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# AN INVESTIGATION OF INTERPERSONAL DISRUPTIONS AND SECONDARY TRAUMATIC STRESS AMONG MENTAL HEALTH THERAPISTS

Rachael Ann Robinson-Keilig

*University of Nebraska - Lincoln*, [rrkeilig@hotmail.com](mailto:rrkeilig@hotmail.com)

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AN INVESTIGATION OF INTERPERSONAL DISRUPTIONS AND SECONDARY  
TRAUMATIC STRESS AMONG MENTAL HEALTH THERAPISTS

by

Rachael Ann Robinson-Keilig

A DISSERTATION

Presented to the Faculty of  
The Graduate College at the University of Nebraska

In Partial Fulfillment of Requirements

For the Degree of Doctor of Philosophy

Major: Psychological Studies in Education

(Counseling Psychology)

(Women's and Gender Studies)

Under the Supervision of Professor Michael J. Scheel

Lincoln, Nebraska

August, 2010

AN INVESTIGATION OF INTERPERSONAL DISRUPTIONS AND SECONDARY  
TRAUMATIC STRESS AMONG MENTAL HEALTH THERAPISTS

Rachael Ann Robinson-Keilig, Ph.D.

University of Nebraska, 2010

Adviser: Michael J. Scheel

Mental health therapists who work with victims of trauma are often exposed to vivid descriptions of traumatic events and strong emotional expressions from their clients. Research within the last fifteen years has started to explore the impact of this indirect form of trauma exposure on therapists who treat trauma clients.

The purpose of this study was to explore the prevalence of interpersonal and sexual disruptions as symptoms of secondary traumatic stress/vicarious trauma among practicing mental health therapists, to understand how various therapist characteristics predict interpersonal and sexual disruptions, and to explore the role that gender and prior trauma history play in the development of secondary traumatic stress/vicarious traumatization. A total of 330 licensed mental health therapists participated in the study. Correlation analysis and multiple regressions were used to test the study hypotheses.

A total of 29.3% of the sample was found to have moderate to severe levels of secondary traumatic stress as measured by the Secondary Traumatic Stress Scale (Bride, Robinson, Yegidis, & Figley, 2003). No association was found between secondary traumatic stress symptoms and sexual interest or sexual relationship satisfaction. Significant associations were found between secondary traumatic stress symptoms and interpersonal disruptions. Specifically, mental health therapists experiencing more severe intrusion symptoms were also experiencing increased use of avoidance and critical

communication patterns. Mental health therapists experiencing more severe avoidance and arousal symptoms were also experiencing less relationship satisfaction, less social intimacy, decreased use of constructive communication patterns, and increased use of avoidance and critical communication patterns.

The variables of female gender, fewer years of counseling experience, receiving personal therapy, and more exposure to trauma clients were not predictive of interpersonal disruptions. Post hoc analysis, however, confirmed these same variables as predictive of intrusion and avoidance symptoms. Fewer years of counseling experience was a statistically significant unique predictor for intrusion and avoidance symptoms, while gender was a statistically significant unique predictor for intrusion symptoms. The variables of female gender, assaultive trauma history and younger age of first trauma were not predictive of secondary traumatic stress symptoms or interpersonal disruptions. Implications, limitations, and directions for future research are discussed.

## Dedication

To my beautiful daughter Audrey Jane.

“Wisdom is better than wit,  
and in the long run will certainly have the laugh on her side.”

– Jane Austen

“Dreams are necessary to life.”

– Anais Nin

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## Chapter I: Introduction

According to the National Comorbidity Survey, 51.2% of women and 60.7% of men have experienced at least one or more traumatic events in their lifetime (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). Defined as an event outside the normal range of human experiences, respondents reported exposure to a wide range of traumatic events. Experiences such as life threatening accidents, natural disasters, and exposure to chronic trauma experiences such as childhood abuse and military combat were all reported.

While no single definition of what constitutes a traumatic event exists, many researchers adhere to the criteria set forth in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR; APA, 2000), as it relates to the diagnostic criteria for Post Traumatic Stress Disorder. According to the *DSM-IV-TR* (APA, 2000) an event or situation is considered traumatic if it involves actual or threatened death, serious injury, or a challenge to the physical integrity of oneself or of another individual. The individual's response to the event must also include intense fear, helplessness, or horror. However, other researchers propose a broader definition of trauma that is inclusive of any event or situation that is sudden, uncontrollable, and perceived as negative by the individual (Carlson & Dalenberg, 2000; Creamer, McFarlane, & Burgess, 2005; McCann & Pearlman, 1990; Olf, Langeland, Draijer & Gersons, 2007).

