, Patton, Kivlighan, and Multon (1998) found that clients with unsuccessful treatment outcomes had therapeutic alliance levels that decreased over time. Client and counselor ratings of the working alliance tended to evolve, with little congruence early in therapy and higher congruence in later sessions. Both the client and the counselor mutually influenced each other's perceptions of the working alliance. Using structural equation modeling, Brossart et al. found that the shared perception of the working alliance were primarily due to counselor influence, both in current sessions of therapy and in subsequent sessions. However, both counselor and client perceptions of the working alliance in one session had an impact on perceptions of the working alliance up to two sessions later. Thus, this study found that not only are perceptions of the working alliance evolving for therapist and client, but these perceptions have the capacity to affect the course of therapy and, ultimately, therapeutic outcome. The authors found that these findings were very robust, indicating

that any significant changes in client and counselor perceptions of the working alliance would involve a considerable shift or – in the authors’ parlance – “shocks” in the course of therapy itself.

## Summary

Emotional processing appears to be a critical component in most effective treatments for PTSD. However, many clients come to treatment unable to engage in this activity in that, from a Stages of Change perspective, they have not yet advanced to the Action stage. Instead, they remain in the Pre-contemplation or Contemplation stage. Theories of psychotherapeutic change that incorporate attachment theory concepts suggest that a secure attachment to the therapist increases the client’s motivation to explore troubling emotional material in session. Critical components of the working alliance include agreement on the tasks and goals of therapy. For clients diagnosed with PTSD, these tasks often include processing emotional material. Therefore, theory and research suggest that a secure attachment to the therapist and a strong working alliance will facilitate a client’s readiness to process emotional material in session. However, a search of the literature could not locate a previous study that examined these linkages. Therefore, the purpose of this study is to examine the correlations between these factors. Specifically, among clients diagnosed with PTSD, this study will investigate through the use of correlational analysis the association between: (a) the client’s attachment to the therapist, (b) the working alliance, and (c) the client’s readiness to disclose traumatic material in session. In addition, multiple regression analysis will be utilized to investigate which of the following variables accounts for unique variance in readiness to disclose: (a) client attachment to therapist, (b) working alliance, (c) age, (d) session number, (e) years

since trauma occurred, (f) medication use, (g) gender of therapist, and (h) PTSD symptom severity.

Hypotheses are as follows: (1) Participants whose scores on the Client Attachment to Therapist Scale (CATS) indicate a secure attachment to the therapist will have higher scores on the Bond subscale of the Working Alliance Inventory (WAI). Scores on the Secure attachment subscale of the CATS will also be positively associated with the WAI Goals and Tasks subscales. Thus, there will be a positive correlation between the Secure subscale of the CATS and the Bond, Goals, and Tasks subscales of the WAI. (2) Participants whose scores on the CATS indicate a more secure attachment to the therapist will also have higher scores on the University of Rhode Island Change Assessment (URICA) scale. Thus, there will be a positive correlation between the Secure attachment subscale of the CATS and the Action subscale of the URICA. (3) Veterans whose scores on the CATS indicate a more secure attachment to the therapist will also have lower scores on the Post-traumatic Stress Disorder Check List- Military version (PCL-M). Thus, there will be a negative correlation between scores on the Secure attachment subscale of the CATS and scores on the PCL-M. (4) Participants whose scores on the CATS indicate a more Avoidant/Fearful attachment to the therapist will have lower scores on the Bond subscale of the WAI, and less agreement on the Goals and Tasks subscales of the WAI. Thus, there will be a negative correlation between the Avoidant/Fearful subscale of the CATS and the subscales of the WAI. (5) Participants whose scores on the CATS indicate a more Avoidant/Fearful attachment to the therapist will also have scores on the URICA scale that are not consistent with the Action stage of

change. Thus, there will be a negative correlation between the Avoidant/Fearful subscale of the CATS and the Action subscale of the URICA.

(6) Participants whose scores on the CATS indicate an Avoidant/Fearful attachment to therapist will have higher scores on the PCL-M. Thus, there will be a positive correlation between Avoidant/Fearful attachment to therapist and Post-traumatic Stress Disorder (PTSD) severity.

(7) Participants whose scores on the CATS indicate a more Preoccupied/Merger attachment to the therapist will have lower scores on the Bond subscale of the WAI and less agreement on Goals and Tasks of therapy. Thus, there will be a negative correlation between the Preoccupied/Merger subscale of the CATS and the subscales of the WAI. (8)

Participants whose scores on the CATS indicate a more Preoccupied/Merger attachment to the therapist will also have scores on the URICA scale that are not consistent with the Action stage of change. Thus, there will be a negative correlation between the

Preoccupied/Merger subscale of the CATS and the Action subscale of the URICA. (9)

Participants whose scores on the CATS indicate a Preoccupied/Merger attachment to the therapist will have higher scores on the PCL-M. Thus, there will be a positive correlation between Preoccupied/Merger attachment to therapist and PTSD severity.

## METHOD

### Participants and Procedures

Participants were recruited from outpatients at a Midwestern Veterans Administration Medical Center. Survey data was collected from veterans with a diagnosis of post-traumatic stress disorder who were assigned to a therapist on the Post-Traumatic Stress Disorder clinical team (PCT). Interested participants were referred by their therapists to this author, who went over informed consent and answered any questions prior to handing out the survey packets. Approximately 12% of the 78 participants who were consented declined to fill out survey packets. Veterans who indicated they were willing to participate were then given a survey packet to fill out. Participants filled out the survey instruments themselves, in groups ranging from one to 10 individuals at a time. Participants were also given the contact numbers to this author and the PI for the study, in the event they had any further questions or concerns after the data was collected. Survey data was collected over an eight month period from November 2008 to June 2009.

A total of 68 veterans provided usable data. Of these, 60 were men and 8 were women. Participant mean age was 54 years ( $SD = 9.95$ , range = 24-64 years). In terms of ethnic identification, 64 (94%) of the participants indicated “White,” 1 (0.01%) indicated “Hispanic” and 2 (0.03%) indicated “Other.” One participant did not indicate his or her ethnicity. Participant mean number of years since the occurrence of the traumatic incident(s) was 31 years ( $SD = 14.21$ , range = 1-54 years). Mean number of therapy sessions for participants was analyzed with 1 = 0-4 sessions, 2 = 5-8 sessions, 3 = 9-12 sessions, and 4 = more than 12 sessions. Mean number of sessions was 9-12 sessions ( $M = 3$ ,  $SD = 1.25$ , range = 0-4). In terms of the sex of the therapist, 29 participants indicated

their therapist was male (43%), 35 indicated their therapist was female (53%) and 4 participants indicated they had more than one therapist (6%). Participants were asked if they were taking prescription medications for symptoms of depression, anxiety, and/or stress. Seventy-eight percent indicated “yes” and 18% indicated “no.” Veteran status was assessed in terms of when participants served on active duty in the military. Veteran status was analyzed with 1 = World War II, 2 = Korean War, 3 = Vietnam, 4 = Peacekeeping Operations (e.g., Somalia, the Balkans), 5 = Panama, 6 = Grenada, 7 = First Gulf War, 8 = OIF/OEF, 9 = “Other.” Some participants served in more than one combat theater and therefore chose more than one category. The final total will exceed 68 participants. No participants indicated having served in WWII or the Korean War. The number of participants having served in Vietnam was 49. For the category “Peace Keeping Operations,” 6 participants endorsed this category. For “Panama,” 2 participants indicated they had served in this country. The number of participants indicating they had served in Grenada was 2. The number of participants who indicated they had served in the First Gulf War was 14. There were 10 participants who indicated they had served in Operation Iraqi Freedom (OIF)/Operation Enduring Freedom (OEF). The number of participants who chose the category “Other” was 3. Participants received a \$5.00 gift certificate to the gift shop in the VA hospital as an incentive to participate.

## Instruments

*Posttraumatic Stress Disorder Checklist-Military Version (PCL-M)*. The PCL-M (Weathers, Litz, Huska, & Keane, 1993) is a 17-item self-report rating scale that was developed to correspond to symptoms for PTSD as defined by the *Diagnostic and Statistical Manual*, 3rd Edition-Revised. The PCL-M uses a 5-point, fully anchored scale

for participant responding (1 = *Not at all*, 2 = *A little bit*, 3 = *Moderately*, 4 = *Quite a bit*, 5 = *extremely*). The scale was originally tested on a sample of 123 male Vietnam theater veterans who contacted the National Center for PTSD, either for clinical services or to participate in research. A second study of 1,006 veterans from the Persian Gulf War was conducted. For participants in the second study, 88% were male, and 12% were female. The PCL-M directs respondents to rate how much they have been bothered by each symptom in the past month. Ratings of PTSD symptoms tapped by the PCL-M are believed to be valid indicators of the main symptom criteria for PTSD: (a) Experiencing or witnessing a traumatic event in which one perceives oneself or another person to be in danger of death or serious injury, (b) The traumatic event is reexperienced, (c) There is persistent avoidance of stimuli associated with the traumatic event, (d) Persistent symptoms of increased arousal not present before the trauma, (e) Symptoms persist for more than one month, and (f) The symptoms cause clinically significant distress or impairment in important domains of functioning. Principal components analysis with varimax rotation identified one factor consisting primarily of reexperiencing and hyperarousal items, which accounted for 59% of the variance, and one factor consisting primarily of emotional numbing items, which accounted for 7% of the variance. Due to an inadvertent clerical error, PCL-M items were omitted from the version completed by study participants.

Weathers et al. (1993) reported a test-retest reliability of .96, with an interval of 2-3 days between testing. The authors reported internal consistency (coefficient alpha) of .93 for B symptoms, .92 for C symptoms, .92 for D symptoms, and .97 for all 17 scale items. In the present study, coefficient alpha was .80. The PCL-M demonstrated

convergent validity when compared to other measures such as the Mississippi Scale for Posttraumatic Stress Disorder, the Minnesota Multiphasic Personality Inventory-2, the Impact of Event Scale, and the Combat Exposure Scale. Correlations between the PCL-M and these scales were .93, .77, .90, and .46, respectively.

