THE ROLE OF PERITRAUMATIC DISSOCIATION IN RECOVERY OF FEMALE SEXUAL ASSAULT SURVIVORS WITH POSTTRAUMATIC STRESS DISORDER

by

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE

REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS

in

THE FACULTY OF GRADUATE STUDIES

GRADUATE COUNSELLING PSYCHOLOGY PROGRAM

We accept this thesis as conforming
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ABSTRACT

In this study the relationship between severity of peritraumatic dissociation, posttraumatic stress disorder symptomatology, and treatment outcome was investigated in a sample of female sexual assault survivors. Relationships between dissociation measures were also explored. Given the prevalence of women who are sexually assaulted and develop posttraumatic stress disorder, thorough understanding of factors that impact treatment efficacy is needed. Dissociation was measured using the Peritraumatic Dissociative Experiences Questionnaire, the Dissociative Experiences Scale and the Current Dissociation Scale-7. Posttraumatic Stress Disorder symptoms were assessed using the Impact of Event Scale- Revised. The variables were statistically analyzed using hierarchical multiple regression. Results indicated that peritraumatic dissociation is a significant predictor of follow-up Impact of Event Scale- Revised scores ($R\Delta = .12$), but not of pre-treatment or immediate post-treatment Impact of Event Scale- Revised scores ($R\Delta = .00$). Peritraumatic dissociation was not significantly correlated with the Dissociative Experiences Scale dissociation measure, although there was substantial correlation between the Peritraumatic Dissociative Experiences Questionnaire and Current Dissociation Scale-7 ($r = .36$). In the prediction equation, pre-treatment posttraumatic stress disorder symptoms and peritraumatic dissociation accounted for the largest amounts of variance in treatment outcome. Peritraumatic and other forms of dissociation are associated with the posttraumatic stress disorder process, but the nature and extent of those relationships has only recently been explored. Interrelationships between contributing factors are not yet fully understood. In this study, the significance of peritraumatic dissociation as a predictor of posttraumatic stress disorder symptoms at

treatment follow-up, but not in pre or immediate posttreatment assessments, may be the result of distinct response patterns in trauma recovery, mediated by time. Implications for clinical practice and future research are discussed.

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ACKNOWLEDGEMENTS

In gratitude to my family, faith, and friends who have been unfailingly understanding when I was going through the motions of everyday living, but my mind was consumed with this research. Particularly appreciated are those who have been the preservers of my sanity, soul, and mirth. This experience would not have been the same without you sharing my highs and lows especially Noah, Dad, and Emily. I sincerely thank my mother, Ruth, whose gently confident belief inspired me to put one foot in front of another even in the midst of grief.

Many thanks to Dr. Richard Bradshaw for his tremendous support and wisdom throughout this process; your encouragement is always appreciated! I have also learned much more than I can articulate through your modeling of selfless caring and passion for helping those in recovery from trauma.

Thank you, Dr. MacDonald. I have benefited from your thoughtful questions, eye for detail, and sense of humour. Our meetings always left me with much food for thought, and this project owes much to your academic rigor.

CHAPTER I: INTRODUCTION

Traumatic Events

The world provides many opportunities for exposure to traumatic incidents, and it is unlikely one may completely avoid trauma during a lifespan. A small child is exposed to family violence, an adolescent is bullied at school, a college student is sexually assaulted, or a middle-aged person witnesses a fatal car accident. All these individuals meet the criterion of exposure to a traumatic event. The difference between a negative stressful experience and a trauma is that the traumatic experience is an "inescapable stressful event that overwhelms one's existing coping mechanisms" (van der Kolk & Fisler, 1995, p. 506). Given the breadth of this definition, many experiences may be considered traumatic, yet may not have a long lasting negative impact on one's life (Rieck, Shakespeare-Finch, Morris, & Newbery, 2005). An event or encounter, which may be extremely traumatic and troubling to one person, may leave a different person less adversely affected. "Many factors contribute to the impact of trauma: age, social and cultural influences, history of previous trauma, physical and psychological health, and quality of coping skills" (Cohen, Barnes, & Rankin, 1995, p. xv). The complex relationships between factors that contribute to the impact of a given traumatic event make it difficult to predict its effect on any one individual.

Development of treatments to help those suffering from the sequelae of trauma is of widespread importance. Members of our society who are sexually assaulted and experience long-term, negative effects require the attention of researchers, and the opportunity to access empirically validated effective treatments. Wampold, Lichtenberg, and Waehler,(2002) tout the importance of integrating the practice of counselling

psychology and scientific inquiry, and contend these two elements are interdependent in the search for a balance between science and practice. The field of counselling exists to help people achieve a satisfactory quality of life, and research is the venue for validating tools to be used by "helpers" to provide adequate interventions for trauma survivors (Marotta, 2000). Specifically, research determines which interventions are most helpful for women who have survived sexual assaults and developed posttraumatic stress disorder (PTSD).

The prevalence of trauma within our society justifies research and inquiry into how it manifests psychologically. The scope of this thesis is limited to the impact of PTSD on women and, unfortunately, research suggests there is no scarcity of women with this disorder. It is reported that 8- 18% of women living in the United States develop PTSD in response to traumatic events (Grinage, 2003; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Yehuda, 2002). Rape is one trauma that disproportionately precedes PTSD in women. Foa and Riggs (1995) found that 51% of rape victims met diagnostic criteria for PTSD 12 weeks after the assault, and Yehuda (2002) reported 46% percent of women who are raped subsequently meet the criteria for PTSD. Briere and Jordan (2004) described the pervasiveness of violence against women in North America as endemic, and this is supported by American statistics on the percentage of women who are sexually assaulted in their lifetimes: 9.2% (Kessler et al., 1995). Rozee and Koss (2001) reported the figure for the lifetime prevalence of completed rape as 15% for women, and only 2.1% for men.

History and Criteria of Posttraumatic Stress Disorder

The *Diagnostic and Statistical Manual of Mental Disorders, fourth edition, text revision* (DSM-IV-TR; American Psychiatric Association, 2000) states that survivors of sexual assault have among the highest rates for developing PTSD. Prior to 1980, the distressing symptoms following sexual assault were considered different from symptoms that developed in combat veterans. Ozer, Best, Lipsey, and Weiss (2003) describe how the collection of symptoms for PTSD following sexual assault was originally called ”rape trauma syndrome”. This separation existed despite the fact that the “psychological suffering described [by both sexual assault and combat veterans] was surprisingly similar…observed to be avoidant, on guard, easily startled, and flooded with memories and images of the assault that could not be easily dispelled” (Ozer et al. 2003, p. 52). The diagnostic separation of the disorders related to combat and to sexual assault was eventually discarded (Bremner, 1999) and the umbrella diagnosis of posttraumatic stress disorder was included in the *Diagnostic and Statistical Manual of Mental Disorders, third edition* (DSM-III; American Psychiatric Association, 1980). Presently, the DSM-IV-TR classifies them as the same disorder: Posttraumatic Stress Disorder. The diagnostic criteria include:

1. An event that involves actual or threatened death or serious injury, or other threat to one’s physical integrity.
2. Person’s response must involve intense fear, helplessness, or horror.
3. Symptoms resulting from exposure include persistent reexperiencing of the traumatic event, persistent avoidance of stimuli associated with the trauma,

numbing of general responsiveness, and persistent symptoms of increased arousal.

4. Symptoms must be present for longer than one month.
5. Disturbance must cause clinically significant distress or impairment in social, occupational, or other important areas of functioning (DSM-IV-TR, p. 463).

The aforementioned symptoms describe only some aspects of the detrimental emotional and physical sequelae experienced by women who are sexually assaulted. Current criteria for PTSD do not include dissociative symptoms, although Acute Stress Disorder, a potential precursor of PTSD (Birmes et al. 2003; Bremner, 1999; Bryant & Harvey, 2003; Harvey & Bryant, 2002), has a diagnostic emphasis on dissociative symptoms. These include: (a) numbing; (b) derealization; (c) depersonalization; (d) amnesia; or (e) "being in a daze", in addition to the clusters of reexperiencing, avoidance, and hyperarousal also found in PTSD (DSM-IV-TR, p. 471). Dissociation appears to play a complex role in the development and severity of PTSD (Foa & Riggs, 1995; Harvey & Bryant, 1999; Marmar, et al., 1999; Marmar, Weiss, & Metzler, 1998; Marmar, 1997; Marmar et al., 1994; McNally, 2003a; Mechanic, Resick, & Griffin, 1998; Ozer et al., 2003; Tichenor, Marmar, Weiss, Metzler, & Ronfeldt, 1996; van der Kolk, 2002b).

Dissociation

Dissociation emerged as a construct in psychological literature in the late nineteenth century, and has experienced a revival of interest during the last several decades. The original conceptualizations regarding the causes and functions of dissociation are surprisingly relevant to current theories in the field of trauma studies. Janet (1920) was the first to introduce "the notion of disconnection or dissociation in

regard to trauma" (as cited in Straker, Watson, & Robinson, 2002, p. 145); and the first to consider dissociation as a mechanism in posttraumatic symptoms (van der Kolk, Brown, & van der Hart, 1989). Janet hypothesized that this response was protective, and used when the primary consciousness was unable to incorporate the traumatic memory. He was also the first to suggest that separate, dissociated states of consciousness can co-exist within an individual mind (Marmar et al., 1998; Nemiah, 1998). Freud and Breuer appropriated this concept, and also theorized that the hysterical response (to a traumatic event) led to the splitting of consciousness and subsequent somatic symptoms (Nemiah, 1998). Freud, however, moved away from this definition and later conceptualized dissociation as repression of internal drives instead of responses to external traumatic triggers (van der Kolk et al., 1989). Janet believed that dissociation and the after effects of trauma could affect anyone regardless of their pre-existing psychological makeup, while Freud contended individuals must be vulnerable to particular trauma responses (Spiegel, 2003). Freud's influence can be found in the current research on "risk factors" for developing PTSD (Brewin, Andrews, & Valentine, 2000; McFarlane, 2000). van der Kolk and van der Hart (1989) describe Janet's concept of a "subconscious fixed idea" within dissociation as responsible for the mind to "organize cognitive, affective, and visceral elements of the traumatic memory while simultaneously keeping them out of conscious awareness" (p. 1532). Despite the vigor which early theories of dissociation were birthed and debated, there was little theoretical development or research in the area of dissociation for most of the mid twentieth century. Interest in the idea of dissociative responses to traumatic experiences was revived in the 1980's, spurred by research on Vietnam veterans and recognition of the prevalence of child abuse (Ross, 1996).

Dissociation is a coping response our minds may engage in when we encounter overwhelming traumatic experiences. A current conceptualization of dissociation is "compartmentalization" of experience (van der Hart, van der Kolk, & Boon, 1998). Kalsched (1996) describes the complexity of this phenomenon: "The human being constantly searches for meaningful links, but trauma reverses this process by creating dissociative defences which fragment an unbearable experience into parts, so that its full horror is mitigated" (as cited in Knox, 2003, p. 224). This is congruent with the concept of peritraumatic dissociation, which is the occurrence of dissociation during a traumatic event. Although the dissociative process is not fully understood, dissociation can be conceptualized as a continuum, ranging from functional, normal dissociation to dysfunctional states that interfere with a person's mediation of the world. Dissociation is "a healthy, adaptive defense used almost universally by people in response to overwhelming stress or life-threatening danger" (Steinberg & Schnall, 2001, p. 5). However, dissociation is not limited to traumatic experiences (McNally, 2003b) despite the trauma framework within which the bulk of research on dissociation currently occurs. The DSM-IV-TR defines dissociation as "a disruption in the usually integrated functions of consciousness, memory, identity or perception. The disturbance may be sudden or gradual, transient or chronic." (American Psychiatric Association, 2000, p. 519).

Steinberg (1995) describes a normative reaction to traumatic events that serves as a mental buffer of protection as dissociation. "The Posttraumatic, dissociative defenses initially evolved as the patient's self-protection, to seal off memories of traumatic experiences" (Steinberg, 1995, p. 14). The mind creates a pain-free zone, through dissociation, that allows the insulation of painful memories to prevent interference with

day-to-day functioning. However, sometimes the traumatic memories breach their protective shell and intrude into the traumatized person's consciousness. Conversely, the shell (dissociation) can work so well that individuals are less able to experience other emotions, or to accurately mediate their perceptions of the world. A history of childhood abuse is a risk predictor for subsequent revictimization due to dissociative symptoms, which may interfere with responses to dangerous situations (Chu, 1998; Ross-Gower, Waller, Tyson, & Elliot, 1998). Putnam and Carlson (1998) report the majority of research indicates a significant relationship between trauma experiences and dissociation. The degree to which this protective mechanism develops may impact multiple areas of a client's lived experience. Nemiah (1998) describes this range "from a restricted and limited set of memories of a single past event to a rich and complicated cluster of mental phenomena" (p. 7). In clinical work, recognition and understanding of the possible impact of dissociation in clients may more effectively inform the goals and implementation of therapy. Dissociation may influence or interfere with trauma treatment regimens and therapeutic progress and therefore must be accurately assessed and adequately addressed.

Research Problem

Given the levels of distress reported by sexual assault victims who develop PTSD, it is necessary that practicing clinicians understand the processes involved in recovery, and the roles of various therapeutic interventions. There is a movement within the field of counselling psychology toward a balance between standardization of therapeutic interventions and more individualized, culturally sensitive, and clinically relevant psychotherapy (Wampold et al., 2002), and this model influences the goals of therapy and

the extent to which results of empirical investigations are extrapolated. In this study, peritraumatic dissociation (measured by the Peritraumatic Dissociative Experiences Questionnaire- Self Report, PDEQ-SR; Marmar, et al., 1998) is used to predict treatment outcome efficacy and variation of responses to trauma. The experience of peritraumatic dissociation, defined as "alterations in perception of time, place, and person, which reflect a sense of unreality" (Zoellner, Alvarez-Conrad, & Foa, 2002, p. 49) has received much attention as a predictive variable of subsequent posttraumatic stress disorder, but its influence upon treatment outcome has yet to be fully examined.

The scope of this thesis project is to explore (a) the extent to which peritraumatic dissociation co-exists with posttraumatic stress symptoms, (b) whether level of peritraumatic dissociation impacts treatment outcome, and (c) the correlation of peritraumatic dissociation with "trait" dissociation. These objectives will be operationally defined in the following hypotheses. There is a relationship between PTSD symptoms and the lack of integration between mental and physical processes that accompany dissociation. Further understanding of the impact of peritraumatic dissociation and current dissociation on treatment efficacy is the primary thrust of this research endeavour.

Study Overview

This thesis is part of a larger comparative experiment in which the efficacy of trauma interventions is being investigated (see Appendices A and B). Participants in this study engaged in one of three different therapeutic approaches: Cognitive processing therapy-revised (CPT-R; see Appendix C), One eye integration (OEI; see Appendix D), or breathing, relaxation, autogenics, imagery, and grounding (BRAIN; see Appendix E). Cognitive Processing Therapy (CPT) has been supported empirically as a treatment for

sexual assault survivors who develop PTSD (Nishith, Resick, & Griffin, 2002; Resick & Schnicke, 1992; Resick, Nishith, Weaver, Astin, & Feuer, 2002). OEI was developed originally as a variant of Eye movement desensitization and reprocessing (EMDR). OEI has had preliminary success as a trauma therapy in two previous studies (Austin, 2003; Grace, 2003). The BRAIN group received training in diaphragmatic breathing, stress reduction, relaxation, autogenics, imagery, and grounding techniques. The fact that all three groups received this active but non-specific therapy made one group the control for the study. The best way for clinicians to provide effective service to their clients is through thorough investigation of treatments and selection of those that are empirically supported. "Integrating various and useful parts of differing therapies appears to be the wisest course of action in moving the progress of psychotherapy forward" (Dworkin, 2003, p.184). People who have survived traumas and subsequently develop PTSD deserve to experience relief and healing through effective treatments. In this segment of the study, the researcher intends to further understanding of the role that peritraumatic dissociation plays in the therapeutic processes of trauma survivors, and to highlight services counsellors can provide to most effectively promote their recovery.

Rationale

Although severity of PTSD has been linked to level of peritraumatic dissociation experienced at the time of trauma (Foa & Riggs, 1995; Marmar et al.,1998; Ozer & Weiss, 2004; Ozer et al., 2003), these results are inconsistently replicated (Brewin et al., 2000; Feeny, Zoellner, Fitzgibbons, & Foa, 2000; Feeny, Zoellner, & Foa, 2000). On a systemic level, the negative impact sexual assault has on survivors can be varied and pervasive; therefore, insight regarding dissociative mechanisms that may help or hinder

recovery from PTSD is warranted. Falsetti, Resnick, Davis, and Gallagher (2001) have documented the cognitive and physiological distress in PTSD sufferers. An investigation of the influence of peritraumatic dissociation on treatment will be an important addition to trauma literature and may inform intervention. The impact of peritraumatic dissociation on treatment outcome has not been thoroughly explored in the literature (Marmar et al., 1998); however, because severity of dissociation has been linked to PTSD severity (Ozer et al., 2003), it is anticipated that dissociation will influence the impact of interventions. PTSD symptoms co-exist with clinical levels of dissociation (Michelson, June, Vives, Testa, & Marchione, 1998) but the degree of interrelated or individual contribution is not fully understood. Foa and Riggs assert "the relationship between dissociation during and shortly after the trauma and later PTSD points to possible mechanisms that are involved in the development of chronic PTSD" (p. 64). Therefore, the unique contribution of this thesis involves investigation of the unique impacts of peritraumatic dissociation and dissociation on the effectiveness of treatment in reducing PTSD symptoms.

Research Questions

The following are the research hypotheses to be addressed in this thesis project:

1. Peritraumatic dissociation (PDEQ score) and PTSD symptoms (Impact of Event Scale-Revised pre-treatment score) will be related, but also account for individual variance in prediction of treatment outcome (measured by follow-up total score for the Impact of Event Scale-Revised) in sexual assault survivors with PTSD.
2. Peritraumatic dissociation (PDEQ scores) will be positively correlated with dissociation (DES scores).

CHAPTER II: LITERATURE REVIEW

Sexual Assault

The prevalence of sexual assault in North America is alarming. Rozee and Koss (2001) report that 15% of women in the United States experience rape, and this phenomenon is not unique to south of the 49th parallel. Statistics Canada reported the 2003 rate of sexual assault in British Columbia was 82.6 incidents per 100,000 (Statistics Canada, 2003). Across Canada, approximately 8% of women are abused by their male partners each year, and one fifth of those women are sexually assaulted by their partners (Wathen & MacMillan, 2003). The impact of sexual assault can continue after the traumatic incident (Rothbaum, Foa, Riggs, Murdock, & Walsh, 1992), since almost half of women who are raped subsequently develop PTSD (Foa & Riggs, 1995; Yehuda, 2002). Given this relationship, empirically validated, effective treatments for women who have been sexually assaulted and subsequently develop PTSD should be a priority for the counselling field. This topic also inherently involves gender issues, since "in general, women are more likely to experience most types of interpersonal violence than men" (Elliot, Mok, & Briere, 2004, p. 203). Rozee and Koss agree women are statistically vulnerable to interpersonal violence, and point out that sexual assault is primarily an act by men toward women. Brewin and colleagues (2000) found women are more likely than men to develop PTSD, even when trauma type is taken into account. Also, women with PTSD have more lengthy and severe symptoms than men with PTSD (Punamaki, Komproe, Qouta, Elmasri, & de Jong, 2005; Seedat, Stein, & Carey, 2005; Kessler et al., 1995). In addition to increased posttraumatic symptoms, Feeny et al. (2000) have

reported interferences with quality of social functioning after women experience sexual assault.

Rozee and Koss (2001) reported that our cultural heritage in North America has historically been victim-blaming in cases of sexual assault. Although there have been shifts away from this in the past century, there is still evidence of this mindset in "today's legal system where the victim-survivor who decided to press charges found herself on trial" (Rozee & Koss, p. 303). Stoler, Quina, DePrince, and Freyd, (2001) described a reaction against research in the 1980's and 1990's on the prevalence of sexual assault as an attack on the research and denial of women's rape experiences. Also, they contend this backlash follows a historical pattern "in which women's accounts of oppression have been denied throughout history" (Stoler, et al., p. 914). Briere and Jordan (2004) concur: "In a culture where sexism remains a significant phenomenon, the tendency to blame or devalue women for their victimization may, in fact, contribute to the greater levels of postassault distress relative to men" (p. 1259). Boeschen, Koss, Figueredo, and Coan (2001) found support for women internalizing this societal falsehood to their detriment, and report that characterological self-blame prolonged distress after the assault. The impact is not limited to physical and psychological distress, but also taps into existential concerns. Boeschen and colleagues (2001) suggest the "impact of sexual violence is primarily an assault on the survivor's world of meaning" (p. 241). Frazier (2000) suggests that this posttrauma "preoccupation with the question "Why?" may suggest that a survivor is still trying to make sense of, or find meaning in, the event" (p. 220).

Sexual assault is a violation of physical and psychological integrity, and all aspects of its impact need to be addressed therapeutically for the holistic recovery of

victims. Also, the shift of responsibility from a women's issue to a men's issue may be an important step in reducing the prevalence of sexual assault. "Focusing on changing male attitudes and behaviors will have a far more direct effect on the incidence and prevalence of rape than will interventions aimed at female attitudes and behaviors" (Rozee & Koss, 2001, p. 301). The inability of women to prevent being victims of sexual assault is validated by Mardorossian's (2003) assertion "it is simply not the case that the trauma experienced by survivors is proportional to the degree or success of resistance they offer" (p. 268). This echoes van der Kolk's (2002b) description of a traumatic incident consisting of a helplessness to change the outcome. However, until the time when sexual assault ceases to occur, investigation of potential factors to expedite post-assault recovery is needed.

Dissociation

Traumatic experiences happen to everyone at some time in their lives; however, there is a continuum of traumatic events. Losing one's favourite pen is at one end, and being severely tortured and abused is at the other. Responses to trauma are as diverse as individuals and the spectrum of their experiences. Given this broad scope, it is necessary to limit the focus of this endeavour to one of the most interesting, and least understood, aspects of traumatic response processes: dissociation. The role of dissociation in the average person's life tends to appear and disappear unnoticed. Anyone who has lost track of time while reading a book, or forgotten where he or she placed keys has experienced slight dissociation. Ray (1996) contends that few participants in non-clinical or trauma samples do not report some dissociative experience and therefore views it as a normal cognitive process. For many trauma survivors, however, dissociation may take on a more

substantial role for coping with events they have experienced. “To help us survive, certain perceptions, feelings, sensations, thoughts, and memories related to the trauma are split off from full awareness and encoded in some peripheral level of awareness” (Steinberg & Schnall, 2001, p.11). This process may allow someone who has survived a traumatic experience to compartmentalize and defer addressing the event until after the immediate survival needs have been addressed.

Steinberg (1995) described the five core dissociative symptoms as: (a) amnesia, (b) depersonalization, (c) derealization, (d) identity confusion, and (e) identity alteration. These symptoms each exist along a continuum, and their presence must constitute an impediment to functioning in an occupational, social or other significant sphere of life to be considered clinically dissociative. The range of these symptom clusters hint at the disarray their presence may cause in the life of a trauma survivor with severe dissociation. Many levels of life experience can be detrimentally affected by dissociation. This coping mechanism, thought to develop as a form of protection, can become a source of distress and contribute to lack of control in a person’s life. For example, dissociation while reading a novel may not be cause for concern, but dissociating when minding an infant would be maladaptive due to the potentially severe consequences.