Across the many conceptualizations of what constitutes a traumatic event, a defining feature is the subjective experience of the survivor. The individual's own perception, response, and ability to cope with the event or situation is what ultimately determines if the event is considered traumatic (Carlson & Dalenberg, 2000; Creamer, McFarlane, &



Burgess, 2005; Olf, Langeland, Draijer, & Gersons, 2007). While the events or situations that are considered traumatic vary by individual, those who experience and perceive an event as traumatic have been found to be at risk for a number of psychological disorders, including Post Traumatic Stress Disorder, Acute Stress Disorder, Major Depression, Anxiety, and substance abuse (Breslau, Davis, Andreski, & Peterson, 1991; Brewin, Andrews, Rose, & Kirk, 1999; Boudreaux, Kilpatrick, Resnick, Best, & Saunders, 1998; Creamer, McFarlane, & Burgess, 2005; Gold, 2008; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Orsillo, Weathers, Litz, Steinberg, Huska, & Keane 1996; Resick, 1993; Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993; Ozer, Best, Lipsey, & Weiss, 2003; Westley, Masson, Delucchi, Hall, & Sees, 2001).

For individuals who have experienced a traumatic event and subsequent psychological disturbances, treatment often includes mental health services (Elhai, Patrick, & Anderson 2006; Gavrilovic, Schutzwohl, & Fazel, 2005; Golding, Stein, Siegel, Burnam, & Sorenson, 1988). In a sample of community mental health clients seeking psychological services, 94% reported lifetime exposure to at least one traumatic event (Switzer, Dew, Thompson, Goycoolea, Derricott, & Mullins, 1999) while in a sample of psychiatric hospital inpatients, 61% reported exposure to at least one lifetime traumatic event (McFarlane, Bookless, & Air, 2001).

Therapists who work with victims of trauma are often exposed to vivid descriptions of the traumatic event, unsettling reports of human-induced cruelty and abuse, and strong emotional expressions from their clients (Figley, 1995a; Pearlman & Saakvitne, 1995a; Resick & Calhoun, 2001). In a survey of 446 female psychotherapists, 72% reported exposure to graphic details of trauma either “sometimes” or “frequently” in their work

with clients (Brady, Guy, Poelstra, & Brokaw, 1999). In a separate survey of 221 mental health professionals, 45.2% reported moderate amounts of exposure to traumatic material, while 24.4% reported profound amounts of exposure (Kadambi & Truscott, 2004). Exposure to traumatic material indirectly from clients is considered by many to be a potential occupational hazard of doing clinical work with traumatized populations (Bride, 2004, 2007; Deighton, Gurriss, & Traue, 2007; Figley, 1995a; Kassam-Adams, 1995).

Within the last fifteen years, researchers have started to explore and understand the varied impact of this indirect form of exposure to trauma on therapists who treat trauma clients. For some therapists, the response includes profound changes in functioning and the emergence of clinical symptoms. Within the literature, this reaction has been referred to by several names, including secondary catastrophic stress reactions (Figley, 1983), secondary victimization, compassion fatigue (Figley, 1995a), secondary traumatic stress, (Dutton & Rubinstein, 1995; Figley, 1995b; Stamm, 1995), vicarious traumatization (McCann & Pearlman, 1990b), traumatic countertransference (Herman, 1992), and secondary survivor (Remer & Elliott, 1988). However, the literature has focused primarily on the two concepts of secondary traumatic stress and vicarious traumatization to describe the reaction of therapists who are traumatized by their work with trauma clients.

The literature on secondary traumatic stress and vicarious traumatization categorizes potential symptoms for therapists into three primary symptom domains: a) cognitive schema disruptions, b) Post Traumatic Stress Disorder (PTSD) related symptoms, and c)

interpersonal disruptions (Collins & Long, 2003; Dutton & Rubinstein, 1995; Sabin-Farrell & Turpin, 2003; Yassen, 1995).

