IDENTIFYING TRAUMA FACTORS THAT PREDICT SUICIDE-SPECIFIC HOPELESSNESS IN FEMALE VETERANS WITH CHRONIC PTSD RESULTING FROM MILITARY SEXUAL TRAUMA

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DEDICATION

To Brendan M. Bass

Save for the laughter, it all would have killed me.

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Without a project that requires requesting and resourcing the guidance and expertise of others I soon forget the obvious, the interdependence that sustains us all even in the most mundane of our activities. Initially, what seemed simply the final requirement of an academic program became a fabric woven from the warp and weft of many mentors, advisors and supporters. First, Dr. Alina Suris should be acknowledged for her mentorship. I am inspired by her continued dedication to tirelessly investigate any and all of the ways to alleviate distress and suffering. Secondly, I would like to express my gratitude for Dr. Lisa Thoman's generosity with her time. She spent many hours brainstorming, outlining, proof reading and providing valuable guidance, feedback and encouragement. Dr. Cindy Claassen brought her expertise on suicide and Alan Eliott for patiently walking through the statistical analysis portion of this project. Lastly, many thanks to my friend, Jerrie Christian, who has been an endless source of encouragement and counsel throughout the past three years.

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Research Objective: This study attempts to understand the contribution of post-traumatic stress disorder (PTSD), resulting from Military Sexual Trauma (MST), and depressive symptoms to *suicide specific hopelessness*. It also examines specifically which of the PTSD symptom clusters is associated with this type of hopelessness along with the interaction of PTSD symptoms and *suicide-specific hopelessness* as it might relate to suicidal ideation. **Methods:** A sample of 86 female veterans receiving mental or physical healthcare at a Southwestern Veteran Administration (VA) Healthcare System participated in the study. Participants were interviewed using the Clinician Administered

PTSD Scale (CAPS); were assessed for depressive symptoms with the Beck Depression Inventory (BDI-II) and *suicide-specific hopelessness* with the Suicide Cognitions Scale (SCS). **Results:** A linear regression indicated that trauma symptoms, as measured by the CAPS, accounted for a significant percentage of the variance in *suicide-specific hopelessness* (R^2 = 18.2, p = 0.002). Contrary to expectations, when examined independently and along with the other symptom clusters, regression analysis revealed that the avoidant symptom cluster was not significantly associated with *suicide-specific hopelessness* (R^2 = 9.5, p = .08 and t = - .66, p = 0.51). As expected, depressive symptoms as measured by the BDI-II, accounted for a significant portion of the variance of *suicide-specific hopelessness* (R^2 = 48.8, p < 0.001). However, trauma symptoms did not contribute more than depressive symptoms (t = 0.54, p = 0.59 and t = 6.95, p = 0.001respectively). Lastly, a significant interaction between *suicide-specific hopelessness* and trauma symptoms was found to be associated with a positive endorsement of suicidal ideation (t = -4.193, p = 0.001). **Conclusion:** Female veterans with chronic PTSD resulting from Military Sexual Trauma (MST) are at risk for experiencing suicidal thoughts and behaviors.

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CHAPTER I.
INTRODUCTION

Experiencing violence in the military is not confined to exposure to combat. Violence associated with sexual assault sustained during active duty in the military has been identified by Congress and defined by the Department of Veterans Affairs (VA, 2004) as one of the pervasive forms of Military Sexual Trauma (MST). Military Sexual Trauma has been broadly defined by the Department of Veterans Affairs as: "sexual harassment that is threatening in character or physical assault of a sexual nature that occurred while the victim was in the military regardless of geographic location of the trauma, gender of the victim, or the relationship to the perpetrator" (Veterans Health Care Act of 1992, Public Law, 102-585, 1992). The prevalence of the most serious form of MST, sexual assault, while difficult to gauge, is estimated to be around seven percent for women and nearly two percent for men annually in the active duty military (Lipari, Cook, Rock, & Mantos, 2008) and around 22% for women and one percent for men in the veteran population (Frayne & Turner, 2004). Even though MST is an issue for both men and women and the actual number of treatment seeking veterans with MST is about equal (Frayne and Turner, 2004), women are at higher risk for developing the trauma related disorder post-traumatic stress disorder (PTSD) (Seedat, Stein, & Carey, 2005). This gender vulnerability is magnified by the unique aspects associated with being traumatized in the context of the military environment (Suris, Lind, Kashner, Borman, & Petty, 2004) and subsequent rates of developing PTSD are elevated

in this population. For women, MST is associated with a nine fold increased risk of PTSD (Suris et al., 2004).

Projections for women serving in the military, being at risk for MST, and subsequently seeking treatment at the VA indicate that this is a growing problem (Kimerling, Street, Gima, & Smith, 2008; VetPop, 2007, Office of the Actuary, Department of Veterans Affairs, 2007). Sexual violence against women who choose to serve in the military is a public health concern as these individuals who report rape or sexual assault are more likely to report a host of other mental and physical health problems along with impaired occupational and social functioning (Suris et al., 2004; Kimerling, Gima, Smith, Street, & Frayne, 2007; Frayne and Turner, 2004). Sexual assault history has been implicated as a risk factor for suicide attempts (Davidson, Hughes, George, & Blazer, 1996; Ullman & Brecklin, 2002; Nock & Kessler, 2006) and an association has been found between MST, suicide and intentional self-harm in the veteran population (Kimerling, et al., 2007).

Even though the existence and effects of MST have been acknowledged and a focus of attention for the Department of Defense (DoD), the VA, and Congress, since the 1990s, research in this area is still lacking (Suris & Lind, 2008). The goal of this present study is to examine trauma factors associated with PTSD resulting from MST that might predict *suicide-specific hopelessness* (Rudd et al., in press), which in turn is thought to be a predictor of suicide-related thoughts and behaviors. Increased

understanding of the association of MST and suicide-specific hopelessness may be beneficial to optimizing clinical management of this specific form of sexual trauma.

CHAPTER II.
LITERATURE REVIEW

Trauma

Unfortunately, traumatic events of some kind are part and parcel of the human life experience and in the United States lifetime trauma exposure ranges from 50-60% (Friedman, Keane & Resick, 2007). These events vary in origin, intensity and frequency and are characterized by the degree of shock and the overwhelming quality of the situation. Both natural disasters such as earthquake, tsunami, fire, and interpersonal events such as combat, torture, rape, assault, and domestic violence can result in varying degrees of physiological and psychological trauma. Psychological trauma can result from direct experience of the trauma or from simply witnessing an event (American Psychiatric Association, 2000). Individuals who are exposed to either singular or multiple events will interact with and react to the experience differently. Reactions may include intense fear, horror, and helplessness and when these present along with some degree of personal and social discomfort, they are the markers of traumatic stress (ISTSS, 2007). Lasting reactions to and consequences of traumatic events, whether singular or multiple, can be relatively mild, resulting in normative distress and a manageable amount of life disruption or at the other extreme, can be severe and debilitating, altering an individual's ability to cope with stress (Yehuda, 2002). The majority of individuals exposed to a traumatic event has sufficient resilience and do not develop long term reactions such as post-traumatic Stress Disorder (PTSD) (Friedman, Keane, & Resick, 2007).

Even though both natural and interpersonal events can be catastrophic and result in varying degrees of traumatic responses, from short-lived symptoms to a

diagnosis of Acute Stress Disorder or Post-Traumatic Stress Disorder, interpersonal trauma has a differential quality. Potential risk factors for the development of PTSD described by Keane, Marshall and Taft (2006) include pre-existing factors specific to the individual, factors related to the traumatic event itself (e.g. type of trauma) and the events that occur following the trauma. A study examining the relationship between the nature of the psychological trauma and PTSD in participants recruited from a primary care setting found that, after controlling for age, gender, and trauma history, rape and unwanted sexual contact were the strongest predictors, four times more likely, of a diagnosis of PTSD (Bruce et al., 2001). This is consistent with previous studies, which examined the type of traumatic event experienced and the subsequent onset of PTSD, and found a higher onset of this disorder after a completed sexual assault (Bruce et al, 2001, Breslau, Davis, & Andreski, Peterson, 1991; Foa & Riggs, 1994; Rothbaum, Foa, Riggs, Murdock, & Walsh, 1992). In a sample of over 4000 women, Resnick et al. (1993) found a lifetime PTSD prevalence rate of 32% and a current rate of 12.4% associated with a completed rape. When the interpersonal nature of the trauma is combined with knowledge of or association with the perpetrator, individuals who are violated by people or institutions on whom they rely or trust for survival or safety needs can experience more negative outcomes resulting from the betrayal component of the traumatic event (Baldwin, 2007). In depth analysis of these differing responses to interpersonal trauma reveal that some individuals may ultimately develop numerous psychological and physical sequelae of trauma including depression, anxiety and substance abuse disorders, with a minority (6-20%) vulnerable to the full syndrome of PTSD (Yehuda, 2002). There are additional consequences to interpersonal trauma; for example, consistent with

findings from several previous studies, Simon, Anderson, Thompson, Crosby, & Sacks (2002) reported that victims of violence were nearly six times more likely to report experiencing suicidal ideation or behaviors. Additionally, it has been established that sexual assault history is associated with increased lifetime prevalence of suicide attempts and should recognized as a significant risk factor (Davidson, Hughes, George, & Blazer, 1996; Ullman & Brecklin, 2002; Nock & Kessler, 2006).

Post-Traumatic Stress Disorder

Exposure to a traumatic event followed by a response of fear, helplessness or horror can result in symptoms of intrusive thoughts regarding the event, increased physical arousal, avoidance of reminders associated with the trauma and numbing of general responsiveness (American Psychiatric Association, 2000). The persistence of these symptoms associated with traumatic stress for a given period of time is the conceptual basis of PTSD. Currently, according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) a diagnosis of PTSD is met by the following criteria:

A. The person has been exposed to a traumatic event in which both of the following were present:

(1) the person experienced, witnessed, or was confronted with an event or events that involved actual threat or threatened death or serious injury, or a threat to the physical integrity of self or others (2) the person's response involved intense fear, helplessness, or horror

B. The traumatic event is persistently re-experienced in one (or more) of the following ways:

(1) recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions; (2) recurrent distressing dreams of the event; (3) acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur on awakening or while intoxicated); (4) intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event; (5) physiological reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event

C. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by three (or more) of the following:

(1) efforts to avoid thoughts, feelings, or conversations associated with the trauma; (2) efforts to avoid activities, places, or people that arouse recollections of the trauma;(3) inability to recall important aspects of the trauma; (4) markedly diminished interest or participation in significant activities: (5) feeling of detachment or estrangement from others; (6) restricted range of affect (e.g. unable to have loving feelings); (7) sense of foreshortened future (e.g. does not expect to have a career, marriage, children, or a normal life span)

D. Persistent symptoms of increased arousal (not present before the trauma), as indicated by two (or more) of the following:

(1) difficulty falling or staying asleep;(2) irritability or outbursts of anger; (3) difficulty concentrating; (4) hypervigilance; (5) exaggerated startle response

E. Duration of the disturbance (symptoms in Criteria B, C, and D) is more than 1 month.

F. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning (American Psychiatric Association, 2000, p. 467).

Distinct from other psychiatric diagnoses, the diagnosis of this disorder is dependent on two uniquely identifiable processes: exposure to trauma and a specific pattern of symptoms that occur following exposure to the traumatic event (North, Suris, Davis, & Smith, 2009). Of the three categories of symptoms associated with PTSD (i.e., re-experiencing, avoidance/numbing, and hyperarousal), avoidance and numbing appear to be the salient factors associated with the identification of this disorder (North, et al., 2009). In their recent work focusing on further validation of the diagnosis of PTSD, North et al. cite several research sources which have concluded that the re-experiencing symptom cluster (group B), and the hyperarousal symptom cluster (group D) are "relatively too sensitive to be of use in the differentiation of psychopathology from distress" (p.14) and that avoidance/numbing symptom cluster (group C) "is strongly determinant of PTSD". Based on the findings from a previous study (North et al, 1999) which revealed that re-experiencing and hyperarousal symptom cluster's have a "lack of association with other indicators of psychopathology" in the absence of avoidance/numbing symptoms, the conclusion was that re-experiencing and hyperarousal "represent normative responses which by themselves, do not necessarily indicate psychopathology" (p.16).

The distinguishing factor between those who are "temporarily stressed" by trauma and those who subsequently develop PTSD is that the latter start to organize

their lives around the traumatic experience (Van der Kolk & McFarlane, 1996). The avoidance symptoms are the manifestation of the post-trauma organization of the individual's life. The avoidance of reminiscent stimuli and numbing of general responsiveness symptom cluster "consists of seven symptoms of avoidance mechanisms and changed patterns of coping with stress that are different from pretraumatic baseline" (Wilson, 2004, p.24). This organization can include efforts to avoid reminders that would stir up unwanted memories and feelings associated with the traumatic experience, loss of memory and inability to recall important aspects of the experience and diminished interest in normal activities of daily living, and changes in future orientation.

Additionally, there are symptoms in this group that are manifestations of alterations in "interpersonal relations" and "intrapsychic capacities to tolerate affect" (Wilson, 2004). Interpersonally, "feelings of detachment or estrangement from others" are typically manifest by "tendencies of isolation, withdrawal, social disengagement, preference for solitary activities, and geographical distance from others in a safe and secure environment" (Wilson, 2004, p.25). Wilson theorizes that intrapsychically, the traumatized individual "overcontrols his or her emotional responsiveness by preemptive mechanisms to prevent feeling vulnerable to the internal distress of traumatic memory and forms of reexperiencing behavior" (Wilson, 2004, p.25). The outcome of this psychic numbing can include the loss of ability to experience emotions, decreased sexuality, loss of meaning and spiritual life, and the appearance of being "emotionally flat, nonresponsive, vapid, unfeeling, cold, and lacking in vitality"(Wilson, 2004, p.25). Wilson (2004) interprets these emotional states as efforts to cope with the hyperarousal that is intrinsic to this trauma related disorder. In order to avoid aversive experiences,

both inner and outer states of isolation can become employed as protective devices. The possible connection between these states of isolation and suicide related thoughts and behaviors is of particular interest to this study.

The duration of PTSD can be either acute with the duration of symptoms lasting from at least one month to three months, or chronic with the symptoms lasting in excess of three months and in some cases lasting the balance of a lifetime. This disorder can manifest with delayed onset if symptoms present at least six months after the stressor. If left undiagnosed and subsequently untreated, this anxiety disorder can be a debilitating factor in an individual's life with interpersonal, psychosocial, physiological and societal ramifications (American Psychiatric Association, 2000). Divorce, child rearing problems, intimate partner aggression, comorbid mental disorders, less satisfaction with life, health problems, legal problems and employment problems are all more likely to be experienced by individuals with this disorder (Keane, et al., 2006; Koss, & Woodruff, 1991; Kukla, Schlenger, Fairbank, Hough, & Jordan, 1990; Schurr & Green, 2004; Walker et al., 2003).

Prevalence of PTSD in Civilian and Military Populations

Although exposure to some sort of traumatic event is experienced by the majority of the general population (i.e., life time prevalence of exposure determined by Kessler, Sonnegan, Bromet, Hughes, & Nelson (1995) in the National Comorbidity Survey was 60.7% of men and 51.2% of women who reported at least one traumatic event) the subsequent development PTSD is around 10%. Community-based studies demonstrated a lifetime prevalence rate of approximately eight percent for PTSD in the adult population of the United States (American Psychiatric Association, 2000). Prior to

the events of 9/11 in the United States studies revealed five to six percent of men and 10 to 14% of women were diagnosed with the disorder (Yehuda, 2002). More recent figures from the 2005 National Comorbidity Survey Replication indicate an overall lifetime prevalence of PTSD of 6.8% (Kessler et al., 2005); these data are limited to age-of-onset distributions and do not include rates by gender.