DePrince and Freyd (1999) found that a high dissociation score (measured by the Dissociative Experiences Scale: DES) “showed disruptions in consciously controlled attentional abilities” (p. 449) and signaled greater difficulty with selective attention. It was also correlated with a greater ability to attend to two things at once than low scorers, which may act as a survival skill to help avoid further negative experiences. This disruption in conscious attendance suggests a continued buffering symptom that impedes

fully processing available stimuli. In their later work, DePrince and Freyd (2004) found a positive correlation between dissociation score and history of trauma. Other researchers have also found support for history of prior traumas as a predictor of Posttraumatic Stress Disorder (Briere & Jordan, 2004; Ozer et al., 2003; Zoellner et al., 2002).

Harvey and Bryant (1999) described the dissociation after trauma as usually helpful to the person. They also noted that it might play a role in the development of PTSD, although not everyone who experiences dissociation after a trauma develops PTSD (Harvey & Bryant). The literature indicates a relationship between the occurrence of dissociation at the time of trauma and subsequent posttraumatic stress symptoms. Simeon, Greenberg, Nelson, Schmeidler, and Hollander (2005) found in the victims of September 11, 2001 that peritraumatic dissociation was the greatest predictor of later dissociation, and early posttraumatic stress symptoms at one year follow-up. This concurs with Frazier's (2000) statement that the "best predictors of later symptoms are earlier symptoms" (p. 222). Shalev, Freedman, Peri, Brandes, and Sahar (1997) found that peritraumatic dissociation and PTSD symptoms immediately after a trauma predicted subsequent PTSD significantly more than chance.

Halligan, Michael, Clark, and Ehlers (2003) identified persistent dissociation as a predictor of chronic PTSD symptoms. The authors suggest persistent dissociation predicts PTSD symptoms to a greater degree than peritraumatic dissociation and other cognitive processing, thus chronic dissociation may be involved in the maintenance of posttraumatic stress symptoms. Depending on the severity or regularity with which someone is traumatized, the intended temporary survival mechanism of dissociation may become a long-term method of coping. Steinberg and Schnall (2001) describe this

distinction as "an adaptive, even life-saving, response to a traumatic event posing grave danger to a person somehow persists and recurs long after the danger has passed and becomes maladaptive" (p. 13). Severe dissociation can continue to detrimentally affect a trauma survivor's current experience. This can lead "to the narrowing of consciousness in which experiences could not be associated with one another" (Everest, 1999, p. 447). The far-reaching impact on everyday functioning includes relationships, thought processes, and physiological triggers and responses. Additionally, there are safety concerns stemming from responding either too severely to a non-threat, or not responding severely enough to a true threat. Memories contained without a context, or narrative, to organize them become rogue, and their retrieval beyond the control of a person. Brewin (2001) commented on this range of experiences and symptoms, and how traumatic memories can affect survivors:

> The study of trauma reveals many complex processes that are poorly understood. One of the most fascinating concerns the paradoxical nature of trauma memories, which may be vague or vivid, intrusive or quiescent, under or out of control, and experienced in the present or the past (p. 388).

Their presence or absence may be equally troubling. The schism between memories and consciousness leaves portions of the survivor's autobiographical narrative and present experiences beyond her or his control. Lanius, et al. (2001) hypothesized that the increased levels of arousal during a traumatic event disrupt the transmission of sensory information in the brain and may contribute to a dissociative state.

Peritraumatic dissociation. One factor of primary interest in this study that has been identified as contributing to the severity and impact of current dissociation is the

preexisting presence of peritraumatic dissociation (Birmes et al., 2003; Foa & Riggs, 1995; McNally, 2003b; Simeon et al., 2005). Peritraumatic dissociation is the level of disruption of mental and physical integration that occurs during a traumatic event and refers to a window of minutes or hours subsequent to trauma. Marmar et al. (1998) describe peritraumatic dissociation as including the following acute reactions, such as an

> "altered sense of time…experiences of depersonalization; profound feelings of unreality that the event is occurring or that the individual is the victim of the event; out-of-body experiences; confusion and disorientation; altered body image or feelings of disconnection from one's body; tunnel vision; altered pain perception". (pp. 231-232)

Spiegal and Cardena (1991) contend that peritraumatic dissociation is functional because it "occurs when the traumatic event is so severe as to feel intolerable" (as cited in Ozer et al., 2001, p. 69). The role of peritraumatic dissociation may be conceptualized as a necessary last resort, and Griffin, Resick, and Mechanic (1997) reported higher peritraumatic dissociation correlated with increased perceptions of life threat during traumatic events. When overwhelmed, one manner in which the mind can self-protect is through not processing the experience. The traumatic event triggers peritraumatic dissociation, and this response to the original event predicts the later development of PTSD and dissociative symptoms. Marmar (1997) described "one *fundamental aspect* [sic] of the dissociative response to trauma concerns immediate dissociation at the time the traumatic event is unfolding" (p. 1). There is also evidence of a "strong relationship between dissociation at the time of trauma and self-reported PTSD symptoms" (Tichenor et al., 1996, p. 1058). van der Kolk (2002b) also flagged "spacing out" (dissociation) as a

predictor of subsequent PTSD when it occurs during a traumatic experience. This has been challenged in the field by a lack of research in which the predictive power of peritraumatic dissociation for later development of PTSD is consistently replicated (Feeny et al., 2000). Freedman, Brandes, Peri, and Shalev (1999) found peritraumatic dissociation a good predictor of short-term PTSD, but not at 1 year post-trauma. Also, Simeon and colleagues (2005) found peritraumatic dissociation was a significant predictor only of later dissociative symptoms, not PTSD symptoms. Peritraumatic dissociation occurs in a context where there is an interplay of physical and psychological responses, but Ozer and colleagues warn that, "heightened arousal is a necessary but not sufficient condition for the experience of peritraumatic dissociation, so that not all those who experience heightened arousal go on to experience peritraumatic dissociation" (2003, p.70). Marmar et al. (1998) hypothesized that "the relationship between peritraumatic dissociation and PTSD may be mediated by high levels of anxiety during the trauma" (p. 239). Shalev and Freedman (2005) reported that in their study of PTSD following terrorist attacks in Jerusalem "heart rate, peritraumatic dissociation, and early PTSD symptoms contributed to subsequent PTSD" (p. 1190). Physiological arousal may be one of several contributing factors in the experience of dissociation and/or subsequent PTSD after a traumatic event.

Somer (2002) investigated the degree to which "trauma related dissociation may impede the self-regulatory feedback cycle thought to be associated with growth-promoting reflective introspection, leaving survivors trapped in a chronic, distressful introspective state" (p. 672). The subsequent inability to integrate and reconcile traumatic memories may be due to the buffer of peritraumatic dissociation. This would obviously

impede typical and ideal functioning. Sandberg, Matorin, and Lynn (1999) contend that the presence of peritraumatic dissociation may be a better predictor of subsequent sexual victimization than general dissociative measures (e.g., DES scores) because it more specifically taps into the trauma response. Overall, peritraumatic dissociation may play an important role in severely inhibiting trauma survivors' abilities to integrate, accept, and resolve emotional and other psychological damage from traumatic incidents. The relationship between dissociation and treatment outcome, however, has yet to be thoroughly explored in evaluations of trauma therapy outcomes.

Peritraumatic dissociation and measurement. A limitation inherent in the study of peritraumatic experiences is that they are necessarily retrospective. This style of data collection may be influenced by post-traumatic experiences that colour recollections of peritraumatic responses, although Birmes and colleagues (2003) attempted to reduce this limitation through administration of the PDEQ to their sample within 24 hours of their traumas. The measure of peritraumatic dissociation most frequently used in research is the PDEQ. This instrument was originally developed for use with Vietnam veterans (Marmar et al., 1997). Primarily, the samples used in the reliability and validity studies have been white, middle-class, educated groups (Marmar et al., 1997; Marshall, Orlando, Jaycox, Foy, & Belzberg, 2002). Marshall et al. (2002) criticized the PDEQ's suitability for data collection in samples of diverse ethnic, socioeconomic, and educational groups.

In an effort to expand understanding of the complex diversity of trauma responses, Brunet et al. (2001) developed an instrument called the Peritraumatic Distress Inventory (PDI) to measure peritraumatic distress in addition to dissociation. They found "feeling frustrated or angry, feeling sadness and grief, and feeling helpless" (p. 1483)

were the most frequently reported peritraumatic experiences. Brunet and colleagues reported that the PDI correlated with PTSD scores beyond variance already accounted for by peritraumatic dissociation and psychopathology (2001).

Peritraumatic dissociation and physiology. The relationship between peritraumatic dissociation and physiological response is not fully understood. Nixon, Resick, and Griffin (2004) reported that peritraumatic dissociation was the greatest predictor of posttrauma panic attacks. However, a fear-arousal-dissociation model was not supported, which is consistent with Ozer et al.'s (2003) statement that physiological arousal is not a sufficient state to predict dissociation. Nixon et al. suggested "in the case of panic, individuals with a tendency to dissociate may be unable to habituate to symptoms of arousal…[or] a dissociative response might prevent realistic interpretations of physical symptoms" (p. 207) by overestimating the lack of danger by the physical arousal (*i.e.,* panic) symptoms. The latter explanation involves the conception of dissociation as "a breaker switch that shuts down" when a certain level of arousal is reached, so consciously controlled coping strategies do not have a chance to be employed.

Van Loey, Maas, Faber, and Taal (2003) highlighted the role of dissociation as distinct from physiological arousal, "dissociation symptoms are more persistent in preventing the integration of the event, compared to panic and other physical symptoms" (p. 367). However, Van Loey and colleagues' contention may oversimplify the complex relationship between a physiological response and peritraumatic dissociation (Ozer et al., 2003). Nixon et al. (2004) identified peritraumatic dissociation as a predictor in post-trauma panic attacks, which underscores the complexity of the relationship between

peritraumatic dissociation and physiological arousal. Despite this, Morris (2001) found peritraumatic dissociation was a significant and relatively independent factor in the peritraumatic response.

The possibility of high levels of arousal as a trigger for peritraumatic dissociation is not universally accepted. To further investigate this relationship, Griffin et al. (1997) conducted a study measuring the physiological arousal, level of peritraumatic dissociation, and PTSD symptoms in female sexual assault survivors within 2 weeks of their assaults. High levels of peritraumatic dissociation (measured by the Peritraumatic Dissociation Index) were significantly correlated with the PTSD subscales of reexperiencing ($r = .29$, $p < .05$), avoidance ($r = .40$, $p < .01$) and hyperarousal ($r = .30$, $p < .05$) of the PTSD Symptom Scale (PSS; Foa, Riggs, Dancu, & Rothbaum, 1993). Also, the high dissociation group displayed lower physiological distress scores than the low dissociation group during the trauma script phase, while verbally expressing greater distress. The low dissociation group displayed greater congruence between physiological indicators and verbal communication of distress. Griffin and colleagues also noted that the correlation between PSS-Avoidance subscale scores and peritraumatic dissociation scores was $r = .40$, and suggested "persons with high levels of dissociation are more likely to use avoidance strategies to deal with the trauma" (p. 1086). These results indicated that the presence of peritraumatic dissociation and physiological arousal co-exist at levels greater than chance, but the underlying mechanisms contributing to either or both phenomena are yet to be adequately explained. In summary, there are mechanisms intertwined with independent factors beyond the physical "fight or flight

response" that appear to play a role in trauma responses, in addition to peritraumatic dissociation.

Peritraumatic dissociation and comorbid symptoms. Peritraumatic dissociation and current dissociation have been found to co-exist with symptoms in addition to those contained in the posttraumatic stress diagnosis. These include: depression (Feeny et al., 2000; Fullerton, et al. 2000; Taylor et al., 2003; van der Kolk, 2002a), trauma-related guilt and anger (Feeny, Zoellner, & Foa, 2000), self-hatred (van der Kolk, 2002a), dampened affect (Feeny, Zoellner, Fitzgibbons, & Foa, 2000; Taylor et al., 2003), and negatively impacted relationships (Feeny, Zoellner, Fitzgibbons, & Foa, 2000). Feeny et al. found that the presence of depression and emotional numbing immediately after an assault significantly predicted chronic PTSD (p. 495). Simeon and colleagues (2005) also reported that peritraumatic experiences of loss of control, and guilt and shame, were significantly related to later dissociation and posttraumatic stress symptoms.

Peritraumatic dissociation and trauma history. The presence of a trauma history has been linked to greater likelihood of adult sexual victimization (Chu, 1998; Morris, 2001). One theory is that the severity of peritraumatic dissociation may be a learned, or habitual, coping strategy that inhibits the recognition of danger (Bremner, 1999). Punamaki and colleagues (2005) reported that level of lifetime trauma exposure and the presence of peritraumatic dissociation were also associated with increased posttraumatic stress symptoms.

Peritraumatic dissociation and generalizability. Marshall et al. (2002) conducted a series of investigations into the implications of peritraumatic dissociation with different cultural groups, and found experiences consistent with dissociation factors across ethnic

groups. Punamaki et al. (2005) investigated the presence of peritraumatic dissociation in a sample of Palestinians living in conditions of military violence, and prevalence was consistent with research conducted using North American samples. Zatzick, Marmar, Weiss, and Metzler (1994) found that differences in peritraumatic and general dissociative experiences between African-American, Caucasian, and Hispanic veterans was accounted for by degree of exposure to traumatic stress, but not ethnic group.

Bryant and Harvey (2003) found in their sample of motor-vehicle accident survivors that females reported significantly more peritraumatic dissociation than males in the study. Results of the study also suggested that acute stress disorder more accurately predicts PTSD in females than in males, due to the weight given to dissociative criteria in ASD. Bryant and Harvey speculated that some of these gender differences might be accounted for by (a) the underreporting of symptoms by males, (b) neurobiological sex differences, and (c) a greater number of females as passengers (not drivers) of motor vehicles.

Pole, Best, Metzler, and Marmar (2005) reported in their comparison of PTSD and ethnicity in police officers that Hispanic participants reported significantly more severe symptoms than their non-Hispanic counterparts, particularly in the avoidance/numbing and hyperarousal subscales. Hispanic participants also reported significantly more peritraumatic dissociation. The impact of acculturation was not reviewed in the previously mentioned article, but Marshall and Orlando (2002) found that highly acculturated Hispanics were less likely to experience peritraumatic dissociation in comparison with their less acculturated counterparts.

Limitations in current understanding of peritraumatic dissociation.

Unfortunately, the nature of peritraumatic dissociation makes it difficult to measure, and the bulk of empirical investigation has relied on retrospective and subjective accounts. McNally criticized the different experiences encapsulated within the current broad label of dissociation, the ranges of which "undoubtedly embraces diverse psychobiological processes" (2003b, p. 785) and suggested the separating of dissociative phenomena into individual constituents.

Researchers challenging the current trauma-inspired bias of research on peritraumatic dissociation compared the levels of peritraumatic dissociation reported in intensely pleasant and aversive experiences, and individuals in both conditions engaged in dissociation at the time of event (Candel & Merckelbach, 2004). Additionally, these authors are critical of the certainty with which the field has accepted the inconsistent findings regarding the link between peritraumatic dissociation and subsequent PTSD. The authors suggest that the retrospective nature of most peritraumatic dissociation may reduce accuracy due to inherent difficulties in describing past emotional states. Candel and Merckelback also question the inclusion of peritraumatic dissociation questionnaires in trauma research, and whether or not trauma assessments prime participants' peritraumatic reports. Lastly, the authors question the validity of a retrospective association between PTSD and peritraumatic dissociation on the basis that "victims who do not develop PTSD might have forgotten their dissociative reactions to the trauma, while those victims who do develop PTSD symptoms might overestimate their dissociative reactions" (p. 47). This last criticism is a legitimate concern; however, the

nature of peritraumatic dissociation makes it difficult to measure at the time of occurrence or in a controlled research setting.

Peritraumatic dissociation: Risk factor for posttraumatic stress disorder. Bernat, Ronfeldt, Calhoun and Arias (1998) found that 67% of their non-clinical college student sample reported a traumatic experience, but only 4% of the sample met current PTSD criteria. The presence of peritraumatic dissociation at the time of trauma has been linked to subsequent development and severity of PTSD (Bernat et al., 1998; Birmes, et al., 2004; Birmes et al., 2003; Birmes, Carreras, & Charlet, 2001; Gershuny, Cloitre, & Otto, 2003; Marshall & Schnell, 2002; McNally, 2003a; Tichenor et al., 1996). There is some controversy, however, about the extent of this relationship (Feeny, Zoellner, Fitzgibbons, & Foa, 2000; Simeon et al., 2005).

In a meta-analysis of 68 peer-reviewed studies targeting predictors of PTSD, Ozer et al. (2003) found that "individuals who described having dissociative experiences during or immediately after the traumatic event reported appreciably higher levels of PTSD symptoms" (p.63). The degree of relationship between experiencing peritraumatic dissociation and subsequently developing PTSD was reported as $r = .35$. This suggests that the use of a dissociative response (during the traumatic event), may lead to further disruptions in the usual functions of life. Birmes and fellow researchers (2003) reported that peritraumatic dissociation accounted for as much as 25% of the variance in PTSD symptoms and, with the addition of acute stress symptoms, the explained variance increased to almost 33%.

In a study of the association between PTSD and dissociative symptoms, Birmes et al. (2004) reported convergent validity of $r = .46$ ($p < 0.01$) between the 10 item PDEQ-

SR total score and IES-R total score. Correlations between PDEQ score and individual subscales of the IES-R were not reported. Tichenor et al. (1996) calculated the variance in PTSD symptoms accounted for by the PDEQ- Rater Version (PDEQ-RV) in a sample of female Vietnam war theatre veterans. The authors reviewed levels of peritraumatic dissociation, and also included current and retrospective self-reports of PTSD symptoms during the worst symptom period. Convergent validity between the PDEQ-RV and the DES was reported as $r = .26$. The Impact of Event Scale (IES) was also included in this data set, but consisted of an early version containing only the Intrusion and Avoidance subscales. Tichenor and colleagues (1996) reported convergent validity between the PDEQ-RV and the IES Intrusion subscale as $r = .41$ at the period of worst symptoms and $r = .20$ for current clinical ratings. The PDEQ-RV was related to Avoidance symptoms on the IES at the worst time ($r = .40$) but not at the time of testing ($r = .10$). The authors conducted hierarchical multiple regression analyses on the IES subscales for the period of worst symptoms and found that after removing effects of level of war-zone exposure and general dissociation (DES total score) the PDEQ-RV still accounted for a significant amount of variance in IES scores ($p < .01$). However, this correlation does not indicate there is a causal relationship. Marshall and Schnell (2002) reported in their sample of community violence victims that peritraumatic dissociation was not an independent predictor of PTSD, although it was significantly correlated with subsequent PTSD symptom severity. The relationship between PTSD and peritraumatic dissociation is still debated, and there are competing theories to account for the relationship. The bulk of research suggests there is a link between these two constructs, but the mechanism and existence of moderation or mediation effects has not been satisfactorily explained. Marx

and Sloan (2005) have summarized current research: "Although peritraumatic dissociation has been identified as a risk factor for PTSD, the mechanism through which this dissociation might make one susceptible to PTSD is not well understood" (p. 570).

Posttraumatic Stress Disorder

The criteria for PTSD according to the DSM-IV-TR include "symptoms following exposure to an extreme traumatic stressor" and "the person's response to the event must involve intense fear, helplessness, or horror" (APA, p. 463). Since it is estimated that between 10 and 18% of U.S. women will develop PTSD over the course of their lives (Brunello, Davidson, Deahl, Kessler, Mendlewicz et al., 2001; Grinage, 2003; Kessler et al. 1995; Yehuda, 2002) it is not surprising that this is a burgeoning field of study. PTSD can be understood as having three interacting groups of symptoms. van der Kolk (2002b) noted that PTSD consisted of three clusters of symptoms, including (a) reliving/re-experiencing, (b) avoidance, and (c) hyperarousal. McNally (2003a) described these clusters further:

> The re-experiencing cluster included recurrent intrusive thoughts about the trauma, traumatic nightmares, and "flashbacks". The numbing cluster included feelings of detachment from others, loss of interest in activities, and constricted affect. The third cluster included miscellaneous symptoms such as exaggerated startle, sleep disturbance, and memory impairment or trouble concentrating. (pp. 230-231)

Taylor et al. (2003) identified an additional cluster of the PTSD response as "numbing of general responsiveness" which would include dissociation and restricted affect. The extent to which the array of symptoms may detrimentally affect a person's life makes the

treatment of PTSD an important and complex pursuit. There are many theoretical paradigms to explain the development of PTSD, but in this paper only selected theories will be addressed.

Cognitive models of posttraumatic stress disorder. There are many relevant cognitive models, and most focus on the role of the mind and thoughts in terms of engaging with traumatic events. Brewin (2001) described a dual memory process: verbally accessed memories (VAMs) are developed slowly and thoughtfully through the hippocampus, and maintain a contextual and autobiographical continuity with other memories. These VAMs can be easily retrieved and deliberately accessed or avoided. The second type of memory process is called situationally accessed memories (SAMs), which are originally processed through the amygdala in a rapid, emergency-oriented fashion that is disconnected from other thoughts and memories. "The SAM system contains information that has been obtained from more extensive, lower level perceptual processing of the traumatic scene (e.g., visuospatial information that has received little conscious processing) and of the person's bodily (e.g., autonomic, motor) response to it" (Brewin, 2001, p. 375). These memories are less easily controlled by consciousness, and may be triggered by situational exposures that are reminiscent of the original event. Because these SAMs are not integrated into the trauma survivor's consciousness, they may interrupt without invitation (flashbacks), or not be accessible when they are sought (*i.e.,* dissociation). Brewin contends that every time a SAM intrudes, more of the related VAM develops, until the SAM memory has become integrated as part of a narrative within the VAM, and is subject to the conscious control of memories that exist as VAMs; however, this typical response to the integration of traumatic memories does not occur in

PTSD. It is speculated that high levels of stress interfere with memory encoding, such as peritraumatic dissociation (wherein the person dissociates while the trauma is occurring). Brewin describes the implications of this phenomenon further, and suggests that "during reliving there is likely to be a reinstatement of any dissociation, helplessness or defeat states, making it more difficult to carry out strategic activities such as deliberate focusing on the content of flashbacks" (p. 384). The inability to focus on the trauma impedes the transfer of information from SAMs to VAMs. In this situation the trauma survivor with an undeveloped narrative surrounding the trauma may be more vulnerable to uncontrollable re-experiencing and flashbacks (included within PTSD symptom cluster) due either to spontaneous production of intrusive experiences or to situational cues that trigger SAMs. Additionally, very little transfer of information into VAMs would occur to build narratives for the experiences and subsequently reduce future responses triggered by situational cues. Halligan and colleagues (2003) suggested that trauma memories have few associations with other stored information, which makes them more susceptible to triggering by sensory cues and to intrusive memories. There is a combination of physiological and psychological process interactions that act to protect humans from danger (Dalgleish, 2004). The mind separates to prevent individuals from becoming overwhelmed (dissociation), while the body's arousal is heightened through the fight or flight response (Fortinash & Holoday-Worret, 2000). These processes are both defined as defense mechanisms, and "protect the individual from threats to biologic, psychologic, and social aspects of the self" (p. 233). These mechanisms can be triggered by an external event, location, or person, but may also occur in response to an internal psychological, or physiological, impetus. Brewin noted that SAMs activate the physiological fear system,

while the more integrated VAMs will not trigger the fear system response. For this reason, the transfer of traumatic memories from SAMs to VAMs eventually reduces physiological arousal when those memories are accessed.