Research into these domains of symptoms has primarily focused on exploring the presence of negative cognitive schemas and PTSD related symptoms (Arvay & Uhlemann, 1996; Cunningham, 2003; Deighton, Gurriss, & Traue, 2007; Kadambi & Truscott, 2004; Pearlman & Mac Ian, 1995; Schauben & Frazier, 1995). Very little research has focused on understanding the disruptions that may occur interpersonally as part of secondary traumatic stress and vicarious traumatization (Bride, 2007; Rich, 1997; Sabin-Farrell & Turpin, 2003; Ting, Jacobson, Sanders, Bride, & Harrington, 2005). In fact, most assertions in the literature regarding interpersonal and sexual disruptions for therapists cite anecdotal claims or theoretical positions as evidence (Canfield, 2005; Figley, 2002; Herman, 1992; Maltz, 1991; McCann & Pearlman, 1990b; Pearlman, 1995; Pearlman & Saakvitne, 1995b; Rosenbloom, Pratt, & Pearlman, 1995). Limited descriptive data is available and no study has been located that specifically addresses the interpersonal and sexual disruptions experienced by mental health therapists as part of symptomology of vicarious traumatization and secondary traumatic stress. Interpersonal and sexual functioning disruptions have yet to be empirically verified as symptoms of secondary traumatic stress and vicarious traumatization.

#### *Rationale*

Recent research indicates that between 5% and 15.2% of therapists experience secondary traumatic stress and vicarious traumatization symptoms at clinical levels (Adams & Riggs, 2008; Bride, 2007; Kadambi & Truscott, 2004). Therapists who have suffered from secondary traumatic stress and vicarious traumatization have been found to

be at risk of doing harm to their clients through non-empathic distancing from their clients, boundary violations (Neumann & Gamble, 1995), victim blaming (Astin, 1997), poor professional judgment (Bride, Radey, & Figley, 2007), or the use of incomplete therapies (Pearlman & Saakvitne, 1995a).

Continued research is needed to fully understand the phenomenon of secondary traumatic stress and vicarious traumatization on mental health therapists. Specifically, research needs to address contributing therapist characteristics in the development of secondary traumatic stress/vicarious trauma and the potential interpersonal and sexual functioning difficulties therapists may experience as a result. Further exploration into these areas will help address gaps in the current literature, assist in the identification and treatment of traumatized therapists, and assist in the development of preventative strategies.

#### *Purpose*

The purpose of this correlational study is to establish the prevalence of interpersonal and sexual disruptions as symptoms of secondary traumatic stress/vicarious trauma among practicing mental health therapists. This study also seeks to understand how various therapist characteristics (age, gender, years of experience, attending personal therapy, exposure to trauma clients, and a personal trauma history) predict interpersonal and sexual disruptions. Finally, this study seeks to gain clarification on the role that gender and prior trauma history play in the development of secondary traumatic stress/vicarious traumatization by examining the interaction among gender, age at time of first trauma, and trauma history type in predicting symptoms of secondary traumatic stress/vicarious traumatization.

It is the intent of this study to help advance the understanding of secondary traumatic stress/vicarious trauma and help those who are suffering from this phenomenon. Results of this study may be used to improve screening efforts in identifying distressed therapists, as well as enhance the treatment of distressed mental health therapists, by acknowledging and including interpersonal dysfunction as symptomology of secondary traumatic stress/vicarious traumatization. Results may also be used to inform workplace wellness programs that educate about potential work related distress thus improving the identification of distressed mental health therapists and increasing the number of therapists who seek treatment. Finally, results may be used in training programs to educate about the potential negative impact of working with trauma clients, the potential risk factors that may increase vulnerability to secondary traumatic stress/vicarious traumatization, and self-care strategies to reduce the impact or development of secondary traumatic stress/vicarious traumatization.

The population of focus for this study is mental health therapists who are primarily engaged in therapy/counseling with clients. Interpersonal disruptions are defined by changes in relationship satisfaction, changes in perceived intimacy with a partner, and disrupted communication patterns. Sexual disruptions are defined as changes in sexual relationship satisfaction and changes in sexual activity interest. Variables that will be examined for their relationship to interpersonal and sexual disruptions are drawn from the existing literature on secondary traumatic stress/vicarious trauma and include: age, gender, level of exposure to trauma clients, years of counseling experience, engagement in personal therapy, and a personal trauma history.

### *Research Questions*

The proposed study seeks to answer several questions:

1. What is the strength of the relationship between interpersonal and sexual disruptions and known symptoms of secondary traumatic stress/vicarious traumatization among mental health therapists?
2. Which therapist characteristics are most influential in predicting interpersonal and sexual disruptions?
3. Among therapists with a personal trauma history, how do gender, age at first trauma, and type of prior personal trauma (assaultive vs non-assaultive) interact to predict secondary traumatic stress/vicarious traumatization symptoms?

## Chapter II: Literature Review

This chapter includes three major sections. The first section is a review of terminology, including secondary traumatic stress, vicarious traumatization, and the related concepts of countertransference and burnout. The second section is a review of the primary symptoms of secondary traumatic stress and vicarious traumatization for mental health therapists who work with victims of trauma. The final section includes a summary, conclusions, and a review of the study hypotheses.