Prevalence of PTSD in the military population varies by era. The National Vietnam Veteran's Readjustment Study (Kukla et al., 1990) reported current and lifetime rates of around 15% and 31% in men and around eight and 26% in women. More recent studies estimate current rates between 5.4-12.1% for U.S. and U.K. Gulf War Veterans (Lee, Gabriel, Bolton, Bale, & Jackson, 2002; Wolf et al., 1999; Kang, Natelson, Mahan, Lee, & Murphy, 2003) and 4.2% for non-Gulf War veterans (Kang, et al., 2003). A more recent cross-sectional survey of veterans attending primary care clinics at four Veterans Affairs Medical Centers reported an overall PTSD prevalence rate of 11.5% (Magruder et al., 2005). Most recently, the RAND Corporation conducted a comprehensive study of post-deployment health related needs of returning Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) veterans that were associated with traumatic brain injury, major depression and PTSD and found that 14% screened positive for PTSD (RAND Corporation, 2008).

Gender Differences.

Lifetime prevalence of exposure to events that cause traumatic stress has consistently measured slightly lower in women, yet the lifetime PTSD rate is nearly twice that for men (Kessler et al., 1995; Seedat, et al., 2005). After controlling for the variables of race, education, income, and marital status, men experience significantly higher rates

of assaultive types of violent events such as being shot, stabbed, mugged, threatened with a weapon, beaten or witnessing these types of actions directed at others. In contrast, rape, sexual molestation and child abuse are the traumas most commonly reported by women (Kessler et al.1995).

Even after controlling for the severity of the traumatic events women tend to be more symptomatic than men (Seedat et al., 2005). Halbrook, Hoyt, Stein and Sieber (2002) assessed the risk of PTSD associated with gender and found that women were at a significantly higher risk than men and the association of gender with PTSD was independent of mechanisms and factors such as perceived threat to life. Because women have higher rates of exposure to rape and other types of sexual assaults, it has been suggested that the higher rate of sexual trauma may account for some of the increased rates of PTSD (Seedat et al., 2005). Keane, et al., (2006) cited studies by Kilpatrick et al. (1992) and Resnick et al. (1993), both epidemiological studies that investigated the mediating role of sexual assault and other criminal acts in the prevalence of PTSD in women. Although both studies found that approximately 13% of the women had experienced a completed rape, the estimation of lifetime and current PTSD rates varied from 26-32% and 12-5% respectively. It is unclear whether women have increased inherent physiological vulnerability to this disorder or if the defining difference is how the event(s) are experienced and processed differently by gender (Yehuda, 2002). Kimberling, Ouimette, & Wolf (2002) hypothesize that gender differences in PTSD rates may be due to increased vulnerability of females including hormonal fluctuations that might be a factor in sympathetic nervous system reactivity at the time of the trauma and cognitive factors that center on the betrayal aspect of the trauma. Additional cognitive

factors that are examined include increased gender specific subjective reaction to the trauma and compromised gender identity schemas (Kimberling et al., 2002). The possibility that chronic stress can lower the threshold for response to future events through cardiovascular reactivity has been examined as well (Kimberling et al., 2002); this could be an important factor in females with extensive trauma histories.

PTSD Comorbidity with other Mental Disorders

Many studies reveal significantly high levels of other conditions in individuals diagnosed with PTSD (Keane, Brief, Pratt, & Miller, 2007). Consistent with previous research, the 1995 National Comorbidity Survey (Kessler et al., 1995) revealed that the diagnosis of other lifetime mental disorders was significantly elevated for individuals with PTSD and that the vast majority had at least one other lifetime disorder. For three or more psychiatric diagnosis, 44% of women with PTSD as compared to 59% of men met criteria. The most common comorbidity for women was major depressive episode (Kessler et al., 1995). Bruce et al. (2001) examined comorbidity in a large sample of primary care patients and found that 45% met criteria for a diagnosis of major depression, 34% met criteria for social phobia, and 62% met criteria for a lifetime history of alcohol/substance abuse or dependence. In a study of community outpatients, Brown, Campbell, Lehman, Grisham, and Mancill (2001) determined the comorbidity of current and lifetime DSM-IV anxiety and unipolar mood disorders. PTSD stood out as having the most severe and varied pattern of comorbidity. Almost all, 92% of the individuals who met current criteria for a diagnosis of PTSD also met criteria for a second Axis I condition. These psychiatric diagnoses included major depressive disorder (77%), generalized anxiety disorder (38%) and alcohol abuse/dependence (31%). Anxiety,

affective and substance disorders clearly stand out. There is less data pertaining to the comorbidity of PTSD and personality disorders (Keane, et al., 2007) with most studies examining borderline and antisocial personality disorder.

Similarly, in the veteran population, those with a diagnosis of PTSD have a much greater likelihood of having a comorbid diagnosis of a psychiatric disorder. Magruder et al. (2005) reported PTSD associated comorbidities of depression (68.6%), other anxiety disorders(73.3%), and substance abuse disorder (10.5%) in veterans seen through VA primary care clinics. A little more than half of those with a diagnosis of PTSD were positive for suicidality. In regards to comorbid Axis II diagnoses, two studies, one with inpatient and one with outpatient veterans, assessed the full range of personality disorders and revealed a variety of personality disorders that co-occurred with PTSD (Keane, et al., 2007).

Military Sexual Trauma

In the literature related to PTSD, the event most often associated with the diagnosis of this disorder in the military was combat, but combat is not the sole context for exposure to traumatic stress. Unfortunately as a part of the military experience, for both women and men, there are the additional risks of exposure to sexual violence and the risk is higher than that of the general population (Kimerling, et al., 2007). Annual incidence of experiencing military sexual assault is three percent among active duty women and one percent among active duty men (Lipari & Lancaster, 2002) as compared to two and a half percent among women and .9 percent among men in the general population (Center for Disease Control and Prevention, 2008). The Armed Forces Sexual Harassment Survey (Lipari and Lancaster, 2002) indicates that women experienced

sexual coercion at an annual rate of eight percent and unwanted sexual attention ranging from touching to threatening attempts to initiate a sexual encounter at an annual rate of 27%. Men experienced an annual rate for coercion of one percent and unwanted sexual attention of five percent (Lipari & Lancaster, 2002). More recently, in the Gender Relations Survey of Active Duty Members (Lipari, Cook, Rock, & Mantos, 2006) almost seven percent of women and two percent of men indicated that they had experienced unwanted sexual contact. Exposure to any form or number of these experiences has been recognized as deleterious deployment stress with negative mental health outcomes (Vogt, Pless, King, & King, 2005). It has been hypothesized that gender vulnerability, sexual assault trauma, factors related to working with the perpetrator, and concerns about career consequences of reporting victimization significantly increase the risk of developing PTSD for women (Suris, Lind, Kashner, Borman, & Petty, 2004).

The term Military Sexual Trauma defines a wide range of behaviors from harassment and stalking to physical and sexual assault (Hall, Sedlacek, Berenbach, & Dieckmann, 2007). Military Sexual Trauma has been defined by the Department of Veterans Affairs (VA) as: " sexual harassment that is threatening in character or physical assault of a sexual nature that occurred while the victim was in the military regardless of geographic location of the trauma, gender of the victim, or the relationship to the perpetrator" (as cited in Frayne and Turner, 2004 p.1). Public recognition and concern about MST can be tied to the Navy's Tailhook sex scandal in 1991. In response to this expose, a hearing held before the Senate Veterans Affairs Committee, June 1992, resulted in the enactment of Public Law 102-585 (Veterans Health Care Act of 1992, Public Law 102-585) mandating the VA system to provide healthcare services, along with other

provisions, for women who had experienced MST. Subsequently, Public Law 103-452 extended the law to include men who had experienced MST. In 1997, a letter from the Secretary of Veterans Affairs, Jesse Brown, further extended public acknowledgement of this recently recognized health issue and was sent to all female veterans regarding MST. In 1999, Public law 106-117 extended the duration of time and outreach to veterans. And most recently, Public Law 108-422, enacted in 2004, made permanent the provision of sexual trauma services at the VA. This has resulted in every VA hospital now having a designated coordinator to oversee MST screening and treatment with standardized training materials for screening made available to all hospital clinicians (Frayne and Turner, 2004). Current efforts to provide evidence-based treatment for MST to reduce the associated mental health consequences, reduce the associated disability and promote recovery are under way (Suris, 2008).

In regard to the unique characteristics of sexual assault for female veterans while on active duty, Suris (2004), informed by clinical experience and empirical findings, characterizes these assaults as often "perpetrated by trusted military personnel; the victim must continue to work with the perpetrator; and the victim is often without access to immediate treatment or care" (p.39). As cited in Suris et al. (2004), the nature of the perpetrator-victim relationship is associated with the severity of the subsequent symptoms and in the military setting, "the woman's perpetrator may be a coworker, supervisor, or personnel with higher rank" (p.750). The potential requirement to continue to work with the perpetrator due to difficulty transferring to other duty stations and the terms of enlistment, along with the lack of social support available from the woman's unit when another member of this unit has assaulted her are seen as

exclusive aspects of military sexual assault that increase the deleterious impact of the traumatic event. Lastly, there are the issues of the negative impact on the victim's identity and her concerns about the negative consequences associated with reporting the assault (Suris, 2004).

Prevalence of Military Sexual Trauma in Female Veterans

Prevalence of Military Sexual Trauma in veterans is difficult to establish as no uniform definition has been used across studies (Suris, 2007). Survey results from a national random sample of female Veterans Affairs (VA) users indicate that approximately one in four women have experienced military sexual assault while on active duty (Skinner et al., 2000). National MST surveillance data from 1.7 million VA patients indicated that 22% of women and one percent of men have experienced sexual trauma in the military (Frayne and Turner, 2004). Analysis of MST screening data from VHA health care settings nationwide revealed that approximately 22% of the female veterans reported MST (Kimerling et al., 2007). A recent research review of the prevalence and associated health consequences of MST in veterans by Suris and Lind (2008) reported a widely varying range of 4%-71% prevalence rate based on in person, face to face interviews and a range of 17%-30% prevalence rates based on mailed or telephone surveys. Prevalence rates were dependent on the specificity of the method of assessment and rates varied depending on the type of sample and on the particular definition used for MST (Suris & Lind, 2008). For the female veteran population overall the majority of studies report rates that fall somewhere between 20 and 40% (Suris & Lind, 2008). Despite the difficulty in getting a more definitive number, "these rates of

sexual assault while in the military are higher than lifetime rates among women in the general population" (Frayne and Turner, 2004).

MST and PTSD

Military Sexual Trauma has been conceptualized as a uniquely deleterious form of sexual trauma (Suris et al., 2004) and, like sexual violence (e.g. rape) in the non-military context, is highly correlated with Posttraumatic Stress Disorder. Military sexual assault was significantly related to PTSD for both genders in a large study of Gulf War Veterans (Kang, Dalager, Mahan, & Ishii, 2005). The degree of risk for developing PTSD as a result of sexual assault for both women and men was comparable to that associated with "high" combat exposure (Kang et al., 2005). Rates of PTSD associated with MST specific to women were examined by two studies in the 1990's. Fontana, Schwartz and Rosenheck (1997) found that trauma experienced in the military was a significant predictor of a diagnosis of PTSD with trauma from combat and from sexual assault being about equally divided. Subsequently, the likelihood of military related sexual trauma influencing the development of PTSD was found to be four times that of duty-related stress (Fontana & Rosenheck, 1998). High rates of PTSD in female veterans caused by sexual assault while on active duty have been confirmed (Suris et al., 2004). Comparing female veteran MST outcomes to those without a previous history of sexual assault, participants with MST were nine times more likely to met criteria for PTSD, seven times more likely if they had a history of childhood sexual assault, and five times more likely if they had a history of civilian adult assault. Among the mental health conditions associated with MST, PTSD was the most highly correlated and the association for women was nearly three times that for men (Kimerling et al., 2007).

Confirming the differential impact of MST on the rate of PTSD, in a study that examined the rates of PTSD in female veterans with MST and female veterans with all other types of trauma, 60% of the veterans who had experienced a Military Sexual Trauma met criteria for PTSD as opposed to 43% in the group who had experienced other traumas (Yaeger, Himmelfarb, Cammack, & Mintz, 2006).

Burden of Illness Associated with MST

The outcome of sexual trauma is not limited to PTSD. In the general population, sexual trauma has negative consequences associated with both physical and mental health (Kimerling et al., 2007). Women who experience repeated assaults in the military have significantly poorer health status and tend to experience post-military violence (Sadler, Booth, Mengeling, & Doebbling, 2004). In this study, both the measures of physical and mental health of multiply victimized women fell well below the national norms for women. The health status of women with repeated violence was lower across all health domains than that of both men and women with chronic medical illness such as type 2 diabetes mellitus and was comparable to those with advanced Parkinson's disease. In addition to the impact on health status, women with multiple exposures to violence in the military have diminished emotional health status, assault associated injuries and diminished academic achievement (Sadler et al., 2004). A number of medical conditions have been associated with MST. For example, in both men and women, liver disease and chronic pulmonary disease are moderately associated and a significant association of obesity, weight loss, and hypothyroidism has been found for women (Kimerling et al., 2007). Additionally, for sexual trauma survivors, symptoms of chronic pain, gynecologic dysfunction and abnormalities, gastrointestinal problems, and chronic

fatigue are other physical conditions that have been consistently diagnosed with higher frequency (Frayne and Turner, 2004). Women with sexual trauma histories tend to seek medical services more than women without this history and women who have been victimized by other crimes. This increased health care utilization is likely a function of the sexual trauma as it occurs after the assault(s) (Frayne and Turner, 2004). Female veterans who have experienced Military Sexual Trauma as compared to veterans without sexual trauma report significantly increased physical symptoms and overall have poorer health functioning (Suris et al., 2004). Typically individuals with a sexual trauma history seek medical services as opposed to mental health services (Kimerling & Calhoun, 1994).

Significant mental health consequences are associated with sexual assault that occurs while on active duty with even some evidence indicating that there are more mental health consequences associated with MST than with sexual assault that occurs outside of the military context (Butterfield, McIntyre, Stechunak, & Nanda, 1998). Through an analysis of a large national sample of Veterans Hospital Administration data it was found that "MST was significantly associated with 2 to 3 times greater odds of a mental health diagnosis, and this association was stronger among women than men" (Kimerling et al., 2007, p.2162). Both alcohol use/abuse disorders and anxiety disorders were more frequently associated with MST for both men and women, although the association with MST was significantly higher for women (Kimerling et al., 2007). Additionally there was a positive relationship between MST and bipolar disorders, schizophrenia, and psychosis for both men and women, but significantly stronger in men. Analyses also revealed a significant relationship between MST and dissociative, eating, and depressive disorders for both men and women (Kimerling et al., 2007). In their

review of the MST literature, Suris and Lind (2008) found overall that MST was associated with higher rates of depression, PTSD, and substance use.

In addition to the physical and mental illness that is associated with Military Sexual Trauma, victims can experience psychosocial impairments that can include:

- self blame and shame;
- difficulties with trust;
- problems in psychological defense mechanisms (repression, denial, or normalization of the trauma);
- poor self-esteem and body image;
- gender image fragility (especially in men, who are more likely than women to have experienced same-sex assaults);
- sexual problems;
- impulsivity;
- anger;
- perpetration of violence;
- problems with readjustment after military service;
- work difficulties (Frayne and Turner, 2004, p. 11).

Lastly, but of significant relevance for the current study, analysis of medical and mental diagnoses associated with veterans who screened positive for MST found an association between MST, suicide and intentional self-harm. As compared to

those who did not report any MST experiences, this association was twice as common among both men and women who reported MST (Kimerling et al., 2007).

Suicide as a Continuum

Moscicki (2001) describes sucidality as a phenomenon that "occurs on a continuum of severity with a progression from less serious and more prevalent behaviors through increasingly severe, less prevalent, and more lethal behaviors" (p.310). At the lesser end of the continuum are behaviors such as causal ideation without a specific plan, self-harming behaviors without the intent to die, and on the other end of the continuum, for a far fewer number of individuals, is a suicide attempt that results in death (Mosicki, 2001). All the permutations of degree of intent to die and lethality of injury fall under the term suicide. There are many theories about why people commit suicide. Prominent theories have been proposed by Durkheim, Schneidman, Beck, Baumeister, and Linehan (Joiner, 2005). These theorists have identified factors such as social forces, psychological pain that reaches intolerable intensity and lethality, cognitive sensitization, cognitive deconstruction, biological deficits, and exposure to trauma and poor coping skills as the identifiable contributors to suicidality.