This model is consistent with the assertion that "excessive employment of dissociative strategies for coping with the trauma would interfere with the emotional reliving of the trauma and thereby impede the natural course of recovery" (Foa & Riggs, 1995, p. 65). These authors propose a model of PTSD development whereby the usual course of trauma resolves itself through information processes which "underlie the natural decline of emotional disturbances following a traumatic experience" (Foa & Riggs, p. 65). PTSD interrupts this process, and does not allow full experiencing and emotional engagement with the traumatic event, and this hinders recovery. Foa and Riggs argue that heightened physiological arousal needs to be addressed and resolved concurrent with psychological re-experiencing. Resick and Schnicke's (1996) cognitive processing model also fits this theoretical paradigm, and will be addressed later in detail.

Physiology of posttraumatic stress disorder. PTSD is categorized within the DSM-IV-TR anxiety disorders. Fortinash and Holoday-Worret (1999) have summarized the multiple dimensions of response to severe anxiety or panic (as cited by Fortinash & Holoday-Worret, 2000, p. 234). (See Table 1).

Insert Table 1 here

The physiological, cognitive/perceptual, and emotional/behavioural components of the anxious response are all experienced within the diagnosis of PTSD. The response to an anxiety provoking situation or memory consists of an interaction of all of these elements. McFarlane characterizes the differing responses to trauma and suggests "whether PTSD

emerges depends on the ability of the individual to modify the associated hyperarousal and neurobiological cascade" (2000, p. 19). Especially of interest to this research query is the inclusion of dissociative responses concurrent with the trauma.

The sympathetic nervous system (also referred to as the "fight or flight" response) is engaged during times of excitement or danger. The amygdala responds to a perception of danger and "sends messages along the neural pathways running out from it to increase heart rate, blood pressure, and respiration" (Steinberg & Schnall, 2001, p.14) before the mind is consciously aware of a potential threat. Marieb (2001) described the sympathetic nervous system response: "pounding heart; rapid deep breathing; cold, sweaty skin; and dilated eye pupils are sure signs of mobilization of the sympathetic nervous system" (p. 515). This response diverts blood and energy from non-essential activities within the body, like digestion. Marieb also contends that the function of this response "is to provide the optimal conditions for an appropriate response to some threat, whether that response is to run, to see better, or to think more clearly" (p. 515). This reaction appears to over-function in times of extreme stress, and in overwhelming situations. Dissociation can occur during the engagement of the sympathetic nervous system and may not encourage clear thinking during distress.

Limitations of posttraumatic stress disorder diagnosis. Responses to trauma are not limited to the symptoms of PTSD (Bremner, 1999; Clum, 1999; Carlson, Armstrong, Loewenstein, & Roth, 1998; Ehrenreich, 2003; van der Kolk, 2002a). Many people who experience traumatic events do not develop PTSD, and others exhibit symptoms beyond those listed in the DSM IV-TR for PTSD. Lanius, et al. (2002) noted in a sample of patients with sexual abuse-related PTSD that 70% exhibited increases in heart rate in

response to traumatic script-driven imagery, and 30% exhibited dissociative responses. This supports the hypothesis that there are two distinct post-traumatic responses that contribute to pathological distress (Lanius, Bluhm, Lanius, & Pain, in press; Lanius et al., 2005; Lanius & Hopper, 2004; Lanius, Hopper, & Menon, 2003; Lanius et al., 2001; Simeon et al., 2005). These have been identified as (a) a primarily dissociative or numbing response, and (b) a re-experiencing/hyperarousal response. Harvey and Bryant (1999) contend that there are multiple pathways to PTSD, and differentiating these pathways is necessary to improve both diagnosis and treatment. Bremner (1999) also suggested the possibility of these two acute responses to trauma, consisting of either a dissociative, or an "intrusive/hyperarousal" response, leading to "chronic stress-related psychopathology" (p. 350). Ehrenreich noted the prevalence of post-trauma symptoms in addition to PTSD criteria, including depression and existential questions: "To the extent that the responses of the victims are not homogeneous, seeing PTSD as the universal core response to traumatic stress is misleading" (p. 19). Ehrenreich also decries the limitations of our current definition of PTSD as inadequate.

> The use of a single term to describe people's emotional responses to such a range of horrific happenings makes no sense. From a practical perspective, it weakens the attempts of researchers to understand trauma, hampers clinicians trying to treat trauma victims, and distorts public policy (p. 16)

van der Kolk (2002a) authored a chapter on complex PTSD, and contends that the current DSM-IV-TR criteria for PTSD contains only some, but not all, essential aspects of trauma responses. McFarlane (2000) agrees that "PTSD is only one vector of the adverse consequence of trauma" (p. 16) and points out the possibility of pre-existing

conditions or traits which may predispose individuals to particular responses to trauma. It has also been suggested that peritraumatic dissociation may be misclassified, and be a symptom of PTSD (Marx & Sloan, 2005). Asmundson, Stapleton, and Taylor (2004) contend that the combination of numbing and avoidance within clusters of PTSD diagnostic criteria may suppress the differences in their presentation and the possibility of the presence of one without the other. Briere and Spinazzola (2005) summarize this argument by stating that "complex posttraumatic responses reflect the wide variety of potential adverse experiences in the world and the many biological, social, cultural, and psychological variables that moderate the impact of these experiences" (p. 409). The one size fits all diagnosis of PTSD may impede our understanding of the range of possible posttraumatic responses and adequate therapeutic interventions to address them.

Cognitive processing therapy

The prevalence of PTSD in victims of sexual assault has inspired a plethora of treatment options. The efficacy of these must be empirically evaluated and validated to ensure that the greatest reduction in PTSD symptoms is offered to such clients (Marotta, 2000). Due to the frequency of sexual assault and subsequent PTSD development, the literature on PTSD treatment specifically addresses rape and the resulting psychological sequelae. Cognitive Processing Therapy (CPT) has emerged in the professional counselling literature as an effective treatment for the reduction of PTSD symptoms in rape victims (Boles, 1995; Falsetti et al., 2001; Nishith et al., 2002; Resick et al., 2002; Resick & Schnicke, 1996). CPT is briefly summarized by Resick and Schnicke: "The focus of CPT is on identifying and modifying "stuck points," conflicts between prior schemata and this new information (the rape)" (1992, p. 750). These conflicts can resolve

when new information is changed to mesh with existing schemata (assimilation) or when the schemata are changed to accept the new information (accommodation) (Resick & Schnicke, 1996). This is accomplished through therapy that "activates the memories of the event, and will also provide corrective information regarding conflicts and faulty attributions or expectations that interfere with complete processing or cause other symptoms" (Resick & Schnicke, 1992, p. 749). CPT draws upon theories (*i.e.,* internal working models) related to how our beliefs about the world play a large part in our encounters and reactions to traumatic events: "Information processing theory speaks to the process by which information is encoded, stored in memory, and recalled" (p. 748) and may also be implicated in dissociation (Foa & Hearst-Ikeda, 1996).

Halligan et al. (2003) and Koss, Figueredo, and Prince (2002) found cognitive processing at the time of the event was correlated with the future onset of PTSD symptoms, so cognitive processing plays a pivotal role. Recognizing an unsafe situation and planning avoidance or escape may be integral for survival, but overuse of danger appraisals when there is no threat reduces overall functionality. The disparity between an internal working model and experience can cause dissonance that makes it difficult for someone to integrate their beliefs about the world with what happened to them. Cognitive processing addresses, and works through, these issues, but the focus is not limited to fearful memories, since "crime victims often report experiencing anger, disgust, humiliation, and guilt" (Resick & Schnicke, 1992, p.749). CPT moves beyond mere cognitive therapy through emphasizing the experiencing of emotions to elicit and process related beliefs. The reader is referred to Appendix B for the generic therapy protocol, and to Appendix C for the condensed and revised treatment protocol for CPT.

Eye movement desensitization and reprocessing

EMDR was introduced by Francine Shapiro (2002) in the late 1980's, and is clinically supported as an effective therapeutic intervention for trauma. It consists of an eight step procedure, including: (a) taking a full history and developing a treatment plan and targets; (b) preparation, education, and stabilization, focusing on resources the client can build on during treatment; (c) clinician-directed processing of traumatic incidents, including sensory, cognitive and affective components (i.e., visual images accompanied by an irrational, negative belief, and bodily sensations); (d) internal focus on a "visual image, negative belief, and body sensations" (Shapiro & Maxfield, 2002, p. 937), and dual-attention to stimuli, leading to a shift in client distress regarding the original event; (e) client focusing on target memory, and positive insights or cognitions; (f) focusing on body tension related to target memory, and processing until tension is relieved; (g) client use of self-calming, and continuing to process in a journal after the session; and (h) re-evaluating the previous session at the start of new session, to ensure treatment gains have held. There are multiple hypotheses about how EMDR works, ranging from brain hemispheric integration and systematic exposure to cognitive reprocessing. Shapiro and Maxfield, however, describe an "adaptive information processing model":

> If the information related to a distressing or traumatic experience is not processed fully, the initial perceptions will be stored essentially as they were input, along with any distorted thoughts or perceptions experienced at the time of the event. A central tenet is that if distressing memories remain unprocessed, they become the basis of current dysfunctional reactions. The intrusive symptoms of PTSD are

> assumed to result from the unprocessed sensory, affective, and cognitive elements of the traumatic memory. (p. 935)

This description of unprocessed traumatic memories is similar to the idea of SAMs and VAMs proposed by Brewin (2001), who agrees that EMDR "may be effective in incorporating distinctive attributes into VAM representations of trauma" (p. 387) to integrate the SAM trauma memories and reduce the distress of PTSD symptoms. Shapiro and Maxfield suggest that EMDR provides a vehicle for traumatic memories to safely become integrated and processed, thereby discontinuing their reign of distress. van der Kolk (2002b) concurs, and reports that "in the vast majority of traumatized patients, EMDR produces rapid mental associations with seemingly unrelated prior life events and a gradual easing of the emotional intensity of the memories of the trauma itself" (p. 50). Studies have noted that EMDR seems to be a more efficient treatment, in terms of reducing PTSD symptoms in a shorter number of sessions and across time (Ironson, Freud, & Strauss, 2002; Lee, Gavriel, Drummond, Richards, & Greenwald, 2002; Power et al., 2002; Rothbaum, 1997; Scheck, Schaeffer, & Gillette, 1998). EMDR addresses the physical and psychological effects of trauma through the resolution of bodily tensions that arise during treatment.

The American Psychological Association requires two trials that demonstrate a treatment is more effective than no treatment at all, and sanctioned EMDR as "probably effective" in treating civilian PTSD (Dworkin, 2003; Rosen, McNally, & Lilienfield, 1999; Shapiro & Maxfield, 2002). Perkins and Rouanzoin (2002) challenge the argument that the benefits of EMDR are equivalent to placebo stating "treatment effects of EMDR are much larger and longer lasting than placebo effects in PTSD, and the empirical

evidence does not support the placebo hypothesis" (p. 79). Maxfield and Hyer (2002) reviewed the methodology and efficacy of EMDR in the treatment of PTSD in a meta-analysis and, overall, the studies with superior methodology "found EMDR to be an efficacious treatment for PTSD" (p. 39).

EMDR controversy. Since the inception of EMDR there have been polarized factions defending opposite positions with fervour. Currently, the field has a growing number of staunch supporters who continue to engage in research that supports EMDR's claims (Maxfield, & Hyer, 2002; Shapiro, 2002; Shapiro & Maxfield, 2002). There are others who believe that EMDR is simply a form of exposure or cognitive therapy and that eye movements, and dual hemispheric stimulation are superfluous (Rogers & Silver, 2002). Lastly, there is a small group who remain unconvinced of the efficacy of EMDR as a trauma therapy (Davidson & Parker, 2001). Shapiro contends that studies suggesting EMDR is ineffective were not faithfully utilizing EMDR, including fewer phases than the eight-step protocol. A review of these issues was done by Perkins and Rouanzoin (2002) who outlined several hypotheses explaining the confusion around EMDR including the lack of an empirical model to explain the process of EMDR, poorly designed research studies, lack of treatment fidelity, and inaccurate and incomplete reporting of research in literature reviews.

Controversy as passionate as that which surrounds EMDR is unlikely to dissipate and resolve in the near future; however, as empirical data continue to be collected, the role of EMDR in trauma therapy will become more apparent. Davidson and Parker (2001) clarify the results of their meta-analysis of the effectiveness of EMDR by stating that the "evidence suggests that this is a fruitful area for research" (p. 313).

One eye integration. OEI is an experimental technique that developed out of EMDR. Cook discovered it while using EMDR with a client who had a "wandering eye", and found that adapting EMDR procedures for application one eye at a time was surprisingly effective and gentle (Cook & Bradshaw, 2002). They hypothesize that one aspect of treating trauma involves allowing the two hemispheres of the brain to integrate traumatic memories stored differently by the right and left hemispheres. Schiffer (1998) supports this hypothesis with his assertion that the two hemispheres of the brain are capable of different, and independent functioning. OEI has shown preliminary success in two previous studies (Austin, 2003; Grace, 2003) although there is not yet peer-reviewed evidence to further support these findings.

Cook and Bradshaw (2002) describe OEI as five techniques: (a) *switching*, which involves covering one eye at a time, and reporting the subjective experiences (cognitions, body sensations, visual images), repeated until clients experience the same level of intensity regardless of which eye is covered; (b) *tracking* which involves the client following the clinician's finger while the clinician watches for *skips* and *glitches* in the movement of the eye; (c) *massaging*, which involves using small back and forth motions of the client's eye (following the therapist's finger), concentrating on the skip or glitch until it is gone; (d) *sweeping*, which involves a combination of switching and tracking in a lateral to medial direction, alternating eyes; and (e) *release points*, which are selected positions in which to hold the eyes for rapid reduction of panic symptoms (hyperventilation, cessation of breathing, or nausea). Occasionally, bodily sensations will interfere with the processing of traumas (headaches, visual distortions). These are referred to as *dissociative artifacts*, and are resolved by switching and sweeping. The

latter technique involves the therapist generating an arcing movement around the side of the head with a finger extended. The therapist moves her/his hand from the edge of the client's peripheral vision to the opposite side of the nose (with the opposite eye covered). This procedure is repeated with the other eye covered and the alternation is continued until the symptom disappears (Cook & Bradshaw, 2002). It is believed this allows the trauma-specific information to become integrated between (a) the two hemispheres, and (b) subcortical and neocortical structures, decreasing the emotional intensity associated with the memories. Physical reactions that arise during the course of this therapy are also addressed and resolved. There is a good deal of anecdotal reporting of positive effects using this method; however, further research is necessary to provide more insight into the efficacy and increased understanding of the mechanisms involved in this treatment. See Appendix D for a more detailed description of the switching procedure.

Relaxation and grounding techniques

In previous studies of PTSD treatments, relaxation training has been compared to more active therapies. In a comparative study of EMDR, prolonged exposure, and relaxation conducted by Taylor et al. (2003) it was reported that EMDR, prolonged exposure, and relaxation training produced similarly effective results in terms of main treatment effects.

The use of relaxation skills with a traumatized population has been documented as effective for reducing co-morbid panic attacks (Falsetti et al., 2001). Arguably, there are similarities between PTSD and panic attacks. Both are anxiety disorders. For this reason, treatments used with PTSD sufferers, including CPT (Nishith et al., 2002; Resick et al., 2002), EMDR (Shapiro & Maxfield, 2002) and OEI (Cook & Bradshaw, 2002) include a

physiological awareness and relaxation component, necessary for the processing of psychological distress. This is a theoretically useful inclusion, considering that one of the symptom domains of PTSD is hyperarousal. The physiological arousal that occurs during a traumatic event may also be triggered by recollections of that event. Sapolsky (2000) found that "a traumatic event elicits a high level of stress hormones, a level that is maintained for some time after the traumatic event" (as cited in Elsesser, Sartory, & Tackenberg, 2004, p. 289). Stress hormones play a role in protecting the body by preparing it to fight or flee. Falsetti and colleagues (2001) found that "the fight or flight reaction that is a common response during trauma may set the stage for a conditioned linkage between panic attacks and trauma-related cues" (p. 253). The body may not return to its previous level of relaxation, and may play a role in the onset of PTSD. "From a biologic perspective, the body's failure to return to its pretraumatic state differentiates PTSD from a simple fear response" (Grinage, 2003, p. 2404). Like dissociation, this inability to return to the pretraumatic state is indicative of reduced functionality. Benson and Klipper (1975) describe the flight-or-fight response as an involuntary evocation of the sympathetic nervous system, which includes the hypothalamus flooding the body with adrenalin or epinephrine, increasing blood pressure, and speeding body metabolism. This physiological response is useful when one needs to physically defend oneself or run away. However, such a strong physiological reaction to physically non-threatening situations (i.e., in response to memories) can eventually lead to physical deterioration through high blood pressure, hypertension, heart disease, and stroke (Benson & Klipper, 1975).

The potential relationship between dissociation and relaxation has not been a subject of academic exploration. Conceptualizations of dissociation have largely focused on cognitive aspects; however, depersonalization (i.e., perception of being outside of one's body) inherently taps into the physical response to psychologically distressing events. While this topic is beyond the scope of this particular thesis, it is an area ripe for further inquiry.

Treatment Outcome Studies

In Seedat et al.'s (2005) review article on women with PTSD, five psychological treatment approaches were recommended as efficacious in ameliorating PTSD symptoms. The five areas included the following: (a) exposure therapy, (b) stress inoculation training, (c) cognitive therapy, (d) EMDR, and (e) combinations of CBT, exposure and stress inoculation training (Seedat et al., 2005, pp. 415-416). The American Psychological Association recommends reporting effect sizes in the results of any published work (Field & Hole, 2003). Unfortunately, not all researchers have followed this advice, so this information is only reported when available in the following treatment outcome studies.

Treatment effectiveness in reducing posttraumatic stress disorder. Power et al. (2002) compared EMDR, exposure and cognitive restructuring, to a wait-list condition with a sample of 105 outpatients with PTSD in Scotland. The authors reported these treatments were efficacious in reducing PTSD symptoms substantially. Approximately 60% of the EMDR, and 50% of the exposure and cognitive restructuring and 10% of the waitlist groups pre-treatment to post-treatment scores on PTSD symptom measures were reduced by two standard deviations. Pre- and post-changes using pairwise comparisons

revealed significance in the reduction of IES scores for both the EMDR ($t = 9.0$, $p < .001$) and exposure and cognitive restructuring group ($t = 5.1$, $p < .001$). The maximum number of treatment sessions was 10, but the average number of sessions attended by the EMDR group was 4.2, and 6.4 in the exposure and cognitive restructuring condition.

Taylor et al. (2003) also found treatment reduced PTSD symptoms in their study that compared exposure, EMDR, and relaxation treatment regimens in a sample of 60 participants with PTSD. The authors used eta squared (η^2) effect size measure, which refers to the percentage of total variance attributed to changes in a certain variable or combination of variables (Field, 2005). PTSD symptoms from pre-treatment to follow-up declined in each treatment group: relaxation, $t(14) > 3.55$, $p < .005$, $\eta^2 > .47$; EMDR, $t(14) > 3.66$, $p < .005$, $\eta^2 > .49$; exposure, $t(14) > 4.52$, $p < .001$, $\eta^2 > .59$ (p. 333). Additionally, the authors reported significant decreases in dissociative symptoms in the exposure and relaxation treatment groups, $t(14) > 2.25$, $p < .05$, $\eta^2 > .27$, with a slightly less pronounced finding in the EMDR condition $t(14) = 1.96$, $p = .07$, $\eta^2 = .22$ (Taylor et al., 2003, p. 335). The exposure group received 56 more direct hours of intervention than EMDR, which may account for some of the differences in treatment outcome.

Resick et al. (2002) compared CPT, prolonged exposure, and a wait-list condition (N=171), and reported both active therapies to be superior to the control in reducing PTSD severity scores. Participants in treatment groups who still met the diagnostic criteria for PTSD at posttreatment ranged from 19.5% (CPT) to 17.5% (prolonged exposure): The effect sizes were positive and large for both treatment groups in comparison to the waitlist condition.

Lee and colleagues (2002) compared stress inoculation training with prolonged exposure to EMDR in a sample diagnosed with PTSD. Both treatments were found to be highly effective, with 87% of participants assigned to EMDR, and 75% of participants in stress inoculation training with prolonged exposure no longer meeting the criteria for PTSD at post-treatment. Immediately after treatment there was no significant difference between the two treatment groups. The 3-month follow up scores indicated a greater gain for the EMDR group (Wilks $\Lambda(4,15) = .55(F=3.08, n^2= .45, p< .05)$. Between subjects univariate tests showed significant differences on the IES scores ($F(1,18) = 8.04$, $n^2= .31$, $p < .05$). Lee et al. (2002) reported within group effect sizes (Cohen's *d*) of 1.97 (EMDR) and 1.01 (Behaviour Therapy).

Scheck et al. (1998) compared EMDR and active listening treatments in 60 women who experienced a traumatic event (77% of participants met criteria for current PTSD). The pre-post effect sizes for reduced PTSD symptoms on IES total score (using Cohen's *d*) were 2.09 (EMDR) and .52 (AL) with an effect size for treatment difference of .83.

Rothbaum (1997) compared EMDR to a no-treatment wait-list condition in sexual assault survivors. Only one member (10%) of the EMDR participants met the criteria for PTSD post-treatment, compared to 88% of the no-treatment participants. The EMDR group scores on pre-treatment IES total scores ($M = 47.4$, $SD = 15.0$, $n= 10$) were reduced significantly in the post-treatment score ($M = 12.4$, $SD = 11.2$) in comparison with the no-treatment pre- to post- change: ($M = 48.9$, $SD = 8.9$, $n = 8$) to ($M = 45.4$, $SD = 6.4$).

Overall, in these six studies, participation in a therapeutic treatment indicates a contribution to a reduction in PTSD symptoms.

Dissociation and peritraumatic dissociation in treatment outcome. Michelson and colleagues (1998) investigated the role of dissociation in cognitive-behavioural psychotherapy outcome in a traumatized sample diagnosed with panic disorder with agoraphobia ($N = 89$). They found level of dissociation to be correlated with increased psychopathology at pre-treatment (adjusted $R^2 = .22$, $df = 1,87$, F-ratio 25.17, $p < .005$) and, additionally, predicted "higher levels of psychopathology and poorer treatment outcome" (p. 1037). The correlation of dissociation with reduced treatment outcome was significant (adjusted $R^2 = 0.04$, $df = 1,87$, F-ratio 4.23 $p < .05$). The degree to which levels of peritraumatic dissociation are associated with treatment outcome may be useful information for planning and assessing interventions.

Zoellner et al. (2002) compared a total of 28 women with PTSD in two treatment groups: prolonged exposure, and prolonged exposure with cognitive restructuring. The role of peritraumatic dissociation in trauma narratives and psychopathology was investigated, but only relationships between peritraumatic dissociation, current dissociation, and PTSD symptomatology are within the scope of this thesis. Participants were split into two groups (median split of total PDEQ-Rater Version scores) of high peritraumatic dissociation ($M = 34.17$, $SD = 4.99$) and low peritraumatic dissociation ($M = 14.34$, $SD = 3.01$) (Zoellner, et al.). They reported there were no significant ($p < .05$) differences in pre-treatment DES scores between the high ($M = 16.63$, $SD = 14.39$) and low ($M = 14.63$, $SD = 10.15$) peritraumatic dissociative groups. The relationship was much greater between PDEQ scores and post-treatment PTSD symptom intensity (as

measured by the PTSD Symptom Scale- Interview Version; PSS-I) compared to pre-treatment (i.e., $r = .45$, and $r = .15$, respectively). Greater peritraumatic dissociation (PDEQ) was correlation with increased posttreatment PTSD scores. This was illustrated by a significant change in the reexperiencing subscale scores from pretreatment to posttreatment ($p < .05$). The avoidance subscale also showed significant change, from $r = .16$ at pretreatment to $r = .54$, $p < .05$ at posttreatment.