*Client Attachment to Therapist Scale (CATS).* The CATS (Mallinckrodt, Gantt, & Coble, 1995) is a 36-item fully anchored self-report scale that was developed to empirically measure the psychotherapy relationship in terms of Bowlby's (1973, 1977, 1988) attachment theory. The six-point response scale of the CATS ranges from 1 = *strongly disagree*, 2 = *somewhat disagree*, 3 = *slightly disagree*, 4 = *slightly agree*, 5 = *somewhat agree*, 6 = *strongly agree*. Factor analysis identified three subscales for the CATS, with 14 items loading on the Secure subscale, 12 items loading on the Avoidant/fearful subscale, and 10 items loading on the Preoccupied/merger subscale. The authors described the Secure subscale as patients experiencing the therapist as empathic, emotionally available, and supportive; the Avoidant/fearful subscale as patients perceiving the therapist as disapproving, dishonest, and rejecting; and the Preoccupied/merger subscale as patients longing to "be at one" with the therapist and to expand the relationship beyond the bounds of therapy. Internal consistency (coefficient alpha) and retest reliability coefficients (Pearson's product moment correlations) were greater than .63 for all subscales in a mixed sample of university counseling center clients and community residents seen at a university training clinic and outpatient hospital. Mallinckrodt et al. (1995) reported test-retest reliability greater than .72 over a 2 – 4 week interval.

*Working Alliance Inventory-Short Form.* The WAI (Horvath & Greenberg, 1986, 1989) is a 36-item self-report measure that uses a 7-point fully anchored response scale (1 = *never*, 2 = *rarely*, 3 = *occasionally*, 4 = *sometimes*, 5 = *often*, 6 = *very often*, 7 = *always*). Based on Bordin's (1979) concept of the working alliance, the Working Alliance Inventory was developed to assess both the therapist's and the client's perception of three aspects of the working alliance: the bond, goals, and tasks of therapy. The WAI consists of three 12-item scales which reflect congruence between the goals and tasks as well as the emotional bond between participants in therapy. The possible total score on the WAI ranges from 36 to 252, with higher scores indicating stronger working alliances (Kivlighan, Patton & Foote, 1998). In a pilot study of the WAI, 29 graduate students in counseling psychology participated in a peer counseling task. The WAI was administered after the third interview and the data was then item analyzed. Reliability estimates based on item homogeneity ranged from .85 to .88 for the subscales in the client's version of the instrument and .68 to .87 for the counselor's version. Cronbach's alpha for the entire instrument was .93 and .87 for the client's and the counselor's version, respectively (Horvath & Greenberg, 1989). Based on factor analysis of the original WAI, Tracey and Kokotovic (1989) developed the 12-item Working Alliance Inventory-Short Form (WAI-S). Busseri and Tyler (2003) compared the interchangeability of the original client version of the WAI and the WAI-S. Eighteen therapists and 54 clients from two university counseling centers contributed data after the fourth session and after the final therapy session. Final therapy sessions across clients ranged from 5-23 sessions. Cronbach's alpha for total scores on the client version for the WAI and the WAI-S after the fourth session were .95 and .91, respectively. After the final sessions, Cronbach's

alpha for total scores on the client version of the WAI and WAI-S were .95 and .92, respectively. Intercorrelations among WAI and WAI-S subscales also demonstrated robust internal consistency. Concurrent WAI and WAI-S subscales and total scores were found to be highly related within rater. Predictive validity estimates involving fourth session WAI and WAI-S ratings and a composite measure of therapy improvement were also similar within rater perspective.

*University of Rhode Island Change Assessment Scale.* The URICA (McConaughy, DiClemente, Prochaska, and Velicer, 1989) is a 32-item self-report measure which assesses individuals' readiness to change. Items are written so they are relevant for change of any problem behavior that is the focus of the intervention. The scale uses a 5-point fully anchored Lickert scale (*1 = Strongly disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, 5 = Strongly agree*). Based on the Transtheoretical Model of change proposed by Prochaska and DiClemente (1984), the URICA scale consists of four subscales: Precontemplation, Contemplation, Action, and Maintenance. In a study of 155 adult psychotherapy outpatients across a number of treatment settings, internal consistency coefficients calculated for the precontemplation, contemplation, action and maintenance subscales yielded coefficient alphas of .88, .88, .89, and .88, respectively (McConaughy, Prochaska, & Velicer, 1983). In a study of 224 participants in an outpatient alcohol treatment program, DiClemente and Hughes (1990) found robust evidence supporting the external validity of the URICA scale by using multiple analysis of variance to compare URICA subscales to primary and secondary subscales of the Alcohol Use Inventory.

## RESULTS

### Descriptive Statistics

Table 1 provides the means, standard deviations, ranges, and coefficient alphas for the CATS, WAI-SF, PCL-M and URICA measures. Participants' CATS Secure subscale mean scores were similar to norm data for a sample of predominantly female college students ( $N = 59$ ) at a university in Canada (4.92 and 5.01, respectively; see Romano, Fitzpatrick, and Janzen, 2008). For the Avoidant/Fearful subscale, mean scores in the present study averaged 2.09, compared to 1.44 in the Romano, et al., study. For the Preoccupied/Merger subscales, participants' mean scores in the present study were 2.77 compared to 1.69 in the Romano, et al., study. Thus, participants in the present study reported somewhat higher mean scores than their college counterparts with regard to the Avoidant/Fearful and Preoccupied/Merger subscales on the CATS. It is worth noting that the spread of the mean scores in the present study are significantly higher by a factor of 3-4; that is, there is significantly more variability in the data. In terms of the WAI-SF, when compared to a sample of 54 college students from two university counseling centers (see Busseri & Tyler, 2003), mean scores in the present study were slightly lower in the Tasks, Goals and Bond subscales (5.54, 5.53, 5.45 versus 5.75, 6.09, and 6.03, respectively). The mean number of counseling sessions was similar across the two studies ( $M = 9$  sessions). Participants' URICA subscale mean scores in the present study were compared to a sample of 276 methadone maintenance patients recruited from four Philadelphia-area methadone clinics (Belding, Iguchi & Lamb, 1996). Average age for the methadone patients was 39 years. Average scores for participants in the present study were very similar to scores reported in the study by Belding et al.

Table 2 demonstrates a negative, strong correlation between the CATS Secure subscale and the CATS Avoidant/Fearful subscale that is statistically significant at the .01 level ( $r = -.85, p < .01$ ). There is a positive, weak correlation between the CATS Secure subscale and the CATS Preoccupied/Merger subscale that is statistically significant at the .05 level ( $r = .27, p < .05$ ). There is no statistically significant correlation between the CATS Avoidant/Fearful and the CATS Preoccupied/Merger subscales.

With regard to the correlations between the subscales of the WAI-SF, there is a positive, strong correlation between the Tasks subscale and the Bond subscale ( $r = .72, p < .01$ ). Similarly, the relation between the Tasks and Goals subscales is also positive and strongly correlated ( $r = .67, p < .01$ ). There is a positive, moderate correlation between the Bond and the Goals subscales that is statistically significant ( $r = .59, p < .01$ ).

The relation between the URICA Pre-Contemplation, Contemplation, and Action subscales in the present study demonstrate statistically significant correlations. Specifically, there is a negative, weak correlation between the Pre-Contemplation and the Contemplation subscales that is statistically significant ( $r = -.39, p < .01$ ). There is also a negative, weak correlation between the Pre-Contemplation and the Action subscales that is statistically significant ( $r = -.38, p < .01$ ). The correlation between the Contemplation and Action subscales is moderate, and statistically significant ( $r = .53, p < .01$ ). The Pre-Contemplation, Contemplation and Action subscales were not correlated with the Maintenance subscale of the URICA in the present study.

## Relations of Client Attachment to Therapist, the Working Alliance and Stages of Change

Spearman correlations of Client Attachment to Therapist, the Working Alliance Inventory, and the University of Rhode Island Change Assessment scale appear in Table 2. Specifically, there is a positive, strong and statistically significant correlation between the CATS Secure subscale and the Tasks and Bond subscales of the WAI-SF ( $r = .70, p < .01$ ;  $r = .79, p < .01$ , respectively). There is also a positive, moderate correlation between the CATS Secure subscale and the Goals subscale of the WAI-SF ( $r = .58, p < .01$ ). There was a negative, weak correlation between the CATS Secure subscale and the Precontemplation subscale of the URICA scale ( $r = -.38, p < .01$ ). There was also a positive, weak correlation between the CATS Secure subscale and the Action subscale of the URICA scale ( $r = .32, p < .01$ ). There were no statistically significant correlations between the CATS Secure subscale and the Contemplation or Maintenance subscales of the URICA scale.

The CATS Avoidant/Fearful subscale showed a positive, high correlation with the Tasks subscale of the WAI-SF ( $r = .70, p < .01$ ). There was a negative, strong correlation between the Avoidant/Fearful subscale and the Bond subscale of the WAI-SF ( $r = -.77, p < .01$ ). The CATS Avoidant/ Fearful subscale and the Goals subscale of the WAI-SF also demonstrated a negative, moderate correlation ( $r = -.56, p < .01$ ). There was a positive, low correlation between the CATS Avoidant/Fearful subscale and the Precontemplation subscale of the URICA ( $r = .43, p < .01$ ). The relation between the Avoidant/Fearful subscale and the Contemplation and Action subscales of the URICA was negative and weak ( $r = -.28, p < .05$  and  $r = -.41, p < .05$ , respectively).