Individuals who engage in suicidal behaviors have negative thoughts about themselves, others and the world. Brown, Jeglic, Henriques, and Beck (2006) identify the role of cognitive theory in the conceptualization of suicide behavior by referencing the fundamental tenet," the way people think about and interpret life events plays a causal role in their emotional and behavioral responses to those events" (p.53). Beck formulated an early theory of suicide based on the construct of hopelessness and "reported that suicidal crises were consistently 'related to' the patient's conceptualization

of their situation as untenable or hopeless" and identified hopelessness as " the catalytic agent in suicidal episodes" (p.54). He suggested that suicidal behaviors were attributable to the combination of hopelessness and impaired reasoning. Beck argued that these behaviors were the result of specific cognitive distortions in which the individual viewed their experiences negatively and they believed that their efforts to achieve major goals would result in failure (Brown et al., 2006).

In response to additional research findings, Beck reformulated his original theory to include the concept of *modes*. These were defined as "interconnected networks of cognitive, affective, motivational, physiological, and behavioral schemas that are activated simultaneously by relevant internal and external events that orient the individual toward achieving some goal" (Brown et al., 2006 p.60). According to Beck, one type of *mode* was a *suicide mode*. Since then, Beck's original conceptualization of a *suicide mode* has been augmented by Rudd (2000) and Rudd et al. (2001); this expanded theory postulates that when this particular *mode* is activated an entire thinking, feeling and behaving repertoire is accessed. Suicide-related cognitions are not a stand-alone phenomenon; negative emotions, physiological arousal, and the intent to engage in some sort of suicidal behavior are also experienced when this *mode* is activated. This identification of a *suicide mode* has expanded the cognitive model from a limited focus on thought content to a broader focus on "the activation of a multisystem cognitive-affective-behavioral-state of suicidality" (Ellis, 2006, p.372).

Adding another element to these theoretical conceptualizations, Joiner (2005) postulates the suicidal individual's acquisition of the ability to enact lethal self-injury is an outcome of habituation to pain. He theorizes that when two fundamental

needs, the need to belong to and connect to others along with the need to feel effective with or influence others are "frustrated to the point of extinction," "….suicide becomes attractive but not accessible without the ability for self-harm" (Joiner, 2005, p. 47). Those who attempt suicide or complete the act are those individuals who in addition to perceived burdensomeness and failed belongingness also have access to the third component, that of being capable of enacting lethal self-injury.

Joiner's (2005) concept of "failed belongingness" appears to contain elements of an earlier perspective on a biological basis of self-injurious or suicidal behaviors. Jones (1982) examined the analogies between animal and human behavior and context and found parallels between the "agitation, rage, and isolation" in animal behavior and "anxiety, anger and social isolation" in human states and "internal states induced by isolation, such as loneliness." Jones (1992) theorized that self-injurious or suicidal states in humans could be a variation of "a related but less complex behavior shown by some animals" who in captivity imposed isolation inflict "nonaccidental" injury on themselves in varying degrees of severity. In animals, these self- injurious behaviors are thought to be arousal reducing and their "value may be to restore arousal to tolerable limits" or "may represent outward expression of fighting behavior" (Jones 1992). In his comparison of the restrictive context that might engender self-injurious behaviors for both the animal and the human, Jones (1992) made the comparison between a "caged animal" and a "human social isolate". He concluded that social isolation in both animals and humans might provoke self-injurious behaviors. In both animals and humans these types of destructive behaviors appear to be the outcome of conditions (e.g.

agitation, rage, social isolation) that can be understood as inducing frustration. Frustration is defined as the inhibition of a strong drive.

The animal/ human parallels are limited to the extent that the human experience has additional elements. Jones (1992) identifies the uniquely human component of cognition and suggests that this component may actually follow behaviors, He adds,

> While it is commonly assumed in human self-injury that thought initiates the act, the order may in fact be reversed, thought being used to elaborate and transform, rather than to initiate, and no doubt also deferring or inhibiting the act altogether on occasions (Jones, 1992, p.48).

In other words, at least in the initial stages, self-injurious behavior results in a reduction of an aroused state, thus acting as a negative reinforcement. Subsequently, a positive cognitive interpretation associating the decrease of arousal with self-injurious behaviors may then be formed.

Suicide-Specific Cognitions

Rudd, Joiner and Rajab (2004) have articulated, "The central pathway for suicidality is cognition (i.e., the *private* meaning assigned by the individual" (p.22). Building on Beck's fundamental axioms of cognitive theory, these authors have proposed a number of fundamental assumptions specific to suicidality that are relevant for the current study:

(1) Suicidality is secondary to maladaptive meaning constructed and assigned regarding the self, the environmental context, and the future (i.e. the cognitive triad, along with related conditional assumptions/rules and compensatory strategies, referred to as the *suicidal belief system*).

(2) The relationship between the *suicidal belief system* (i.e., cognitive triad specific to the *suicidal mode*…) and the other psychological (e.g., behavioral, emotional, attentional and memory) and biological/physiological systems is interactive and interdependent.

(3) The *suicidal belief system* will vary from individual to individual, depending on the content and context of various psychological systems (i.e., cognitive content specificity). Nonetheless, there will be some uniformity in terms of identified *categories* (i.e., helplessness, unlovability, and poor distress tolerance;….. all tinged by a pervasive sense of hopelessness).

(4) Individuals are predisposed to suicidality as a function of cognitive vulnerabilities, or *faulty cognitive constructions,* which covary with specific syndromes. Accordingly, different cognitive vulnerabilities are consistent with different syndromes and patterns of comorbidity, both Axis I and Axis II (Rudd et al., 2004).

Additionally, these authors proposed that there were identifiable and unique aspects of suicide-specific hopelessness that are characteristic of the cognitive component of the *suicidal belief system*. Negative future oriented thinking about "self" and "others" is the specific nature of suicide hopelessness (Rudd, 2007) and this type of

hopelessness is a "predictor of suicide ideation, suicide attempts, seriousness of non-lethal attempts, and completed suicides" (p.2).

Nomenclature for Suicidology

Suicide is the final outcome of a process of cognitions, affects and behaviors, yet not all suicidal behaviors result in death or even serious physical injury. Historically, the language used in scientific literature describing the permutations of thoughts and behaviors with intent and resulting injury is confusing. A revised nomenclature for the study of suicide and suicidal behaviors defines *suicide attempt* as " self-inflicted, potentially injurious behavior with a nonfatal outcome for which there is evidence (either explicit or implicit) of intent to die" (Silverman, Berman, Sandall, O'Carroll, & Joiner, 2007, p.273). Attempts can result in no injuries, injuries or death; and are defined as *suicide* if they result in "self inflicted death with evidence (either explicit or implicit) of intent to die" (Silverman, Berman, Sandall, O'Carroll, & Joiner, 2007, p.273). *Suicide Ideation* is defined as "any self-reported thought of engaging in suicide-related behavior" (O'Carroll et al., 1996, p.247). In contrast, Rudd's construct of suicide-specific hopelessness is a broader term that captures the unique characteristics of this negative affect. The Suicide Cognitions Scale (SCS) was developed with the objective to assess *suicide-specific hopelessness* (Rudd, 2007). The SCS is purported to be conceptually distinct from other measures of suicide ideation, intent, or behaviors, due to its focus on the underlying belief system that is referred to as suicide-specific hopelessness as opposed to a focus on the nature of suicidal thoughts, or the feature of suicidal behaviors (Rudd et al., in press). The instrument was designed to tap "some of the content of the cognitive system of the suicidal mode" along the two primary themes

of *self* and *other*. "Within the *self* theme, items address sources of hopelessness well documented in suicide literature, including unlovability (Beck, 1967; Beck, 1995), helplessness (e.g., Schotte & Clum, 1982, 1987), and poor distress tolerance (Linehan, 1993) and within the *other* theme are cognitions relative to the recently identified construct of perceived burdensomeness (Joiner, 2005; Joiner et al., 2002; Rudd, Joiner &Rajab, 2004; Rudd, 2007).

Risk Factors for Suicide

Moscicki (2001) categorized risk factors for suicide in terms of the context, (e.g. within the individual or in the environment) and in terms of points of reference, (e.g. distal and proximal orientation to the subsequent behavior). Within the context of the individual, distal risk factors include mental disorders, substance abuse disorders, comorbidity of disorders, neurochemical vulnerability, family history of mental disorders/ suicidality, history of physical/sexual abuse, and previous suicide attempts. Proximal risk factors in this context are stressful life events, (e.g. interpersonal conflicts, personal failure/humiliation), and other life events such as loss and hopelessness. Environmental distal risks include dysfunctional family, easy availability of firearms, mental illness stigma, and an unprotective environment. Proximal risk factors in this context include contagion (e.g., death of an acquaintance), and firearm in the home.

Bryan and Rudd (2006) identified eight areas of risk assessment. These areas are predisposition to suicidal behavior, identifiable precipitant or stressors, symptomatic presentation, presence of hopelessness, the nature of suicide thinking, previous suicidal behavior, impulsivity and self-control, and protective factors. Of particular interest for this study is the area of the presence of hopelessness. The majority

of suicide patients report the presence of this cognition and feeling, the relief of which might be a primary motivator for the act of suicide (Bryan & Rudd, 2006).

Incidence of Suicide in Civilian and Military Populations

In the field of suicidology, it is generally agreed that the actual number of suicide deaths are misclassified and underreported (Moscicki, 2001). Individual's behaviors and intent behind behaviors are not always obvious and lack of standardization of death scene reporting across the nation and ambiguous data classification, misclassification, and under-reporting is estimated to range from less than three percent to 24% (Moscicki, 2001). Current data from the American Association of Suicidology indicates that suicide ranks 11th in the cause of death in the United States, annually accounting for over 32,000 deaths and is represented as a rate of 11/100,000 population. It should be noted that this number represents all age groups. The ratio of men to women is almost 4:1. Data reveals that there are 25 annual attempts for event that ends in death; when analysis focuses on attempts of suicide in contrast to completion rates there are three female attempts for each male attempt. The relatively large ratio of attempts to actual deaths indicates that there might be other factors influencing these behaviors. For example, 272 attempters surveyed in the National Comorbidity Survey reported that their behavior was a "cry for help" (Kessler, Borges, &Walters, 1999). Nock and Kessler (2006) in an analysis of the National Comorbidity Survey which investigated the prevalence of and risk factors for suicide attempts versus suicide gestures found that more women than men were likely to make a suicide gesture rather than an attempt and "women were more likely to report doing so as a means of communicating with others" (p. 620).

Incidence rates of veteran suicides are even more difficult to determine than civilian rates. Data from the VA is limited to veterans who access care or are enrolled in the VA system. A 2007 Congressional Budget Office report indicates that only around a third of the total veteran population uses services or is enrolled at the VA (Percy, 2007). Additionally, veteran status may not be known at the time of death and recorded on death certificates. As a result of the lack of a national surveillance system for suicide among veterans, the information that is available is from special epidemiological studies (Sundararaman et al., 2008) and these studies have considerable differences in design, in the sub-populations of veterans that are studied, and they frequently report conflicting results. Often the results from these studies are compared to the rates from the civilian population; the validity of such a comparison is questionable when the data for the general population is confounded by data applicable to veterans (Sundararaman et al., 2008).

Limited information from a few studies provides some data, but " the true incidence of suicide among veterans is not known" (Sundararaman et al., 2008, CRS-6). Bullman and Kang (1996) examined the association between combat trauma and post service suicide among Vietnam veterans and found an increased risk of suicide with the increased occurrence of combat trauma. Zivin et al., (2007) conducted a large study of veterans who were diagnosed with depression, and during a five-year period 21% of the veterans in this high-risk group died by suicide. This rate was comparable to suicides among those in general population with a diagnosis of depression. Kang and Bullman's (2008) analysis of veterans returning from the Iraq and Afghanistan war zones indicated that the risk of suicide among this group was not statistically significantly different than

the general population. However, it was suggested that there might be vulnerable subgroups including those with mental disorders.

The recent Report for Congress on Suicide Prevention Among Veterans states, "At this time there is no nationwide system for surveillance (i.e., tracking) of suicide among all veterans" (Sundararamen, Panagala, & Lister, 2008, p. CRS-2). This report concludes that despite the recent interest in comparing prevalence rates in civilian and veteran populations, this comparison may not be very useful. "In numerous ways that affect their suicide risk, veterans are not like the general population" (Sundararamen et al., 2008). The point is made that the VA is invested in decreasing the "burden of suicide" among veterans, no matter how the rate amongst this group compares to the general population.

In both the civilian and veteran population the numbers may seem relatively small in relationship to causes of death such as heart disease, cancer and stroke. However, it is not the quantitative aspects of this cause of death that should garner attention, it is the qualitative and contributing aspects relative to the decision to end one's own life. Suicide impacts not only the person; it is estimated that each suicide intimately affects at least 6 other people (American Association of Suicidology, 2008)

Mental Disorders Associated with Suicidality

"Suicide is a complex and tragic outcome of mental illness" (Moscicki, 2001). In a study that examined the diagnostic comorbidity in individuals with suicidal ideation and behavior, Rudd, Dahm and Rajab (1993) found that mood disorders were the most frequent primary diagnosis, followed by phobias and PTSD followed third. Mood disorders, personality disorders and substance use disorders are the primary contributors

to the majority of both suicide attempts and suicide as well as the lesser suicidal behaviors (Moscicki, 2001). "Mood disorders, frequently co-occurring with other psychiatric and medical diagnosis, are the most commonly found diagnoses in psychological autopsy studies of completed suicides for both men and women, across all age groups" (Moscicki, 2001, p.316). Generally, there is an increased risk for attempted suicide for individuals with more than one psychiatric diagnosis (Moscicki, 2001)

Rates in the National Comorbidity Survey indicated that both men and women with PTSD were six times more likely then demographically matched controls to attempt suicide (Kessler et al., 1995). PTSD is frequently comorbid with major depressive episode and their concurrence significantly increases the risk for suicidal behaviors (Oquendo et al., 2005). While the relationship between PTSD and suicide appears to be mediated by specific personality disorders, it is surmised that both the PTSD and personality disorders were attributable to traumatic experiences (Oquendo et al., 2005). Analyses from the Bruce et al., (2001) study indicated that the relative number of lifetime suicide attempts significantly increased as a function of trauma and PTSD status. Lifetime suicide attempts increased from five percent for a no-trauma group to 16% for a trauma group who did not meet diagnosis for PTSD to 33% for those who did meet criteria for this disorder. In another study (Kotler, Iancu, Efroni, & Amir, 2001), findings indicated that individuals with PTSD are at greater risk for suicide and that impulsivity was strongly correlated with suicide risk.

Studies examining PTSD and suicidal behaviors in veteran populations found similar results. From the Vietnam era, evidence exists that a diagnosis of PTSD increases the overall risk of suicidal behaviors (Bonin, Norton, Asmundson, & Pidlubney,

2000; Fontana & Rosenheck, 1995). Lehman, McCormick and McCracken (1995) analyzed suicidal behaviors among patients in the VA healthcare system and found that the incidence of anxiety disorder diagnosis, particularly PTSD, among patients who ended their lives by suicide, was much higher than the rate reported for the comparable group in the general population. Relative to veterans returning from deployment in Iraq and Afghanistan, Friedman (2006) outlined the risk factors associated with PTSD and stated that there is evidence of association between the likelihood of a suicide attempt and the number of previously experienced traumatic events. He attributed this increased risk to the fact that PTSD is often comorbid with the other psychiatric disorders that are associated with suicidal behavior such as depression, substance use, anxiety disorders, and substance use. Kang and Bullman (2008) did not find any significant differences in the risk of suicide when comparing Operation Iraqi Freedom/Operation Enduring Freedom (OIF/OEF) veteran to the general population, however; these authors identified vulnerable sub-groups, " notably active component service members and those with mental disorders."