Boles (1995) investigated the impact of peritraumatic dissociation on severity and change in PTSD symptoms before and after CPT group treatment in a sample of women who were raped. The relationship between peritraumatic dissociation (as measured by adapted PDEQ) and PTSD (measured by PTSD Symptom Scale –Self Report) was assessed before treatment ($r = .33$, $p < .01$), 1 week after treatment ($r = .13$), 3 months post-treatment ($r = .09$) and 6 months post-treatment ($r = .47$, $p < .01$; p. 65). The PTSD Symptom Scale Self-Report also has subscales correlating to the three PTSD symptom clusters at each time of measurement. The correlation between the PDEQ score and the PTSD Symptom Scale Self-Report Intrusion and Avoidance subscales was significant ($p \leq .01$) at measurement times one and four. The correlation between the PDEQ score and the PTSD Symptom Scale –Self Report Avoidance subscale was significant at time one ($p \leq .05$), and at fourth assessment ($p \leq .01$). PTSD symptoms are reduced immediately following treatment, gains are maintained over time, and the correlations between peritraumatic dissociation and PTSD symptoms are disrupted during treatment, but re-achieve homeostasis.

Overall, the results of research suggest that PTSD interventions like EMDR, relaxation, and CPT are effective in reducing symptoms to varying degrees. Research

also suggests a connection between severity of PTSD symptoms and presence of dissociative responses to trauma, but this has been inconsistently demonstrated in the literature. The goal of this study is to further elucidate the influence of peritraumatic dissociation (and, to a lesser extent, general dissociation) on PTSD treatment outcome.

CHAPTER III: METHOD

Participants

Participants were 27 female survivors of sexual assault. Screening criteria for this study included: (a) limited childhood trauma as measured by the child and adolescent scales of the Traumatic Antecedents Questionnaire; (b) PTSD classified by a Clinician Administered PTSD Scale score greater than 45 (Weathers, Ruscio, & Keane, 1999); (c) only 1-3 assaults; (d) at least 1 year free of substance abuse; and (e) a DES score of less than 40. Participants resided primarily in British Columbia (Vancouver/Lower Mainland area), or were willing to travel to Langley, B.C. to fulfill the assessment requirements of the study. The participants' ages ranged from 28 to 67 years old (M = 42, SD = 11), and the average time passed since most recent sexual assault was 18.2 years (SD = 14), ranging from 6 months to 51 years prior to participating in this study. All but one participant had attended at least one session of psychotherapy or counselling before participation in this research study. The ethnicity of the participants was predominantly Euro-Canadian (n = 25), with one participant self-identified as Indo-Canadian, and another as both Caribbean and European descent.

Recruitment of participants. Recruitment activities included the posting of notices on the campuses of Trinity Western University, University College of the Fraser Valley, and Kwantlen College. Newspaper articles that described the study were published in *The Chilliwack Progress, Chilliwack Times, Abbotsford Times, Surrey/North Delta Leader, BC Christian News, Langley Times, Langley Advance News* and other local community newspapers and radio stations. The Sexual Assault Nurse Examiner program was also a recruitment source. Finally, a series of five television programs on the topic of sexual

assault were used to promote the study on NOW TV, a local cable television station. A total of 137 women responded to recruitment opportunities. Of these women, 73.7% did not meet screening requirements, 6.6% dropped out during the pre-treatment stage, and 19.7% discontinued participation after preliminary assessments had begun.

Instruments

The constructs of interest in this study include peritraumatic dissociation, dissociation, and PTSD symptoms.

Peritraumatic Dissociative Experiences Questionnaire - Self-Report (Marmar, Weiss, & Metzler, 1998). The PDEQ-SR consists of 10 items, and was developed as a self-report measure of participants' experiences during, or immediately following, traumatic events. This questionnaire measures the degree to which clients experienced peritraumatic dissociation during a trauma (Ozer et al., 2003). Studies have supported the internal consistency, as well as the reliability and convergent, discriminant, and predictive validity of the PDEQ (Marmar et al., 1998). The PDEQ test-retest reliability has been reported as a correlation coefficient of .72, and internal consistency of .78 to .79 (Birmes et al., 2005). This instrument has been used in studies investigating dissociative experiences occurring at the time of trauma (Zoellner et al., 2002). The test-retest reliability in the current study was $r = .76$. (see Appendix F for the PDEQ and scoring key).

Dissociative Experiences Scale (Bernstein & Putnam, 1986; Carlson & Putnam, 1993). The DES includes 28 items to measure the percentage of time participants engaged in dissociative experiences during the past 2 weeks. Carlson and Putnam describe the DES as a "brief, self-report measure of the frequency of dissociative

experiences" (p. 16) developed for adult, clinical populations. Scores above 20-30 are of clinical interest. It is conceptualized as a "trait measure (as opposed to a state measure)" (Carlson & Putnam, p. 16) by its authors, and has been used widely in research studies (van der Kolk & Fisler, 1995; van IJzendoorn & Schuengel, 1996; Zoellner et al., 2002). The DES has been used with a variety of populations in more than 250 published studies (DePrince & Freyd, 1999) with high convergent validity (e.g., r = .96), test-retest reliability (r = .79 -.96), and high internal consistency ranging from r = .83 -.93 (Carlson & Putnam, 1993). Waller, Putnam, and Carlson (1996) have contended that a variation of this scale, the DES-T, may be useful in categorizing pathological versus normative experiences of dissociation. The screening criteria for the current study included a score below 40, to reduce the likelihood of someone with a severe dissociative disorder entering the study, due to the limited treatment intervention participants received. Test-retest reliability of the DES within this sample was r = .42 (see Appendix G for the DES and scoring key). The difference between literature reports of test re-test reliability for the DES and those found in our study may be due to the restriction of range in scores, stemming from its use as a screening instrument.

Impact of Event Scale-Revised (Weiss & Marmar, 1997; IES: Horowitz, Wilner, & Alvarez, 1979). The IES-R is a self-report measure to assess an individual's distress over the previous 7 days using a five-point Likert scale. Validated internationally (van der Ploeg, Mooren, Kleber, van der Velden, & Brom, 2004), this 22 item instrument links current symptoms to a single traumatic event (Solomon, Keane, Newman, & Kaloupek, 1996) and has been used to gauge PTSD symptoms before and after treatment. Internal consistency ratings were found to be more than adequate (ranging from .85 -.92) on the

three subscales of Intrusion, Avoidance, and Hyperarousal. Weiss and Marmar (1997) recommended using the three subscales; however, small sample size and (what would have been) the resulting high experiment-wise error rate prohibited this, in this study.

The earlier version, the Impact of Event Scale (IES, consisting of avoidance and intrusion subscales), was revised to include an additional subscale (hyperarousal) to reflect the current DSM-IV-TR diagnostic clusters. Test-retest reliability in the literature ranges from r = .51 - .92, and reduction of reliability is positively correlated with the length of time between tests. Test-retest reliability within this sample was r = .79. (Appendix H)

Current Dissociation Scale-7. The CDS-7 was developed for use in this study to provide further assessment of dissociative symptoms during symptom provocation. This instrument was developed by the research team from items and observations based on clinical experiences working with clients suffering from trauma and dissociation (See Appendix I). The CDS-7 is comprised of 7 items and relies on researcher's observations (2 items), subjective verbal responses of participants (4 items), and a visual analogue self-report scale (1 item). The Cronbach's alpha coefficient on the scale for this sample is r = .69 (see Appendix I for a copy of the instrument and scoring key). It was not considered ethically warranted to subject participants to another administration of the script-driven symptom provocation procedure merely to obtain test re-test reliability estimates for the CDS-7. Participant attrition may have arisen to the point where the study could not be continued (Scott & Stradling, 1997). Such reliability assessments will have to be done in future studies.

Clinician-Administered Posttraumatic Stress Disorder Scale (CAPS; Blake, Weathers, Nagy, Kaloupek, Gusman, Charney et al., 1995). This measure of PTSD in sexual assault survivors (Nishith et al., 2002; Resick et al., 2002) is a well-established, semi-structured interview based on diagnostic criteria in the DSM-IV-TR that measures both frequency and intensity of PTSD symptoms (Solomon et al., 1996). Orr (1997) identified a combined severity score of 45 or greater as correlated with physiological reactivity in a similar sample, which supported this as a cut-off for PTSD symptom levels to include in analyses. Test-retest reliability for the total 17 items range from .90 to .98, and high convergent validity with other PTSD scales has been demonstrated from .77 to .91 (Blake et al., 1995). (see Appendix J for scale and scoring key). Interrater reliability in this study was $r = .94$.

Traumatic Antecedents Questionnaire (TAQ; van der Kolk, 2001). This instrument was used to assess the accumulated history of trauma over the lifespan, including childhood and adolescent exposures to traumatic experiences. This self-report measure consists of 42 items from all major categories of trauma (see Appendix K).

Procedure

Prescreening (in the form of a brief history interview) occurred to ensure participants' suitability as candidates for the study. Participants also underwent a number of assessments to further assess their eligibility for inclusion. Specifically, the CAPS (score greater than 45), DES score below 40 (level of dissociation), and limited TAQ trauma scores (in ages 0-6, and 7-12 years), no more than 3 sexual assaults, and absence of substance abuse for at least one year. After participants completed the initial screening and were found to meet study inclusion criteria, they completed the PDEQ-SR, IES-R,

and CDS-7. As mentioned, the PDEQ and IES-R are self-report questionnaires, while the CDS-7 reflects observations by research team members during engagement with the traumatic event using script-driven symptom provocation (audiotapes), within the 30-minute provocation period, in addition to self-report items.

Next, all participants attended a 2 hour psychoeducational presentation on relaxation, diaphragmatic breathing, and grounding techniques for implementation of the self-administered relaxation program. Participants subsequently attended 2 hour psychoeducational presentations on their respective (randomly assigned) therapeutic interventions. Participants assigned to the relaxation (control) group attended a second session on relaxation techniques.

The active, therapist-delivered treatment phase of the study consisted of participants who were assigned to either the OEI or CPT-R treatments, attending 3 weekly 1 hour sessions of individual therapy with Masters-level female counsellors who used manualized versions of these therapeutic interventions (Appendixes B & C). Participants assigned to the self-administered treatment did not attend therapy with the counsellors, but were encouraged to follow their self-administered programs. After participants completed their three 1 hour sessions of either CPT-R, OEI, or engaged in their relaxation skills (self-administered protocol), they attended individual assessment sessions and completed the post-treatment IES-R, and DES assessments. Participants were re-assessed for PTSD symptoms at the 3 month follow up with the IES-R.

Ethical Considerations

Due to the sensitive nature of their traumas, concern regarding this population's ability to safely engage with the research process is understandable. Griffin, Resick,

Waldrop and Mechanic (2003) reported that sexual assault survivors found their participation in a research study to be a beneficial experience: “Participation by sexual and physical assault survivors in extensive psychological and psychophysiological assessments does not induce detrimental effects. On the contrary, the experience was generally rated as a very positive and interesting one” (Griffin et al., 2003, p. 226). The anecdotal reports from participants within the current study suggest that they had similar experiences.

CHAPTER IV: RESULTS

Descriptive Statistics

Preliminary analyses were conducted to prepare the data set for small sample statistical analyses (Pallant, 2001). These results indicated that transformations of the DES and CDS-7 were required. The DES was modified using a square root transformation and the CDS-7 was subjected to a log 10 transformation (Tabachnick & Fidell, 2000). Both transformations resulted in satisfactory approximations of normal distributions. Univariate and bivariate outlier analyses were conducted. A bivariate outlier was identified and the impact was investigated in post hoc explorations. Analyses were not found to be significant ($p > .05$). Descriptive statistics for key study variables are presented in Table 2. The reduction in IES-R scores at each assessment was significant, $F(2,22) = 7.14$, $p = .004$ (see Table 2 for means at each assessment period).

Insert Table 2 here

Analyses

Hierarchical multiple regressions were conducted to examine relationships between PTSD symptoms (IES-R scores) (a) immediately after treatment and (b) at 3 month follow up, with the predictor variables of peritraumatic dissociation (PDEQ), and dissociation (DES, CDS-7). Pre-treatment PTSD symptom severity (IES-R) was used as a covariate. Predictors were examined separately to maximize the ratio of participants to predictors as a conservative strategy to minimize familywise error rates (Field, 2005). The low power available in this sample required tolerance of relatively large familywise error rates. Missing data were excluded from the regression casewise to protect the integrity of the sample.

Hypothesis one. It was anticipated that peritraumatic dissociation (PDEQ scores) would be correlated with PTSD symptoms (IES-R pre-treatment scores), and additional variance would also be attributable to the PDEQ. The correlation between IES-R pre-treatment scores and PDEQ scores was not significant, r (24) = -.01.

To explore the variance peritraumatic dissociation accounted for in PTSD treatment outcome, hierarchical regressions were performed on the post-treatment IES-R, using pre-treatment IES-R as a covariate R = .62, $F(1, 23) = 14.56$, $p < .001$ (R^2 change = .39) and PDEQ as predictor (R^2 change = .00). Another multiple regression was performed with IES-R pre-treatment score as a covariate, PDEQ as a predictor variable and IES-R post-treatment 3 month follow up score as the dependent variable. The IES-R pre-treatment covariate accounted for almost 24% of the variance in the outcome variable, and inclusion of the PDEQ, accounted for an additional 12% of variance (R^2 change = .12, $p < .05$) (as shown in Table 3). When the pretest scores are partialed out, the effect of PDEQ on IES-R follow-up scores is significant, supporting expectations that peritraumatic responses may predict the long-term impact of posttraumatic symptoms. PDEQ scores are associated with greater improvement at follow-up despite a lack of correlation with pre-treatment scores.

Insert Table 3 here

Hypothesis two. It was anticipated that a significant correlation would exist between peritraumatic dissociation (PDEQ score) and dissociation (DES score). This hypothesis was not supported, r = -.29, $p > .05$ (see Table 2). Upon further examination of the relationship between the DES and PTSD symptoms, a non-significant correlation was found between the DES and pre-treatment IES-R, (r = .41, $p > .05$). In a multiple

regression with IES-R pretreatment scores as a covariate, the DES did not make a significant contribution to the overall regression model after pre-treatment symptoms had been accounted for (R^2 change = .02, $p > .05$), suggesting the role of dissociation (DES) did not have a large impact on the treatment of PTSD in this sample (see Table 4).

Insert Table 4 here

Post hoc Analyses

To investigate the role of current dissociation in the treatment of PTSD, a regression was performed with the IES-R pre-treatment score as the covariate predictor variable, and CDS-7 as the predictor variable (see Table 5). The CDS-7 revealed a mild correlation with pre-treatment IES-R, $r = .22$, $p > .05$ (two-tailed). However, the contribution of the CDS-7 to the criterion variable was not significant when regressed on immediate post-treatment IES-R scores, $R = .67$, $F(2, 24) = 2.34$, $p > .05$ (R^2 change = .05) or follow-up IES-R scores, $R = .49$, $F(2, 22) = 0.00$, $p > .05$ (R^2 change = .00). This suggests dissociation, as measured by the CDS-7, is not a significant predictor of treatment outcome in this study.

Insert Table 5 here

As mentioned, a bivariate outlier was identified on the PDEQ and IES-R. Therefore, hypothesis one was re-analyzed without this PDEQ score step one $R^2 = .53$, $F(1, 22) = 24.95$, $p < .01$, and step two, $R^2 \Delta = .15$, $F(1, 21) = 9.70$, $p < .01$ to ensure it was not unduly influencing the regression output. These results illustrate the same trend as the original analyses (see Table 4 above), but the amount of explained variance is slightly increased.

Summary

Results for the main analyses confirmed the hypothesis that peritraumatic dissociation was a significant predictor of posttraumatic symptoms after treatment, and that it remained significant when the variance accounted for by level of pre-treatment PTSD symptoms was considered. Peritraumatic dissociation accounted for a much larger proportion of explained variance at the follow-up assessment of PTSD symptoms than before or immediately after treatment. The second hypothesis was not supported. A non-significant correlation was found between level of peritraumatic dissociation (PDEQ) and dissociation (DES). However, results demonstrate that peritraumatic dissociation (PDEQ) and current dissociation (CDS-7) were moderately correlated. The DES presented as a mild, but not significant, interaction term when paired with the IES-R pre-treatment scores.

Post hoc analyses revealed that the CDS-7 accounted for a small but noticeable amount of variance in predicting immediate post-treatment IES-R, but not follow up IES-R. Not surprisingly, pretreatment scores for PTSD symptoms were the greatest predictor of posttreatment PTSD symptom levels among the included predictor variables, followed by peritraumatic dissociation.

CHAPTER V: DISCUSSION

Trauma therapy research encompasses many types of traumas and treatments designed to alleviate posttraumatic symptoms. This thesis addresses the role of peritraumatic dissociation in the treatment of posttraumatic stress disorder in sexual assault survivors. The rate of sexual assault survivors who develop PTSD after their assault is approximately 50% (Foa & Riggs, 1995; Yehuda, 2002), and unfortunately women with PTSD experience both greater duration, and severity, of symptoms (Koss & Figueredo, 2004; Punamaki et al., 2005; Seedat et al., 2005). These factors occur within a larger framework of many types of violence against women (Elliot et al., 2004) and support a concerted effort by trauma therapy professionals to seek treatments that effectively, efficiently, and respectfully reduce negative sequalae of sexual assault and subsequent PTSD. A construct often concurrent with posttraumatic symptoms is dissociation (Michelson et al., 1998). Dissociation is conceptualized as a normative response to trauma that can continue to act as a protective shield, sometimes even after immediate danger is past (Steinberg & Schnall, 2001). This potential overworking of the dissociative response makes investigation of the impact of dissociation and peritraumatic dissociation on treatment outcome an important avenue for exploration. In this study, the aim was to gain insight regarding relationships between peritraumatic dissociation, dissociation, and PTSD therapy outcome.

Dissociation and Treatment Effectiveness

Hypothesis one. A relationship between peritraumatic dissociation and pretreatment PTSD symptoms was anticipated to reach significance, but results did not support this hypothesis ($r = -.01$, $p > .05$). However, there was a moderate correlation

between peritraumatic dissociation and follow-up posttraumatic stress disorder symptoms (r = -.35, p < .05). There is precedent for this increased relationship between peritraumatic dissociation in treatment follow-up (Boles, 1995; Zoellner et al., 2002). One interpretation of this finding is that the PDEQ and IES-R are measuring different, but related, aspects of treatment response. Peritraumatic dissociation accounted for 12% of unique variance in PTSD symptoms, similar to the findings of Martin and Marchand (2003). The relationship between peritraumatic dissociation and subsequent PTSD may be clarified through investigating mediation effects of additional factors.

Hypothesis two. There was an insignificant correlation between peritraumatic dissociation (PDEQ) and dissociation (DES) r = -29, p > .05. The DES was not significantly correlated with IES-R scores at either pretreatment or posttreatment, but was moderately correlated with three-month follow up (r = .23). The DES and the PDEQ share a pattern of increased correlation with the IES-R but were not significantly correlated with each other. This supports the supposition that the PDEQ and DES are capturing slightly different information and that, although they overlap, they address distinct posttraumatic symptoms.

Post hoc analyses. Results indicated there were no significant interactions between any of the predictor variables, including any of the dissociation related variables with IES-R pretreatment scores. The inclusion of the CDS-7 as a predictor variable did not appear to account for a significant amount of variance in PTSD symptom treatment outcome, although the CDS-7 was a better predictor of IES-R scores immediately after treatment than of three-month follow up scores. The intercorrelations between PDEQ, DES, and CDS-7 scores suggests there are partially convergent elements in what these

instruments are measuring. The bivariate outlier between the PDEQ and IES-R was investigated to gauge the impact it had on results. This participant's scores on the individual scales were not unusual, but the bivariate pattern may be indicative of a unique combination of these factors that was underrepresented in this sample, comprising a specific subset of the population.

Theoretical Implications

The study of dissociation and trauma response has been explored with waxing and waning levels of interest in recent history (Herman, 1992; van der Kolk, 2002b). Currently, there are still areas of debate, such as the nature of dissociation, and dissatisfaction with the diagnostic criteria for PTSD. The potential inaccuracies in the categorization of PTSD and/or dissociation impede full understanding of the processes involved in the development and maintenance of these constructs, in addition to our ability to address them in therapy.

The amalgamation of multiple trauma responder subgroups may obscure unique patterns of response to treatment. There is evidence of at least two distinct pathological responses to trauma (Bremner, 1999; Lanius et al. 2003): a dissociative/numbing subgroup and a re-experiencing/hyperarousal subgroup, but understanding of the relationship between these two response patterns has yet to emerge. In this study, differences between pretreatment and three-month follow up PTSD symptom correlations with peritraumatic dissociation support the contention that peritraumatic dissociative responses address aspects of functioning that are distinct from standard DSM-IV-TR PTSD symptom clusters. Dissociative symptoms may be differentially associated with PTSD symptoms of varying degrees of severity. In the current study differential

reduction in PTSD scores with treatment begins to shed light on with treatment the relationship between peritraumatic dissociation and classic PTSD symptoms. This relationship between peritraumatic dissociation and PTSD scores was not identified during the pre or immediate posttreatment assessments of PTSD scores, but became apparent at the three-month follow up. This observed relationship between delayed reduction in PTSD scores and peritraumatic dissociation was not anticipated, and supports the construct of distinctive response patterns to trauma therapy, depending on symptom patterns of participants. Prospective studies of responses to trauma have identified patterns of increasing dissociation over time, in the form of greater difficulty recalling the traumatic events. It may be that if individuals have predispositions to dissociate in response to traumatic incidents (whether innately or as a result of exposure to previous traumas), they may experience less intense trauma symptoms if left to avoid thinking about their traumas (as in the three-month follow up period with no symptom provocation from the study) than those who are less prone to dissociation.

The insignificant correlations between the dissociation measures indicate there is a great deal of unique information captured within each scale, with moderate overlap. Additionally, peritraumatic dissociation and dissociation measured by the DES demonstrate a similar pattern in relation to PTSD symptoms over the course of treatment and afterwards. The distinctive relationships of PDEQ and DES scores with PTSD scores may be clarified in future with the inclusion of additional mediators. These unidentified distinctions within the dissociation family of symptoms may blur understanding of underlying relationships with other posttraumatic responses, particularly considering they shared a negative relationship in this sample.

The treatment outcome literature has focused on classical PTSD symptom clusters. Differential response patterns to treatment may be obscured by lack of distinction between posttraumatic response sub-groups. The separation of trauma survivors into more specific posttrauma response categories may increase our understanding of the elements contributing to specific patterns of treatment response. The early history of investigation into trauma response patterns (e.g., Janet) included exploration of relationships between dissociative and abreactive posttraumatic responses. Returning to those broader observations and questions may clarify relationships between these two processes and response patterns.

Limitations of the Study

Screening criteria for the study stipulated that participants should have few traumatic experiences. The pattern of recovery for such individuals may have unfolded differently for survivors of early-onset, consistent childhood, multiple, or long-term traumas. Due to the small size of this sample, generalizability to the broader population is limited. Unfortunately, this limitation is not unique to this study. Spinazzola, Blaustein, and van der Kolk (2005) decried the exclusion criteria used in experimental studies that makes applying research results to clinical practice difficult. The authors stated that with some study exclusion criteria, 73% of PTSD sufferers would not be allowed to participate. The implications for lack of generalizability beyond these treatment samples are disheartening.