The Preoccupied/Merger subscale of the CATS demonstrated a positive, low correlation with the Bond subscale of the WAI-SF ( $r = .28, p < .05$ ). There were no statistically significant correlations between the CATS Preoccupied/Merger subscale and other subscales of the WAI-SF or the URICA. Neither the CATS nor the WAI-SF subscales demonstrated statistically significant correlations with the PCL-M. However, the PCL-M did show a positive, weak relation with the Contemplation and Maintenance subscales of the URICA scale ( $r = .27, p < .05$  and  $r = .30, p < .05$ , respectively). There were no statistically significant correlations between the PCL-M and the Precontemplation or Action subscales of the URICA scale.

#### ANOVA

An ANOVA was performed to see if there were any statistically significant differences between veterans who had served in Vietnam and veterans who had served in other combat theaters. There were no statistically significant differences between these two groups. There were also no statistically significant differences between males and females in the present study. However, there were significant differences between married veterans and divorced or separated veterans. Specifically, the URICA Action subscale mean was higher for divorced/separated veterans than for married veterans ( $r = .040; p < .05$ ). The PCL-M mean was also higher for divorced/separated veterans than for married veterans ( $r = .020; p < .05$ ).

Forward stepwise multiple regression analysis was conducted to provide an estimate of the extent to which subscales of the CATS, the WAI-SF and the URICA predicted scores on the PCL-M. Additionally, forward stepwise regression analyses were performed to provide an estimate of the extent to which subscales of the CATS and the

WAI-SF, and the PCL-M mean predicted the stages of change subscales in the URICA scale. Results demonstrated in Table 3 indicate that 9 % of the variability in scores on the PCL-M are accounted for by the Maintenance subscale of the URICA ( $R^2 = .09$ ;  $F(1, 65) = 6.40$ ;  $p < .05$ ).

Results shown in Table 4 indicate that the CATS Avoidance subscale was the most salient predictor for scores on the URICA Precontemplation subscale ( $R^2 = .18$ ;  $F(1,66) = 14.64$ ;  $p < .05$ ), predicting 18 % of the variance for URICA Precontemplation scores. For the URICA Contemplation subscale, two predictors were identified in the model as statistically significant: The Bond subscale of the WAI-SF which accounted for 14 % of the variability in the Contemplation subscale ( $R^2 = .14$ ;  $F(1,66) = 10.30$ ;  $p < .05$ ); and the PCL-M mean score which accounted for 21% of the Contemplation subscale variability ( $R^2 = .21$ ;  $F(2,65) = 6.56$ ;  $p < .05$ ). Standardized beta values indicate the WAI-SF Bond subscale had slightly more impact in the model than the PCL-M mean score at .37 and .28, respectively. The WAI-SF Tasks subscale was the statistically significant predictor of the URICA Action subscale score ( $R^2 = .21$ ;  $F(1,66) = 17.53$ ;  $p < .05$ ); accounting for 21 % of the variance. Finally, 9 % of the variability in scores on the URICA Maintenance subscale was accounted for by the PCL-M Mean scores ( $R^2 = .09$ ;  $F(1, 65) = 6.40$ ;  $p < .05$ ).

## DISCUSSION

The purpose of this study was to investigate the relations among: (a) clients' attachment to their therapists, (b) the working alliance, and (c) clients' readiness to disclose traumatic material in session among veterans diagnosed with posttraumatic stress disorder (PTSD). Mean scores shown in Table 1 indicate that veterans in this study tended to report scores on the Secure subscale of the Client Attachment to Therapist Scale (CATS) that were similar to predominantly female college students at a large Midwestern university counseling center and to mostly female student volunteers from a counseling course in an applied human science program at a university in Canada (Mallickrodt, Porter & Kivlighan, 2005; Romano et al., 2008). This suggests that veterans in this sample were about as likely to view their therapists as a secure attachment figure (e.g., warm, empathic, supportive) as their college counterparts in previous studies. Conversely, veterans in this sample had somewhat higher average scores on the CATS Avoidant/Fearful and on the Preoccupied/Merger subscales. High scores on these scales are interpreted as representing clients' insecure attachment to their therapists. Veterans in this study also tended to experience their therapists as more disapproving and rejecting as compared to their college counseling center and student counterparts. This is consistent with the attachment literature which indicates that individuals with an insecure attachment style have a tendency to view attachment figures as "unreliable and untrustworthy," and to have "motives [that] are suspect" (Mikulincer & Shaver, 2005).

Furthermore, veterans with combat-related PTSD experience impairment in social relationships and the ability to connect with others overall (Riggs, Byrne, Weathers & Litz, 1998), further alienating them from the attachment figure of the therapist. Finally,

combat veterans may experience cognitive distortions related to perceptions of the world as unsafe; views of their therapists as disapproving and rejecting is in keeping with this paradigm (Foa & Rothbaum, 1997).

With regard to the working alliance, veterans in this study reported mean scores on the WAI-SF subscales that were slightly lower than scores reported by university counseling center clients (Busseri & Tyler, 2003). This suggests that veterans in this study were somewhat less likely to agree with the tasks and goals of therapy, and to experience less of an emotional bond with their therapists than were the 54 college students at two university counseling centers who participated in the Busseri and Tyler (2003) study. This finding is consistent with the results of a study by Parish and Eagle (2003) who found that a stronger attachment to the therapist is related to a stronger working alliance and greater attachment security in the therapeutic relationship.

Mean scores for the URICA subscales indicate veterans in the present study reported similar scores to average subscale scores reported by Belding, Iguchi and Lamb (1997) in their study of 276 methadone maintenance patients in Philadelphia. Interestingly, in the Belding et al. study, a high correlation was found between the Contemplation and Maintenance stages of change. The authors speculated this strong relation was indicative of tentative hopes to change combined with satisfaction with changes that have already been made. The authors also state this is consistent with therapists' reports of patients in methadone treatment who reduce their drug use but then are complacent about further efforts to change. Unlike the complacency exhibited by the methadone maintenance patients in the Belding, et al. (1997) study, veterans with chronic

PTSD often report wanting to make changes in PTSD symptomology, while at the same time expressing doubts and ambivalence about the possibility of further therapeutic gains.

Nine hypotheses were explored regarding the associations among clients' attachment to their therapists, the working alliance, and clients' readiness to process traumatic material in session. Results shown in Table 2 indicate three of these hypotheses were fully supported, and two hypotheses were partially supported. Specifically, the hypothesis that the Secure subscale of the Client Attachment to Therapist Scale (CATS) would be positively correlated with the Bond, Goals, and Tasks subscales of the Working Alliance Inventory-Short Form (WAI-SF) was supported. There was a strong, positive correlation between the CATS Secure subscale and the Tasks and Bond subscales of the WAI-SF; and a moderate, positive correlation between the CATS Secure subscale and the Goals subscale of the WAI-SF.

These findings suggest that veterans in treatment for symptoms of PTSD who had established a secure emotional bond with their therapists may be more likely to agree with the tasks of therapy, as well as the goals of therapy. This observation is supported by findings reported in the literature. For example, in a study of 105 adults participating in psychoanalytic or psychodynamic therapy for at least six months, Parish and Eagle (2003) found that secure attachment to their therapists was highly correlated with the working alliance. In particular, the perception of the therapist as a "secure base" from which to explore the world, as well as someone to return to and prior experiences of an attentive, emotionally available primary caregiver in childhood appeared to have the most effect on clients' ability to establish a strong working alliance.

The hypothesis that there would be a positive correlation between the Secure attachment subscale of the CATS and the Action subscale of the University of Rhode Island Change Assessment (URICA) scale was also supported. There was a weak, but positive correlation between the Secure attachment subscale of the CATS and the Action subscale of the URICA scale. Individuals reporting greater security in the therapeutic relationship tended to view their therapists as more empathic, emotionally available, and supportive (Mallinckrodt, Gantt, & Coble, 1995). In the Transtheoretical Model, the Action stage of change is marked by a willingness to invest the time and energy to make real and lasting changes in an identified problem area in life (Prochaska, 1984). It is congruent with attachment theory (Farber, Lippert & Nevas, 1995; Sroufe & Waters, 1977) that clients who viewed their therapists as offering a “secure base” (i.e., reporting higher scores on the CATS Secure subscale) would also report greater orientation toward action in therapeutic change (i.e., scored higher on the Action subscale of the URICA scale). In the infant-caregiver dyad, securely attached infants tend to have caregivers who encourage exploration while at the same time remaining available should the child need safety and comforting. Similarly, within the security of the therapeutic alliance, clients explore by learning to see the world in new ways and attempting to change old patterns of being and relating to others (Ainsworth, Blehar, Waters, & Wall, 1978; Farber, Lippert & Nevas, 1995). From the perspective of attachment theory, this is a fundamental precept in psychotherapy and is theorized to provide the conceptual bridge between secure attachment and the action stage of change (Bowlby, 1969, 1988).

The hypothesis that there would be a negative relation between the Avoidant/Fearful subscale of the CATS and the Action subscale of the University of

Rhode Island Change Assessment scale (URICA) was supported, although the correlation was weak. The correlation between the Avoidant/Fearful subscale of the CATS and the Contemplation subscale of the URICA was also negative and weak. These results suggest that veterans in the study who endorse an avoidant attachment style with their therapist may not be fully aware that a problem exists, nor are they ready to take action in addressing their problem or to devote themselves to change. This is consistent with the literature on attachment, which suggests that individuals with insecure attachment styles are less likely to engage in exploration – which includes the cognitive exploration that is the precursor to change – and therefore less likely to be in the action stage of change (Ainsworth, Blehar, Waters & Wall, 1978; Bowlby, 1969, 1973, 1977, 1988; Elliot & Reis, 2003; Mikulincer, 1997).