Summary

In summary, over the course of a lifetime, experiencing a traumatic event is more often the case than not (Friedman, Keane, & Resick, 2007). There are qualitative differences and more deleterious consequences associated with interpersonal trauma. Specifically, sexual assault is associated with more negative consequences and is highly associated with post-traumatic stress disorder (Bruce et al, 2001, Breslau, et al., 1991; Foa & Riggs, 1994; Rothbaum et al., 1992). There are gender differences associated with the prevalence of PTSD (Kessler et al., 1995; Seedat, Stein & Carey, 2005), with women

having almost twice the prevalence rates as men. Numerous other negative physical and mental health consequences are associated with PTSD (Kessler et al., 1995: Keane et al., 2007). One of the most potentially negative and far-reaching outcomes of interpersonal trauma is suicidal thoughts or behaviors (Simon, Anderson, Thompson, Crosby, & Sacks, 2002).

Sexual assault within the context of the military has recently come to be recognized as a problem and unique characteristics associated with this form of interpersonal trauma have been identified (Frayne and Turner, 2004). Female veterans have differential rates of PTSD due to sexual assault, the higher rates identified among those veterans who were assaulted while on active duty (Suris et al., 2004). The burden of illness associated with PTSD resulting from MST is not confined to a diagnosis of this anxiety disorder; there are negative consequences associated with both mental and physical health (Frayne and Turner, 2004; Kimerling et al., 2007). Additionally, psychosocial consequences can include relational difficulties both intrapersonally and interpersonally, post-military readjustment, and occupational difficulties (Frayne and Turner, 2004). Post-traumatic Stress Disorder symptoms that manifest as defensive avoidance, the most salient factor associated with this disorder (North et al., in press), can generate states of both physical and emotional isolation, a context that is thought to be related to self-injurious behaviors. Finally, there is an association between MST, suicide and intentional self-harm (Kimerling et al., 2007)

Mental Health Needs of Female Veterans

A twenty-year projection of the female veteran population shows an expected increase of around 15% (VetPop2007; Office of the Actuary, Department of

Veterans, 2007). If Military Sexual Trauma prevalence rates continue to range around 20% this puts close to a half a million women at risk for long term physical and mental health consequences. A 2004 VA report on MST (Frayne and Turner, 2004) acknowledges that despite efforts on the part of the Department of Defense, sexual harassment and sexual assault continue to occur in the military and in military academies substantiating the pressing need for continued efforts to add to current understanding of how best to alleviate both the mental and physical health consequences of this type of interpersonal trauma. Suicidality, because of its potential lethality, stands out as a particularly deleterious potential consequence of MST. Previous research has focused on combat related factors that might place veterans at risk for suicide related thoughts and behaviors, changes in suicide rates in VA mental health outpatients as a result of system-wide-reorganization, demographic factors, epidemiology, active duty personnel, and has primarily examined these risks in men (e.g., Bullman and Kang, 1996; Desai, Rosenheck, & Desai, 2008; Zivin et al., 2007; Scoville, Gubata, Potter, White, & Pearse, 2007; Eaton, Messer, Wilson & Hoge, 2006; Hill, Johnson & Barton, 2006; Allen, Cross, & Swanner, 2005; Kaplan, Huguet, McFarland, Newsom, 2007; Helmkamp, 1996). A review of the literature revealed little information pertaining to the principle factors that predict suicide-specific cognitions in female veterans who have been diagnosed with PTSD resulting from MST. Identification of these factors is important; knowledge in this area will contribute to the on going improvement of mental health care for the specialized issues of this specific population. Employing these factors as a focus of treatment might potentially decrease the negative physical, psychological and social consequences associated with any of the suicide related thoughts and behaviors that fall on the

continuum of suicide.

CHAPTER III.
OBJECTIVES OF THE PROPOSED STUDY AND HYPOTHESIS

Objectives of the Proposed Study

The proposed study is a part of a larger study currently being conducted at a large Southwestern Veterans Administration Medical center (VAMC) to determine the effectiveness of Cognitive Processing Therapy (CPT) for treating female veterans with Post-Traumatic Stress Disorder (PTSD) resulting from sexual assault trauma that occurred while on active military duty. The primary objective of the proposed study was to identify PTSD related factors that predict *suicide-specific hopelessness* in female veterans with PTSD related to MST. Cognitions that have been associated with completed suicides as identified by the Suicide Cognitions Scale (SCS) (Rudd, 2007) have shown promise in identifying specific cognitions that are indicative of suicide-specific hopelessness and might be predictive of individuals who would actually attempt suicide in the future (C. Claassen, personal communication, March 20, 2007). If it was determined that there is a characteristic pattern of predictive factors that are associated with suicide-specific cognitions, then interventions in this population could be targeted toward focusing on this specific cognitive risk factor that has been shown to be related to negative affect and suicidal behaviors. If the avoidance symptoms associated with PTSD proved to be indicative of suicide-specific cognitions then interventions could be tailored to target both the behavioral and cognitive elements to increase potential benefits of treatment. The topic is important and timely as recent legislation suggests a need for research in this area; an amended version of the Joshua Omvig Veterans Suicide

Prevention Act, a bill introduced to the 110th Congress on February 1, 2007 was passed on March 21, 2007 and is a response to the indications to Congress that:

1) Suicide among veteran's suffering from PTSD is a serious problem and;
2) The Secretary of Veterans Affairs should take into consideration the special needs of veterans suffering from PTSD and the special needs of elderly who are at high risk for depression and experience high rates of suicide in developing and implementing a comprehensive program under this act.

The final section of the act outlines a Comprehensive Program For Suicide Prevention among Veterans (The Joshua Omvig Veterans Suicide Prevention Act, Public Law 110-110)

Hypotheses

I. In this sample, trauma symptoms, as measured by the total score of the Clinician's Administered PTSD Scale for DSM-IV (CAPS) will be predictive of *suicide-specific hopelessness* as measured by the Suicide Cognitions Scale (SCS).

Ia. Of the three symptom clusters that are assessed by the CAPS: re-experiencing, avoidance and hyperarousal, avoidance symptoms are more likely to be associated with suicide-specific cognitions.

II. In this sample, depressive symptoms, as measured by the Beck Depression Inventory (BDI-II) will be associated with *suicide-specific hopelessness* as measured by the SCS.

III. Both trauma symptoms and depressive symptoms will be associated with *suicide-specific hopelessness* and trauma symptom's association will be above and beyond depressive symptoms.

Exploratory Analysis

I. An interaction effect between *suicide-specific hopelessness* as measured by the SCS and trauma symptoms as measured by the CAPS will be associated with a positive endorsement of suicide ideation as measured by item 9 on the BDI-II.

CHAPTER IV.
METHOD

Participants

Participants were female veterans from a Southwestern Veterans Administration Healthcare System. These participants were involved in a large study, approved by the Institutional Review Board (IRB), examining the effectiveness of Cognitive Processing Therapy (CPT) for treating Military Sexual Trauma (MST) related Posttraumatic Stress Disorder (PTSD). Approval by the IRB was obtained prior to recruitment (See Appendix A). Participants were identified primarily through clinician referrals with additional recruitment methods including, the Principal Investigator and other staff members networking with mental health professionals, female veterans groups, and using IRB approved advertising methods. An initial phone screening served to determine if individuals meet the inclusion criteria for participation in the study. In order to be included, participants needed to: be female veterans, with a current diagnosis of post-traumatic stress disorder (PTSD) as a result of Military Sexual Trauma (MST), have experienced MST no less than three months prior to entering the study, identify that MST was the trauma that was causing them the worst current distress (if they had other sexual traumas), have at least one clear memory of the trauma (sufficient to write an impact statement for therapy), consent to be randomized into treatment, not receive other psychotherapy for PTSD during the 6-weeks of active treatment (brief check-ins with an existing therapist, and attendance in self-help groups will be allowed), and, if on newly prescribed antidepressants, be on a stable medication regimen for a minimum of 6 weeks prior to entering the study. Potential participants were excluded for the following reasons:

prior Cognitive Processing Therapy (CPT) or Present Centered Therapy (PCT), current substance dependence, prior substance dependence that has not been in remission for at least three months, any current psychotic symptoms, prominent current suicidal (e.g., having a plan or intent in addition to suicidal ideation) or homicidal features, any severe cognitive impairment or history of organic mental disorder, or current involvement in a violent relationship.

Procedures

Once eligibility was determined through the initial phone screening, an appointment was scheduled for participants to come in and discuss the study in more detail and the informed consent process was completed. After informed consent of the subjects was complete and the subject agreed to participate, they were interviewed by one of the Assessment Technicians (AT's), a doctoral level psychologist or a trained and supervised assessment technician. Data was obtained from these face-to-face interviews and written questionnaires at the time of the baseline screening assessment for participation in the larger study. Eligible subjects were reimbursed in the amount of $50.00 in this initial assessment if they met criteria for participation and $20.00 if the criteria were not met.

Measures

Demographic Questionnaire:

As a part of the baseline assessment procedure, participant self-report demographic information was recorded onto the Subject Interview Questionnaire Sheet. Information included; education, ethnicity, marital status, urban residence, age at time of

interview, gender, usual occupation, employment status, income, service connection, PTSD service connection status, and dates and branch of military. (See Appendix B).

Clinician Administered PTSD Scale (CAPS).

The Clinician Administered PTSD Scale for DSM-IV (CAPS) completed at baseline was used to establish the level of trauma symptomatology related to an MST event(s) (See Appendix C). The Clinician Administered PTSD Scale for DSM-IV (CAPS) is a structured clinical interview, developed by Blake et al. (1995), and is considered the gold standard in PTSD assessment. The 20-item interview corresponds with the DSM-IV criteria for PTSD and measures the frequency and intensity of the DSM-IV-TR's 17 symptoms of PTSD on a behaviorally anchored 5-point rating scale from 0 ('never") to 4 ("daily or almost daily") and intensity from 0 ('none') to 4 ('extreme'). The most frequently used scoring rule is to count the symptom present when there is a frequency score of 1 or more and an intensity score of 2 or more (Blake et al., 2000). Diagnostic criteria for PTSD is met when Criterion A is present, (having experienced a traumatic event and responded to the event with intense fear, helplessness or horror), criterion B is met if at least one or more re-experiencing symptoms are present, Criterion C is met when 3 or more avoidance symptoms are present, and criterion D is met when 2 or more hyperarousal symptoms are met. Additionally, the duration must be for at least a month resulting in distress or impairment in social, occupational or other important areas of life. The CAPS contains questions to assess the effect of these symptoms on social and occupational functioning, a validity indicator, a severity score of reported symptoms, and improvements since previous assessment (for repeated administrations). As a part of establishing that Criterion A of the disorder is met, the Life

Events Checklist is used to identify traumatic experiences, and up to three experiences can be referenced during the administration of the CAPS. Test retest reliability for the CAPS is reported to range from .90 to .98 with internal consistency for the 17 symptoms at .94. The total severity score has been reported to be highly correlated with other measures of PTSD including the Mississippi (.91) and PK scale of the MMPI-2 (.77) (Blake et al., 1995). For this study, the "1/2" rule is used (e.g., the symptoms have occurred at least once or twice in the past month, and the intensity is reported at least at a moderate level) and a minimum CAPS score of 45 or higher was required. (Weathers, Keane and Davidson, 2001).

Beck Depression Inventory (BDI-II)

The Beck Depression Inventory II (BDI-II) was completed at baseline to assess depressive symptoms (See Appendix D). This instrument, developed by Beck, Steer and Brown (1996) is a 21-item scale that has been used widely in research and clinical application to detect depression. Each item on the scale lists four statements arranged in increasing severity about a particular symptom of depression. These symptoms correspond with the DSM-IV criteria for depression. Scores are obtained by summing the 21 ratings and scores can range from 0-63. High levels of convergent and divergent validity as well as reliability have been established in prior research (Beck &Steer, 1987; Beck, Steer & Garbin, 1988). A test-retest reliability of .90 and an average reliability coefficient of .86 have been established (Pearson website).

Suicide Cognition's Scale (SCS)

The Suicide Cognitions Scale (SCS) (Rudd, 2007) completed at baseline was used to assess *suicide-specific hopelessness* (See Appendix E). The Suicide

Cognitions Scale (SCS) is a 20 item self-report questionnaire that identifies cognitions of perceived burdensomeness, unlovability, helplessness, and poor distress tolerance, all thought to be components of suicide-specific hopelessness. Subjects rate statements pertaining to these factors with ratings made on a 5-point Likert Scale, with 1 representing "strongly disagree" and 5 representing "strongly agree". Scores are calculated by summing the responses and can range from 20-100. Rudd et al., (in press) validated the SCS in both a student and a clinical sample. This instrument showed good psychometric properties including high internal consistency (alpha = .97 in the clinical sample and .96 in the student sample) and good test-retest reliability. Pearson product moment correlation for the initial administration and then taken 5 days later was .84 for the student sample and .55 for the clinical sample. Additionally, the instrument effectively differentiated between those with and without a history of suicide attempts in both samples. The SCS also showed incremental validity in comparison to the Beck Hopelessness Scale (BHS), an instrument that is purported to assess suicide-specific hopelessness. In addition, the developers propose that this instrument provides an "easy and direct mechanism to track some of the content of the suicidal belief system," hence its applicability to risk assessment and measurement of cognitive change over the course of treatment (Rudd, 2007).

Statistical Analyses

Data for all participants was entered using double entry. A Statistical Package for the Social Sciences (SPSS, 2007), version 16.0, based diagnostic program employed to determine collection problems and the verified raw data was uploaded to research-ready files in preparation for analysis. The Statistical Package for the Social

Sciences GradPak, version 17.0 (SPSS, 2008), was utilized to perform statistical analyses.

Where appropriate, means, medians and standard deviations were calculated for demographic variables (see Table 1). Means and standard deviations were run for all study measures (see Table 2). An analysis of the four suicide ideation statements from the Beck Depression Inventory was performed (see Table 3). Race and marital status were adjusted for in these analyses.

Statistical analyses for each hypothesis are as follows:

Hypothesis I: In this sample, trauma symptoms, as measured by the total score of the Clinician's Administered PTSD Scale for DSM-IV (CAPS), will be associated with *suicide-specific hopelessness* as measured by the Suicide Cognitions Scale (SCS).

Hypothesis I was evaluated with a simple linear regression with trauma symptoms as the independent variable and *suicide-specific hopelessness* as the dependent variable.

Hypothesis Ia: Of the three trauma symptom clusters that are assessed by the CAPS: re-experiencing, avoidance and hyperarousal, avoidance symptoms are more likely to be associated with suicide-specific cognitions.

Hypothesis Ia was evaluated by a multiple linear regression with the re-experiencing symptoms, avoidance symptoms, and hyperarousal symptoms as the independent variables and *suicide-specific hopelessness* as the dependent variable to determine which symptom group variable was the most significantly associated with *suicide-specific hopelessness*.

Hypothesis II: In this sample, depressive symptoms, as measured by the Beck Depression Inventory (BDI-II) will be associated with *suicide-specific hopelessness* as measured by the SCS.

Hypothesis II was evaluated by a simple linear regression with depressive symptoms as the independent variable and *suicide-specific hopelessness* as the dependent variable.

Hypothesis III: Both trauma symptoms and depressive symptoms will be associated with suicide-specific hopelessness and trauma symptoms will be associated above and beyond depressive symptoms.

Hypothesis III was evaluated by a multiple linear regression with both trauma symptoms and depressive symptoms as independent variables and *suicide-specific hopelessness* as the dependent variable.

Exploratory Analysis

Hypothesis 1: An interaction effect between *suicide-specific hopelessness* as measured by the SCS and trauma symptoms as measured by the CAPS will be associated with suicide ideation as measured by item 9 on the BDI-II.

For the purpose of this study, item 9 was assessed as a stand-alone value in one of the analyses as it is the measure of self-endorsed suicidal ideation. The four statements are as follows: “I don’t have any thoughts of killing myself, “I have thoughts of killing myself but won’t carry them out”, “I would like to kill myself” and “I would like to kill myself if I had the chance.” It was not expected that there would be many endorsements of the two most severe ideation statements as the criteria for exclusion from the study includes “prominent current suicidal (e.g., having a plan or intent in

addition to suicidal ideation) or homicidal features." The scores were limited to a 0-1 (e.g., 0 = no ideation as indicated by the first statement and 1 = ideation as indicated by the other three statements) or more for this particular analysis.

Hypothesis I was evaluated by a *t*-test to compare the mean score of the interaction of trauma symptoms and *suicide-specific hopelessness* between those participants with no suicide ideation and suicide ideation.