Also due to the limited sample size, the number of predictors in each multiple regression was restricted to two. However, Tabachnick and Fidell (2000) state "regression will be best when each IV is strongly correlated with the DV, but

uncorrelated with other IV's" (p. 116) and that pattern is reflected in this study (see Table 3). The limited number of predictors within each regression analysis may have contributed to the mild effect sizes, with the exception of the PDEQ and IES-R pre-treatment scores that were large. Scores were not separated into groups due to the low sample size. There is evidence that information derived from the composite treatment sample will have merit and generalizability across different therapeutic regimes. Support for this approach is found in the research on common versus specific treatment factors. Lambert (2005) describes common factors as the "dimensions of the treatment setting (therapist, therapy, client) that are not specific to any particular technique" (p. 856). The efficacy of psychotherapy interventions specific to an individual therapy is approximately 15% (Drisko, 2004; Samstag, 2002) and the rest to factors common across specific therapies. "There remains a surprising continued tendency toward technical competition among therapies, given the evidence for the relatively small relationship of so-called technical factors to treatment efficacy" (Samstag, 2002, p. 61).

Additionally, the length of commitment necessary to participate in the entire study may have contributed to the low number of participants, since they were asked to refrain from calling or visiting therapists other than those involved in the study for the duration of the research project (18 months). Nishith, and colleagues (2002), stated "It is important for the therapist to teach the clients that their symptoms are going to initially exacerbate, but if the clients stay with the protocol and do the therapeutic work expected of them, the symptoms eventually decline" (p. 885). The three sessions offered to participants in this study may not have provided the opportunity for symptoms to decline. For this reason, results may represent only responses to brief trauma therapy interventions, and may not

reflect the full impact of longer-term therapeutic interventions. Rothbaum (1997), however, reported significant reduction in PTSD symptoms after only four sessions of EMDR in female sexual assault victims (pre-tx $M = 47.4$; post-tx $M = 12.4$) which is a reduction of almost 75%. Power et al. (2002) defined clinically significant change as a reduction of two standard deviations of symptoms, and met this criterion with an average of 4.2 to 6.4 sessions. This criterion was not met in this study, but PTSD symptoms were reduced by 28% overall. Further investigation of specific treatment elements and factors that maximize reduction in PTSD scores are worthy of future attention.

Investigation regarding patterns of dissociation is truncated by the exclusion criterion of a score below 40 on the DES. This led to a suppression of possible scores, and may have contributed to the non-parametric distribution and subsequent need for transformation of DES scores. Non-clinical levels of dissociation were sought when beginning treatment to minimize interference with treatment for PTSD symptoms, due to the limited number of sessions available to participants. The possible floor effect in the DES may have contributed to the relatively low correlation with the PDEQ compared associations found in other research studies (Birmes et al., 2004; Tichenor et al., 1996).

Another limitation of the study is the focus on negative sequelae of the traumatic event. Simeon and colleagues (2005) found social support the most powerful predictor of improvement in PTSD symptoms after the World Trade center disaster (one year post-event). Frazier (2000) noted that many sexual assault survivors report positive life changes after their assaults, and those who retain these changes report less distress one year post-assault. She identified the positive change correlates as including social

support, cognitive restructuring, expressing emotions, and religious faith. In this study, positive repercussions were not explored.

Potential Impact of Research

This study will make a useful contribution to clinical work with sexual assault survivors who develop PTSD. The prevalence of women who are sexually assaulted and subsequently develop PTSD indicates there are a vast number of women in our society living with great distress without effective treatment. The roles of peritraumatic dissociation, dissociation as measured by the DES, and current dissociation still hold some mysteries, but the relationship between peritraumatic dissociation and PTSD symptoms after treatment may help clinicians provide a more informed approach to these elements of trauma treatment. One possible use of this knowledge would involve encouraging clinicians to assess peritraumatic dissociation at the beginning of treatment (only 10 items) and assess later impact of treatment on PTSD symptoms. In this study, PTSD symptom severity at 3-month follow up was significantly negatively associated with peritraumatic dissociation, but in other analyses in the same larger project (Grice, 2006) peritraumatic dissociation was positively associated with intensity and reliving of somatic and affective symptoms in response to triggering (script-driven symptom provocation). This suggests that those with higher levels of peritraumatic dissociation may appear less distressed than those with lower levels, until they are triggered by cues in the environment that remind them in some way of their traumas. This response pattern is fully supported in the work of Brewin (2001) who identified a pattern of increased Situationally Accessed Memories (SAMs) in individuals with PTSD. This is also a common pattern observed clinically, where many clients enter therapy and report feeling

worse, due to reduced dissociation, until the underlying posttraumatic symptoms are resolved.

Therapists who dedicate themselves to helping people overcome traumas need access to data regarding factors that may impact treatment effectiveness, and severity of posttraumatic symptoms. Schauben and Frazier (1995) conducted a study on the effects of female counsellors working with survivors of sexual violence. Their participants identified positive and negative aspects of their work, and the authors found that the work itself was not correlated with increased negative affect in the female counsellors. Despite this finding, the delicate nature of working with trauma survivors and the effects of vicarious exposure to trauma highlights the need for equipping counsellors with the most efficacious treatment regimes. Wampold et al. (2002) contend that a mutually informing and beneficial relationship between research and practice is necessary to provide the most effective treatment to clients. Empowering clients to make well-informed and research-supported choices is a priority in this new paradigm. The greatest potential benefit of the study is to provide greater understanding of the impact of dissociative elements on therapeutic interventions. This will allow counsellors to more effectively reduce posttraumatic symptoms and allow survivors to enjoy more physically, emotionally, and cognitively integrated lives. Treatment outcome literature is a valuable way to increase understanding of elements that impact and influence the treatment of PTSD. Another unique contribution of this study is the use of the PDEQ as a study variable, with multiple active treatment approaches. The lack of published treatment outcome studies incorporating the PDEQ as a predictor variable suggests this is an area ripe for further exploration.

Future Research Endeavours

Ehrenriech (2003) expressed concern that by focusing only on diagnosing and treating posttraumatic responses, the potential benefits of prevention are ignored. Reick and colleagues (2005) suggest "the struggle and endurance of trauma survival does seem to produce positive and optimistic outcomes that enhance personal well-being in some people, despite the possibility of persistent negative symptoms" (p. 94). A greater understanding of the ingredients that contribute to positive outcomes may encourage trauma therapists to increase these aspects in addition to reducing posttraumatic symptoms of distress and dissociation. Becker and Kaplan (1991) reiterate the impact of sexual assault on "the emotional, cognitive, social, and physical functioning" (p. 289) of survivors. Future researchers should explore treatment outcomes using a variety of measures encompassing these different areas of functioning.

Bremner (1999) mused that the separate diagnoses of Acute Stress Disorder, PTSD, and Dissociative disorders are more accurately and usefully conceptualized as trauma spectrum disorders. Extensive criticisms of the limitations of current PTSD diagnostic criteria (Bremner, 1999; Briere & Spinazzola, 2005; Carlson et al., 1998; Clum, 1999; Ehrenreich, 2003; van der Kolk, Spinazzola, & Hopper, in press; van der Kolk, Roth, Pelcovitz, Sunday, & Spinazzola, 2005; van der Kolk, 2002a) indicate that this area is sorely in need of further scholarly exploration and discussion. Our current understanding of posttraumatic processes may be inhibited by the categorical language we use to describe them. These processes may be more usefully understood as traumatic response tools, used to varying degrees depending on individuals' capacities to integrate traumatic experiences into their autobiographies. This encapsulates a more holistic

appreciation of the range of sequelae that occur after traumatic experiences, which includes a collection of responses. Much may be lost in the drive to view trauma survivors' experiences exclusively through the limiting lens of Acute Stress Disorder, PTSD, or Dissociative Disorder diagnostic criteria rather than by gathering information on the full spectrum of psychological, relational, emotional, physical, and spiritual impacts of psychological traumas and treatments. Categorization of experience is convenient as shorthand communication between professionals, or for normalizing posttraumatic responses but may unintentionally be limiting investigation regarding these processes. Perhaps what we are measuring or organizing into categories does not capture the full range of responses to trauma. This insufficient examination will reduce the effectiveness of treatment regimes derived from such incomplete knowledge of treatment outcomes.

Replications of this research will be useful for establishing generalizability of peritraumatic dissociation and treatment outcome findings from this study to other populations with PTSD, and extending evaluations to specific PTSD treatments. The CDS-7 was found to have a relationship with the PDEQ, suggesting that these instruments are measuring similar, or parallel, processes. The presence of peritraumatic dissociation and current dissociation as measured by the CDS-7 may only be noticeable at the time of a triggering event. This is in contrast to the DES, which measures daily experiences of dissociation. Increasing understanding of this relationship may clarify current models regarding patterns of dissociative response.

Conclusion

The population suffering from PTSD is a vulnerable, distressed group. This researcher believes there is an ethical responsibility for counsellors to provide the most effective and palatable therapeutic interventions available. Results of this study provide information regarding the impact of dissociation upon treatments for PTSD symptoms in sexual assault survivors. The purpose of this research was to thoughtfully consider how these factors influence treatment effectiveness, and the impact they have on various symptoms trauma survivor's experience. Peritraumatic dissociation, dissociation, and current dissociation are related, but separate, processes in the development and maintenance of posttraumatic stress disorder symptoms. There are many such elements that are not entirely understood. "Traumatic memories and traumatic amnesia remain frontier areas in the mental health sciences. We have yet to appreciate their nature, master their mysteries, or answer the profound questions they raise" (Kluft, 1999, p. 324). In time, through continued research and discussion, understanding of these constructs will increase. That knowledge, in turn, can be used to implement empirically supported treatment strategies.

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Table 1

Matrix of Anxiety Level and Physiological, Cognitive/Perceptual and Emotional/Behavioural Responses.

Level of Anxiety:	Physiologic	Cognitive/Perceptual	Emotional/Behavioural
Severe	"Fight or flight" response. Autonomic nervous system excessively stimulated. Muscles rigid, tense. Senses affected; hearing decreased, pain sensation decreased.	Perceptual field greatly narrowed. Problem solving difficult. Selective attention (focus on one detail). Selective inattention (block out threatening stimuli). Distortion of time (things seem faster or slower than actual) Dissociative tendencies.	Feels threatened, startles with new stimuli; feels on "overload". Activity may increase or decrease. May appear or feel depressed. Demonstrates denial; may complain of aches or pains; may be agitated or irritable. Need for space increased. Eyes may dart around room, or gaze may be fixed. May close eyes to shut out environment.
Panic	Above symptoms escalate until sympathetic nervous system release occurs. Person may become pale; blood pressure decreases; hypotension. Muscle coordination poor. Pain, hearing sensations minimal.	Perception totally scattered or closed. Unable to take in stimuli. Problem solving and logical thinking highly improbable. Perception of unreality about self, environment, or event. Dissociation may occur.	Feels helpless with total loss of control. May be angry, terrified; may become combative or totally withdrawn, cry or run. Completely disorganized. Behaviour is usually extremely active or inactive.

Table 2

Posttraumatic Stress Disorder Symptoms, Peritraumatic Dissociation, and Dissociation Measures: Correlations, Alpha Values, Means, and Standard Deviations.

	1	2	3	4	5	6
1. IES-R pre-tx[a]	--	--	--	--	--	--
2. IES-R immediate post[b]	.62**	--	--	--	--	--
3. IES-R follow-up[c]	.49*	.75**	--	--	--	--
4. PDEQ[d]	-.01	-.03	-.35	--	--	--
5. DES[e]	.41	-.12	.23	-.29	--	--
6. CDS-7[f]	.22	.36	.10	.38	.13	--
N	27	27	24	25	26	27
A	.92	.93	.96	.84	.81	.70
M[g]	1.78	1.56	1.28	2.82	3.92	.46
SD	.80	.82	1.00	.81	1.34	.25

[a]Impact of Event Scale-Revised Pre-treatment. [b]Impact of Event Scale-Revised Immediate Post-treatment. [c]Impact of Event Scale-Revised 3-Month Follow up [d]Peritraumatic Dissociative Experiences Questionnaire. [e]Dissociative Experiences Scale. [f] Current Dissociation Scale 7. [g]Means and standard deviations standardized for comparison.

*$p > .05$. **$p > .01$.

Table 3

Hierarchical Regression of IES-R Follow-Up Scores on PDEQ (predictor) and IES-R Pre-treatment Scores (covariate), N=22.

Variable	β	*R*	R^2 Δ	*F* Δ	*df*	*P*
IES-R Pre-tx	.49	.49	.24	7.39	1, 23	.01
PDEQ	-.35	.60	.12	4.23	2, 22	.05

Note. PDEQ = Peritraumatic Dissociative Experience Questionnaire; IES-R = Impact of Event Scale-Revised. The interaction between PDEQ and IES-R pre-treatment scores was not significant, $R^2\Delta = .00$, $p > .05$.

Table 4

Hierarchical Regression of IES-R Follow-Up Scores on DES (predictor) and IES-R Pre-treatment Scores (covariate), N=23.

Variable	β	R^2	R^2 Δ	*F* Δ	*df*	*P*
IES-R Pre-tx	.49	.25	.25	6.55	1, 22	.01
DES	.14	.27	.02	.50	2, 21	.49

Note. IES-R= Impact of Event Scale- Revised; DES= Dissociative Experiences Scale. The interaction between DES and IES-R pre-treatment scores was not significant, $R^2\Delta = .05$, $p > .05$.

Table 5

Hierarchical Regression of IES-R Immediate and Follow-Up Post-treatment Scores on Current Dissociation Scale-7 (predictor) and IES-R Pre-treatment Scores (covariate), N=24

Variable	β	R^2	R^2 Δ	*F* Δ	*df*	*p*
IES-R Immediate Post-tx						
IES-R Pre-tx	.62	.39	.39	15.82	1, 25	.001
CDS-7	.24	.44	.05	2.34	2, 24	.14
IES-R Follow-up						
IES-R Pre-tx	.49	.24	.24	7.39	1, 23	.01
CDS-7	.01	.24	.00	.00	2, 22	.98

Note. IES-R = Impact of Event Scale- Revised; CDS-7 = Current Dissociation Scale-7. The interaction between CDS-7 and IES-R pre-treatment scores was not significant, $R^2\Delta = .00$, $p > .05$. The interaction between CDS-7 and IES-R pre-treatment scores was not significant, $R^2\Delta = .00$, $p > .05$.

APPENDIX A

OVERVIEW OF TRAUMA STUDY

Instruments involved in this thesis are highlighted in **bold**.

Stage 1: Prescreening **1. Brief history interview (see Appendix (K)),** **2. Clinician Administered PTSD Scale (CAPS score must be 50 or greater) to qualify for PTSD diagnosis;** **3. Dissociative Experiences Scale II (DES II score below 40) to measure dissociation;** 4. **Traumatic Antecedents Questionnaire (TAQ cutoff of no more than 2 sexual assaults, and limited childhood or adolescent traumas)**
Stage 2: Baseline Assessment of Participants **1. Impact of Event Scale Revised (IES-R)** **2. Peritraumatic Dissociative Experiences Questionnaire (PDEQ)** 3. Beck Depression Inventory (BDI) 4. Traumatic Scene Form (TSF) **5. Current Dissociation Scale-7 (CDS-7)** 6. Trauma-Related Guilt Inventory (TRGI) 7. Myers-Briggs Type Indicator (MBTI) 8. Trauma Script tape-recording (based on TSF) 9. Quantitative Electro Encephalograms (QEEG) 10. Report Subjecive Units of Distress (SUDS) 11. Traumatic Memory Inventory- Post script version (TMI-PS interview) 12. Social Avoidance and Distress Scale (SAD) 13. Adult Attachment Interview (AAI) 14. Experiences of Assault and PTSD Interview
Stage 3: Psychoeducational Component **1. Psychoeducational Group on Breathing, Relaxation, Autogenics, Imagery, and Grounding (2 hours). All three groups receive this training.**

2. **Participants in Clinician-Administered treatments receive 2-hour psychoeducational group on their respective therapies, while the control group receives an additional session on relaxation skills.** 3. Credibility of Treatment Questionnaire (COTQ) is administered after each group session.
Stage 4: Treatment Attendance/ Utilization 1. **Attendance for 3 individual psychotherapy sessions with assigned treatment and/or** 2. **Utilization of self-administered therapy.**
Stage 5: Assessment of Treatment Effects of all Participants 1. CAPS **2. IES-R** 3. DES 4. QEEG 5. TMI-PS 6. BDI 7. TRGI 8. SADS 9. Experiences of Therapy/Changes in Symptoms Interviews
Stage 6: 3 month Follow-up Assessment of Treatment Effects of all Participants 1. CAPS **2. IES-R** 3. DES 4. QEEG 5. TMI-PS 6. BDI 7. TRGI 10. SADS 11. Experiences of Therapy/Changes in Symptoms Interviews
Stage 7: 6 Month Follow-up Assessment of Treatment Effects of all Participants 1. CAPS

2. IES-R 3. DES 4. QEEG 5. TMI-PS 6. BDI 7. TRGI 8. SADS 9. Experiences of Therapy/Changes in Symptom Interviews
Stage 8: Treatment effects Analysis 1. Data from the assessments will be analyzed using repeated measures ANOVA's 2. Clinician-administered treatment with the greatest reduction in PTSD scores will be offered to relaxation (control) group
Stage 9: Psychoeducational Component 1. Participants in original self-administered treatment group will attend psychoeducational training on the treatment they will receive next, and participants in control group will receive 2-hour group sessions for therapy with best treatment outcome in first half of study. 2. COTQ
Stage 10: Treatment Attendance/ Utilization 1. Attendance at 3 individual psychotherapy with assigned treatments
Stage 11: Final Assessment for Participants 1. CAPS 2. IES-R 3. DES 4. QEEG 5. TMI-PS 6. BDI 7. TRGI 8. SADS 9. Experiences of Therapy/Changes in Symptoms Interview

APPENDIX B

PROTOCOL FOR CPT AND OEI THERAPIST ADMINISTERED THERAPIES

SEXUAL ASSAULT & PTSD
Psychotherapy Overview for Therapist-Directed Active Treatments:
Cognitive Therapy & One Eye Integration

Guiding Principles

1. All interactions with participants must include core empathy & reflection.
2. Therapeutic regimens should not cross-over (i.e., no CT techniques in OEI).
3. Therapeutic protocols should be followed accurately per manualizations.

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1. Core Empathy & Reflection

In order to establish trust and rapport with participants (necessary for the development of therapeutic engagement), the psychotherapists should ensure that they convey warmth, genuineness and unconditional positive regard, verbally (through paraphrasing, active listening and advanced empathic statements), paraverbally (softer tones of voice, higher pitch, moderate pacing of speech, and use of supportive vocalizations ("um-hmm", "uh-huhhh")) and non-verbally (providing eye contact, nodding, smiling, and tolerating silence).

2. Cross-Over Avoidance

This is much less likely to occur, or warrant serious concern, for counselling sessions where Cognitive Therapy is being provided, than during sessions where One Eye Integration is being administered. The techniques of Cognitive Therapy are much more verbal (and therefore more likely to occur or be introduced inadvertently) than such specialized and deliberate non-verbal techniques as One Eye Integration. Examples to avoid in OEI sessions would include: Disputing distorted cognitions, challenging maladaptive schemas and correcting faulty thinking *verbally* (orally or in writing) during OEI sessions.

In OEI sessions, therapists are permitted to address *spontaneously-emerging* cognitions, but the work should involve almost exclusively nonverbal intervention (voice primarily used *para*verbally to provide support and encouragement, rather than to dispute beliefs or self-talk). An acceptable example would be for the client to be told to "focus on a disturbing internal self-critical statement that just emerged while attending to a physical sensation" while the therapist "tracks" through the visual field(s) until the disturbing thought is "the loudest, the most disturbing, or the most believable". The therapist would, upon having the

participant identify that location, "massage" the participant's eye(s) in that area until the intensity subsided.

3. Manualized Protocol Administration

The OEI therapy protocol for this study is delineated in (a) a PowerPoint presentation with video clips; (b) a 2-hour training video led by Dr. Rick Bradshaw, co-developer of OEI, and (c) a collection of handouts for therapists. Likewise, the variant of CPT used in this study is delineated in (a) a PowerPoint presentation with video clips; (b) a 2-hour training video led by Dr. Patricia Resick, co-developer of CPT, and (c) a collection of handouts for therapists.

In each group session (OEI and CPT), *overviews* of the therapies are provided and *prerequisite/foundational knowledge* is presented. In all individual therapy sessions with participants, use of the various core techniques is individualized, depending on the unique presentations of participants. It was considered more efficient to quickly identify areas associated with disturbing somatic or affective states and/or disturbing or confusing thoughts & beliefs, rather than having all participants receive identical treatments. With the latter approach, participants would likely resign from the study, since they would not be experiencing meaningful interactions with research team members. Instead, they would be receiving applications of rigid therapeutic templates, which would fail to directly address their concerns.

Participants will be encouraged to practice and apply the techniques they learn in all 3 group sessions, *between* any therapist-administered individual sessions, and *during* follow-up periods (3 months between post-treatment and 3-month follow-up assessments; and 3 months between 3- and 6-month follow-up evaluations). Finally, in the second phase of treatment (following the 6-month follow-up assessment), participants will be asked to refrain from using the therapy techniques during the first phase of the study (if *any* active treatment was provided)

APPENDIX C

COGNITIVE PROCESSING THERAPY-REVISED PROTOCOL

SEXUAL ASSAULT & PTSD STUDY
Cognitive Therapy Protocol
Excerpts and Adaptations from Resick (2001)[1]

Assimilation:

Before addressing any of the 5 cognitive themes, it is important to determine whether or not any given participant is engaging in Assimilation. That may include doubt or denial that the event was a crime (as opposed to a "misunderstanding"), guilt over what she did or did not do during the assault, including self-blame for the event (time of day, clothes worn, alcohol or drug consumption, etc.). See the first example on the "Stuck Points - What Are They?" Sheet.

Over-Accommodation

Next in line for therapist attention should be Over-Accommodation, which may include any number of negative over-generalizations about men, night hours (dark), activities inside or outside the home (depending on when her particular assault occurred) and about the future (relationships).

A. SAFETY ISSUES

Beliefs Related to Self

If 1 (a) is endorsed:

If she previously believed she had no control over events and could not protect herself, the traumatic event will confirm these beliefs. New beliefs must be developed that mirror reality and serve to increase her belief about her control and ability to protect herself. A self-statement may be "I do have some controI over events and I can take steps to protect myself from harm. I cannot control the behaviour of other people, but I can take steps to reduce the possibility that I will be in a situation where my control is taken from me."

If 1 (b) is endorsed:

If she previously believed "It can't happen to me," she will need to resolve the conflict between this belief and the victimization experience. Possible self-statement may be "It is unlikely to happen again, but the possibility exists."

If she previously believed "I can control what happens to me and can protect myself from any *harm,"* she will need to resolve the conflict between prior beliefs and the

[1] Cognitive Processing Therapy Manual

victimization experience. Possible self-statement may be "I do not have control over *every*thing that happens to me, but I can take precautions to reduce the possibility of future victimization."