The hypothesis that there would be a negative correlation between the Avoidant/Fearful subscale of the CATS and the subscales of the WAI-SF was only partially supported. Specifically, there was a strong, negative correlation between the Avoidant/Fearful subscale of the CATS and the Bond subscale of the WAI-SF. The CATS Avoidant/ Fearful subscale and the Goals subscale of the WAI-SF also demonstrated a negative, moderate correlation. This is consistent with an avoidant attachment style which is uncomfortable with emotional connection and therefore may not work to establish a bond with the therapist (Mallinckrodt, Gantt & Coble, 1995), as may have been the case with their primary caretakers during their upbringing. These individuals may also be disinclined to engage in collaborative goal-setting in session, given their propensity to view their therapists as fundamentally unavailable to address their needs (Bretherton, 1985; Sable, 1997). Interestingly, however, the Avoidant/Fearful

subscale of the CATS and the Tasks subscale of the WAI-SF showed a positive, high association, rather than a negative association as hypothesized. These results suggest that patients may agree on and even carry out tasks that need to be done in therapy (e.g., show up to their appointments, complete homework between sessions), but they do not have a close, emotional bond with the therapist nor do they agree on the goals of therapy. More specifically, one of the goals about which they may disagree with their therapist is the value of processing their traumatic material in session to decrease PTSD symptomology.

The hypothesis that the Avoidant/Fearful subscale of the CATS and the Tasks subscale of the WAI-SF would show a negative association was not fully supported. It may be that tasks in therapy are simply easier to agree upon than the less concrete endeavor of establishing therapeutic goals. It may also be the case that individuals who endorse an avoidant attachment style to their therapist— particularly a fearful attachment style — are motivated to please a therapist through the overt fulfillment of therapeutic tasks, but do not agree with the overall goals of therapy. This is further supported by the work of Mallinckrodt, Porter and Kivlighan (2005) who hypothesized that avoidantly attached individuals may suspect their therapists of being displeased with them and possibly rejecting of them. For patients who are not dismissing but rather are fearful of attachment with others, pleasing their therapists may be an incentive to carry out therapeutic tasks, even if they implicitly disagree with therapeutic goals. This conjecture supports the finding of Bartholomew and Horowitz (1991), who suggested that avoidant attachment consists of both dismissing and fearful attachment styles. They further posited that both dismissing and fearful attachment styles were both socially avoidant. However,

individuals with dismissing or fearful attachments differed in their need for the acceptance of others.

Another reason this hypothesis is only partially supported may be the role of financial remuneration of veterans with PTSD for service-connected disabilities. Specifically, veterans are assessed regarding the amount of financial compensation they will receive based on the severity of their service-connected PTSD symptoms. Furthermore, they are re-assessed periodically to determine if there has been a change in the level of posttraumatic stress, with particular emphasis on its global effects across several domains of functioning (e.g., work, social and family relationships, cognitive functioning). Based on financial considerations, individuals in this study may have been motivated to carry out the tasks of therapy, but not necessarily the overall therapeutic goal of reduction of PTSD symptomology (Sayer, Spont, & Nelson, 2005).

The hypothesis that there would be a negative association between the Preoccupied/Merger subscale of the CATS and the subscales of the WAI-SF was only partially supported. Specifically, there was no association between veterans' reports of an anxious, insecure attachment with their therapists and agreement on the goals and tasks of therapy. However, there was a positive correlation between the Preoccupied/Merger subscale of the CATS and the Bond subscale of the WAI-SF. These results suggest that veterans who reported a preoccupied/merger or anxious attachment style with their therapist were more likely to attend to the therapeutic bond and less inclined to attend to the goals and tasks of therapy. Individuals with an anxious or preoccupied attachment style tend to scan their environment for potential abandonment by attachment figures, and use strategies to maintain proximity to them (Sable, 1997). This attachment behavior

could explain the positive relation between the preoccupied attachment style and the therapeutic bond, as well as the lack of correlation between this attachment style to the therapist and the tasks and goals of therapy. That is, preoccupation with their therapists as attachment figures may have superseded a focus on the tasks and goals of therapy.

Mallinckrodt, Gantt and Coble (1995) noted the same pattern in the development of the Client Attachment to Therapist Scale stating:

The correlations of the CATS Preoccupied-Merger subscale with working alliance dimensions suggest that these clients form a working alliance bond with their therapists much more readily than they come to agreement about the tasks or goals of therapy. It seems likely that clients in the merger cluster have maintained a strongly negative working model of self and a positive working model of others (pg. 315).

The hypothesis that veterans who endorsed a Preoccupied/Merger attachment style with their therapist would have a statistically significant negative correlation with the URICA Action stage of change was not supported. It may be that the Client Attachment to Therapist Scale and the University of Rhode Island Change Assessment Scale address unrelated constructs and so are not correlated. This is demonstrated in Table 2 by the fact that the Preoccupied Merger subscale of the CATS did not correlate with any subscales in the URICA scale.

In this study, several hypotheses that examined associations between client attachment to therapist, the therapeutic working alliance and post-traumatic stress disorder were not supported. Specifically, there was no significant correlation between attachment to therapist and post-traumatic stress, or between the working alliance and

post-traumatic stress. These were unexpected findings and may be explained by the use of a cross-sectional research design that provided a “snapshot in time.” Thus, the study was not able to examine a possible association between these factors that may change over time. Theoretically, with the passage of time, an improved working alliance, an increase in the strength of veterans’ attachment to their therapists, and veterans’ increased readiness to process traumatic material in session (as evidenced by being in the Action stage of change in the Prochaska & DiClemente model [1984]) would be associated with a reduction of PTSD symptoms. Thus, at least theoretically, veterans with a secure attachment to their therapists would tend to get better, while veterans with an insecure attachment to their therapists would, over time, develop a more secure attachment. Because of the cross-sectional design of the present study, these potential longitudinal dynamics were not assessed.

Another possible explanation for the role of the passage of time in terms of PTSD symptom reduction may be that veterans who experience long-term PTSD often develop issues that provide additional motivation to get better. This would not be surprising given that chronic, combat-related PTSD is often associated with co-morbid mental health issues such as major depression and panic disorder (Mellman, Randolph, Brawman-Mintzer, Flores & Milanes, 1992), which negatively impact veterans’ quality of life on a daily basis, sometimes for decades following the combat trauma. Additionally, veterans with chronic PTSD regularly experience physical health concerns related to enduring stress, such as cardiovascular problems, diabetes, osteoarthritis, and gastrointestinal concerns (Boscarino, 2004; David, Woodward, Esquenazi, & Mellman, 2004). Physical

and mental health issues may serve as powerful motivators to address chronic, combat-related PTSD among veterans who experience these concerns.

An analysis of variance (ANOVA) indicated there were no statistically significant differences between Vietnam veterans and veterans of other combat theaters in their endorsement of the constructs. Alternatively, it is also possible that the low number of veterans from other combat zones and peacekeeping operations were not sufficient to demonstrate differences from Vietnam veterans. This is not likely, however, in that the means of the two groups were virtually identical, indicating that larger samples would probably make little difference. On the other hand, no veterans in this study participated in World War II or the Korean War. The Vietnam War, peacekeeping operations (e.g., Panama, Grenada), the First Gulf War, Operation Iraqi Freedom (Iraq campaign) and Operation Enduring Freedom (Afghanistan campaign) all share what Thayer (1985) referred to as “a war without fronts.” They are marked by events in which national armies do not always clash on clearly defined fields of battle. Rather, they are confrontations in which it is often difficult to tell friend from foe, and some combatants are civilians. It is possible, therefore, that the similarities may extend to how these veterans rate their attachments to their therapists, their working alliances, their readiness to process traumatic material in session and, ultimately, how they experience posttraumatic stress.

There were also no differences between male and female veterans in the present study. It may be that the observed relations (and non-relations) among the constructs are not affected by veterans’ sex. Alternatively, the findings of the study may be due to the fact that there were only eight women and thus there was an insufficient number to demonstrate a statistical difference based on gender. It is also the case that since the early

1990s women in the United States Armed Forces increasingly share the same combat-related military occupational specialties as their male counterparts, and thus may share similar combat experiences as well (Smith, Jacobson, Smith, Hooper & Ryan, 2007). These similarities, like similarities among different theaters of military operations, may explain why no differences were noted in how men and women answered scale items in this study.

One significant finding was that the PCL-M mean and the URICA Action subscale mean were higher for divorced or separated veterans compared to married veterans. This suggests that veterans reporting more PTSD symptoms (i.e., higher scores on the PCL-M) and who reported experiencing problems in their intimate partner relationships, were also more likely to be in the Action stage of therapeutic change. There are many possible explanations for these relations.

The difficulties that combat veterans with PTSD experience in intimate partner relationships have been well-documented for many years (Carroll, Rueger, Foy & Donahoe, 1985; Galovski & Lyons, 2004; Jordan, Marmar, Fairbank, Schlenger, 1992). Relationship difficulties have been found among female veterans with PTSD and their partners as well (Gold, Taft, Keehn, King, King, & Samper, 2007). Caregiver burden among spouses and cohabitating partners of veterans suffering from chronic PTSD has also been addressed in the literature (Calhoun, Beckham & Bosworth, 2002). Taken together, it is not surprising that veterans with PTSD would experience intimate relationship difficulties. What is interesting is the role these relationship difficulties may have on veterans' willingness to address their PTSD symptomology.

It may be that the loss, and particularly the threatened loss, of their partners provided the veterans who were divorced or separated the impetus to change in order to salvage the relationship. It may also be the case that veterans had more time to devote to addressing their PTSD symptoms within the new reality of being single. The desire to find meaning in the loss or threatened loss of their partner as it relates to PTSD symptomology in particular may have also provided a motivation to change. Finally, veterans in this study who experienced the dissolution or threatened dissolution of their intimate partner relationships may have used the experience as a catalyst for examining the quality of their previous romantic relationships overall. Additionally, they may be motivated to reduce their PTSD symptomology and to improve their functioning as ways to improve their attractiveness to a potential future partner.