CHAPTER V.
RESULTS

Descriptive Data

The sample consisted of 86 individuals who completed the baseline assessment for a larger study and were recruited from a Southwestern Veterans Administration Healthcare System between 2006 and 2009. Females represented 100% of this sample (*n* = 86), ranging in age from 25 to 68 years, with a mean age of 45.90 years (SD = 8.97). The majority of the study participants were African American (*n* = 41, 47.7%), 32.6% were Caucasian (*n* = 28), 8.1% were Asian (*n* = 7), 5.8 % were Hispanic (*n* = 5), 4.7% were American Indian (*n* = 4), and 1.2% were of Native Hawaiian/Pacific Islander descent (*n* = 1). The mean number of years of education for the sample was 14.2 (SD = 2.05) and ranged from 10-20 years. Nearly half of the sample indicated that they were divorced (*n* = 37, 43%), whereas 18 (20.9%) participants were married, 13 (15.1%) were separated, 9 (10.5%) were never married, 7 (8.1%) were widowed, and 2 (2.3%) were cohabitating with a significant other. At the time of the assessment, less than a third (*n* = 24, 27.9%) reported that they were employed full time, 8 (9.3%) reported part time employment, 10 (11.6%) reported a retirement status, 28 (32.6%) reported an unemployed status and the remaining 16 (18.6%) specified an "other" status. With the exception of the Coast guard, participants came from all branches of the military, with the majority (*n* =41, 47.7%) coming from the Army, followed by the Navy (*n* =20, 23.3%), Air Force (*n* =18, 20.9%), Marines (*n* =4, 4.7%), the remaining 2 participants (2.3%) specified an "other" status. The mean years (*n* =86) for the elapsed time between the "index traumas", the sexual assault that the participant identified as causing them the

worst distress, and initial assessment for participation in the larger study was 21.99 years (SD = 9.19) and ranged from .20 to 41.96 years. (See Table 1)

Preliminary Analysis

In order to validate the relationship between the construct of *suicide-specific hopelessness* as measured by the Suicide Cognitions Scale (SCS) and suicidality as measured by the endorsement of suicidal ideation on item 9 of the Beck Depression Inventory (BDI-II), a *t*-test was run to determine if those who scored higher on the SCS also endorsed suicidal ideation. This analysis indicated that there is a significant relationship between *suicide-specific hopelessness* ($M = 46.87$, $SD = 15.35$) and suicidal ideation ($n = 46$, $n = 40$ with no ideation and with ideation, respectively)
t (84), = -5.03, $p < 0.001$. (See table 2)

Analysis of Hypotheses

Hypothesis1. The first hypothesis proposed that trauma symptoms, as measured by the Clinician's Administered PTSD Scale for DSM-IV (CAPS), would be associated with *suicide-specific hopelessness* as measured by the Suicide Cognitions Scale (SCS). A linear regression analysis was performed with trauma symptoms as the independent variable and *suicide-specific hopelessness* as the dependent variable. Race and marital status were adjusted for in the analysis. The results indicated that trauma symptoms as measured by the CAPS ($M = 84.16$, $SD = 14.65$) account for a significant percentage of the variance in *suicide-specific hopelessness* ($M = 46.87$, $SD = 15.35$) $R^2 = 18.2$, F (4, 81) = 4.50, $p = 0.002$.

Hypothesis Ia. This hypothesis examined the role of the trauma symptom clusters to determine their association with *suicide-specific hopelessness,* with the expectation that the avoidance symptoms would more significantly contribute to the model. A multiple linear regression was performed with the re-experiencing symptoms, avoidance symptoms, and hyperarousal symptoms as the independent variables and suicide-specific hopelessness as the dependent variable to determine which symptom group variable is the most significantly associated with suicide-specific hopelessness. Both race and marital status were adjusted for in this analysis. Initially, the symptom clusters were examined independently. When compared independently, re-experiencing symptoms ($M = 23.42$, $SD = 6.12$) were significant $R^2 = 22.3$, $F(4, 81) = 5.82$, $p < 0.001$ as well as hyperarousal symptoms ($M = 26.51$, $SD = 5.07$) $R^2 = 15.1$, $F(4, 81) = 3.57$, $p = 0.01$. When examined independently, the avoidance symptoms cluster ($M = 34.01$, $SD = 6.90$) was the only symptom cluster that was not significantly associated with *suicide-specific hopelessness* ($M = 46.87$, $SD = 15.35$) $R^2 = 9.5$, $F(4, 81) = 2.13$, $p = 0.08$. As a combined model, the three-symptom cluster total scores predicted *suicide-specific hopelessness* $R^2 = 23.2$, F (6, 79) = 3.97, $p = 0.002$. However, the avoidant symptom cluster ($M = 34.01$, $SD = 6.90$) still did not significantly contribute to the model t (85) = -.66, $p = .51$). Alternatively, in this model, of the three symptom cluster scores, only the re-experiencing cluster ($M = 23.42$, $SD = 6.11$) was significantly associated with *suicide-specific hopelessness* ($M = 46.87$, $SD = 15.35$), t (85) = 2.78, p = 0.007.

Hypothesis II. This hypothesis predicted that participant's symptoms of depression would be associated with *suicide-specific hopelessness.* As expected, depressive symptoms ($M = 27.34$, $SD = 9.91$), as measured by the BDI-II, accounted for a

significant portion of the variance of *suicide-specific hopelessness* ($M = 46.87$, $SD = 15.35$) $R^2 = 48.8$, $F\ (4, 81) = 19.31$, $p < 0.001$. Again, race and marital status were adjusted for in the analysis.

Hypothesis III. In an attempt to gain a better understanding of the role of trauma symptoms and depressive symptoms in this population, it was expected that trauma symptoms would contribute more significantly than depressive symptoms to *suicide-specific hopelessness*. As a combined model, depressive symptoms and trauma symptoms did account for a significant amount of the variance in *suicide-specific hopelessness* ($M = 46.87$, $SD = 15.35$), $R^2 = 49.0$, $F\ (5, 80) = 15.37$, $p = 0.001$. However, trauma symptoms ($M = 84.16$, $SD = 14.65$) did not contribute more than depressive symptoms ($M = 27.34$, $SD = 9.91$), $t\ (85) = 0.54$, $p = 0.59$ and $t\ (85) = 6.95$, $p < 0.001$, respectively. In fact, both the combined model of the CAPS and the BDI-II, and the BD-II as the sole predictor model accounted for nearly the same amount of variance (48.8% and 49% respectively) in *suicide-specific hopelessness.* Therefore, in the third hypothesis, the null hypothesis that there would be no differences was retained.

Exploratory Hypothesis Ia. This hypothesis postulated that there would be an interaction effect between *suicide-specific hopelessness* and trauma symptoms that would predict suicidal ideation. In this model, there was a significant interaction between *suicide-specific hopelessness* ($M = 46.87$, $SD = 15.35$) and trauma symptoms ($M = 84.16$, $SD = 14.65$) that was associated with suicidal ideation ($n = 46$, $n = 40$, with no ideation and with ideation, respectively), $t\ (82) = -4.193$, $p = 0.001$.

CHAPTER VI.
DISCUSSION

Less than twenty years ago the mental and physical health consequences of Military Sexual Trauma became a stated focus of concern for the Veteran's Administration (Veterans Health Care Act of 1992, Public Law 102-585). More recent concerns, in regards to the mental health of veterans, focus attention on the topic of veteran suicide (Joshua Omvig Veterans Suicide Prevention Act, Public Law 110-110). In light of the fact that up to one third of the general population has suicidal thoughts at some point and time in their lives and only 12 per 100,000 per year in the same population and 60 per 100,000 per year in a psychiatric population (Bongar, 2002) actually suicide, efforts to fine tune ways to identify and treat individuals who are truly at risk are warranted. This study attempted to gain a better understanding of the role of trauma symptoms resulting from Military Sexual Trauma (MST) in *suicide-specific hopelessness.* The construct of *suicide-specific hopelessness* is purported to capture the essence of hopeless cognitions that are specific to suicidality and can result in a range of suicidal thoughts and behaviors (Rudd, 2007).

The first objective of this study was to examine the association of the total impact of trauma symptoms and *suicide-specific hopelessness.* In order to do this, the relationship between *suicide-specific hopelessness* and suicidal ideation had to be validated. A preliminary analysis was run and the findings indicated that there was a significant relationship between a higher score on the Suicide Cognitions Scale (SCS) and an endorsement of suicidal ideation on the Beck Depression Inventory (BDI-II). This analysis set the stage for further examination of trauma

factors and *suicide-specific hopelessness.* Based on previous literature concerning victims of violence (Simon et al., 2002) and multiple studies concerning veterans with PTSD (e.g., Bonin et al., 2000; Fontana & Rosenheck, 1995; Lehman & McCracken, 1995 & Friedman, 2006), it was expected that higher trauma symptoms would be associated with more endorsements of *suicide-specific hopelessness*. A linear regression supported this hypothesis and although the influence that could be attributed to trauma symptoms was relatively small, the effect suggests the importance of assessing *suicide-specific hopelessness* in veterans who has been identified as having PTSD as a result of experiencing a Military Sexual Trauma. Early assessment of these negative expectancies about "self" and "others" is important as they are a predictor of any of the range of thoughts and behaviors that fall on the continuum of suicide: ideation, attempts, the seriousness of non-lethal attempts and completed suicides (Rudd, 2007).

The next objective was to determine if trauma symptoms examined as the symptom clusters of PTSD as set out in the DSM-IV-TR, capturing the persistent reexperiencing of the traumatic event, persistent avoidance of trauma associated stimuli, and persistent symptoms of increased physiological arousal, would contribute in varying degrees to *suicide-specific hopelessness.* The expectation was that the avoidance cluster would contribute more significantly. This expectation was based on the theoretical assumption that although most individuals who experience an overwhelming traumatic event will temporarily respond with symptoms of reexperiencing and hyperarousal, this

being a normative response; however, only those that respond with avoidance and numbing symptoms will subsequently develop PTSD (North et al., 1999; Van der Kolk and McFarlane, 1996). It was thought that the avoidance symptoms might significantly contribute to the formulation of cognitions that are structured around "perceived burdensomeness, unlovability, helplessness, and poor distress tolerance", all components of *suicide-specific hopelessness* (Rudd, 2007). However, the avoidance symptoms did not prove to be associated with the endorsement of these cognitions; alternatively, the reexperiencing symptoms were the only symptom group that was significant in its association with *suicide-specific hopelessness* in both the analyses that were performed. Hyperarousal symptoms, persistent symptoms of increased physiological arousal, were only significant when viewed independently and were not significant when viewed along with the other two symptom clusters.

The salience of the reexperiencing symptoms relationship to *suicide-specific hopelessness* could be understood in terms of a proposed relationship between the symptom clusters. If symptoms in the avoidance cluster of trauma related thoughts and associated stimuli are methods to cope with both the physiological and psychological symptoms of distress associated with the intrusions of reexperiencing symptoms (Cahill, 2007), and these methods of coping actually prevent alterations in the underlying maladaptive memory structures that contributes to the maintenance of PTSD symptoms, this could account for lack of relationship between the avoidance and numbing symptoms and the positive association between reexperiencing and *suicide-specific hopelessness.*

The recurrence of intrusive recollections, distressing dreams, flashbacks, psychological distress related to exposure to internal or external cues that are associated

with the traumatic event and physiological reactivity related to exposure to these cues, any or all of these symptoms activate both mental and physical distress. The avoidance is the mechanism, albeit not a totally effective one, to reduce the distress caused by the symptoms of reexperiencing. Even though avoidance produces short-term reduction of distress, these behaviors prevent exposure to corrective information that could lead to changes in the fear associations or maladaptive cognitions that are hallmarks of PTSD. Citing extensive literature on cognitions and PTSD, Meichenbaum (2006) summarizes a cognitively based theory, "an individual's maladaptive appraisals of the trauma and its aftermath along with an accompanying "catastrophic" cognitive style predict later PTSD (p.336)." Subsequently, the individual's exaggerated cognitions relative to the probability of "future negative consequences occurring and the adverse effects of these events" predict a course of chronic PTSD and adaptive difficulties. An avoidant cognitive style is theorized to preclude the "processing of trauma-related memories along with a failure to recall positive coping memories (Meichenbaum, 2006, p.336)." Hence, the avoidance symptoms perpetuate the maintenance of the preexisting levels of reexperiencing and hyperarousal and the reexperiencing symptom cluster appears to be associated with distress. It is proposed that the distress caused by the reexperiencing leads to the cognitions of *suicide-specific hopelessness*: unlovability, helplessness and poor distress tolerance. Additionally, it is should be noted that 7 out of twenty statements on the Suicide Cognitions Scale pertain to "poor distress tolerance" cognitions. An endorsement of the inability to endure or cope with "pain" is captured in 4 out of 7 of these statements and the trauma symptoms set out in the DSM-IV-TR reexperiencing symptom cluster, there were positively associated with *suicide-specific hopelessness,* capture both

psychological and physiological distress. Future studies would be of interest to investigate whether these endorsements of pain are related to psychological or physiological distress differently for the comorbid disorders that tend to be associated with PTSD.

Another objective of the study was to examine the contribution of depressive symptoms to the endorsement of cognitions thought to indicate *suicide-specific hopelessness.* As expected and supported by the cognitive model of depression (Beck 1967) and the hopelessness theory of depression (Abramson, Metalsky, & Alloy, 1989), these symptoms accounted for a very large portion, almost half of the variance, of this type of hopelessness. Comparing the relative contributions of trauma symptoms and depressive symptoms to *suicide-specific hopelessness,* it was expected in this population, that trauma symptoms might have a larger association with this type of hopelessness. However, this was not the case. This could be understood either in terms of examining depression as an independent factor or as a comorbid factor in *suicide-specific hopelessness.* This study solely examined the role of depressive symptoms that were reported by participants as having been experienced in the preceding week as opposed to the role of a diagnosis of depression. Depression may be the mediating factor between PTSD and suicidality in females who have experienced Military Sexual Trauma. Even though PTSD is the psychiatric consequence most commonly associated with exposure to trauma, a number of studies have shown that among trauma survivors, major depression is even more prevalent (Gold, 2004). There is also the issue of comorbidity. In the general population the National Comorbidity Survey revealed that the most common comorbidity for women was major depressive episode (Kessler et al., 1995). Rudd, Dahm

and Rajab (1993) looked at the diagnostic comorbidity in individuals with suicidal ideation and behavior, and found that mood disorders were the most frequent primary diagnosis, followed by phobias and PTSD followed third. Mood disorders, personality disorders and substance use disorders are the primary contributors to the majority of the range of thoughts and behaviors that fall along the continuum of suicide (Moscicki, 2001).

Rates in the National Comorbidity Survey indicated that both men and women with PTSD were six times more likely then demographically matched controls to attempt suicide (Kessler et al., 1995). PTSD is frequently comorbid with major depressive episode and their concurrence significantly increases the risk for suicidal behaviors (Oquendo et al., 2005). In the veteran population seen through primary care clinics through the Veterans Administration, Magruder et al. (2005) found those with a diagnosis of PTSD had a higher probability of a comorbid psychiatric diagnosis with 68.6% having a diagnosis of depression. In general, the risk for suicide attempts increases for individuals with more than one psychiatric diagnosis (Moscicki, 2001).
Future studies that examine the role of a comorbid diagnosis of depression in this population would be informative.

Finally, the interaction of trauma symptoms and *suicide-specific hopelessness* was expected to significantly predict an endorsement of suicidal ideation. Appropriately, the nature of this study limited participation to individuals who were not actively in any sort of current suicidal state; hence the information that was available was self-reported endorsements of suicidal ideation (i.e. “I have thoughts of killing myself, but I will not carry them out”). In this study the combination of trauma symptoms and *suicide-specific*

hopelessness, the hopelessness appearing to be associated with depressive symptoms, was associated with an endorsement of suicidal ideation. Again, looking through the cognitive lens, Meichenbaum (2006) states that when the thoughts and behaviors that " maintain and exacerbate chronic PTSD are present along with feelings and cognitions of helplessness and hopelessness, the risk of suicide is increased by 20-60% depending on the type of victimization. Outcome research that examines the efficacy of cognitive interventions in the reduction of suicide-specific hopelessness remains to be done.