Beliefs Related to Others

If 3 (a) is endorsed:

If she previously believed "'Others are out to harm me and can be expected to cause harm, injury or loss," she will need to adopt new beliefs in order for her to be able to continue to feel comfortable with people she knows and be able to enter into new relationships with others. Possible self-statement may be “There are some people out there who are dangerous, but not everyone is out to harm me in some way."

If 3 (b) is endorsed:

If she previously believed "I will not be hurt by others," she will need to resolve the conflict between that belief and the victimization. Possible self-statement may be "There may be *some* people who will harm others, but it is unrealistic to expect that everyone I meet will want to harm me."

B. TRUST ISSUES

Beliefs Related to Self

If 1 (a) is endorsed:

If she previously believed she could not rely on her own perceptions or judgements, the traumatic event may have reinforced her belief "I cannot trust my judgement" or "I have bad judgement." In order to come to understand that the traumatic event was not her fault and that her judgements didn't cause the traumatic event, she needs to adopt more adaptive beliefs. Possible self-statements may be:

“I can still trust my good judgement even though it's not perfect”.

“Even if I misjudged this person or situation, I realize that I cannot always realistically predict what others will do or whether a situation may turn out as I expect it to”.

If 1 (b) is endorsed:

If she previously believed she had perfect judgement, the traumatic event may shatter that belief. New beliefs need to reflect the possibility that she can make mistakes but still have good judgement. Possible self-statement may be: "No one has perfect judgement. I did the best I could in an unpredictable situation and I can still trust my ability to make decisions even though it's not perfect."

Beliefs Related to Others

If 3 (a) is endorsed:

If she had the prior belief "No one can be trusted," which was confirmed by the traumatic event, she will need to adopt new beliefs which will allow her to enter into new relationships with others instead of withdrawing because she believes others are untrustworthy. A possible resolution may be "Although I may find some people to be untrustworthy, I cannot assume that *every*one is that way." Additional resolutions include "Trust is not an all-or-nothing concept. Some may be more trustworthy than others." "Trusting another involves some risk, but I can protect myself by developing trust slowly and including what I learn about that person as I get to know him/her.

If 3 (b) is endorsed:

If she grew up believing that "Everyone can be trusted," the traumatic event will shatter that belief. In order to avoid becoming suspicious of the trustworthiness of others, including those she used to trust, she will need to understand trust is not either/or. "I may not be able to trust everyone, but that doesn't mean I have to stop trusting the people I used to trust."

If 5 (a) is endorsed:

If her beliefs about the trustworthiness of her support system were shattered, it will be necessary to address general issues before she assumes she can no longer trust them. Of central importance is to consider their reactions and the reasons *why* they may have reacted in unsupportive ways. Many people simply don't know *how* to respond, and may be reacting out of ignorance. Some respond out of fear or denial because what has happened to her makes them feel vulnerable and may shatter *their* beliefs.

Practicing how to ask for what she needs from those in her support system may be a step to take in assessing their trustworthiness. If her attempts to discuss the traumatic event with them leave her feeling unsupported, she may resolve the conflict by adopting the belief: "There may be *some* people I can't trust to talk with about the traumatic event, but they can be trusted to support me in *other* areas."

If that person continues to blame her and make negative judgments about her, she may decide that person is no longer trustworthy. It's unfortunate, but sometimes she will find out that some people she thought of as 'friends' don't turn out to be *true* friends after victimization; however, she may also be pleasantly surprised to find that some people have better reactions than she expected.

C. POWER & CONTROL ISSUES

Beliefs Related to Self

If 1 (a) is endorsed:

Resolution for helpless beliefs: In order to regain a sense of control and decrease the accompanying symptoms of depression and loss of self-esteem that often go along with believing she is helpless, she will need to reconsider the controllability of events. A possible self-statement could be, "I cannot control *all* events outside of myself, but I do have *some* control over what happens to me and my reactions to events."

If 1 (b) is endorsed:

Resolution for over-control will involve understanding that no one can have complete control over her emotions or behavior at all times. And, while she may influence them, it is impossible to control all external events or the behaviour of other people. Neither of these facts represent signs of weakness, only an understanding the she is human and can admit that she is not in total control of everything that happens to her or her reactions. A possible self-statement may, be "I don't have total control over my reactions, other people, or events at all times. I'm not powerless; however, to have *some* control over my reactions to events, or to influence the behaviour of others or the outcome of some events."

Beliefs Related to Others

If 3 (a) is endorsed:

Powerlessness - In order for her to avoid being abused in relationships because she does not exert any control, she will need to learn adaptive, balanced beliefs about her influence on other people. Possible self-statement could be, "Even though I can't always get everything I want in a relationship, I do have the ability to influence others by standing up for my right to ask for what I want."

If 3 (b) is endorsed:

Over-control - It is important to realize that healthy relationships involve sharing power and control. Relationships in which one person has all the power tend to be abusive (even if she is the one with all the power). Possible self-statements are "Even though I may not get everything I want or need out of a relationship, I can assert myself and ask for it." A good relationship is one in which power is balanced between both people. If she isn't allowed any control, she can exert her control in a negative or abusive relationship by ending it, if necessary.

D. ESTEEM ISSUES

Beliefs Related to Self

If 1 (a) is endorsed:

If she had prior experiences that left her believing she was worthless (or *any* of the beliefs listed below 1(a)), the traumatic event may seem to confirm that belief. This can also occur if she received poor social support after the event. In order to improve her self-esteem and reduce the symptoms that often go along with it, she will need to re-valuate her beliefs about her self-worth, and begin to replace maladaptive beliefs with more realistic, positive ones. Possible self-statements include:

"Sometimes bad things happen to good people".

"Just because someone says something bad about me, that doesn't make it true".

"No one deserves *this*, and that includes me".

"Even if I *have* made mistakes in the past, that doesn't make me a *bad person*, deserving of unhappiness or suffering (including the traumatic event)".

If 1 (b) is endorsed:

If she had positive beliefs about her self-worth before the traumatic event, she may have believed "Nothing bad will happen to me because I'm a good person." The event may have disrupted such beliefs, and she may begin to think she's a bad person because this event happened, or look for reasons why it happened or what she did to deserve it (i.e., "Maybe I was being punished for something I'd done, or because I'm a bad person.")

In order to regain her prior positive beliefs about her self-worth, she'll need to make some adjustments, so that her sense of worth is not disrupted every time something unexpected and bad happens to her. When she can accept that bad things might happen to her (as they happen to everybody from time to time), she'll let go of blaming herself for events she didn't cause. Possible self-statements include:

"Sometimes bad things happen to good people".

"If something bad happens to me, it's not necessarily because I did something to cause the event, or because I deserved it".

"Sometimes there's *no good explanation* for why bad things happen".

Beliefs Related to Others

If 4 (a) is endorsed:

It will be important for her to reconsider the automatic assumption that people are “no good”, and consider how that belief has affected her behaviour and social life in general.

When she first meets someone it is important that she doesn’t form snap judgments, because these tend to be based on stereotypes, which are not generally true for the majority of people she will meet. It’s better to adopt a "wait and see" attitude, which allows her flexibility in developing her perceptions of the other person, and doesn’t penalize the person who she is trying to get to know.

If, over time, that person makes her uncomfortable, or does things that she doesn't approve of, she’s free to stop trying to develop the relationship, and end it.

She needs to be aware, however, that *all* people make mistakes, and consider her ground rules for friendships or intimate relationships. If she confronts a person with something that makes her uncomfortable, she can use that person's reaction to her request in making a decision about what she wants from that person in the future (i.e., If the person is apologetic and makes a genuine effort to avoid making the same mistake in the future, then she might want to continue getting to know that person. On the other hand, if the person is insensitive to her request or belittles her in some other way, she may want to get out of that relationship).

The important point is that, like trust, she needs time to get to know someone, form an opinion of them. It is important that she adopts a view of others that is balanced and allows for changes.

A possible self-statement is "Although there are people I don’t respect and don’t want to know, I can’t assume that about everyone I meet. I may come to that conclusion later, but it’ll be after I’ve learned more about this person."

If 4 (b) is endorsed:

If those she expected support from let her down, she needs to be encouraged not to drop those people altogether at first. Encourage her to talk to them about how she feels, and what she wants from them. Encourage her to use their reactions to her requests as a way to evaluate where she wants her relationships to go. A possible self-statement could include: "People sometimes make mistakes. I will try to find out whether they understand it was a mistake or whether it reflects a negative characteristic of that person, which may end the relationship for me, if it is something I cannot accept."

E. INTIMACY ISSUES

Beliefs Related to Self

If 1 (a) is endorsed:

Understanding normal reactions following traumas may help her feel less panicky about what she is experiencing. It is important to emphasize that most people can't recover from such major traumatic events without the support of others. External sources of comfort such as alcohol or food, however, are just crutches which, instead of heIping her to recover, may in fact prolong her reactions. Those temporary resournces may comfort her in the short-run because she has used them successfully to avoid and suppress her feelings. The feelings don't go away, however, and then she also has to deal with the consequences of the excess food, spending, alcohol, etc., which just compounds the problem.

Possible self-statements to work on with her include:

"I will not suffer forever".

"I can soothe myself and use the skills I have learned to cope with these negative feelings".

"I may need help dealing with my reactions, but that is normal".

"Even though my feelings are quite strong and unpleasant to experience, I know they are temporary and will fade over time".

"The skills and abilities I am developing now will help me to cope better with other stressful situations in the future".

If 1 (b) is endorsed:

Nothing needs work in this area, except perhaps some reminders to use the self-soothing techniques which were included in the B.R.A.I.N. program.

Beliefs Related to Others

If 3 (a) is endorsed:

In order for her to again have intimate relationships with others, she will need to adopt new, more adaptive beliefs about intimacy. Intimate relationships take time to develop and involve effort from both people. It is important to stress that she is not solely responsible for the failure of prior relationships. The development of relationships involves risk-taking, and it is possible that she may be hurt again. Staying away from

relationships for that reason alone, however, is likely to leave her feeling empty and alone.

Possible self-statements regarding new relationships include:

“Even though a former relationship didn’t work out, it doesn’t mean that I can’t have satisfying intimate relationships in the future”.

“I can’t continue to believe and behave as though everyone will betray me”.

“I will need to take risks in developing relationships in the future, but if I take it sIow, I’ll have a better chance of telling whether any particular person can be trusted”.

If 3 (b) is endorsed:

Not too much to work on, since the prior history of solid relationships will likely serve to frame an interpretation of the sexual assault/betrayal as a “statistical outlier” rather than something to be generalized to others in the world in general.

If 5 (a) is endorsed:

Encourage her to attempt to resolve her issues with the people who let her down and hurt her, by asking from them what she needs, and letting them know how she feels about what they said or did. Stress that if those people are unable to adjust to her requests or give you what she needs, she may decide that she can’t be c!ose to those people any longer. She may find, however, that they responded the way they did due to ignorance or fear. As a result of her efforts, communication may improve and she may end up feeling closer to them than she did before the sexual assault.

Possible self-statements to encourage, regarding existing relationships, include:

“I can still be close to people, but I may not be able (or want) to be intimate with everyone I meet”.

“I may lose prior or future intimate relationships with others who can’t meet me half-way, but that’s not my fault or due to the fact that I didn’t try”.

If 5 (b) is endorsed:

Again, not likely much to work on, since the validation and support from solid relationships has confirmed, and will continue to confirm, that others in her social network can be relied upon for encouragement and strength during times of upheaval and crisis.

APPENDIX D

ONE EYE INTEGRATION THERAPY PROTOCOL

One Eye Integration "Switching" procedure
(Grace, 2003)

1. The subject is instructed to close his or her eyes and play the traumatic incident through in his or her mind from start to finish "like a movie". During this reflection, the subject is encouraged to let the therapist know when he or she first feels any of the following:

   Physical Signs:

   →Chest "compression" (tension or constriction near the solar plexus);
   →Diaphragmatic "restriction" (difficulty taking in a full breath);
   →Nausea, cramping or "fluttering" in the stomach;
   →Head pain, pressure, numbness or tingling:
   →Throat constriction or closing;
   →Visual distortion or blurring.

   Emotional Signs:

   →Fear, shock or anxiety;
   →Sadness or "hurt";
   →Anger or rage;
   →Shame/guilt.

   As soon as she or he feels any of these, the instruction is given to first cover the left eye and report the intensity of the physical and/or emotional sign from "0" ("Doesn't bother you at all") to "10" ("The worst you have ever felt"). This is a modification of Wolpe's (1990) Subjective Units of Distress (SUD) Scale.

   If the subject (S) shows Negative Intensity Markers (facial flush, reddening around the eyes, tears, halting of breathing, shaking, or furrowing of the brow), or reports a high SUDS rating, the instruction is given to uncover the left eye and cover the right eye. The S is then asked to report the SUDS rating with the left eye open. If the SUDS ratings with the left *and* right eyes open (one at a time) are *both* high, the S is instructed to begin rapidly alternating open eyes (covering and uncovering first the left, then the right eye), approximately every second.

   This alternation can be as fast as every half-second if extreme Negative Intensity Markers are observed. This is kept up (usually 25-50 "Switches") until a shift or "release" is either *observed* by the therapist or *reported* by the subject. At that time, the S is instructed to check intensity levels (either physical or emotional sign) with the right, then left eye, covered and note which one is lower in intensity (SUDS). The

S is told to "stay on the eye" (i.e., keep the eye uncovered) that is associated with the lowest SUDS level[2].
It is most common for Ss to come *down* in SUDS ratings 2-3 points with each "round" of (i.e., series of 25-50) rapid "Switching". This may be repeated 2 or 3 times, if the S reports equal SUDS ratings with each eye open.

The S is instructed to continue thinking about the scene, or face, or physical sensation from the trauma that is disturbing and continue checking and reporting SUDS levels with each of the eyes alternately covered and uncovered. If the S reports that a *lower* (rather than equal and high) SUDS level is experienced with *one* of the eyes covered, he or she is instructed to remain with that same eye covered until the SUDS level goes down "*as low as* it feels like it will go". The S is then told to "Switch" (the eye that is covered) and notice whether what he or she experiences is the "same as" or "different from" what he or she just experienced when the *other* eye was covered.[3] If the intensity goes *up*,[4] the S is instructed to quickly "Switch" back to covering the other eye. This process is continued until the specific intensity is reduced to SUDS levels of "2" or lower.

2. The S is then instructed to *continue* "playing the movie" of the trauma until he or she again feels some form of physical or emotional intensity. The whole procedure is continued (steps 1, 2 and 3), as necessary, until the S reports little or no physical or emotional intensity while "playing the whole movie" of the trauma from start to finish. The S is then instructed to consider whether this trauma reminds him or her of any other, perhaps similar, traumas and, as time allows, these are also desensitized using steps 1, 2 and 3. Still another approach that is used to activate and access dissociated portions of memories is to track across multiple dimensions of the traumatic experiences, from what is "known" to what is "unknown". An example would be a subject who could remember what he or she felt in his or her body, but

3. had no visual, auditory or emotional connections to the same moment or event. He or she would be instructed to keep thinking of the same body sensations and event, while noticing any emotions, or audio-visual reactions he or she experienced.

4. Occasionally a subject would report a *lower* SUDS intensity (for fear, shock or anxiety) with the *right* eye open, even though he or she was focussed on an obviously emotionally and physically horrific scene. If this occurred, the therapist asked "Can

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[2] For most right-hand dominant Ss, they will report that when the right eye is open, the highest SUDS levels are experienced. The major exception to this is for the emotion of "Sadness/Hurt", which is often associated with the highest SUDS ratings with the left eye open.

[3] In body location (head, stomach, chest, throat or jaw), type of sensation (pain, numbness, or tingling) or intensity (SUDS 0-10).

[4] The S is instructed to "pay attention to the first sign that the intensity is increasing, and "Switch" immediately, rather than letting the intensity build up. That gives the S a greater sense of control over physical and emotional intensity, and also avoids activation of overwhelming intensity. It should be noted that, unlike Prolonged Exposure therapy, OEI does not require Ss to experience high levels of distress in order to effectively process (integrate) posttraumatic states.

you believe that happened" (or that he/she did that to you)? After several "Switches" the same question is asked. Usually, believability *increases*, dissociation *decreases* and therapy moves more freely.

APPENDIX E

BREATHING, RELAXATION, AUTOGENICS, IMAGERY AND GROUNDING

(BRAIN) PROTOCOL

B.R.A.I.N. 2 Group Session

4. ABDOMINAL BREATHING

Shift from chest (or thoracic) breathing to diaphragmatic (or abdominal) breathing. Chest breathing is often shallow, irregular, and usually rapid. This can lead to breath-holding, hyperventilation, constricted breathing, shortness of breath, and even fear of fainting.

- Place one hand on your abdomen and the other on your chest.
- Close your eyes and take a deep breath in through your nose.
- Notice how much each of your hands rises (the goal is to have the hand on your abdomen rise (or be pushed out) more than the one on your chest).
- If you're still having difficulty with this one, you can lie on your back, or even better on your stomach, resting your head on your folded hands.

1. BREATHING ACTIVITIES

While breathing, it is often helpful to engage in other movements, thoughts or patterns:

- Count each time you exhale, in sets of four, for 5 to 10 minutes.
- Sigh deeply, letting out a sound of deep relief as the air rushes from your lungs (if you sigh or yawn during the day it's usually an indication you're not getting enough oxygen).
- As you inhale say to yourself, "Breath in relaxation", and as you exhale say to yourself, "Breath out tension".
- Pretend you're blowing through a straw and exhale a little of the air with considerable force through the small opening between your lips, in small, forceful puffs.
- Try rotating your arms alternately like a windmill while breathing.
- Stand with your hands on your hips and bend forward, backward, to the right and to the left while you exhale.
- Placing your hands gently on your solar plexus, imagine that energy is rushing into your lungs and is stored in your solar plexus, to flow out to all parts of your body with each exhalation.
- Put your hand at a point in your body which is either tense or painful. Inhale and imagine energy coming in and being stored. As you exhale, imagine the energy

flowing to the spot that hurts, and stimulating it. Imagine the energy driving out the pain with each exhalation.
- Do the same with any point in your body that has been injured or is infected.
- Rest your index and second finger of your right hand on your forehead. Close your right nostril with your thumb and inhale slowly & soundlessly through your left nostril. Close your left nostril with your ring finger and simultaneously open your right nostril by removing your thumb and inhale. Continue alternating.
- Try walking, pacing your steps to match a slow rate of breathing.
- Say to yourself the word "In" as you inhale and "Calm" as you exhale.

2. PROGRESSIVE MUSCULAR TENSING & RELAXATION

Sometimes in order to become more aware of the first signs of stress, we need to increase our ability to differentiate *tense* muscles from extremely *relaxed* ones:

Hold it for 1…2…3…4…5 seconds, and now release the tension. With each breath, releasing more tension in your hands, forearms and biceps.

- Work through the following muscle groups in order:
  Hands, forearms, & biceps;
  Head, face, throat & shoulders;
  Chest, stomach & lower back; and
  Thighs, buttocks, calves & feet.

  Tense each muscle group from 5 to 7 seconds, and then release for 20 to 30

seconds. Practice in each muscle group up to five times.

- When *un*tensing, use the following release expressions:
  "Let go of the tension", "Throw away the tension", "I am feeling calm and rested";

  "Relax and smooth out the muscles"; and "Let the tension dissolve away".

- Start by clenching your dominant fist, then curl both fists, then tighten biceps and forearms ("Charles Atlas" pose)
- Move to wrinkling up forehead, wrinkle up muscles in face like a walnut, frown, squint eyes, purse lips, press tongue to roof of mouth, and hunch up shoulders.
- Next, arch back as you take a deep breath into the chest and press out the stomach.
- Finally, pull feet and toes back toward face, tightening shins; curl toes, simultaneously tightening calves, thighs and buttocks.
- After each of these tightening exercises, hold them for 5 to 7 seconds and then relax. Continue to take deep breaths, releasing more tension with each breath, until you find absolutely *no trace* of tension in the muscle group you have just tensed. Use the relaxation phrase "Let go more and more".

APPENDIX F

PERITRAUMATIC DISSOCIATIVE EXPERIENCES QUESTIONNAIRE- SELF-REPORT VERSION (PDEQ-SR)

Instructions: Please complete the items below by circling the choice that best describes your experiences and reactions **during the _____ and immediately afterward**. If an item does not apply to your experience, please circle "Not at all true."

1. I had moments of losing track of what was going on I "blanked out", or "spaced out" or in some way felt that I was not part of what was going on.

1	2	3	4	5
Not at all true	Slightly true	Somewhat true	Very true	Extremely true

2. I found that I was on "automatic pilot"- I ended up doing things that I later realized I hadn't actively decided to do.

1	2	3	4	5
Not at all true	Slightly true	Somewhat true	Very true	Extremely true

3. My sense of time changed- things seemed to be happening in slow motion.

1	2	3	4	5
Not at all true	Slightly true	Somewhat true	Very true	Extremely true

4. What was happening seemed unreal to me, like I was in a dream or watching a movie or play.

1	2	3	4	5
Not at all true	Slightly true	Somewhat true	Very true	Extremely true

5. I felt as though I were a spectator watching what was happening to me, as if I were floating above the scene or observing it as an outsider.

1	2	3	4	5
Not at all true	Slightly true	Somewhat true	Very true	Extremely true

6. There were moments when my sense of my own body seemed distorted or changed. I felt disconnected from my own body, or that it was unusually large or small.

1	2	3	4	5
Not at all true	Slightly true	Somewhat true	Very true	Extremely true

7. I felt as though things that were actually happening to others were happening to me- like I was being trapped when I really wasn't.

1	2	3	4	5
Not at all true	Slightly true	Somewhat true	Very true	Extremely true

8. I was surprised to find out afterward that a lot of things had happened at the time that I was not aware of, especially things I ordinarily would have noticed.

1	2	3	4	5
Not at all true	Slightly true	Somewhat true	Very true	Extremely true

9. I felt confused; that is, there were moments when I had difficulty making sense of what was happening.

1	2	3	4	5
Not at all true	Slightly true	Somewhat true	Very true	Extremely true

10. I felt disoriented; that is, there were moments when I felt uncertain about where I was or what time it was.

1	2	3	4	5
Not at all true	Slightly true	Somewhat true	Very true	Extremely true

Scoring Key: Add scores from each item to generate total score.

Adapted from Marmar CR, Weiss DS, Metzler TJ (1997). 'The peritraumatic dissociative experiences questionnaire'. In Wilson J.P. et al. (Eds.). Assessing psychological trauma and PTSD. NY: GuildfordPress.

APPENDIX G

DISSOCIATIVE EXPERIENCES SCALE (DES)

DES

Eve Bernstein Carison, Ph .D. Frank W. Putnam, M. D.

DIRECTIONS

This questionnaire consists of twenty-eight questions about experiences that you may have in your daily life. We are interested in how often you have these experiences. It is important, however, that your answers show how often these experiences happen to you when you are not under the influence of alcohol or drugs. To answer the questions, please determine to what degree the experience described in the question applies to you and mark the line with a vertical slash at the appropriate place, as shown in the example below.

Example:

0% I ---------- /----------I 100%

Date_____ Age _____ Sex: M F _____

1. Some people have the experience of driving a car and suddenly realizing that they don't remember what has happened during all or part of the trip. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

2. Some people find that sometimes they are listening to someone talk and they suddenly realize that they did not hear part or all of what was said. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

3. Some people have the experience of finding themselves in a place and having no idea how they got there. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

4. Some people have the experience of finding themselves dressed in clothes that they don't remember putting on. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

5. Some people have the experience of finding new things among their belongings that they do not remember buying. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

6. Some people sometimes find that they are approached by people that they do not know who call them by another name or insist that they have met them before. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

7. Some people sometimes have the experience of feeling as though they are standing next to themselves or watching themselves do something and they actually see themselves as if they were looking at another person. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

8. Some people are told that they sometimes do not recognize friends or family members. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

9. Some people find that they have no memory for some important events in their lives (for example, a wedding or graduation). Mark the line to show what percentage of the important events in your life you have no memory for.