Table 3 shows that the Maintenance subscale of the URICA predicted 9% of the variability in PCL-M scores. No other subscale in the model was demonstrated to be predictive of PCL-M scores. This means that, according to the stages of change model (Prochaska, 1984), veterans in the Maintenance stage of change are in the process of working on and solidifying gains they have made in therapy, and that differences in their endorsement of being in the Maintenance stage of change explains 9% of their PTSD symptoms. By definition of the Maintenance stage of change construct, it is reasonable to assume that PCL-M scores would tend to be lower for veterans in the Maintenance stage of change. Such individuals are reporting that they have made changes that they are seeking to maintain.



preparation for being in the Action stage of change within 30 days. The Maintenance stage of change was not included in this model. Interestingly, this graph demonstrates that veterans in the Contemplation stage did not exhibit the highest degree of distress, as defined by PCL-M mean scores. Veterans were at different points in their readiness to change, with most being in the Contemplation stage of change. This supports the findings of Rosen et al., (2001), that the Transtheoretical Model could be used in the management of PTSD by assessing where veterans are in their readiness to change.

Table 4 shows that the CATS Avoidance/Fearful subscale was the most significant predictor of scores on the URICA Pre-contemplation subscale, accounting for 18% of the variance in scores on the Pre-contemplation subscale. Veterans with an Avoidant/Fearful attachment to their therapist tend to have views of their therapist as a negative and rejecting figure if displeased. In addition, veterans who endorse an Avoidant/Fearful attachment tend to be reluctant to disclose personal material in session, and feel humiliated and embarrassed when doing so (Mallinckrodt et al., 2005). This is consistent with the Stages of Change model, in which the Pre-Contemplation stage is characterized by clients' lack of intention to address a problem, and lack of insight that a problem exists (Prochaska, 1984).

Table 4 also shows that for the URICA Contemplation subscale, the Bond subscale of the WAI-SF accounted for 14% of the variability, while the PCL-M mean score accounted for 21% of the Contemplation subscale variability. This suggests that the quality of the therapeutic relationship is a factor in whether veterans are likely to recognize that a problem exists. In addition, the level of posttraumatic stress, as suggested

by the PCL-M score, is also a factor in whether or not the veteran recognizes that a problem needs to be addressed in therapy.

The WAI-SF Tasks construct was the statistically significant predictor of the URICA Action subscale score accounting for 21% of the variance. This model suggests that if veterans agree with their therapists on the tasks that need to be accomplished to achieve the goals in therapy, they are more likely to be ready to dedicate the time and energy necessary to address their PTSD symptomology.

### Clinical Implications

Posttraumatic stress is often a chronic illness that is particularly resistant to change (Schnurr, Lunney, Sengupta, & Waelde, 2003). While a number of treatment approaches continue to be utilized with PTSD, results of the present study underscore that fostering a strong, secure emotional bond appears to be the *sine qua non* in working with veterans struggling with posttraumatic stress. It would appear that a primary focus for therapists working with service-connected veterans experiencing PTSD is to establish and maintain a strong emotional connection with the patients.

Patients' attachment to their therapists is important to identify as this affects how therapists are viewed, and whether or not the patient's focus will be solely on maintaining the emotional bond, or whether there will be actual agreement on the tasks and goals of therapy. Specifically, patients may agree on and even carry out tasks that need to be done in therapy (e.g., show up to their appointments, complete homework assignments between sessions), but they may do so to please the therapist and to avoid what they perceive as disapproval, rather than as a means to address their presenting concerns. It

would appear that patient motivation in carrying out the tasks of therapy is therefore an important topic to address openly and honestly in session.

Veterans with chronic PTSD tend to have a reduced sense of safety in the world. Symptoms that enhance perceptions of safety and control (e.g., avoidance, hypervigilance) serve as powerful motivators to maintain the status quo. This, together with the financial incentive inherent in service-connected compensation for PTSD, and the humiliation and embarrassment some veterans experience when discussing their traumatic experiences in session render a decision to address PTSD symptomology difficult indeed. Motivational interviewing (Rollnick & Miller, 1995) may be a powerful tool to assist veterans in weighing the pros and cons of addressing their posttraumatic stress. Sensitive exploration of these issues early in the therapy relationship may assist veterans in deciding how they wish to proceed, and may guide therapists in treatment planning.

### Limitations

A number of limitations to the study are noteworthy and should be addressed. Sixty-eight veterans participated in the study. While results are encouraging, a larger, more diverse sample size (e.g., more females, more ethnically diverse study participants, veterans from other combat theaters) may yield results that could be more generalizable to the population of veterans who are service-connected for PTSD. There was also a self-selection bias among study participants in that not all veterans diagnosed with PTSD at this VA medical center chose to participate in the study. Thus, selection biases may be present. In addition, this is a cross-sectional study design, which precludes the ability to track changes within individuals over time. Hence, causality cannot be determined due to

the research design. Thus, there is no way in the present study to measure how individuals move through the stages of change based on changes in their attachment to their therapist, as well as changes in the working alliance and PTSD symptomology. The Transtheoretical Model was originally developed using individuals with substance abuse issues. Therefore, it is unclear if the Transtheoretical Model is the best measure of change for individuals diagnosed with PTSD. In addition, the Stages of Change model attempts to capture complex constructs that represent “changeable states and not static traits” (Diclemente, Schlundt, & Gemmell, 2004). The same may be said for the PCL-M. Thus, it is difficult to operationalize PTSD and readiness to change into precise, fixed categories. Results of the multiple regression analysis demonstrated that the URICA Maintenance subscale predicted 9% of the variance in veterans’ PCL-M scores. However, statistical analysis also demonstrated that the PCL-M predicted 9% of variance in URICA Maintenance subscale scores. Therefore, it is impossible to determine directionality in the association between these two constructs.

Additionally, 7 of the 17 questions on the PCL-M were inadvertently excluded from the survey packet. However, since there are no subscales within the PCL-M, it was possible to calculate a criteria score for PTSD derived from the shortened version of the PCL-M. However, the PCL-M means in this study may not coincide precisely with those that would be derived from the longer 17-item version of the scale.

It may be useful in future research to replicate this study using a longitudinal research design. Veterans’ readiness to change as it relates to PTSD symptomology and the therapeutic relationship may be more easily demonstrated across time. In addition, a

larger, more diverse sample may provide data that would be more generalizable to the population of veterans service-connected for PTSD.

An important research implication of this study is the key role of the therapeutic alliance in assisting veterans to address their PTSD symptoms. Specifically, therapists' attention should be focused on providing a warm, supportive environment for veterans to explore traumatic material in session. An understanding of attachment theory and how veterans' attachment styles may facilitate or disrupt the goals of therapy may assist therapists in tailoring their treatment interventions. In addition, sensitive, honest exploration early in therapy about veterans' motivation to address PTSD symptoms as preparation for implementation of empirically supported treatment regimens may positively affect successful resolution of PTSD symptomology.

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## APPENDICES

### Appendix A: Health Sciences Institutional Review Board Approval Letter



**Institutional Review Board  
Health Sciences Section**

University of Missouri-Columbia

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July 29, 2008

Grant O'Neal  
VA Hospital  
Columbia, MO 65212

Dear Mr. O'Neal,

Regarding your application for approval of the research project, *Attachment to therapist, the working alliance, and emotional processing of traumatic material in session among veterans diagnosed with post-traumatic stress disorder*, the Health Sciences Institutional Review Board (HS IRB) took the following action:

- a. Approved your study through full board review on July 23, 2008.
- b. Found this protocol dated July 23, 2008 to impose minimal risk to the research participant.
- c. Requires that the principal investigator obtain the informed written consent of each research participant.
- d. Reviewed and approved the final version of the consent form on July 29, 2008. Please use the approved consent displaying the signed IRB approval box when consenting patients.
- e. Reviewed and approved any questionnaires and surveys that were submitted with your application.
- f. Found that there is no HIPAA requirement for this project.
- g. Approval for this protocol will expire on July 23, 2009. A Continuing Review Report must be submitted a minimum of one month prior to this date.
- h. Upon completion of the study a Completion Form must be submitted to the HS IRB office. If the closure is not documented on the Completion Form, you may close the study at the time of the annual review.

Please reference IRB Project # 1080397 in all future communications regarding this project.

Before enrolling patients at the Truman V.A. Hospital, all research involving human participants must be approved by both the appropriate MU IRB and the V.A. Research and Development Committee. This requirement includes Principal Investigators who are V.A. employees conducting research outside of the V.A., and any non-V.A. employees who are either recruiting V.A. patients or using V.A. facilities for their research. If you meet any of the above criteria, please contact the V.A. Research Office at 814-6550.

Pursuant to the HS IRB conflict of interest policy, investigators who are HS IRB members do not vote on protocols in which they are involved.

Death occurring in a study at this site must be reported to the HS IRB office within 24 hours of occurrence, whether or not the death is related to the study. All on-site serious adverse events must be reported to the HS IRB office within five (5) days of occurrence.

No change may be made in an approved protocol or recruitment materials unless the change is submitted to and approved by the HS IRB.

Do not depend on the HS IRB for your record keeping. Pursuant to federal regulations, the IRB retains files of only three years after termination of a research project.

Sincerely,

A handwritten signature in black ink, appearing to read 'Niels Beck'.

Niels Beck, PhD  
Chair

Enclosure

**Department of  
Veterans Affairs**

**Memorandum**

**Date:** September 22, 2008

**From:** Chairperson, Research and Development Committee  
Associate Chief of Staff for Research and Development (ACOS/R&D)

**Subj:** Request to Conduct Research

**To:** Grant O'Neal, PhD, Behavioral Health (BEH)

1. On September 17, 2008, the Research and Development (R&D) Committee met to discuss your protocol entitled, "Attachment to Therapist, the Working Alliance, and Emotional Processing of Traumatic Material in Session Among Veterans Diagnosed with Post-Traumatic Stress Disorder" [Project #: 0002/IRB #: 1080397].