Limitation of the Present Study and Future recommendations

Although the results are informative, this study is subject to numerous limitations. This study was a single-site, baseline assessment. Participants answered questions about symptoms associated with an event or events that occurred, on average, many years prior to the evaluation, raising concerns about the reliability of responses. The possibility of selection biases for those seeking treatment must be considered. This study was conducted within the confines of the Veterans Administration and participants may have been influenced by concurrent efforts to seek or protect compensation for the psychological wounds incurred while on active military duty. Additionally, many of the participants assault histories included childhood sexual assault and civilian sexual assault. During the assessment, even though participants were asked to consider only the effects of the Military Sexual Trauma, the cumulative effects of their history may have contributed to the measured distress level. This study did not take into account the participant's pre-assault psychiatric history or family psychiatric history, both factors that may have influenced their post assault psychological functioning. Limitations were also incurred via the inclusion/exclusion criteria for participation in the study. Because the

larger study was a treatment study, it was inappropriate to include those individuals with prominent current suicidal features (e.g., having a plan or intent in addition to suicidal ideation). Therefore the data was limited. Information was also influenced by the fact that participation was limited to those female veterans who chose to use the Veterans Administration as a resource for healthcare and this is a small portion of the overall female veteran population (Percy, 2007), thus impacting generalizability. Despite these limitations, some preliminary evidence about the association of Posttraumatic Stress Disorder resulting from Military Sexual Trauma and suicidality can assist in planning and implementing treatment approaches for this specific population.

In summary, the results suggest that post-traumatic stress disorder resulting from sexual assault while on active duty in the military is associated with suicidal thoughts and behaviors. The outcome of any of the expressions of suicidality has important public health implications; strategies aimed at early detection and intervention could lead to better outcomes for female veterans. Effective treatment is a key to decreased psychological and physiological distress; reduction of negative future oriented cognitions about the “self” and “others”, and overall improved functioning within the individual.

Table 1

Demographic Information for Sample of female Veterans with PTSD in Current Study

Variable	N	Percent
Age	86	M = 45.90, SD = 8.97 Range = 25 - 68
Gender		
Male	0	0
Female	86	100
Race Ethnicity		
African American	41	47.7
Caucasian	28	32.6
Asian	7	8.1
Hispanic	5	5.8
American Indian	4	4.7
Native Hawaiian	1	1.2
Marital Status		
Single/Never married	9	10.5
Married	18	20.9
Separated	13	15.1
Divorced	37	43.0
Widowed	7	8.1
Cohabitating	2	2.3

(table continues)

Variable	N	Percent
Employment		
Employed Full Time	24	27.9
Employed Part Time	8	9.3
Retired	10	11.6
Unemployed	28	32.6
Other	16	18.6
Education		
High School	14	16.3
Some College/College	60	69.7
Post College	12	14.0
Branch of the Military		
Army	41	47.7
Navy	20	23.3
Air Force	18	20.9
Marines	4	4.7
Other	2	2.3

Table 2

Means and Standard Deviations of Study Measures

Measures (*N* =86)	Mean	Range	Standard Deviation
SCS	46.87	20-88	15.35
CAPS (Total)	84.16	49-115	14.65
Reexperiencing Cluster	23.42	8-37	6.11
Avoidance Cluster	34.01	15-46	6.90
Hyperarousal Cluster	26.51	15-36	5.07
BDI-II	27.34	2-54	9.91

Table 3

Distribution and Percentages of BDI-II Item 9

BDI-II	Item Statements	Total	Percent
BDI-II Item-9	I don't have any thoughts of killing myself	*n* = 46	53.5
	I have thoughts of killing myself, but I will not carry them out	*n* = 38	44.2
	I would like to kill myself	*n* = 1	1.2
	I would like to kill myself if I had the chance	*n* = 1	1.2

APPENDIX A
INSTITUTIONAL REVIEW BOARD APPROVAL

Department of Veterans Affairs

Memorandum

Date: June 26, 2006

From: Chair, Research & Development Committee

Subj: Notification of Action of the R&D, #06-036, "Manualized Treatment for Female Veterans with Military Sexual Trauma"

To: Alina Suris, Ph.D.

1. The Research & Development Committee met on Monday, June 26, 2006, to review the application for approval of your study, referenced above.

2. The study has been **Approved** by the R&D Committee for a 12-month period.

3. During this approval period, you should inform the IRB of any adverse events associated with this study, deviations from the approved protocol, requested changes to the consent form, or any other events that might affect the patient's perception of the risks and benefits associated with the study.

4. The study will be subject to Continuing Review by the IRB and the R&D Committees at the end of the approval period.

5. Thank you for your submission

Clark R. Gregg, M.D.
Chair, Research & Development Committee

Department of Veterans Affairs

Memorandum

Date: June 19, 2006

From: Chair, IRB

Subj: Revisions to Proposal, #06-036, Manualized Treatment for Female Veterans with Military Sexual Trauma

To: Alina Suris, Ph.D.

1. I have received the changes to your proposal and consent form for the study reference above, as required by the IRB.

2. The changes made to the proposal satisfy the concerns of the IRB, and your study has now been **Approved** for 12 months. The study will be subject to Continuing Review at the end of that time.

3. The study will now be forwarded to the Research & Development Committee for their consideration. Patients may not be enrolled, and the study is not to be considered fully approved, until the R&D committee has met and granted their approval of the study.

4. When you are ready to begin, a stamped copy of an approved consent form must be used for any new patients enrolled into this study. If you have submitted an electronic copy of the consent form, a stamped version has been sent to you via Email. If paper copies were submitted, please forward to the IRB Administrator an electronic copy of the approved consent form for this study so that the IRB approval stamp may be affixed. All signed Consent Forms for any new patients enrolled into this study must have a current stamp.

5. During the approval period, you should inform the IRB of any adverse events associated with this study, deviations from the approved protocol, requested changes to the consent form, or any other events that might affect the patient's perception of the risks and benefits associated with the study.

6. You will be notified via Email by the IRB Administrator when this approval of the study is nearing expiration.

7. Thank you for your submission.

Rhonda Souza, MD
IRB Chairman

Department of Veterans Affairs | REPORT OF THE SUBCOMMITTEE ON HUMAN STUDIES

Project Title: **Manualized Treatment for Female Veterans with Military Sexual Trauma, #06-036**
Principal Investigator: **Alina Suris, Ph.D.**
VAMC: **Dallas VAMC**
Review Date: **June 12, 2006**

COMMITTEE FINDINGS:

1. The information given in the Informed Consent under the Description of Research by Investigator is complete, accurate, and understandable to a research subject or surrogate who possesses standard reading and comprehension skills. ☒ YES ☐ NO

2. The informed consent is obtained by the principal investigator or a trained and supervised designate under suitable circumstances. ☒ YES ☐ NO

3. Every effort has been made to decrease risk to subjects(s). ☒ YES ☐ NO

4. The potential research benefits justify the risk to subject(s). ☒ YES ☐ NO ☐ N/A

5. If the subject is incompetent and surrogate consent is obtained, have all of the following conditions been met: a) the research cant be done on competent subjects; b) there is no risk to the subject, or if risk exists the direct benefit to subject is substantially greater; c) if an incompetent subject resists, he/she will not have to participate, d) if there exists any question about the subjects competency, the basis for decision on competency has been fully described. ☐ YES ☐ NO ☒ N/A

6. If the subject is paid, the payment is reasonable and commensurate with the subject's contribution. ☒ YES ☐ NO ☐ N/A

7. Members of minority groups and women have been included in the study population whenever possible and scientifically desirable. ☒ YES ☐ NO

8. Comments: (Indicate if Expedited Review)

RECOMMENDATION: ☒ APPROVED ☐ DISAPPROVE/REVISE

SIGNATURE OF CHAIRMAN	DATE
[signature] MD	6-23-06

VA FORM 10-1223

APPENDIX B
DEMOGRAPHICS

Study PIN ___ ___ ___
Date & AT Initials _____

DEMOGRAPHICS

DEMOGRAPHIC INFORMATION

(1) What is your current address?

STREET _____
CITY _____
STATE _____
ZIP _____
PHONE _____

(2) SSN# _____

(3) Gender: Female Male

(4) What is your highest level of education?

No School.....0
Elementary 1, 2, 3, 4, 5, 6, 7, 8
High School.....9, 10, 11, 12
College 13, 14, 15, 16
Post College 17, 18, 19, 20

(5) What is your marital status?

Never Married 1
Married.....2
Co-habitating…….……3
Separated.....4
Divorced.....5
Widowed 6

(6) What is your date of birth? ☐☐ / ☐☐ / ☐☐
mm dd yy

(7) Age? ☐☐

(8) How would you describe your race/ethnicity?

White, not Hispanic ……. 1
Black/African American, not Hispanic…. 2
White, Hispanic……. 3
Black/African American, Hispanic…….. 4
American Indian/Alaska Native……..… 5
Native Hawaiian/Pacific Islander…… 6
Other (please indicate below) ....…… 7

_____

Study PIN ___ ___ ___

Date & AT Initials _____

(9) What is your usual occupation?

Unemployed…… 0
Clerical…….. 1
Sales…….. 2
Service Worker…… 3
Craftsman, Operative, Laborer…….. 4
Military…….. 5
Professional, Technical, Managerial……6
Other (please indicate below)……7

_____

(10) What is your current work status?

Employed Full-time…… 1
Employed, Part time…….....2
Retired……...3
Unemployed……..4
Other (specify)……..5

_____

(11) What was your service branch?

Air Force…… 1
Army…… 2
Coast Guard……..3
Marines…….....4
Navy…… 5
Other (specify)……..6

_____

(12) What are your dates of active duty?

	Begin Date **(mm/dd/yy)**	End Date **(mm/dd/yy)**
Active Duty 1		
Active Duty 2		
Active Duty 3		

Study PIN ___ ___ ___
Date & AT Initials _____

(13) What is your VA service-connected disability status?

Never applied…..…… .....……..0
Applied, Denied…… 1
Applied, Pending…….. 2
Approved…….. 3
If approved, complete % _____% (0 – 100%)

(14) What is your VA PTSD service-connected disability status?

Never applied…..……..0
Applied, Denied…… 1
Applied, Pending…….. 2
Approved…….. 3
If approved, complete % _____% (0 – 100%)

(15) Do you receive any non-VA disability payments?

No..…….....0
Yes…..…… 1

(16) Emergency contact:

NAME _____
RELATIONSHIP _____
HOME NUMBER _____
CELL NUMBER _____
BUSINESS NUMBER _____

APPENDIX C
CLINICIAN ADMINISTERED PTSD SCALE (CAPS)

Study PIN ___ ___ ___
Date & AT Initials _____

CLINICIAN ADMINISTERED PTSD SCALE FOR DSM-IV (CAPS)

I'm going to be asking you about some difficult or stressful things that sometimes happen to people. Some examples of this are being in some type of serious accident; being in a fire, a hurricane, or an earthquake; being mugged or beaten up or attacked with a weapon; or being forced to have sex when you didn't want to. I'll start by asking you to look over a list of experiences like this and check any that apply to you. Then, if any of them do apply to you, I'll ask you to briefly describe what happened and how you felt at the time.
Some of these experiences may be hard to remember or may bring back uncomfortable memories or feelings. People often find that talking about them can be helpful, but it's up to you to decide how much you want to tell me. As we go along, if you find yourself becoming upset, let me know and we can slow down and talk about it. Also, if you have any questions or you don't understand something, please let me know. Do you have any questions before we start?

Criterion A. The person has been exposed to a traumatic event in which both of the following were present:
(1) the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others
(2) the person's response involved intense fear, helplessness, or horror. Note: In children, this may be expressed instead by disorganized or agitated behavior

IF NO EVENTS ENDORSED ON CHECKLIST ABOVE: *(Has there ever been a time when your life was in danger or you were seriously injured or harmed?)*
IF NO: *(What about a time when you were threatened with death or serious injury, even if you weren't actually injured or harmed?)*
IF NO: *(What about witnessing something like this happen to someone else or finding out that it happened to someone close to you?)*
IF NO: *(What would you say are some of the most stressful experiences you have had over your life?)*

EVENT #1
DATE OF EVENT:_____

What happened? *(How old were you? Who else was involved? How many times did this happen? Life threat? Serious injury?)* **How did you respond emotionally?** *(Were you very anxious or frightened? Horrified? Helpless? How so? Were you stunned or in shock so that you didn't feel anything at all? What was that like? What did other people notice about your emotional response? What about after the event -- how did you respond emotionally?)*	*Describe (e.g., event type, victim, perpetrator, age, frequency):* *A. (1)* *Life threat? NO YES [self ___ other ___]* *Serious injury? NO YES [self ___ other ___]* *Threat to physical integrity? NO YES [self ___ other ___]* *A. (2)* *Intense fear/help/horror? NO YES [during ___ after ___]* *Criterion A met? NO PROBABLE YES*

Study PIN ___ ___ ___

Date & AT Initials _____

EVENT #2

DATE OF EVENT:_____

What happened? *(How old were you? Who else was involved? How many times did this happen? Life threat? Serious injury?)*	*Describe (e.g., event type, victim, perpetrator, age, frequency):*
How did you respond emotionally? *(Were you very anxious or frightened? Horrified? Helpless? How so? Were you stunned or in shock so that you didn't feel anything at all? What was that like? What did other people notice about your emotional response? What about after the event -- how did you respond emotionally?)*	*A. (1)* *Life threat? NO YES [self ___ other ___]* *Serious injury? NO YES [self ___ other ___]* *Threat to physical integrity? NO YES [self ___ other ___]* *A. (2)* *Intense fear/help/horror? NO YES [during ___ after ___]* *Criterion A met? NO PROBABLE YES*

Study PIN ___ ___ ___
Date & AT Initials _____

EVENT #3
DATE OF EVENT:_____

What happened? *(How old were you? Who else was involved? How many times did this happen? Life threat? Serious injury?)*	*Describe (e.g., event type, victim, perpetrator, age, frequency):*
How did you respond emotionally? *(Were you very anxious or frightened? Horrified? Helpless? How so? Were you stunned or in shock so that you didn't feel anything at all? What was that like? What did other people notice about your emotional response? What about after the event -- how did you respond emotionally?)*	*A. (1)* *Life threat? NO YES [self ___ other ___]* *Serious injury? NO YES [self ___ other ___]* *Threat to physical integrity? NO YES [self ___ other ___]* *A. (2)* *Intense fear/help/horror? NO YES [during ___ after ___]* *Criterion A met? NO PROBABLE YES*

For the rest of the interview, I want you to keep (EVENTS) in mind as I ask you some questions about how they may have affected you.
I'm going to ask you about twenty questions altogether. Most of them have two parts. First, I'll ask if you've experienced a particular problem in the last month, and if so, about how often. Then I'll ask you how much distress or discomfort that problem may have caused you.

EVENT #1: _____

Criterion B. The traumatic event is persistently reexperienced in one (or more) of the following ways:

1. (B-1) recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions.

Frequency	***Intensity***	***Current***
In the past month, have you had unwanted memories of (EVENT)? What were they like? *(What did you remember?)* [IF NOT CLEAR:] *(Did they ever occur while you were awake, or only in dreams?)* [EXCLUDE IF MEMORIES OCCURRED ONLY DURING DREAMS] **How often have you had these memories in the past month?** 0 Never 1 Once or twice 2 Once or twice a week 3 Several times a week 4 Daily or almost every day ***Description/Examples***	**In the past month, how much distress or discomfort did these memories cause you? Were you able to put them out of your mind and think about something else?** *(How hard did you have to try?)* **How much did they interfere with your life?** 0 None 1 Mild, minimal distress or disruption of activities 2 Moderate, distress clearly present but still manageable, some disruption of activities 3 Severe, considerable distress, difficulty dismissing memories, marked disruption of activities 4 Extreme, incapacitating distress, cannot dismiss memories, unable to continue activities ***QV (specify)*** _____	***F_____*** ***I _____*** ***Sx: Y N***

2. (B-2) recurrent distressing dreams of the event.