0% I ----------I 100%

10. Some people have the experience of being accused of lying when they do not think that they have lied. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

11. Some people have the experience of looking in a mirror and not recognizing themselves. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

12. Some people have the experience of feeling that other people, objects, and the world around them are not real. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

13. Some people have the experience of feeling that their body does not seem to belong to them. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

14. Some people have the experience of sometimes remembering a past event so vividly that they feel as if they were reliving that event Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

15. Some people have the experience of not being sure whether things that they remember happening really did happen or whether they just dreamed them. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

16. Some people have the experience of being in a familiar place but finding it strange and unfamiliar. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

17. Some people find that when they are watching television or a movie they become so absorbed in the story that they are unaware of other events happening around them. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

18. Some people find that they become so involved in a fantasy or daydream that it feels as though it were really happening to them. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

19. Some people find that they sometimes are able to ignore pain. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

20. Some people find that that they sometimes sit staring off into space, thinking of nothing, and are not aware of the passage of time. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

21. Some people sometimes find that when they are alone they talk out loud to themselves. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

22. Some people find that in one situation they may act so differently compared with another situation that they feel almost as if they were two different people. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

23. Some people sometimes find that in certain situations they are able to do things with amazing ease and spontaneity that would usually be difficult for them (for example: sports, work, social situations, etc.). Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

24. Some people sometimes find that they cannot remember whether they have done something or have just thought about doing that (for example: not knowing whether they have just mailed a letter of have just thought about mailing it). Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

25. Some people find evidence that they have done things that they do not remember doing. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

26. Some people sometimes find writings, drawings, or notes among their belongings that they must have done but cannot remember doing. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

27. Some people sometimes find that they hear voices inside their head that tell them to do things or comment on things that they are doing. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

28. Some people sometimes feel as if they are looking at the world through a fog so that people and objects appear far away or unclear. Mark the line to show what percentage of the time this happens to you.

0% I ----------I 100%

Scoring Key: Measure milimetres within visual analogue scales and assign 1% for each milimetre. Add the total of the 28 items, and then divide by 28 for the total score.

APPENDIX H

IMPACT OF EVENT SCALE-REVISED (IES-R)

INSTRUCTIONS: Below is a list of difficulties people sometimes have after stressful life events. Please read each item, and then indicate how distressing each difficulty has been for you DURING THE PAST SEVEN DAYS with respect to _____. How much were you distressed or bothered by these difficulties?

0 = Not at all; I = A little bit; 2 = Moderately; 3 = Quite a bit; 4 = Extremely.

1. Any reminder brought back feelings about it.

   0_____ 1_____ 2_____ 3_____ 4_____

2. I had trouble staying asleep.

   0_____ 1_____ 2_____ 3_____ 4_____

3. Other things kept making me think about it.

   0_____ 1_____ 2_____ 3_____ 4_____

4. I felt irritable and angry.

   0_____ 1_____ 2_____ 3_____ 4_____

5. I avoided letting myself get upset when I thought about it or was reminded of it.

   0_____ 1_____ 2_____ 3_____ 4_____

6. I thought about it when I didn't mean to.

   0_____ 1_____ 2_____ 3_____ 4_____

7. I felt as if it hadn't happened or wasn't real.

   0_____ 1_____ 2_____ 3_____ 4_____

8. I stayed away from reminders of it.

   0_____ 1_____ 2_____ 3_____ 4_____

9. Pictures about it popped into my mind.

   0_____ 1_____ 2_____ 3_____ 4_____

10. I was jumpy and easily startled.

    0_____ 1_____ 2_____ 3_____ 4_____

11. I tried not to think about it.

    0_____ 1_____ 2_____ 3_____ 4_____

12. I was aware that I still had a lot of feelings about it, but I didn't deal with them.

0_____ 1_____ 2_____ 3_____ 4_____

13. My feelings about it were kind of numb.

0_____ 1_____ 2_____ 3_____ 4_____

14. I found myself acting or feeling like I was back at that time.

0_____ 1_____ 2_____ 3_____ 4_____

15. I had trouble falling asleep.

0_____ 1_____ 2_____ 3_____ 4_____

16. I had waves of strong feelings about it.

0_____ 1_____ 2_____ 3_____ 4_____

17. I tried to remove it from my memory.

0_____ 1_____ 2_____ 3_____ 4_____

18. I had trouble concentrating.

0_____ 1_____ 2_____ 3_____ 4_____

19. Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart.

0_____ 1_____ 2_____ 3_____ 4_____

20. I had dreams about it.

0_____ 1_____ 2_____ 3_____ 4_____

21. I felt watchful and on-guard.

0_____ 1_____ 2_____ 3_____ 4_____

22. I tried not to talk about it.

0_____ 1_____ 2_____ 3_____ 4_____

Scoring Key:
The Intrusion subscale is the mean item response of items 1, 2, 3, 6, 9, 14, 16, 20. Thus, scores can range from 0 through 4.
The Avoidance subscale is the mean item response of items 5, 7, 8, 11, 12, 13, 17, 22. Thus, scores can range from 0 through 4.
The Hyperarousal subscale is the mean item response of items 4, 10, 15, 18, 19, 21. Thus, scores can range from 0 through 4.
Total score is the mean item response of every item. Thus scores can range from 0 to 4.

APPENDIX I

CURRENT DISSOCIATION SCALE-7 (CDS-7)

The CDS is comprised of seven items in three separate categories. The items were derived from clinical experience (Dr. Richard Bradshaw, personal communication, April 14, 2006). Data were collected through researcher observations, and the self-reports of participants.

CDS-7

A. Observations of Researcher after listening to audiotape of trauma experience. Circle the letter of any item(s) that apply(ies).
    a. "glazed" eyes, indicated unusually "spaced out" state for *this specific client*.
    b. delayed or confused responses to verbal auditory questions (*unusual for client*)
B. Subjectively Perceived Dissociative Symptoms, ask participant "Did you have any of these symptoms in the last hour during the times you were asked to remember the audiotape and focus on your experience of that recollection?". Circle the letter(s) of any item(s) that apply(ies).
    a. numbness and tingling in hands, face, or feet.
    b. visual blurring or distortions
    c. dizziness, lightheadedness, or loss of balance.
C. Subjective Analysis of Qualitative item. Ask participant "Were you thinking about or remembering anything else while listening to the audiotape and/or during the post-tape remembering phase?" Record yes/no response.

D. Ask participant to rate the percentage of time reflecting on audiotape of traumatic event during which participant "Spaced out" and have them mark their response on the visual analogue scale below. *

0%_____100%

* For analysis this item response was dichotomized via median split into "equal to or less than 10%" and "greater than 10%".

APPENDIX J

CLINICIAN ADMINISTERED PTSD SCALE (CAPS)

National Center for PTSD

CLINICIAN-ADMINISTERED PTSD SCALE FOR DSM-IV

Name: _____ *I.D. #:* _____

Interviewer: _____ Date: _____
Study: _____

Dudley D. Blake, Frank W. Weathers, Linda, M Nagy,
Danny G. Kaloupek, Dennis S. Charney, & Terence M. Keane.

National Center for Posttraumatic Stress Disorder

Behavioural Science Division – Boston VA Medical Center
Neurosciences Division – West Haven VA Medical Center

Revised July 1998

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 other (2) the person's response involved intense fear, helplessness, or horror. Note: In children, this may be expressed instead by disorganized or agitated behaviour

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 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?

ADMINSTER CHECKLIST, THEN REVIEW AND INQUIRE UP TO THREE EVENTS. IF MORE THAN THREE EVENTS ENDORSED, DETERMINE WHICH THREE EVENTS TO INQUIRE (E.G. FIRST, WORST AND MOST RECENT EVENTS; THREE WORST EVENTS; TRAUMA OF INTEREST PLUS TWO OTHER WORST EVENTS, ETC.)

IF NO EVENTS ENDORSED ON CHECKLIST: (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

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). A. (1) Life threat? No YES (self_____ other____) Serious injury? No YES
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?	(self_____ other____) Threat to physical integrity? NO YES (self___ other___) A. (2) Intense fear/help/horror? NO YES (self____ other___) Criterion A met? NO PROBABLE YES

EVENT # 2

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 (self____ other___) Criterion A met? NO PROBABLE YES

EVENT # 3

What happened? (How old were you? Who else was involved? How many times did this happen? Life threat? Serious injury?	DES cribe (e.g. event type, victim, perpetrator, age, frequency). A. (1) Life threat? No YES

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?	(self_____ other____) Serious injury? No YES (self_____ other____) Threat to physical integrity? NO YES (self___ other___) A. (2) Intense fear/help/horror? NO YES (self____ other___)
	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-five questions altogether. Most of them have two parts. First, I'll ask if you've ever had a particular problem, and if so, about how often in the past month (week). Then I'll ask you how much distress or discomfort that problem may have caused you.

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

1. (B-1) recurrent and intrusive distressing recollections of the event, including images, thoughts or perceptions. **Note:** In young children, repetitive play may occur in which themes or aspects of the trauma is expressed.

Frequency Have you ever 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 (week)? 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**	**Intensity** 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)	**Past Week** F _____ I _____ <u>Past</u> **Month** F _____ I _____ Sx: Y N **Lifetime** F _____ I _____ Sx: Y N

2. (B-2) recurrent distressing dreams of the event. **Note:** In children, there may be frightening dreams without recognizable content.

<u>Frequency</u> Have you ever had unpleasant dreams about the (EVENT)? Describe a typical dream? (What happens in them?) How often have you had these dreams in the past month (week)?	**Intensity** 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	F _____ I _____

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**	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?) 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 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, hallucination, and Dissociative flashback episodes, including those that occur on awakening or when intoxicated). **Note:** In young children; trauma-specific reenactment may occur.

Frequency	**Intensity**	**Past week**
Have you ever suddenly acted or felt as if (EVENT) were happening again? (Have you ever had flashbacks about [EVENT}?) (Did this ever occur while you were awake, or only in dreams?) [EXCLUDE IF OCCURRED ONLY DURING DREAMS] Tell	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?) What did you do while this was happening? How long did it last? (Did other people notice your behaviour? What did they say?)	F _____ I _____ **Past month** F _____

me more about that. How often has that happened in the past month (week)? 0 Never 1 Once or twice 2 Once or twice a week 3 Several times a week 4 Daily or almost every day	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 **d**issociation (flashback), no awareness of surroundings, may be unresponsive, possible amnesia for the episode (blackout) QV (specify)	I _____ Sx: Y N **Lifetime** 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**	**Past Week**
Have you ever gotten emotionally upset when something reminded you of (EVENT)? (Has anything triggered bad feelings related to (EVENT)? What kinds of reminders made you upset? How often in the past month (week)? 0 Never 1 Once or twice 2 Once or twice a week 3 Several times a week 4 Daily or almost every day	How much distress or discomfort did these reminders cause you? How long did it last? 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,	F _____ I _____ **Past Month** F_____ I _____ Sx: Y N

Description **/Examples**	marked disruption of activities. 4 Extreme, incapacitating distress, cannot dismiss memories, unable to continue activities. QV (specify)	**Lifetime** F _____ I _____ Sx: Y N

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

Frequency Have you ever had physical reactions when something reminded you of the (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 your breathing change? What about feeling really intense or shaky?) What kinds of reminders triggered these reactions? How often in the past month (week)? 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	**Intensity** How strong were (PHYSICAL REACTIONS)? 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 in exposure continues 3 Severe, marked physical reactivity, sustained throughout exposure 4 Extreme, dramatic physical reactivity, sustained arousal even after exposure has ended QV (specify)	**Past Week** F _____ I _____ **Past Month** F_____ I _____ Sx: Y N **Lifetime** 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, and conversations associated with the trauma

Frequency	**Intensity**	**Past Week**
Have you ever tried to avoid thoughts or feelings about (EVENT)? (What kind 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 (week)? 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 No physical reactivity 1 Mild, minimal reactivity 2 Moderate, physical reactivity clearly present, may be sustained in 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_____ **Past Month** F_____ I_____ Sx: Y N **Lifetime** F_____ I_____ Sx: Y N

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

Frequency	**Intensity**	**Past Week**
Have you ever had physical reactions when something reminded you of the	How strong were (PHYSICAL REACTIONS)? How long	F _____

(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 your breathing change? What about feeling really intense or shaky?) What kinds of reminders triggered these reactions? How often in the past month (week)? 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**	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 in exposure continues 3 Severe, marked physical reactivity, sustained throughout exposure 4 Extreme, dramatic physical reactivity, sustained arousal even after exposure has ended QV (specify)	I _____ **Past Month** F _____ I _____ Sx: Y N **Lifetime** F _____ I _____ Sx: Y N

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

Frequency 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 (week), how much of the important parts of (EVENT) have you had difficulty remembering? (What parts do you still remember?)	**Intensity** How much difficulty did you have recalling important part of the (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	**Past Week** F _____ I _____ **Past Month** F _____ I _____ Sx: Y N

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**	aspects of event QV (specify)	**Lifetime** F _____ I _____ Sx: Y N

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

Frequency Have you been 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, OR IF DEVELOPMENTALLY APPROPRIATE CHANGE IN PREFERRED ACTIVITIES] In the past month (week), 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 Never 1 Once or twice 2 Once or twice a week 3 Several times a week 4 Daily or almost every day	**Intensity** How strong was your loss of interest? (Would you enjoy [ACTIVITIES] once you got started?) 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) _____ Trauma-related? 1 definite 2 probable 3 unlikely Current _____ Lifetime_____	**Past Week** F _____ I _____ **Past Month** F _____ I _____ Sx: Y N Lifetime F _____ I _____ Sx: Y N

Description **/Examples**		

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

Frequency Have you felt distant or cut off from other people? What was that like? How much of the time in the past month (week) have felt that way? When did you first start to feel 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**	**Intensity** How strong were your feelings of being distant or cut off from others? (Who do your 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)_____ Trauma related? 1 definite 2 probable 3 unlikely Current_____ Lifetime_____	**Past Week** F _____ I _____ **Past Month** F _____ I _____ Sx: Y N **Lifetime** F _____ I _____ Sx: Y N

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

Frequency	**Intensity**	**Past Week**
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 (week) have you felt that way? When did you first start having trouble experiencing (EMOTIONS)? (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 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 Current_____ Lifetime_____	F _____ I _____ **Past Month** F _____ I _____ Sx: Y N **Lifetime** F _____ I _____ Sx: Y N

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

Frequency	**Intensity**	**Past Week**
Have there been times when you felt there was no need	How strong was this feelings that your future	F _____

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 (week) have you felt that way? When did you first start to feel 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** <u>/Examples</u>	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 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 _____ Trauma related? 1 definite 2 probable 3 unlikely Current_____ Lifetime_____	I _____ **Past Month** F _____ I _____ Sx: Y N **Lifetime** 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 Have you had any problems falling or staying asleep? How often in the past month (week)? When did you first start having	**Intensity** 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?	**Past Week** F _____ I _____

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 **Description** **/Examples**	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, (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 30 hrs loss of sleep) 4 Extreme, very long latency, or profound difficulty staying asleep (3 hrs loss of sleep) QV Trauma related? 1 definite 2 probable 3 unlikely Current_____ Lifetime_____	**Past Month** F _____ I _____ Sx: Y N **Lifetime** F _____ I _____ Sx: Y N

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

Frequency 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 (week) have you felt that way? When did you first start	**Intensity** 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 for you to calm down? Did your	**Past Week** F_____ I_____

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**	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 _____ Trauma related? 1 definite 2 probable 3 unlikely Current_____ Lifetime_____	**Past Month** F_____ I_____ Sx: Y N **Lifetime** F_____ I_____ Sx: Y N

15.(D-3) difficulty concentrating

<u>Frequency</u> 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 (week)? When did you first start having trouble concentrating? (After the [EVENT ?]	**Intensity** How difficult was it for you to concentrate? [INCLUDE OBSERVATIONS OF CONCENTRATION AND ATTENTION IN INTERVIEW] How much did that interfere with your life?	**Past Week** F _____ I _____ **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**	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 Trauma related? 1 definite 2 probable 3 unlikely Current_____ Lifetime_____	F _____ I _____ Sx: Y N **Lifetime** F _____ I _____ Sx: Y N

16. (D-4) hypervigilance

Frequency Have you been especially alert or watchful, even when there was no real need to be? (Have you felt constantly as if you were on guard)? Why is that? How much of the time in the past month (week)? When did you first start acting 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	**Intensity** 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 or awareness 2 Moderate, hypervigilance clearly present, watchful in public (e.g., chooses safe place to sit in a restaurant or	**Past Week** F _____ I _____ **Past Month** F _____ I _____ Sx: Y N

Description **/Examples**	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 behaviours, marked watchfulness during interview QV _____ Trauma related? 1 definite 2 probable 3 unlikely Current_____ Lifetime_____	**Lifetime** F _____ I _____ Sx: Y N

17. (D-5) exaggerated startle response

Frequency Have you had any strong startle reactions? When did this happen? (What kinds of things made you startle?) How often in the past month (week)? When did you first start having 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	**Intensity** 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	**Past Week** F _____ I _____ **Past Month** F _____ I _____ Sx: Y N

Description **/Examples**	behaviour (e.g., combat veteran who 'hits the dirt') QV _____ Trauma related? 1 definite 2 probable 3 unlikely Current_____ Lifetime_____	**Lifetime** 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 month?	_____ total # of months delay in onset With delayed onset (> 6 months?) NO YES

19. Duration of symptoms

[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 month) or chronic (> 3 months)	**Current** No YES _____ Acute Chronic	**Lifetime** NO YES _____ Acute Chronic

Criterion F. The disturbance causes clinically significant distress of 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	**Past week** _____

(LIFETIME) Overall, how much were you bothered by these (PTSD SYMTOMS) you've told me about? [CONSIDER DISTRESS REPORTED ON EARLIER ITEMS]	distress 4 Extreme, incapacitating distress	**Past Month** **Lifetime**

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] (LIFETIME) Did these (PTSD SYMTOMS) affect your social life? How so? [CONSIDER IMPAIRMENT IN SOCIAL FUNCTIONING 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	**Past week** **Past month** **Lifetime**

22. impairment in occupational or other important areas 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	0 No adverse impact 1 Mild impact, minimal impairment in occupational/ other important functioning 2 Moderate impairment, definite impairment, but many aspects of occupation/other important functioning still intact 3 Severe impact, marked impairment, few aspects of occupational/other	**Past week**

QUALITY OF WORK RELATIONSHIPS. IF PREMORBID FUNCTIONING IS UNCLEAR,INQUIRE ABOUT WORK EXPERIENCES BEFORE THE TRAUMA. FOR CHILDHOOD TRAUMAS, ASSESS PRE-TRAUMA SCHOOL PERFORMANCE AND POSSIBLE PRESENCE OF BEHAVIOUR 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? [LIFETIME – IF NOT ALREADY CLEAR] Were you working then? IF YES: Did these (PTSD SYMPTOMS) affect your work of 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	important functioning still intact 4 Extreme impact, little or no occupational/ other important functioning	**Past month** **Lifetime**

BEFORE THE TRAUMA. FOR CHILDHOOD TRAUMAS, ASSESS PRE-TRAUMA SCHOOL PERFORMANCE AND POSSIBLE PRESENCE OF BEHAVIOUR PROBLEMS]. IF NO: Did these (PTSD SYMPTOMS) affect any other important part of your life? [AS APPROPRIATE, SUGGEST EXAMPLES SUCH AS PARENTING, HOUSEWORK, SCHOOLWORK, VOLUNTEER WORK, ETC.] How so?		

Global Ratings

23. global rating

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 MINIMISE SYMPTOMS.	0 No clinically significant symptoms, no distress and no functional impairment 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'

24. global severity

ESTIMATE THE OVERALL SEVERITY OF PTSD SYMPTOMS. CONSIDER DEGREE OF SUBJECTIVE IMPAIRMENT, OBSERVATIONS OF BEHAVIOURS IN INTERVIEW, AND	0 No clinically significant symptoms, no distress, and no functional impairment. 1 Good, minimal distress or functional impairment but functions satisfactorily with effort 2 Moderate, definite distress or functional	**Past week** **Past month**

JUDGMENT REGARDING REPORTING STYLE.	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	**Lifetime**

25. global improvement

RATE OVERALL IMPROVEMENT PRESENT SINCE THE INITIAL RATING. IF NO EARLIER RATING, ASK HOW THE SYMPTOMS ENDORSED HAVE CHANGED OVER THE PAST 6 MONTHS. RATE THE DEGREE OF CHANGE, WHETHER OR NOT, IN OUR JUDGMENT, IT IS DUE TO TREATMENT.	0 Symptomatic 1 Considerable improvement 2 Moderate improvement 3 Slight improvement 4 Insufficient information

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 (Criterion 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 STMPTOMS) 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 SYMPTOMS)? How often?