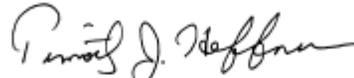
2. Full, ongoing compliance with Health Sciences Institutional Review Board (HS-IRB) regulations will be required in all respects. Quality assurance audits may be performed by the Human Research Compliance Officer (HRCO).

3. In our capacities as Chair, R&D Committee and Associate Chief of Staff for Research and Development (ACOS/R&D), we are pleased to inform you that your project was approved, so you may proceed with your proposed work.

4. Your project will be re-reviewed on an annual basis by the R&D Committee; you will be asked to provide a status report at that time.

5. In addition, any proposed changes in your research protocol must be brought to the attention of the R&D Committee.

6. We look forward to having your project initiated at the Harry S. Truman Memorial Veterans' Hospital (HSTMVH).



TIMOTHY J. HOFFMAN, PHD



JOHN D. WHITED, MD

cc: HS-IRB

Appendix C: Informed Consent

 Department of Veterans Affairs		<b>VA RESEARCH CONSENT FORM</b>	
<b>Subject Name:</b> _____			
Attachment to therapist, the working alliance, and emotional processing of traumatic material in session among veterans diagnosed with post-traumatic stress disorder.			
<b>Title of Study:</b> _____		<b>Date:</b> _____	
<b>Principal Investigator:</b> <u>Dr. Grant O'Neal</u>		<b>VAMC:</b> _____	

**PROJECT NUMBER** 1080397

**INTRODUCTION**

**This consent may contain words that you do not understand. Please ask the investigator or the study staff to explain any words or information that you do not clearly understand.**

This is a research study. Research studies include only people who choose to participate. As a study participant you have the right to know about the procedures that will be used in this research study so that you can make the decision whether or not to participate. The information presented here is simply an effort to make you better informed so that you may give or withhold your consent to participate in this research study.

Please take your time to make your decision and discuss it with your family and friends.

You are being asked to take part in this study because you have been diagnosed with post-traumatic stress disorder. In order to participate in this study, it will be necessary to give your written consent.

**WHY IS THIS STUDY BEING DONE?**

The purpose of this study is to determine whether patients are able to talk about traumatic experiences (including thoughts, feelings, and beliefs about what happened) with a therapist in a psychotherapy session. This research is being done in an effort to better understand post-traumatic stress disorder and its treatment.

**HOW MANY PEOPLE WILL TAKE PART IN THE STUDY?**

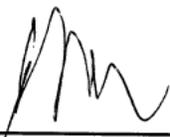
About 100 people will take part in this study at this institution.

---

FOR HS IRB USE ONLY

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APPROVED



\_\_\_\_\_  
HS IRB Authorized Representative

9-9-08  
Date

EXPIRATION DATE: 7-23-2009

VA FORM  
JAN 1990

10-1086

	Department of Veterans Affairs	<b>VA RESEARCH CONSENT FORM</b> (Continuation Page 2 of 6)
<b>Subject Name:</b> _____		
Attachment to therapist, the working alliance, and emotional processing of traumatic material in session among veterans diagnosed with post-traumatic stress disorder.		
<b>Title of Study:</b> _____		<b>Date:</b> _____
<b>Principal Investigator:</b> <u>Dr. Grant O'Neal</u>		<b>VAMC:</b> _____

**WHAT IS INVOLVED IN THE STUDY?**

If you take part in this study, you will be asked to fill out four questionnaires that ask about your post-traumatic stress disorder symptom severity, as well as the quality of your relationship with your therapist. The information you provide will be anonymous.

**How Long Will I Be in the Study?**

Your participation in the study will take up to 30 minutes.

**You can stop participating at any time. Your decision to withdraw from the study will not affect in any way your medical care and/or benefits.**

**WHAT ARE THE RISKS OF THE STUDY?**

You will be exposed to no greater risks than those usually encountered in everyday life. It is possible that some individuals may experience discomfort completing survey items.

For this reason, Tina Peterman, the study investigator will observe you closely while you are filling out the questionnaires and, if you experience any discomfort related to the survey items, you may let her know immediately. You also have the option of contacting Tina Peterman by telephone at: (573) 639-1829.

**ARE THERE BENEFITS TO TAKING PART IN THE STUDY?**

If you agree to take part in this study, there may or may not be direct medical benefit to you. You may expect to benefit from taking part in this research to the extent that you are contributing to medical knowledge. We hope the information learned from this study will benefit other patients with post-traumatic stress disorder in the future.

There is no guarantee that taking part in this research will result in any improvement in your condition.

**WHAT OTHER OPTIONS ARE THERE?**

Instead of being in this study, you have these options:

- You may participate in therapy even if you do not take part in the study.

Please discuss these options with Tina Peterman, the study co-investigator.

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 Department of Veterans Affairs		<b>VA RESEARCH CONSENT FORM</b> (Continuation Page 3 of 6)	
<b>Subject Name:</b> _____			
Attachment to therapist, the working alliance, and emotional processing of traumatic material in session among veterans diagnosed with post-traumatic stress disorder.			
<b>Title of Study:</b> _____		<b>Date:</b> _____	
<b>Principal Investigator:</b> Dr. Grant O'Neal		<b>VAMC:</b> _____	

**WHAT ABOUT CONFIDENTIALITY?**

Information produced by this study will be stored in a locked file cabinet at the Behavioral Health Clinic. You will be identified by a code number only. Information contained in your records may not be given to anyone unaffiliated with the study in a form that could identify you without your written consent, except as required by law. If the investigator conducting this study is not your primary, or regular doctor, he/she must obtain your permission before contacting your regular doctor for information about your past medical history or to inform them that you are in this trial.

It is possible that your medical and/or research record, including sensitive information and/or identifying information, may be inspected and/or copied by the study sponsor (and/or its agent), the Food and Drug Administration (FDA), federal or state government agencies, or hospital accrediting agencies, in the course of carrying out their duties. If your record is inspected or copied by the study sponsor (and/or its agents), or by any of these agencies, the hospital will use reasonable efforts to protect your privacy and the confidentiality of your medical information.

The results of this study may be published in a medical book or journal or used for teaching purposes. However, your name or other identifying information will not be used in any publication or teaching materials.

**WHAT ARE THE COSTS?**

There will be no costs to you for any of the treatment or testing done as part of this research study. However, medical care and services provided by the VA that are not part of this study (e.g., normal hospital and prescription expenses which are not part of the research study) may require co-payments if your VA-eligibility category requires co-payment for VA services.

**WILL I BE PAID FOR PARTICIPATING IN THE STUDY?**

You will receive a \$5.00 voucher for the VA cafeteria for participation in the study.

**WHAT IF I AM INJURED?**

In the event that you sustain an injury or illness as part of your participation in this VA approved research study, all medical treatments (emergency as well as medical treatment beyond emergency care) will be provided by the VA. You will be treated for the injury at no cost to you. However, no additional compensation has been set aside. You have not waived any legal rights or released the hospital or its agents from liability by signing this form.

In the event of a research-related injury or if you experience an adverse reaction, please immediately contact Dr. Grant O'Neal at (573) 814-6000 ext. 56486/toll free 800-249-8262 ext.56486 during the day and Tina Peterman at

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<b>Subject Name:</b>	_____	
	Attachment to therapist, the working alliance, and emotional processing of traumatic material in session among veterans diagnosed with post-traumatic stress disorder.	
<b>Title of Study:</b>	_____	<b>Date:</b> _____
<b>Principal Investigator:</b>	Dr. Grant O'Neal	<b>VAMC:</b> _____

(573) 639-1829 after business hours. If you need emergency hospitalization in a private hospital because you are unable to come to the VA, have a family member or friend contact Dr. Grant O'Neal so that the VA can coordinate care with the private hospital.

**WHAT ARE MY RIGHTS AS A PARTICIPANT?**

I have read or have had read to me all of the above. Tina Peterman has explained the study to me and answered all of my questions. I have been told of the risks or discomforts and possible benefits of the study. I have been told of other choices of treatment available to me.

It has been explained to me that I do not have to take part in this study, and my refusal to participate will involve no penalty or loss of rights to which I am entitled. I may withdraw from this study at any time without penalty or loss of VA or other benefits to which I am entitled. The results of this study may be published, but my records will not be revealed unless required by law.

In case there are medical problems or questions, I have been told to call Dr. Grant O'Neal at (573) 814-6000 ext.56486/ toll free 800-249-8262 ext. 56486 during the day and Tina Peterman at (573) 639-1829 after hours. If any medical problems occur in connection with this study the VA will provide emergency care.

**My rights as a research subject have been explained to me, and I voluntarily consent to participate in this study. It has been explained to me what the study is about and how and why it is being done. I will receive a signed copy of this consent form.**

**WHOM DO I CALL IF I HAVE QUESTIONS OR PROBLEMS?**

Questions or problems about the research can be addressed to Tina Peterman, the Study Representative at (573) 639-1829. In addition, any concerns or complaints about the research can be addressed to the primary investigator, Dr. Grant O'Neal, at (573) 814-6000 ext.56486/ toll free 800-249-8262 ext. 56486.

If you have any questions regarding your rights as a participant in this research and/or concerns about the study, or if you feel under any pressure to enroll or to continue to participate in this study, or want to speak to individuals who are independent of the research team for additional information or assistance, to discuss concerns or complaints, or in case the research staff cannot be reached, you may contact either the University of Missouri Health Sciences Institutional Review Board,(which is a group of people who review the research studies to protect participants' rights) at (573) 882-3181, the VA Human Research Compliance Officer at 573-814-6560, the VA Patient Representative at 573-814-6594, or the VA Associate Chief of Staff for Research and Development at 573-814-6550. These individuals can also provide assistance with verifying the validity of this study or contacting the research staff.

APPROVED SEP 09 2008



**Subject Name:** \_\_\_\_\_

Attachment to therapist, the working alliance, and emotional processing of traumatic material in session among veterans diagnosed with post-traumatic stress disorder.