Frequency	***Intensity***	***Current***
In the past month, have you had unpleasant dreams about (EVENT)? Describe a typical dream. *(What happens in them?)* **How often have you had these dreams in the past month?** 0 Never 1 Once or twice 2 Once or twice a week 3 Several times a week 4 Daily or almost every day ***Description/Examples***	**In the past month, how much distress or discomfort did these dreams cause you? Did they ever wake you up?** [IF YES:] *(What happened when you woke up? How long did it take you to get back to sleep?)* [LISTEN FOR REPORT OF ANXIOUS AROUSAL, YELLING, ACTING OUT THE NIGHTMARE] *(Did your dreams ever affect anyone else? How so?)* 0 None 1 Mild, minimal distress, may not have awoken 2 Moderate, awoke in distress but readily returned to sleep 3 Severe, considerable distress, difficulty returning to sleep 4 Extreme, incapacitating distress, did not return to sleep ***QV (specify)*** _____	***F_____*** ***I _____*** ***Sx: Y N***

3. (B-3) acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur on awakening or when intoxicated).

Frequency	***Intensity***	***Current***
In the past month, have you suddenly acted or felt as if (EVENT) were happening again? *(Have you ever had flashbacks about [EVENT]?)* [IF NOT CLEAR:] *(Did this ever occur while you were awake, or only in dreams?)* [EXCLUDE IF OCCURRED ONLY DURING DREAMS] **Tell me more about that. How often has that happened in the past month?** 0 Never 1 Once or twice 2 Once or twice a week 3 Several times a week 4 Daily or almost every day ***Description/Examples***	**In the past month, how much did it seem as if (EVENT) were happening again?** *(Were you confused about where you actually were or what you were doing at the time?)* **How long did it last? What did you do while this was happening?** *(Did other people notice your behavior? What did they say?)* 0 No reliving 1 Mild, somewhat more realistic than just thinking about event 2 Moderate, definite but transient dissociative quality, still very aware of surroundings, daydreaming quality 3 Severe, strongly dissociative (reports images, sounds, or smells) but retained some awareness of surroundings 4 Extreme, complete dissociation (flashback), no awareness of surroundings, may be unresponsive, possible amnesia for the episode (blackout) ***QV (specify)*** _____	***F_____*** ***I _____*** ***Sx: Y N***

4. (B-4) intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event

Frequency	***Intensity***	***Current***
In the past month, have you gotten emotionally upset when something reminded you of (EVENT)? *(Has anything ever triggered bad feelings related to [EVENT]?)* **What kinds of reminders made you upset? How often in the past month?** 0 Never 1 Once or twice 2 Once or twice a week 3 Several times a week 4 Daily or almost every day ***Description/Examples***	**In the past month, how much distress or discomfort did (REMINDERS) cause you? How long did it last? How much did it interfere with your life?** 0 None 1 Mild, minimal distress or disruption of activities 2 Moderate, distress clearly present but still manageable, some disruption of activities 3 Severe, considerable distress, marked disruption of activities 4 Extreme, incapacitating distress, unable to continue activities ***QV (specify)*** _____	***F_____*** ***I _____*** ***Sx: Y N***

Study PIN ___ ___ ___
Date & AT Initials _____

5. (B-5) physiological reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event

Frequency	***Intensity***	***Current***
In the past month, have you had any physical reactions when something reminded you of (EVENT)? *(Did your body ever react in some way when something reminded you of [EVENT]?)* **Can you give me some examples?** *(Did your heart race or did your breathing change? What about sweating or feeling really tense or shaky?)* **What kinds of reminders triggered these reactions? How often in the past month?** 0 Never 1 Once or twice 2 Once or twice a week 3 Several times a week 4 Daily or almost every day ***Description/Examples***	**How strong were (PHYSICAL REACTIONS) in the past month? How long did they last?** *(Did they last even after you were out of the situation?)* 0 No physical reactivity 1 Mild, minimal reactivity 2 Moderate, physical reactivity clearly present, may be sustained if exposure continues 3 Severe, marked physical reactivity, sustained throughout exposure 4 Extreme, dramatic physical reactivity, sustained arousal even after exposure has ended ***QV (specify)*** _____	***F_____*** ***I _____*** ***Sx: Y N***

Criterion C. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by three (or more) of the following:

6. (C-1) efforts to avoid thoughts, feelings, or conversations associated with the trauma

Frequency	***Intensity***	***Current***
In the past month, have you tried to avoid thoughts or feelings about (EVENT)? *(What kinds of thoughts or feelings did you try to avoid?)* **What about trying to avoid talking with other people about it?** *(Why is that?)* **How often in the past month?** 0 Never 1 Once or twice 2 Once or twice a week 3 Several times a week 4 Daily or almost every day ***Description/Examples***	**How much effort did you make to avoid (THOUGHTS/FEELINGS/CONVERSATIONS)?** *(What kinds of things did you do? What about drinking or using medication or street drugs?)* [CONSIDER ALL ATTEMPTS AT AVOIDANCE, INCLUDING DISTRACTION, SUPPRESSION, AND USE OF ALCOHOL/DRUGS] **How much did that interfere with your life?** 0 None 1 Mild, minimal effort, little or no disruption of activities 2 Moderate, some effort, avoidance definitely present, some disruption of activities 3 Severe, considerable effort, marked avoidance, marked disruption of activities, or involvement in certain activities as avoidant strategy 4 Extreme, drastic attempts at avoidance, unable to continue activities, or excessive involvement in certain activities as avoidant strategy ***QV (specify)*** _____	***F_____*** ***I _____*** ***Sx: Y N***

Study PIN ___ ___ ___

Date & AT Initials _____

7. (C-2) efforts to avoid activities, places, or people that arouse recollections of the trauma

Frequency	***Intensity***	***Current***
In the past month, have you tried to avoid certain activities, places, or people that reminded you of (EVENT)? *(What kinds of things did you avoid? Why is that?)* **How often in the past month?** 0 Never 1 Once or twice 2 Once or twice a week 3 Several times a week 4 Daily or almost every day ***Description/Examples***	**In the past month, how much effort did you make to avoid (ACTIVITIES/PLACES/PEOPLE)?** *(What did you do instead?)* **How much did that interfere with your life?** 0 None 1 Mild, minimal effort, little or no disruption of activities 2 Moderate, some effort, avoidance definitely present, some disruption of activities 3 Severe, considerable effort, marked avoidance, marked disruption of activities or involvement in certain activities as avoidant strategy 4 Extreme, drastic attempts at avoidance, unable to continue activities, or excessive involvement in certain activities as avoidant strategy ***QV (specify)*** _____	***F_____*** ***I _____*** ***Sx: Y N***

8. (C-3) inability to recall an important aspect of the trauma

Frequency	***Intensity***	***Current***
In the past month, have you had difficulty remembering some important parts of (EVENT)? Tell me more about that. *(Do you feel you should be able to remember these things? Why do you think you can't?)* **In the past month, how much of the important parts of (EVENT) have you had difficulty remembering?** *(What parts do you still remember?)* 0 None, clear memory 1 Few aspects not remembered (less than 10%) 2 Some aspects not remembered (approx 20-30%) 3 Many aspects not remembered (approx 50-60%) 4 Most or all aspects not remembered (more than 80%) ***Description/Examples***	**How much difficulty did you have recalling important parts of (EVENT)?** *(Were you able to recall more if you tried?)* 0 None 1 Mild, minimal difficulty 2 Moderate, some difficulty, could recall with effort 3 Severe, considerable difficulty, even with effort 4 Extreme, completely unable to recall important aspects of event ***QV (specify)*** _____	***F_____*** ***I _____*** ***Sx: Y N***

9. (C-4) markedly diminished interest or participation in significant activities

Frequency	***Intensity***	***Current***
In the past month, have you been less interested in activities that you used to enjoy? *(What kinds of things have you lost interest in? Are there some things you don't do at all anymore? Why is that?)* [EXCLUDE IF NO OPPORTUNITY, IF PHYSICALLY UNABLE, OR IF DEVELOPMENTALLY APPROPRIATE CHANGE IN PREFERRED ACTIVITIES] **In the past month, how many activities have you been less interested in?** *(What kinds of things do you still enjoy doing?)* **When did you first start to feel that way?** *(After the [EVENT]?)* 0 None 1 Few activities (less than 10%) 2 Some activities (approx 20-30%) 3 Many activities (approx 50-60%) 4 Most or all activities (more than 80%) ***Description/Examples***	**How strong was your loss of interest?** *(Would you enjoy [ACTIVITIES] once you got started?)* 0 No loss of interest 1 Mild, slight loss of interest, probably would enjoy after starting activities 2 Moderate, definite loss of interest, but still has some enjoyment of activities 3 Severe, marked loss of interest in activities 4 Extreme, complete loss of interest, no longer participates in any activities ***QV (specify)*** _____ ***Trauma-related?*** *1 definite 2 probable 3 unlikely* *Current* _____ ***Reminder: Sx should not be counted if definitely not trauma related.***	***F***_____ ***I*** _____ ***Sx: Y N***

10. (C-5) feeling of detachment or estrangement from others

Frequency	***Intensity***	***Current***
In the past month, have you felt distant or cut off from other people? What was that like? How much of the time in the past month have you felt that way? When did you first start to feel that way? *(After the [EVENT]?)* 0 None of the time 1 Very little of the time (less than 10%) 2 Some of the time (approx 20-30%) 3 Much of the time (approx 50-60%) 4 Most or all of the time (more than 80%) ***Description/Examples***	**How strong were your feelings of being distant or cut off from others?** *(Who do you feel closest to? How many people do you feel comfortable talking with about personal things?)* 0 No feelings of detachment or estrangement 1 Mild, may feel "out of synch" with others 2 Moderate, feelings of detachment clearly present, but still feels some interpersonal connection 3 Severe, marked feelings of detachment or estrangement from most people, may feel close to only one or two people 4 Extreme, feels completely detached or estranged from others, not close with anyone ***QV (specify)*** _____ ***Reminder: Sx should not be counted if definitely not trauma related.*** ***Trauma-related?*** *1 definite 2 probable 3 unlikely*	***F***_____ ***I*** _____ ***Sx: Y N***

11. (C-6) restricted range of affect (e.g., unable to have loving feelings)

Frequency	***Intensity***	***Current***
In the past month, have there been times when you felt emotionally numb or had trouble experiencing feelings like love or happiness? What was that like? *(What feelings did you have trouble experiencing?)* **How much of the time in the past month have you felt that way? When did you first start having trouble experiencing (EMOTIONS)?** *(After the [EVENT]?)* 0 None of the time 1 Very little of the time (less than 10%) 2 Some of the time (approx 20-30%) 3 Much of the time (approx 50-60%) 4 Most or all of the time (more than 80%) ***Description/Examples***	**How much trouble did you have experiencing (EMOTIONS)?** *(What kinds of feelings were you still able to experience?)* [INCLUDE OBSERVATIONS OF RANGE OF AFFECT DURING INTERVIEW] 0 No reduction of emotional experience 1 Mild, slight reduction of emotional experience 2 Moderate, definite reduction of emotional experience, but still able to experience most emotions 3 Severe, marked reduction of experience of at least two primary emotions (e.g., love, happiness) 4 Extreme, completely lacking emotional experience ***QV (specify)*** _____ ***Trauma-related?*** *1 definite 2 probable 3 unlikely*	***F_____*** ***I _____*** ***Sx: Y N***

12. (C-7) sense of a foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)

Frequency	***Intensity***	***Current***
In the past month, have there been times when you felt there is no need to plan for the future, that somehow your future will be cut short? Why is that? [RULE OUT REALISTIC RISKS SUCH AS LIFE-THREATENING MEDICAL CONDITIONS] **How much of the time in the past month have you felt that way? When did you first start to feel that way?** *(After the [EVENT]?)* 0 None of the time 1 Very little of the time (less than 10%) 2 Some of the time (approx 20-30%) 3 Much of the time (approx 50-60%) 4 Most or all of the time (more than 80%) ***Description/Examples***	**How strong was this feeling that your future will be cut short?** *(How long do you think you will live? How convinced are you that you will die prematurely?)* 0 No sense of a foreshortened future 1 Mild, slight sense of a foreshortened future 2 Moderate, sense of a foreshortened future definitely present, but no specific prediction about longevity 3 Severe, marked sense of a foreshortened future, may make specific prediction about longevity 4 Extreme, overwhelming sense of a foreshortened future, completely convinced of premature death ***QV (specify)*** _____ ***Trauma-related?*** *1 definite 2 probable 3 unlikely*	***F_____*** ***I _____*** ***Sx: Y N***

Criterion D. Persistent symptoms of increased arousal (not present before the trauma), as indicated by two (or more) of the following:

13. (D-1) difficulty falling or staying asleep

Frequency	***Intensity***	***Current***
In the past month, have you had any problems falling or staying asleep? How often in the past month? When did you first start having problems sleeping? *(After the [EVENT]?)* 0 Never 1 Once or twice 2 Once or twice a week 3 Several times a week 4 Daily or almost every day Sleep onset problems? Y N Mid-sleep awakening? Y N Early a.m. awakening? Y N Total # hrs sleep/night _____ Desired # hrs sleep/night _____	**How much of a problem did you have with your sleep?** *(How long did it take you to fall asleep? How often did you wake up in the night? Did you often wake up earlier than you wanted to? How many total hours did you sleep each night?)* 0 No sleep problems 1 Mild, slightly longer latency, or minimal difficulty staying asleep (up to 30 minutes loss of sleep) 2 Moderate, definite sleep disturbance, clearly longer latency, or clear difficulty staying asleep (30-90 minutes loss of sleep) 3 Severe, much longer latency, or marked difficulty staying asleep (90 min to 3 hrs loss of sleep) 4 Extreme, very long latency, or profound difficulty staying asleep (> 3 hrs loss of sleep) ***QV (specify)*** _____ ***Trauma-related?*** *1 definite 2 probable 3 unlikely*	***F***_____ ***I*** _____ ***Sx: Y N***

14. (D-2) irritability or outbursts of anger

Frequency	***Intensity***	***Current***
In the past month, have there been times when you felt especially irritable or showed strong feelings of anger? **Can you give me some examples? How often in the past month? When did you first start feeling that way?** *(After the [EVENT]?)* 0 Never 1 Once or twice 2 Once or twice a week 3 Several times a week 4 Daily or almost every day ***Description/Examples***	**How strong was your anger?** *(How did you show it?)* [IF REPORTS SUPPRESSION:] *(How hard was it for you to keep from showing your anger?)* **How long did it take you to calm down? Did your anger cause you any problems?** 0 No irritability or anger 1 Mild, minimal irritability, may raise voice when angry 2 Moderate, definite irritability or attempts to suppress anger, but can recover quickly 3 Severe, marked irritability or marked attempts to suppress anger, may become verbally or physically aggressive when angry 4 Extreme, pervasive anger or drastic attempts to suppress anger, may have episodes of physical violence ***QV (specify)*** _____ ***Trauma-related?*** *1 definite 2 probable 3 unlikely*	***F***_____ ***I*** _____ ***Sx: Y N***

15. (D-3) difficulty concentrating

Frequency	***Intensity***	***Current***
In the past month, have you found it difficult to concentrate on what you were doing or on things going on around you? What was that like? How much of the time in the past month? When did you first start having trouble concentrating? *(After the [EVENT]?)* 0 None of the time 1 Very little of the time (less than 10%) 2 Some of the time (approx 20-30%) 3 Much of the time (approx 50-60%) 4 Most or all of the time (more than 80%) ***Description/Examples***	**How difficult was it for you to concentrate?** [INCLUDE OBSERVATIONS OF CONCENTRATION AND ATTENTION IN INTERVIEW] **How much did that interfere with your life?** 0 No difficulty with concentration 1 Mild, only slight effort needed to concentrate, little or no disruption of activities 2 Moderate, definite loss of concentration but could concentrate with effort, some disruption of activities 3 Severe, marked loss of concentration even with effort, marked disruption of activities 4 Extreme, complete inability to concentrate, unable to engage in activities ***QV (specify)*** _____ ***Trauma-related?*** *1 definite 2 probable 3 unlikely*	***F*_____** ***I* _____** ***Sx: Y N***

16. (D-4) hypervigilance

Frequency	***Intensity***	***Current***
In the past month, have you been especially alert or watchful, even when there was no real need to be? *(Have you felt as if you were constantly on guard?)* **Why is that? How much of the time in the past month? When did you first start acting that way?** *(After the [EVENT]?)* 0 None of the time 1 Very little of the time (less than 10%) 2 Some of the time (approx 20-30%) 3 Much of the time (approx 50-60%) 4 Most or all of the time (more than 80%) ***Description/Examples***	**How hard did you try to be watchful of things going on around you?** [INCLUDE OBSERVATIONS OF HYPERVIGILANCE IN INTERVIEW] **Did your (HYPERVIGILANCE) cause you any problems?** 0 No hypervigilance 1 Mild, minimal hypervigilance, slight heightening of awareness 2 Moderate, hypervigilance clearly present, watchful in public (e.g., chooses safe place to sit in a restaurant or movie theater) 3 Severe, marked hypervigilance, very alert, scans environment for danger, exaggerated concern for safety of self/family/home 4 Extreme, excessive hypervigilance, efforts to ensure safety consume significant time and energy and may involve extensive safety/checking behaviors, marked watchfulness during interview ***QV (specify)*** _____ ***Trauma-related?*** *1 definite 2 probable 3 unlikely*	***F*_____** ***I* _____** ***Sx: Y N***

Study PIN ___ ___ ___
Date & AT Initials _____

17. (D-5) exaggerated startle response

Frequency	***Intensity***	***Current***
In the past month, have you had any strong startle reactions? When did that happen? *(What kinds of things made you startle?)* **How often in the past month? When did you first have these reactions?** *(After the [EVENT]?)* 0 Never 1 Once or twice 2 Once or twice a week 3 Several times a week 4 Daily or almost every day ***Description/Examples***	**How strong were these startle reactions?** *(How strong were they compared to how most people would respond?)* **How long did they last?** 0 No startle reaction 1 Mild, minimal reaction 2 Moderate, definite startle reaction, feels "jumpy" 3 Severe, marked startle reaction, sustained arousal following initial reaction 4 Extreme, excessive startle reaction, overt coping behavior (e.g., combat veteran who "hits the dirt") ***QV (specify)*** _____ ***Trauma-related?*** *1 definite 2 probable 3 unlikely*	***F_____*** ***I _____*** ***Sx: Y N***

Criterion E. Duration of the disturbance (symptoms in Criteria B, C, and D) is more than 1 month.