Lifetime 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

LIFETIME PTSD (Criteria A-F met)? NO YES

Associated features

26. guilt over acts of commission or omission

Frequency	**Intensity**	**Past Week**
Have you ever felt guilty about anything you did or didn't do during (EVENT)? Tell me more about that. (What do you feel guilty about?) How much of the time have you felt that way in the past month (week)? 0 None of the time 1 Very little of the time 2 Some of the time 3 Much of the time (approx 20-30%) 4 Much of the time (approx 50-60%) 5 Most or all of the time (more than 80%)	How strong were these feelings of guilt? How much stress or discomfort did they cause? 0 No feelings of guilt 1 Mild, slight feelings of guilt 2 Moderate, guilt feelings definitely present, some distress but still manageable 3 Severe, marked feelings of guilt, considerable distress 4 Extreme, pervasive feelings of guilt, self-condemnation regarding behaviour, incapacitating distress	F_____ I_____ <u>Past Month</u> F_____ I_____ Sx: Y N
Description **/Examples**	QV Trauma related? 1 definite 2 probable 3 unlikely Current_____ Lifetime_____	**Lifetime** F_____ I_____ Sx: Y N

27. survivor guilt (APPLICABLE ONLY IF MULTIPLE VICTIMS)

Frequency	**Intensity**	**Past Week**
Have you felt guilty about surviving (EVENT)? Tell me more about that. (What do you feel guilty about?) How much of the time have you felt that way in the past month (week)? 0 None of the time 1 Very little of the time 2 Some of the time 3 Much of the time (approx 20-30%) 4 Much of the time (approx 50-60%) 5 Most or all of the time (more than 80%) **Description** **/Examples**	How strong were these feelings of guilt? How much stress or discomfort did they cause? 0 No feelings of guilt 1 Mild, slight feelings of guilt 2 Moderate, guilt feelings definitely present, some distress but still manageable 3 Severe, marked feelings of guilt, considerable distress 4 Extreme, pervasive feelings of guilt, self condemnation regarding behaviour, incapacitating distress QV Trauma related? 1 definite 2 probable 3 unlikely Current_____ Lifetime_____	F_____ I_____ **Past Month** F_____ I_____ Sx: Y N **Lifetime** F_____ I _____ Sx: Y N

28. a reduction in awareness of his or her surroundings (e.g., ‘being in a daze)

Frequency	**Intensity**	**Past Week**
Have there been times when you feel out of touch with things going on Around you, like you were in a daze? What was that like? [DISTINGUISH FROM FLASHBACK EPISODES] How often has that happened in the past month (week)? [IF NOT CLEAR:] (Was it due to an illness or the effects of drugs or alcohol?) 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 this feeling of being out of touch or in a daze? (Were you confused about where you actually were or what you were doing at the time?) How long did it last? (Did other people notice your behaviour? What did they say?) Intensity? How strong was this feeling of being out of touch or in a daze? (Were you confused about where you actually were or what you were doing at the time?) How long did it last? (Did other people notice your behaviour? What did they say?) 0 No reduction in awareness 1 Mild, slight reduction in awareness 2 Moderate, definite but transient reduction in awareness, may report feeling 'spacy' 3 Severe, marked reduction in awareness, may persist for several hours 4 Extreme, complete loss of awareness of surroundings, may be unresponsive, possible amnesia for the episode (blackout) QV_____ Trauma related? 1 definite 2 probable 3 unlikely Current_____	F_____ I_____ **Past Month** F_____ I_____ Sx: Y N **Lifetime** F_____ I_____ Sx: Y N

	Lifetime_____	

29. derealisation

Frequency Have there been times when things going on around you seemed unreal or very strange and unfamiliar? [IF NO:] (What about times when people you knew suddenly seemed unfamiliar?) What was that like? How often has that happened in the past month (week)? [IF NOT CLEAR:] (Was it due to an illness or the effects of drugs or alcohol?) 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**	**Intensity** How strong was (DEREALISATION)? How long did it last? (Did other people notice your behaviour? What did they say?) 0 No derealisation 1 Mild, slight derealisation 2 Moderate, definite but transient derealisation 3 Severe, considerable derealisation, marked confusion about what is real, may persist for several hours 4 Extreme, profound derealisation, dramatic loss of sense of reality or familiarity QV Trauma related? 1 definite 2 probable 3 unlikely Current_____ Lifetime_____	**Past Week** F_____ I_____ <u>Past Month</u> F_____ I_____ Sx: Y N **Lifetime** F _____ I_____ Sx: Y N

30. depersonalization

Frequency	**Intensity**	**Past Week**
Have there been times when you felt as if you were outside your body, watching yourself as if you were another person? [IF NO:] (What about times you're your body felt strange or unfamiliar to you, as if it had changed in some way?) What was that like? How often has that happened in the past month (week)? [IF NOT CLEAR:] (Was it due to an illness or the effects of drugs or alcohol?) 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	How strong was (DEPERSONALISATION) ? How long did it last? What did you do while this was happening? (Did other people notice your behaviour? What did they say?) 0 No depersonalisation 1 Mild, slight depersonalisation 2 Moderate, definite but transient depersonalisation 3 Severe, considerable depersonalisation, marked sense of detachment from self, may persist for several hours 4 Extreme, profound depersonalisation, dramatic sense of detachment from self QV	F _____ I _____ **Past Month** F_____ I _____ Sx: Y N
Description **/Examples**	Trauma related? 1 definite 2 probable 3 unlikely Current_____ Lifetime_____	**Lifetime** F _____ I _____ Sx: Y N

To score:

Insure that the client meets Criterion A:

The person has been exposed to a traumatic event in which both of the following were present: a) 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 other, and b) the person's response involved intense fear, helplessness,

or horror. Note: In children, this may be expressed instead by disorganized or agitated behaviour.

Criterion B: The client needs to re-experience at least one of the symptoms in questions 1– 5. Add the frequency and intensity scores together (for the time period selected) for questions 1 – 5. These will then be added at the end for the total overall CAPS score.

Criterion C: The client needs to experience at least three of the symptoms in questions 6–12 (Avoidance and numbing symptoms). Add the frequency and intensity scores together (for the time period selected) for questions 6 – 12. These will then be added at the end for the total overall CAPS score.

Criterion D: The client needs to experience at least two of the symptoms in questions 13–17 (Hyperarousal symptoms). Add the frequency and intensity scores together (for the time period selected) for questions 13–17. These will then be added at the end for the total overall CAPS score.

To obtain the overall CAPS score add together the frequency and intensity scores for criterion B, C and D, for the time period selected.

Criterion E: The duration of the disturbance must be at least one month.

Criterion F: The client needs to experience at least one of the symptoms in questions 20–22 (Significant distress or impairment in functioning).

PTSD diagnosis: Assess whether all criteria are met and specify whether there was a delayed onset (> 6 months), an acute onset (<3 months) or a chronic onset (>3 months).

Global rating: Responses from questions 23, 24 and 25 will give you the global validity, global severity and global improvement of the client's answers.

Associated features: Questions 26–30 will give the intensity and frequency of the clients; guilt over acts of commission or omission; survivor guilt; reduction in awareness of surroundings; derealisation and depersonalisation.

APPENDIX K

TRAUMATIC ANTECEDENTS QUESTIONNAIRE (TAQ)

Name:_____ Date:_____
Age:_____ Sex:____ Marital Status:_____ Education:_____
Occupation:_____

Instructions: This questionnaire asks you to describe experiences you may have had as a young child (ages 0 to 6), as a school age child (ages 7 to 2), as an adolescent (ages 13 to 16), and as an adult. For each item, indicate the degree to which the statement describes your experience at each different age period. The scale has both frequency and intensity words; please choose the highest applicable number. If there are any age periods for an item that you are unable to answer, please indicate this by choosing DK ("don't know").

Use the highest applicable number
0 = never or not at all
1 = rarely or a little bit
2 = occasionally or moderately
3 = often or very much
DK = don't know

	AGE	INTENSITY / FREQUENCY
1. I generally felt safe and cared for.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
2. Someone made sure I got up in the morning and went to school.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
3. I was really good at something (like sports, a hobby, school, work, or some creative activity).	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
4. I had good friends.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
5, I felt close to at least one of my brothers and sisters.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK

Use the highest applicable number	0 = never or not at all 1 = rarely or a little bit 2 = occasionally or moderately 3 = often or very much DK = don't know	
	AGE	INTENSITY / FREQUENCY
6. Somebody in my family had so many problems that there was little left for me.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
7. I felt that nobody cared whether I lived or died.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
8. I had someone to talk with outside my family when something was bugging me at home.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
9. There were secrets in my family that I was not supposed to know about	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
10. My parents confided things in me that made me feel uncomfortable.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
11. My parents were divorced or separated.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
12.1 lived with different people at different times (like different relatives, or foster families).	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
13. Somebody close to me died.	0-6	NO YES
	7-12	NO YES
	13-18	NO YES
	adult	NO YES

Use the highest applicable number	0 = never or not at all 1 = rarely or a little bit 2 = occasionally or moderately 3 = often or very much DK = don't know	
	AGE	INTENSITY / FREQUENCY
14. I had a serious illness and/or had to be hospitalized for a medical problem.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
15. Someone I was close to was very sick, or, in an accident for which they needed to be hospitalized.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
16. I received news that someone close to me had been seriously injured or violently killed during an accident, a fight, or a crime.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
17. In my parents eyes, nothing I did was ever good enough.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
18. People in my family called me insulting names.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
19. The rules in my family were unclear and inconsistent.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
20. The punishments I received were unfair.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK

Use the highest applicable number

0 = never or not at all
1 = rarely or a little bit
2 = occasionally or moderately
3 = often or very much
DK = don't know

	AGE	INTENSITY/ FREQUENCY
21. My parents hurt each other physically when they argued and fought.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
22. 1 spent time out of the house and no one knew where I was.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
23. People in my family were out of control.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
24. Nobody knew what really went on in my family.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
25. I witnessed physical violence in my family.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
26. Someone in my family got medical attention because of violence.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
27. Someone in my family had a problem with alcohol and/or drugs.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
28. I abused alcohol and/or drugs.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK

	Use the highest applicable number	0 = never or not at all 1 = rarely or a little bit 2 = occasionally or moderately 3 = often or very much DK = don't know
	AGE	INTENSITY/ FREQUENCY
29, My caregivers were so into alcohol or drugs that they couldn't take care of me.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
30. I was beaten, kicked or punched by someone close to me.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
31. I was in a situation in which I was convinced that I would be physically injured or lose my life.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
32. Someone outside my family attacked me.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
33. I saw dead bodies.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
34. I was involved in a serious accident	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
35. I was in a natural disaster.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK

Use the highest applicable number

0 = never or not at all
1 = rarely or a little bit
2 = occasionally or moderately
3 = often or very much
DK = don't know

	AGE	INTENSITY/ FREQUENCY
36. I saw sexual things that scared me.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
37. Someone (older) touched me sexually, against my wishes or tried to make me touch them.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
38. Someone forced me to have sex against my will.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
39. Someone threatened me with physical harm unless I did something sexual.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
40. I believe that one of my brothers or sisters was sexually molested.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
41. I have had another very frightening or traumatic experience where I felt intense fear helpless, or horrified.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
42. Something terrible happened to me that still remains a mystery to me.	0-6	0 1 2 3 DK
	7-12	0 1 2 3 DK
	13-18	0 1 2 3 DK
	adult	0 1 2 3 DK
		INTENSITY
43. How upsetting was it to answer these questions?		1 2 3 DK

Traumatic Antecedents Questionnaire Scoring

	Young Child (0-6)	School Age (7-12)	Adolescence (13-18)	Adulthood	Total
RESOURCES Higher Scores are Better					
Competence					
Safety					
TRAUMA AND NEGLECT Higher Scores Indicated Greater Exposure:					
Neglect					
Separation					
Secrets					
Emotional Abuse					
Physical Abuse					
Sexual Abuse					
Witnessing					
Other Traumas					
Alcohol and Drugs					

Explanation of Scores:

Scores are calculated with a threshold-based system.

No raw scores of 0 or 1 for individual TAQ items,i.e.,endorsements of (1) “Not at all” or “Never” and (2) “Rarely” or “A little bit” are included in the calculatin of scores for age periods.

Only raw scores of 2 or 3,endorsements of (2) “Occasionally” or “Moderately” and (3) “Often” or “Very Much,” are averaged to generate age-period scores.

TOTAL scores are sums of age-period scores for that scale.

APPENDIX L

RECRUITMENT POSTERS

Did you know that……

1 in 5 Canadian women has experienced
Sexual Assault

50% of those women will experience
Posttraumatic Stress Disorder
(PTSD)
Symptoms:

- Flashbacks or Re-experiencing of Event
- Agitation, Sleep Difficulty, Irritability, Intense Startle Reflex
- Emotional Numbing and/or Avoidance

If you, or someone you know, has experienced this, please call:

(604) 513-2164

Confidential Voice-Mail. Call will be returned by female research associate 24-48 hrs

This is an opportunity for free therapy with experienced, masters-level female counsellors…

Healthy Relationships --- Emotional Wellness

Free Trauma Therapy

FOR RAPE & SEXUAL ASSAULT:

An Experimental Comparison of Three Treatments for Posttraumatic Stress Disorder

A number of recent studies have documented neurological changes in the brain as a result of exposure to traumatic events. Three therapies have been found to be effective in reducing the symptoms of Posttraumatic Stress Disorder (PTSD) when compared with no-treatment control groups. One treatment is called "One Eye Integration" (OEI) another is called "Cognitive Processing Therapy" (CPT) and a third "Grounding & Relaxation Techniques" (GRT). These approaches need to be compared with each other, and assessed more formally through observation of brainwave patterns prior to, and following, application of these techniques.

An experimental comparative study is proposed, and 40 adult research subjects are needed. Since both the study and the duration of treatment to be provided are short-term, we are seeking individuals who have been (and are currently) experiencing the symptoms of Posttraumatic Stress Disorder listed below, but did *not* experience *significant ongoing* trauma (including continuous abuse or neglect) in childhood or adolescent years. Research participants will receive at least 3 free sessions of psychotherapy (1 hour each) from an experienced masters level counsellor (that would normally cost $150). Ideally, participants should be at least 1 year post-rape/sexual assault, have had no more than 2 rape incidents, and be free of substance (alcohol or drug) abuse for at least one year.

Symptoms of PTSD

A. *Exposed to traumatic event involving both of the following:*

(1) Experienced, witnessed or confronted with an event that involved actual or threatened death or serious injury or threat to the physical integrity of self or others;

(2) Your response involved intense fear, helplessness or horror.

B. *The traumatic event is reexperienced in a distressing manner;*

C. *You are persistently avoiding reminders of the event;*

D. *You have persistent symptoms like sleep disturbance; irritability or anger, intensified startle response or difficulty concentrating;*

E. *You have had the symptoms for longer than 1 month; and*

F. *The disturbance causes clinically significant distress and/or impairment in social, occupational or other areas of functioning.*

If you believe you meet these criteria and you are interested in participating in the study,

please contact Heather Bowden or Wendy Dobson at (604) 513-2164

APPENDIX M

TELEPHONE PRE-SCREENING INTERVIEW

FIRST

Ask whether the caller is able to talk for 10 minutes for a brief pre-screening call
Describe the types of questions you will be asking (factual criteria for the study)
Explain procedures to ensure confidentiality of information from this intake call
Explain the next steps if she qualifes for screening questionnaires & interviews
Refer to other resources if clearly NOT qualified, put in "consulting" if unclear

DO

Confirm ***no*** extensive history of childhood abuse (prefer esp ***not*** in 0-6 years)
Confirm ***1 or 2*** incidents of sexual assault (prefer not more than 2 incidents)
Get ***age(s)*** when assaults occurred (prefer 13+ years, but will consider 10)
Ask ***how long since assault*** (prefer 1 year + but will consider 1 month +)
Confirm no ***current substance abuse*** (prefer 1 year + sobriety/drug cln)
Confirm ***PTSD*** symptoms (review 3 clusters of symptoms with callers)
Explain the ***overall study***, and where this pre-screening call fits plan
Assure of info confidentiality (forms in locked cabinet in locked lab)
Let caller know that full Informed Consent Form will follow later

DON"T

Ask *unnecessary details* about abuse (only enough to answer Qs above)
Say you will call back at a given time on a given day and not follow thru
Break the call up into multiple conversations --- try to get it in 10 mins.
Get caught up in explaining delays --- we have been *very* active!
Guarantee they will be in the study or the date when it will start
Mention anything about a "Control" group (all p's get 2 tx's)

NOTE: It is still hoped that we will have full recruitment by the end of December, Screening interviews & questionnaires completed by the end of January, and Therapy starting in February. Remind callers that they will be getting approx. $500 worth of treatment free in return for their participation, and that therapy will be provided by empathic, experienced female therapists

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Fill out forms on ***all*** callers, including health care professionals calling about pts.

Hope this makes the phone prescreening intake more clear and professional!

APPENDIX N

INFORMED CONSENT

January 7, 2005

Application of One Eye Integration Techniques for Trauma:
A Comparative Experimental Study

For Answers to Questions or Clarifications Regarding this Study, Contact:

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The intent in the proposed study is to compare the effectiveness of three different psychotherapies for relieving post-traumatic symptoms. One of these therapies involves eye movements, including alternate exposure of eyes to light (referred to as One Eye Integration, or OEI) and the others do not. One of the therapies involves a good deal more talking than the other (Cognitive Therapy, or CT). The third therapy involves mainly physical and mental relaxation. All three therapies have been effective in

previous comparisons with no-treatment control groups, but no studies have yet been done to compare the effectiveness of these three approaches.

Your participation in this study will require 5 hours of your time for each block of assessments (questionnaires, checklists, interviews and brainwave recording sessions). These will be completed at the start of the study, and every 2-3 months until completion of the study (a total of 5 assessment blocks over 10-12 months). In addition, at the beginning of the study, at the half-way point, and at the conclusion of the study there will be 1½ -2 hours of additional interviews. Depending on the group to which you are assigned, you may be provided with a 30-minute audio recording of relaxation & calming exercises and asked to play it once per day during half the length of the study. Also depending on which group you are assigned to, you will complete 2 hours of group training in emotional containment & "grounding" techniques, 2 hours of psychoeducation regarding the rationales for (and likely mechanisms of) OEI and/or CT, and three to six 1-hour individual psychotherapy sessions, with a competent Masters level clinician. At current B.C. rates, this would cost over $500, but this treatment is being provided free of charge to compensate you for the time involved in the study. Short journal entries will be requested of participants between individual and/or group sessions they receive.

Apart from listening to the audio recording daily, the total time requirements for participation in this study (assessments and treatments) will be approximate a 40-hour work week, spread over 10-12 months. A psychologist or counsellor will provide up to 3 additional sessions, if necessary, to alleviate any additional distress which may have been caused or aggravated by participation in the study. It is reasonable to alleviate *some* of the intensity of PTSD in 3-6 sessions, but participants should not expect *all* of their symptoms to be gone in 3-6 sessions if they have had a *number* of previous traumatic experiences.

In this study, you will be asked to recall a particular event (sexual assault or rape experience) which is still disturbing for you to think about. Researchers will help you develop a short description of the event that will be read onto an audiotape by one of the investigators. That tape will be played back, and your brainwaves will be monitored and recorded, along with your levels of reaction (to sounds, pictures, body sensations, smells, emotions and thoughts you experience). Those short audiotapes will be played just prior to treatment, after all 3 treatment sessions, at the time of the 3- and 6-month follow-up assessments, and at the time of the final post-treatment assessment. In order to measure electrical activity in the brain before and after treatments, an EEG electrode cap will be placed on your head. This is a relatively painless procedure. During psychotherapy sessions you will also be videotaped, to allow later correlation between therapeutic procedures and brainwave activity. You will periodically be asked by the investigators to rate your level of distress on a scale from 0 to 10 (with "0" indicating no distress or intensity, and 10 indicating the worst you have ever experienced).

All information you share in written and oral form will be carefully collected and stored in locked file cabinets, accessible only to the individuals named at the end of this consent form (and a professional transcriptionist) to ensure confidentiality. In addition, once the data is collected, numbers (rather than names) will be used to identify individuals on all written forms and interview protocols. This will prevent inadvertent disclosure of identifiable personal information.

As with any research project involving assessment or treatment of trauma, you will likely experience psychological distress at some points, as you recall events, people and situations that traumatized you. You will be randomly assigned to one of three groups in this study: One group will receive Cognitive Therapy, one will receive One Eye Integration Therapy, and one will receive stress reduction, relaxation and calming exercises for home use, with an audio recording. In the second half of the study, all participants will receive a second therapy (one of the three approaches mentioned earlier in this Consent Form.

One of the two psychotherapy approaches considered in this study for relief from PTSD symptoms is "Experimental" because there are currently no published studies in refereed professional journals attesting to the effectiveness of the procedures. For this reason, some additional information about that set of techniques is necessary. In the last 8 years, a series of clinical procedures has been developed and used to reduce posttraumatic stress symptoms. This series of techniques has been referred to as "One Eye Integration".

During One Eye Integration (one of three treatment approaches used in this study), people sometimes experience transient symptoms such as headaches, visual distortions and stomach or chest tension. These generally fade within 30 minutes, and more often within 5 minutes. In addition, it is possible that recall of traumatic incidents will trigger dissociative symptoms, such as drowsiness, light-headedness, numbness or difficulty speaking. Again, such symptoms normally subside within 30 minutes, and more commonly within 5 minutes. As in any research study of new clinical procedures, there may be harms that we don't yet know about.

Based on clinical experience and 2 studies (1 controlled) with One Eye Integration techniques, these procedures appear to provide significant, rapid relief from the major symptoms of Posttraumatic Stress Disorder (PTSD). The therapy proceeds one memory at a time, and recollection of each traumatizing event, person or situation is desensitized to the point where it is no longer disturbing to recall. For a given memory, this normally occurs within 60-180 minutes.

It is reasonable to alleviate *some* of the intensity of PTSD in 3 sessions, but you should not expect *all* your symptoms to be gone in 3 sessions if you have had a number of previous traumatic experiences.

Alternative therapies to One Eye Integration, for PTSD symptoms, include:

- Prolonged Exposure (spending time in situations associated with distress and focusing on them until intensity subsides);
- Imaginal Exposure (thinking or writing or talking about the distressing situation or event until the intensity subsides);
- Cognitive Behavioural Therapies, such as Cognitive Processing Therapy --- CPT (changing thoughts & beliefs about yourself, and the people, events or situations that are traumatic for you to think about); or

- Eye Movement Desensitization & Reprocessing (combining Cognitive-Behavioural Therapy with bilateral stimulation – eye movements, hand-taps or sounds – while thinking about distressing events or situations or people).

All completed written questionnaires, audiotapes, videotapes and psychophysiological data will be kept for 5 years from the completion date for the study and then erased or destroyed, unless you give written permission to retain records longer or specifically request (in writing) destruction of your data sooner.

As with any counselling or psychotherapy, confidentiality is also limited by:

- Threat to self (suicide risk)
- Threat to other (homicide risk and duty to warn)
- Suspicion of child abuse
- Intention to drive a motor vehicle while intoxicated by alcohol or drugs
- Intention to have unprotected sexual contact or share IV drug needles, when infected by HIV and/or diagnosed with AIDS
- Subpoenas or special legal warrants in which portions of participant files are requested

One very important condition of participation in this study is that you try to refrain from mental health consultations other than those provided in this study (seeing counsellors, psychologists or psychiatrists for treatment of your symptoms of distress, apart from those associated with this study, except in a crisis). The reason this condition is important is that if you receive other mental health treatments during the study we will not be able to clearly determine the sources of any changes in symptoms.

Finally, participants are asked to inform the principal investigator if your medical treatment (especially changes in medications or dosages) is changed in any way for the duration of this study. Again, this is so that we may accurately attribute changes in symptoms to the treatments provided during the study rather than to changes in treatments (including medications) provided *outside* the study

NOTE: Even *after* you consent to participate in this study by signing below, you may refuse to participate or withdraw at any time without consequence.

If you have any questions about *ethical issues* involved in this project, you may contact Ms. Sue Funk in the Office of Research at (604) 513-2142.

☐ I have read and understood the description of the study, and I willingly consent to participate in this study.

_____ _____

(Participant Signature) (Date)

_____ _____

Parent or Guardian Signature (if under 19 yrs. of age) (Date)

APPENDIX O

BRIEF HISTORY INTERVIEW

Intake Interview

Name: Birth Date:

Address:

Home Phone Number: Cell Phone Number:

Next of kin, social support network (is there someone you're comfortable with who could accompany/drive you for support?):

Emergency Contact Name: Phone Number:

Marital/relationship status:

Occupation:

Are you currently in physical pain?:

Medical History:

Current medications (list all, including daily vitamins and supplements):

Name of Physician:

Address:

Phone:

Please Complete & Sign Release of information from General Practitioner Form

(re:current medications):

Allergies (especially related to lotion/cosmetics):

Global medical conditions (epilepsy, fibromyalgia, etc.):

History of brain injuries:

Recent hospitalizations:

History of substance use/abuse? Elaborate:

Illegal drugs, check all that apply (Currently Using-Indicate Frequency & Amount Used):

Marijuana	
Cocaine	
Ecstasy	
Heroin	
Speed	
Acid	
Crystal Meth	

Current/Recent life stresses:

Prior therapy:

Type of therapy:
Presenting Issues:
Length of therapy:
When it took place:

Are you comfortable with a man operating the computer in the lab (QEEG) assessments?

Participant Specifications

Please measure and record carefully, so participants don't have to go through this again!

Colour/Size of cap _____/_____.

Dome Length (vertical)			
Circumference (horizontal)			
Vertical Compass spread			
Horizontal Compass spread			
Hand dominance			
Eye dominance			

Pre-Assessment Interview

1. Have you changed your dosage or intake of medication/other substances in the last month?

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2. Are you currently experiencing physical pain? Is this a change in the last month?

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3. Have you participated in any therapy outside of this study in the last month?

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4. Have you experienced any major life changes in the last month?