**Title of Study:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Principal Investigator:** Dr. Grant O'Neal **VAMC:** \_\_\_\_\_

You may ask more questions about the study at any time. For questions about the study or a research-related injury, contact Dr. Grant O'Neal at (573)814-6000 ext.56486/ toll free 800-249-8262 ext.56486.

A copy of this consent form will be given to you to keep.

**SIGNATURE** \_\_\_\_\_.

**RESEARCH SUBJECTS' RIGHTS:**

I have read or have had read to me all of the above. Tina Peterman, the study representative has explained the study to me and answered all of my questions. I have been told of the risks or discomforts and possible benefits of the study. I have been told of other choices of treatment available to me.

It has been explained to me that I do not have to take part in this study, and my refusal to participate will involve no penalty or loss of rights to which I am entitled. I may withdraw from this study at any time without penalty or loss of VA or other benefits to which I am entitled. The results of this study may be published, but my records will not be revealed and the information I provide will be anonymous.

**My rights as a research subject have been explained to me, and I voluntarily consent to participate in this study. It has been explained to me what the study is about and how and why it is being done. I will receive a signed copy of this consent form.**

**Are you participating in any other research projects? Yes No**

\_\_\_\_\_  
Subject/Patient Date

\_\_\_\_\_  
Witness Signature\* Date

\_\_\_\_\_  
Legal Guardian/Advocate(if required) Date

\_\_\_\_\_  
Witness Signature (if required)\*\* Date

APPROVED SEP 09 2008



<b>Subject Name:</b>	_____	
	Attachment to therapist, the working alliance, and emotional processing of traumatic material in session among veterans diagnosed with post-traumatic stress disorder.	
<b>Title of Study:</b>	_____	<b>Date:</b> _____
<b>Principal Investigator:</b>	Dr. Grant O'Neal	<b>VAMC:</b> _____

\* VA Regulations 1200.5 requires a witness to the VA participant signature. This witness may be study personnel, although must not be the person obtaining consent.

\*\*The presence and signature of an **impartial witness** is required during the entire informed consent discussion if the patient or patient's legally authorized representative is unable to read. This witness may not be affiliated with the study.

The same witness may serve in both witness capacities if the criteria of both capacities are met.

**SIGNATURE OF STUDY REPRESENTATIVE**

*I have explained the purpose of the research, the study procedures, identifying those that are investigational, the possible risks and discomforts as well as potential benefits and have answered questions regarding the study to the best of my ability.*

\_\_\_\_\_  
**Tina Peterman, study co-investigator**

\_\_\_\_\_  
**Date**

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Appendix D: Demographic Data Questionnaire

**Descriptive Information**

1. Age: \_\_\_\_\_
2. Sex:     Male         Female
3. Marital Status
  - Single, never married
  - Married
  - Separated
  - Divorced
  - Widowed
4. Race
  - White, non-Hispanic
  - Black, non-Hispanic
  - Hispanic
  - Asian or Pacific Islander
5. Number of years since your trauma occurred: \_\_\_\_\_ years
6. Number of therapy sessions you have received for trauma and/or stress with current therapist:  
\_\_\_\_
  - 0-4
  - 5-8
  - 9-12
  - More than 12 sessions
7. Sex of your therapist:     Male         Female
8. Are you currently taking any prescription medicines for symptoms of depression, anxiety and/or stress?
  - Yes                       No
9. Veteran status (check more than one if applicable)
  - World War II
  - Korean War
  - Vietnam (more than 180 days of active military service, with any part occurring between February 28, 1961 and May 7, 1975; including Laos, Cambodia, Thailand).
  - Peace-keeping operations (e.g., the Balkans, Somalia)
  - Panama
  - Grenada
  - First Gulf War
  - OIF/OEF

Appendix E: Post-traumatic Check List-Military Version (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, using the scale below, indicate how much you have been bothered by that problem **in the past month**.

1                      2                      3                      4                      5  
not at all      a little bit      moderately      quite a bit      extremely

- \_\_\_\_ 1. Repeated, disturbing *memories*, *thoughts*, or *images* of a stressful military experience?
- \_\_\_\_ 2. Repeated, disturbing *dreams* of a stressful military experience?
- \_\_\_\_ 3. Suddenly acting or feeling as if a stressful military experience were happening again (as if you were reliving it)?
- \_\_\_\_ 4. Feeling *very upset* when *something reminded you* of a stressful military experience?
- \_\_\_\_ 5. Having *physical reactions* (e.g., heart pounding, trouble breathing, sweating) when *something reminded you* of a stressful military experience?
- \_\_\_\_ 6. Avoiding *thinking about* or *talking about* a stressful military experience or avoiding *having feelings* related to it?
- \_\_\_\_ 7. Avoiding *activities* or *situations* because *they reminded you* of a stressful military experience?
- \_\_\_\_ 8. Trouble *remembering important parts* of a stressful military experience?
- \_\_\_\_ 9. *Loss of interest* in activities that you used to enjoy?
- \_\_\_\_ 10. Feeling *distant* or *cut off* from other people?

Appendix F: Client Attachment to Therapist Scale (CATS)

Instructions. These statements refer to how you currently feel about your counselor. Please try to respond to every item using the scale below to indicate how much you agree or disagree with each statement.

1	2	3	4	5	6
strongly disagree	somewhat disagree	slightly disagree	slightly agree	somewhat agree	strongly agree

- \_\_\_ 1. I don't get enough emotional support from my counselor.
- \_\_\_ 2. My counselor is sensitive to my needs.
- \_\_\_ 3. I think my counselor disapproves of me.
- \_\_\_ 4. I yearn to be "at one" with my counselor.
- \_\_\_ 5. My counselor is dependable.
- \_\_\_ 6. Talking over my problems with my counselor makes me feel ashamed or foolish.
- \_\_\_ 7. I wish my counselor could be with me on a daily basis.
- \_\_\_ 8. I feel that somehow things will work out OK for me when I am with my counselor.
- \_\_\_ 9. I know I could tell my counselor anything and s/he would not reject me.
- \_\_\_ 10. I would like my counselor to feel closer to me.
- \_\_\_ 11. My counselor isn't giving me enough attention.
- \_\_\_ 12. I don't like to share my feelings with my counselor.
- \_\_\_ 13. I'd like to know more about my counselor as a person.
- \_\_\_ 14. When I show my feelings, my counselor responds in a helpful way.
- \_\_\_ 15. I feel humiliated in my counseling sessions.
- \_\_\_ 16. I think about calling my counselor at home.
- \_\_\_ 17. I don't know how to expect my counselor to react from session to session.
- \_\_\_ 18. Sometimes I'm afraid that if I don't please my counselor, s/he will reject me.
- \_\_\_ 19. I think about being my counselor's favorite client.
- \_\_\_ 20. I can tell that my counselor enjoys working with me.
- \_\_\_ 21. I suspect my counselor probably isn't honest with me.
- \_\_\_ 22. I wish there were a way I could spend more time with my counselor.
- \_\_\_ 23. I resent having to handle problems on my own when my counselor could be more helpful.
- \_\_\_ 24. My counselor wants to know more about me than I am comfortable talking about.
- \_\_\_ 25. I wish I could do something for my counselor too.
- \_\_\_ 26. My counselor helps me to look closely at the frightening or troubling things that have happened to me.
- \_\_\_ 27. I feel safe with my counselor.
- \_\_\_ 28. I wish my counselor were not my counselor so that we could be friends.
- \_\_\_ 29. My counselor is a comforting presence to me when I am upset.
- \_\_\_ 30. My counselor treats me more like a child than an adult.
- \_\_\_ 31. I often wonder about my counselor's other clients.
- \_\_\_ 32. I know my counselor will understand the things that bother me.

- \_\_\_\_ 33. It's hard for me to trust my counselor.  
\_\_\_\_ 34. I feel sure that my counselor will be there if I really need her/him.  
\_\_\_\_ 35. I'm not certain that my counselor is all that concerned about me.  
\_\_\_\_ 36. When I'm with my counselor, I feel I am his/her highest priority.

**Subscale 1: Secure** (14 items: 1\*, 2, 5, 8, 11\*, 14, 17\*, 20, 23\*, 26, 29, 32, 34, 36).

**Subscale 2: Avoidant/fearful** (12 items: 3, 6, 9\*, 12, 15, 18, 21, 24, 27\*, 30, 33, 35).

**Subscale 3: Preoccupied/merger** (10 items: 4, 7, 10, 13, 16, 19, 22, 25, 28, 31).

\* **These items should be reverse keyed** (i.e. 6 = 1, 5 = 2, etc.).

## Appendix G: Working Alliance Inventory-Short Form (WAI-SF)

In the next set of items are sentences that describe some of the different ways a person might think or feel about his or her counselor. As you read the sentences, mentally insert the name of your counselor in place of each " \_\_\_\_ " in the text. To respond to each item use the seven point scale below and fill in the appropriate number in the blank to the left of the question. If the statement describes the way you always feel (or think), respond with number 7; if it never applies to you, respond with number 1. Use the other numbers to describe variations between these extremes. Remember, there are no right or wrong answers. We realize that your thoughts or feelings about your counselor may undergo changes over a period of time, but we would like to know your views or feelings as of right now. For each of the 32 items below "the problem" refers to understanding how my traumatic experience(s) in the military might be influencing my life currently.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>never</b>	<b>rarely</b>	<b>occasionally</b>	<b>sometimes</b>	<b>often</b>	<b>very often</b>	<b>always</b>

1. \_\_\_\_ and I agree about the things I will need to do in therapy to help improve my situation.
2. What I am doing in therapy gives me new ways of looking at my problem.
3. I believe \_\_\_\_ likes me.
4. \_\_\_\_ does not understand what I am trying to accomplish in therapy.
5. I am confident in \_\_\_\_'s ability to help me.
6. \_\_\_\_ and I are working towards mutually agreed upon goals.
7. I feel that \_\_\_\_ appreciates me.
8. We agree on what is important for me to work on.
9. \_\_\_\_ and I trust one another.
- 10 \_\_\_\_ and I have different ideas on what my problems are.
11. We have established a good understanding of the kind of changes that would be good for me.
12. I believe the way we are working with my problem is correct.