18. onset of symptoms

[IF NOT ALREADY CLEAR:] **When did you first start having (PTSD SYMPTOMS) you've told me about?** *(How long after the trauma did they start? More than six months?)*	_____ ***total # months delay in onset*** ***With delayed onset (≥ 6 months)? NO YES***

19. duration of symptoms

		Current
[CURRENT] **How long have these (PTSD SYMPTOMS) lasted altogether?** [LIFETIME] **How long did these (PTSD SYMPTOMS) last altogether?**	*Duration more than 1 month?* *Total # months duration* *Acute (< 3 months) or chronic (≥ 3 months)?*	***NO YES*** _____ ***acute chronic***

Criterion F. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

20. subjective distress

[CURRENT] **Overall, how much have you been bothered by these (PTSD SYMPTOMS) you've told me about?** [CONSIDER DISTRESS REPORTED ON EARLIER ITEMS]	0 None 1 Mild, minimal distress 2 Moderate, distress clearly present but still manageable 3 Severe, considerable distress 4 Extreme, incapacitating distress

21. impairment in social functioning

[CURRENT] **Have these (PTSD SYMPTOMS) affected your relationships with other people? How so?** [CONSIDER IMPAIRMENT IN SOCIAL FUNCTIONING REPORTED ON EARLIER ITEMS]	0 No adverse impact 1 Mild impact, minimal impairment in social functioning 2 Moderate impact, definite impairment, but many aspects of social functioning still intact 3 Severe impact, marked impairment, few aspects of social functioning still intact 4 Extreme impact, little or no social functioning

22. impairment in occupational or other important area of functioning

[CURRENT -- IF NOT ALREADY CLEAR] **Are you working now?** IF YES: **Have these (PTSD SYMPTOMS) affected your work or your ability to work? How so?** [CONSIDER REPORTED WORK HISTORY, INCLUDING NUMBER AND DURATION OF JOBS, AS WELL AS THE QUALITY OF WORK RELATIONSHIPS. IF PREMORBID FUNCTIONING IS UNCLEAR, INQUIRE ABOUT WORK EXPERIENCES BEFORE THE TRAUMA. FOR CHILD/ADOLESCENT TRAUMAS, ASSESS PRE-TRAUMA SCHOOL PERFORMANCE AND POSSIBLE PRESENCE OF BEHAVIOR PROBLEMS] IF NO: **Have these (PTSD SYMPTOMS) affected any other important part of your life?** [AS APPROPRIATE, SUGGEST EXAMPLES SUCH AS PARENTING, HOUSEWORK, SCHOOLWORK, VOLUNTEER WORK, ETC.] **How so?**	0 No adverse impact 1 Mild impact, minimal impairment in occupational/other important functioning 2 Moderate impact, definite impairment, but many aspects of occupational/other important functioning still intact 3 Severe impact, marked impairment, few aspects of occupational/other important functioning still intact 4 Extreme impact, little or no occupational/other important functioning

Global Ratings

23. global validity

ESTIMATE THE OVERALL VALIDITY OF RESPONSES. CONSIDER FACTORS SUCH AS COMPLIANCE WITH THE INTERVIEW, MENTAL STATUS (E.G., PROBLEMS WITH CONCENTRATION, COMPREHENSION OF ITEMS, DISSOCIATION), AND EVIDENCE OF EFFORTS TO EXAGGERATE OR MINIMIZE SYMPTOMS.	0 Excellent, no reason to suspect invalid responses 1 Good, factors present that may adversely affect validity 2 Fair, factors present that definitely reduce validity 3 Poor, substantially reduced validity 4 Invalid responses, severely impaired mental status or possible deliberate “faking bad” or “faking good”

Study PIN ___ ___ ___
Date & AT Initials _____

24. global severity

ESTIMATE THE OVERALL SEVERITY OF PTSD SYMPTOMS. CONSIDER DEGREE OF SUBJECTIVE DISTRESS, DEGREE OF FUNCTIONAL IMPAIRMENT, OBSERVATIONS OF BEHAVIORS IN INTERVIEW, AND JUDGMENT REGARDING REPORTING STYLE.	0 No clinically significant symptoms, no distress and no functional impairment 1 Mild, minimal distress or functional impairment 2 Moderate, definite distress or functional impairment but functions satisfactorily with effort 3 Severe, considerable distress or functional impairment, limited functioning even with effort 4 Extreme, marked distress or marked impairment in two or more major areas of functioning

Current PTSD Symptoms

Criterion A met (traumatic event)? *NO* *YES*

_____ *# Criterion B sx (≥ 1)?* *NO* *YES*

_____ *# Criterion C sx (≥ 3)?* *NO* *YES*

_____ *# Criterion D sx (≥ 2)?* *NO* *YES*

Criterion E met (duration ≥ 1 month)? *NO* *YES*

Criterion F met (distress/impairment)? *NO* *YES*

_____

CURRENT PTSD (Criteria A-F met)? *NO* *YES*

IF CURRENT PTSD CRITERIA ARE MET, SKIP TO ASSOCIATED FEATURES.

IF CURRENT CRITERIA ARE NOT MET, ASSESS FOR LIFETIME PTSD. IDENTIFY A PERIOD OF AT LEAST A MONTH SINCE THE TRAUMATIC EVENT IN WHICH SYMPTOMS WERE WORSE.

Since the (EVENT), has there been a time when these (PTSD SYMPTOMS) were a lot worse than they have been in the past month? When was that? How long did it last? *(At least a month?)*

IF MULTIPLE PERIODS IN THE PAST: **When were you bothered the most by these (PTSD SYMPTOMS)?**

IF AT LEAST ONE PERIOD, INQUIRE ITEMS 1-17, CHANGING FREQUENCY PROMPTS TO REFER TO WORST PERIOD:
During that time, did you (EXPERIENCE SYMPTOM)? How often?

Study PIN ___ ___ ___
Date & AT Initials _____

CAPS-DX SUMMARY SHEET

Circle One: **Baseline** **Post-Treatment** **2 month** **4 month** **6 month**

Date of Traumatic Event: (/ /)
mm dd yy

A. Traumatic Event:

B. Re-Experiencing Symptoms	**CURRENT**		
	Freq	**Int**	**F + I**
(1) intrusive recollections			
(2) distressing dreams			
(3) acting or feeling as if event were recurring			
(4) psychological distress at exposure to cues			
(5) psychological reactivity on exposure to cues			
B subtotals			
Number of Criterion B symptoms (need 1)			

C. Avoidance and numbing symptoms	**CURRENT**		
	Freq	**Int**	**F + I**
(6) avoidance of thoughts, feelings or conversations			
(7) avoidance of activities, places or people			
(8) inability to recall important aspect of trauma			
(9) diminished interest or participation in activities			
(10) detachment or estrangement			
(11) restricted range of affect			
(12) sense of a foreshortened future			
C subtotals			
Number of Criterion C symptoms (need 3)			

D. Hyperarousal symptoms	**CURRENT**		
	Freq	**Int**	**F + I**
(13) difficulty falling or staying asleep			
(14) irritability or outbursts of anger			
(15) difficulty concentrating			
(16) hypervigilance			
(17) exaggerated startle response			
D subtotals			
Number of Criterion D symptoms (need 2)			

Total Freq, Int, Severity (F + I)	**CURRENT**		
	Freq	**Int**	**F + I**
Sum of Subtotals (B + C + D)			

Study PIN ___ ___ ___
Date & AT Initials _____

E. Duration of disturbance	**CURRENT**	
(19) duration of disturbance at least one month	**NO**	**YES**
F. Significant distress or impairment in functioning	**CURRENT**	
(20) subjective distress		
(21) impairment in social functioning		
(22) impairment in occupational functioning		
AT LEAST ONE ≥ 2?	**NO**	**YES**

PTSD diagnosis	**CURRENT**	
PTSD PRESENT -- ALL CRITERIA (A-F) MET?	**NO**	**YES**
Specify: (18) with delayed onset (≥ 6 months delay)	**NO**	**YES**
(19) acute (< 3 months) or chronic (≥ 3 months)	**acute**	**chronic**

Global ratings	**CURRENT**
(23) global validity	
(24) global severity	

APPENDIX D
BECK DEPRESSION INVENTORY II (BDI-II)

BDI-II

DIRECTIONS: On this questionnaire are groups of statements. Please read each group of statements carefully. Then pick out the one statement in each group which best describes the way you have been feeling the **PAST WEEK INCLUDING TODAY**. **Mark only one box** in each group to the right of the statement you picked. Be sure to read all statements in each group before making your choice.

During the past week…	During the past week…
1. □ a I do not feel sad. □ b I feel sad. □ c I feel sad all the time and I can't snap out of it. □ d I am so sad or unhappy that I can't stand it.	**6.** □ a I don't feel I am being punished. □ b I feel I may be punished. □ c I expect to be punished. □ d I feel I am being punished.
2. □ a I am not particularly discouraged about the future. □ b I feel discouraged about the future. □ c I feel I have nothing to look forward to. □ d I feel that the future is hopeless and that things cannot improve.	**7.** □ a I don't feel disappointed in myself. □ b I am disappointed in myself. □ c I am disgusted with myself. □ d I hate myself.
3. □ a I do not feel like a failure. □ b I feel I have failed more than the average person. □ c As I look back on my life, all I can see is a lot of failures. □ d I feel I am a complete failure as a person.	**8.** □ a I don't feel I am any worse than anybody else. □ b I am critical of myself for my weaknesses or mistakes. □ c I blame myself all the time for my faults. □ d I blame myself for everything.
4. □ a I get as much satisfaction out of things as I used to. □ b I don't enjoy things the way I used to. □ c I don't get real satisfaction out of anything anymore. □ d I am dissatisfied or bored with everything.	**9.** □ a I don't have any thoughts of killing myself. □ b I have thoughts of killing myself, but I will not carry them out. □ c I would like to kill myself. □ d I would like to kill myself if I had the chance.
5. □ a I don't feel particularly guilty. □ b I feel guilty a good part of the time. □ c I feel guilty most of the time. □ d I feel guilty all of the time.	**10.** □ a I don't cry anymore than usual. □ b I cry now more than I used to. □ c I cry all the time now. □ d I used to be able to cry, but now I can't even cry even though I want to.

Study PIN ___ ___ ___
Date & AT Initials_____

During the past week…	During the past week…
11. □ a I am no more irritated now than I ever was. □ b I get annoyed or irritated more easily than I used to. □ c I feel irritated all the time now. □ d I don't get irritated at all by the things that used to irritate me.	**17.** □ a I don't get more tired than usual. □ b I get tired more easily than I used to. □ c I get tired from doing almost anything. □ d I am too tired to do anything.
12. □ a I have not lost interest in other people. □ b I am less interested in other people than I used to be. □ c I have lost most of my interest in other people. □ d I have lost all of my interest in other people.	**18.** □ a My appetite is no worse than usual. □ b My appetite is not as good as it used to be. □ c My appetite is much worse now. □ d I have no appetite at all anymore.
13. □ a I make decisions about as well as I ever could. □ b I put off making decisions more than I used to. □ c I have greater difficulty in making decisions than before. □ d I can't make decisions at all anymore.	**19.** □ a I haven't lost much weight, if any, lately. □ b I have lost more than 5 pounds. □ c I have lost more than 10 pounds. □ d I have lost more than 15 pounds.
14. □ a I don't feel I look any worse than I used to. □ b I am worried that I am looking old or unattractive. □ c I feel there are permanent changes in my appearance that make me look unattractive. □ d I believe I look ugly.	**20.** □ a I am no more worried about my health than usual. □ b I am worried about physical problems such as aches and pains, or upset stomach, or constipation. □ c I am very worried about physical problems and it's hard to think of much else. □ d I am so worried about my physical problems that I cannot think about anything else.
15. □ a I can work about as well as before. □ b It takes an extra effort to get started at doing something. □ c I have to push myself very hard to do anything. □ d I can't do any work at all.	**21.** □ a I have not noticed any recent change in my interest in sex . □ b I am less interested in sex than I used to be. □ c I am much less interested in sex now. □ d I have lost interest in sex completely.
16. □ a I can sleep as well as usual. □ b I don't sleep as well as I used to. □ c I wake up one to two hours earlier than usual and find it hard to get back to sleep. □ d I wake up several hours earlier than I used to and cannot get back to sleep.	

APPENDIX E
SUICIDE COGNITIONS SCALE (SCS)

Study PIN ___ ___ ___
Date & AT Initials_____

SCS

Revised Instructions: The following 20 statements are intended to assess your beliefs about your current problems. Please read each statement carefully and circle the number that best describes you right now. How **you feel right now**. Remember to rate each item and circle only one number for each item.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. The world would be better off without me.	1	2	3	4	5
2. Suicide is the only way to solve my problems.	1	2	3	4	5
3. I can't stand this pain any more.	1	2	3	4	5
4. I am an unnecessary burden to my family.	1	2	3	4	5
5. I've never been successful at anything.	1	2	3	4	5
6. I can't tolerate being this upset any longer.	1	2	3	4	5
7. I can never be forgiven for the mistakes I have made.	1	2	3	4	5
8. No one can help solve my problems.	1	2	3	4	5
9. It is unbearable when I get this upset.	1	2	3	4	5
10. I am completely unworthy of love.	1	2	3	4	5
11. Nothing can help solve my problems.	1	2	3	4	5
12. It is impossible to describe how badly I feel.	1	2	3	4	5
13. I have driven away everyone in my life.	1	2	3	4	5
14. I can't cope with my problems any longer.	1	2	3	4	5
15. I can't imagine anyone being able to withstand this kind of pain.	1	2	3	4	5
16. There is nothing redeeming about me.	1	2	3	4	5
17. Suicide is the only way to end this pain.	1	2	3	4	5
18. I don't deserve to live another moment.	1	2	3	4	5
19. I would rather die than feel this unbearable pain.	1	2	3	4	5
20. No one is as loathsome as me.	1	2	3	4	5

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