**Tasks Subscale:** (4 items: 1, 2, 8, 12)

**Bond Subscale:** (4 items: 3, 5, 7, 9)

**Goals Subscale:** (4 items: 4, 6, 10, 11)

Appendix H: University of Rhode Island Change Assessment (URICA) scale

1	2	3	4	5
strongly disagree	disagree	undecided	agree	strongly agree

Please rate the following items using the scale above:

- \_\_\_ 1. As far as I'm concerned, I don't have any problems that need changing.
- \_\_\_ 2. I think I might be ready for some self-improvement.
- \_\_\_ 3. I am doing something about the problems that have been bothering me.
- \_\_\_ 4. It might be worthwhile to work on my problem.
- \_\_\_ 5. I'm not the problem one. It doesn't make sense for me to be here.
- \_\_\_ 6. It worries me that I might slip back on a problem I have already changed, so I am here to seek help.
- \_\_\_ 7. I am finally doing some work on my problems.
- \_\_\_ 8. I've been thinking that I might want to change something about myself.
- \_\_\_ 9. I have been successful in working on my problem but I'm not sure I can keep up the effort on my own.
- \_\_\_ 10. At times my problem is difficult, but I'm working on it.
- \_\_\_ 11. Being here is pretty much a waste of time for me because the problem doesn't have to do with me.
- \_\_\_ 12. I'm hoping this place will help me to better understand myself.
- \_\_\_ 13. I guess I have faults, but there's nothing that I really need to change.
- \_\_\_ 14. I am really working hard to change.
- \_\_\_ 15. I have a problem and I really think I should work on it.
- \_\_\_ 16. I'm not following through with what I had already changed as well as I had hoped, and I'm here to prevent a relapse of the problem.
- \_\_\_ 17. Even though I'm not always successful in changing, I am at least working on my problem.

1	2	3	4	5
strongly disagree	disagree	undecided	agree	strongly agree

- \_\_\_ 18. I thought once I had resolved the problem I would be free of it, but sometimes I still find myself struggling with it.
- \_\_\_ 19. I wish I had more ideas on how to solve my problem.
- \_\_\_ 20. I have started working on my problems but I would like help.
- \_\_\_ 21. Maybe this place will be able to help me.
- \_\_\_ 22. I may need a boost right now to help me maintain the changes I've already made.
- \_\_\_ 23. I may be part of the problem, but I don't think I really am.
- \_\_\_ 24. I hope that someone here will have some good advice for me.
- \_\_\_ 25. Anyone can talk about changing; I'm actually doing something about it.
- \_\_\_ 26. All this talk about psychology is boring. Why can't people just forget about their problems?
- \_\_\_ 27. I'm here to prevent myself from having a relapse of my problem.
- \_\_\_ 28. It is frustrating, but I feel I might be having a recurrence of a problem I thought I had resolved.
- \_\_\_ 29. I have worries but so does the next person. Why spend time thinking about them?
- \_\_\_ 30. I am actively working on my problem.
- \_\_\_ 31. I would rather cope with my faults than try to change them.
- \_\_\_ 32. After all I had done to try to change my problem, every now and again it comes back to haunt me.

**Subscale Precontemplation:** (8 items: 1, 5, 11, 13, 23, 26, 29, 31)

**Subscale Contemplation:** (8 items: 2, 4, 8, 12, 15, 19, 21, 24)

**Subscale Action:** (8 items: 3, 7, 10, 14, 17, 20, 25, 30)

**Subscale Maintenance:** (8 items: 6, 9, 16, 18, 22, 27, 28, 32)

TABLES

Table 1

*Means, Standard Deviation, Range, and Coefficient Alphas of the CATS, WAI-SF, PCL-M and URICA for participants diagnosed with posttraumatic stress*

Variable	<i>M</i>	<i>SD</i>	Range	$\alpha$
<u>CATS</u>				
1. Secure	4.92	.92	1.50-6.00	.88
2. Avoidant/Fearful	2.09	.87	1.00-5.46	.82
3. Preoccupied/Merger	2.77	.98	1.00-5.50	.80
<u>WAI-SF</u>				
4. Tasks	5.54	1.14	3.00-7.00	.83
5. Bond	5.45	1.31	1.75-7.00	.87
6. Goals	5.53	1.12	3.25-7.00	.69
<u>PCL-M</u>				
7. Total	3.92	.60	2.10-5.00	.80
<u>URICA</u>				
8. Pre-contemplation	1.76	.61	1.00-3.86	.69
9. Contemplation	4.28	.42	3.57-5.00	.69
10. Action	4.21	.50	2.57-5.00	.83
11. Maintenance	3.90	.69	2.29-5.00	.77

*Note.*  $N = 68$ . CATS = Client Attachment to Therapist Scale, WAI-SF = Working Alliance Inventory-Short Form, PCL-M = Posttraumatic Check List-MilitaryVersion, URICA = University of Rhode Island Change Assessment Scale. Means are reported as the average item response on each scale.

Table 2

*Correlations of Attachment, Working Alliance, Posttraumatic Stress Disorder (PTSD) and Readiness to Process Traumatic Material in Session*

Variable	CATS		WAI-SF			PCL-M	URICA			
	2	3	4	5	6	7	8	9	10	11
<u>CATS</u>										
1. Secure	-.85**	.27*	.70**	.79**	.58**	-.14	-.38**	.22	.32**	.05
2. Avoidant/Fearful	---	-.10	.70**	-.77**	-.56**	.22	.43**	-.28*	-.41*	-.04
3. Preoccupied/Merger		---	.17	.28*	-.03	.15	.03	.10	-.11	.15
<u>WAI-SF</u>										
4. Tasks			---	.72**	.67**	.02	-.22	.34**	.46**	.15
5. Bond				---	.59**	-.04	-.28*	.37**	.39**	.10
6. Goals					---	-.20	-.31*	.16	.30*	-.14
<u>PCL-M</u>										
7. Total						---	.10	.27*	.12	.30*
<u>URICA</u>										
8. Pre-contemplation							---	-.39**	-.38**	.02
9. Contemplation								---	.53**	.19
10. Action									---	.14
11. Maintenance										---

*Note.*  $N = 68$ . CATS = Client Attachment to Therapist Scale, WAI-SF = Working Alliance Inventory-Short Form, PCL-M = Posttraumatic Check List-MilitaryVersion, URICA = University of Rhode Island Change Assessment Scale.

\* $p < .05$ . \*\* $p < .01$

Table 3

*Forward Stepwise Regression Analysis with URICA Subscales predicting PCL-M Mean*

Variable	<i>B</i>	<i>SE B</i>	$\beta$	<i>p</i>	<i>sr</i> <sup>2</sup>	<i>R</i> <sup>2</sup>	$\Delta R^2$	$\Delta F(df_s)$
Step 1 URICA-M Mean	0.26	.10	.30	.01	.09	.09	.09	6.40 (1,65)

Table 4

*Forward Stepwise Regression Analyses with CATS, WAI-SF, and PCL-M predicting URICA Subscales Means*

Variable	<i>B</i>	<i>SE B</i>	$\beta$	<i>p</i>	<i>sr</i> <sup>2</sup>	<i>R</i> <sup>2</sup>	$\Delta R^2$	$\Delta F(df_s)$
URICA Precontemplation								
Step 1						.18	.18	14.64 (1,66)
CATS A Mean	0.30	.08	.43	.000	.18			
URICA Contemplation								
Step 1						.14	.14	10.30 (1,66)
WAI-SF B Mean	0.12	.04	.37	.002	.13			
Step 2						.21	.08	6.56 (2,65)
PCL-M Mean	0.20	.08	.28	.013	.08			
URICA Action								
Step 1						.21	.21	17.53 (1,66)
WAI-SF T Mean	0.20	.05	.46	.000	.21			

\**p* < .05

## VITA

Tina Marie Lunsford Peterman was born September 1, 1957 at Tyndall (Field) Air Force Base, Panama City, Florida. Because her father, Warren Rader Lunsford, was in the Air Force, Tina grew up in many places including military bases in Florida, Montana, Puerto Rico, Washington State, and South Dakota. She graduated from Rapid City Central High School in 1976, and a week after graduation reported to basic training at Ft. McClellan, Alabama. She then went to Advanced Individualized Training (AIT) at the Academy of Health Sciences, Ft. Sam Houston, Texas, where she trained to be a radiologic technologist. After four years in the military, Tina left the Army and worked for 12 more years in hospitals and clinics as an X-ray and CT technologist. Ten of those years she spent on the Kenai Peninsula in Alaska. She eventually attended Radiation Therapy School at the University of Utah Health Sciences Center in Salt Lake City, Utah. After graduating as a radiation therapist, Tina moved to Ottumwa, Iowa, to work part-time at the South Iowa Radiation Oncology Center. She then moved to Columbia, Missouri with her three small children in January, 1995 to work full-time at Ellis Fischel Cancer Center. She met and married her husband, Paul Peterman, an Environmental Chemist with the USGS lab in Columbia. With his encouragement, Tina enrolled at the University of Missouri as a 40 year-old college freshman. She graduated with her B.A. in psychology in May 2003 and began her graduate work in the Counseling Psychology Program at MU in June 2003. She earned her M.A. in Counseling Psychology in May 2005, and anticipates completing her doctoral degree in 2010. Her clinical and research interests include acute and posttraumatic stress disorder, serious illness, grief, bereavement, and end-of-life issues. She is currently a pre-doctoral intern at the Harry S.

Truman Memorial VA Hospital in Columbia, Missouri. She has accepted a one year postdoctoral position at the Rocky Mountain Blood and Marrow Transplant Program in Denver, Colorado, beginning September 1, 2010.