### *Terminology*

#### *Secondary Traumatic Stress*

Secondary traumatic stress is described as the stress response experienced by persons who have close contact with a survivor of trauma. It is a response that results from learning about a traumatizing event and includes a state of exhaustion and dysfunction that impacts the individual on a biological, psychological, and social level. Secondary traumatic stress can affect family members, friends, acquaintances, and significant others of trauma survivors (Dutton & Rubinstein, 1995; Figley, 1995a, 2002).

While secondary traumatic stress can be experienced by a victim's family members and friends, it is also applicable to a wide range of professionals working with traumatized persons, including nurses (Clark & Gioro, 1998; Coetzee & Klopper, 2010), emergency responders (Beaton & Murphy, 1995), law enforcement (Follette, Polusny, & Milbeck, 1994), domestic violence advocates (Slattery & Goodman, 2009), hospital staff (Lyon, 1999; Meadors, Lamson, Swanson, White, & Sira, 2009) firefighters (Bryant & Harvey, 1996), and mental health therapists (Figley, 1995a, 1995b). Mental health therapists are considered especially vulnerable to the development of secondary traumatic

stress symptoms due to the empathic engagement that therapists have with their clients and the level of exposure therapists can have with traumatized persons (Figley, 1995a).

Figley (1995a, 1995b, 1995c, 2002) proposed the trauma transmission model to explain the secondary traumatic stress phenomenon. This model draws from research and literature related to traumatic stress, interpersonal relationships, and worker burnout. The trauma transmission model identifies empathy and exposure as central elements to the development of secondary traumatic stress and symptoms are viewed as a natural byproduct of working with trauma victims (Figley, 1995c). Thus, Figley (1995b) has suggested that the term compassion fatigue be used as a friendlier alternative to the term “secondary traumatic stress.”

In this model, Figley (1995c) identifies compassion stress as the stress connected with empathic exposure to the victim. Compassion fatigue is defined as the state of exhaustion and dysfunction (biologically, psychologically, and socially) that results from prolonged exposure to compassion stress. The individual’s empathic ability (i.e. the ability to notice the pain of others), empathic concern (i.e. motivation to help), and empathic response (i.e. the effort put forth to help the victim) all combine with the individual’s ability to maintain a healthy distance from the victim along with the level of satisfaction they feel regarding their efforts. Altogether, these elements determine the level of compassion stress. The severity of compassion stress is determined by how long the individual is exposed to the various compassion stress influences. It is through this process of empathic engagement and exposure that the individual experiences emotions and symptoms which are similar to those of the victim.



Secondary traumatic stress symptoms can have a sudden onset and occur after a single exposure to traumatic material (Figley, 1995b, 2002). Symptoms may include sleeping problems, depression, or generalized anxiety (Stamm, 1997; Valent, 1995; Yassen, 1995). However, predominant symptoms are considered intrusive, avoidant, and arousal symptoms; symptomology that mirrors Post Traumatic Stress Disorder (Bride, 2007; Figley, 1995a, 1995b).

According to the DSM-IV-TR (APA, 2000), intrusion or re-experiencing symptoms include recurrent and intrusive recollections of the event or recurrent distressing dreams during which the event is replayed. The recollections may be in the form of images, thoughts, or perceptions. Symptoms also include acting or feeling as if the traumatic event were recurring in the form of illusions, hallucinations, flashbacks, or a sense of reliving the experience as well as intense psychological distress or physiological reactivity when exposed to a cue or reminder of the event.

Avoidance symptoms include persistent avoidance of any stimuli associated with the trauma and a numbing of responsiveness. Avoidance may occur via efforts to avoid thoughts, feelings, and conversations associated with the trauma, or activities, places, and people that are reminders of the trauma. Avoidance symptoms also include loss of recall regarding aspects of the trauma, loss of interest in activities, detachment or estrangement from others, restricted range of emotional responses, and a sense of a foreshortened future. Arousal symptoms include persistent symptoms of anxiety or increased arousal that was not present prior to the trauma. Examples include difficulty falling asleep or staying asleep, irritability or anger outbursts, difficulty concentrating, hypervigilance, or an exaggerated startle response.

If enough symptoms are present and reach a level of clinical distress, the individual may have Secondary Traumatic Stress Disorder (STSD) which is conceptualized by Figley (1983) to be identical to PTSD apart from the source of trauma exposure. Whereas PTSD is a result of direct personal experience with a traumatic event or learning about the trauma of a personally close individual, STSD results solely from exposure to a traumatizing event experienced by another person with whom one has a close and empathic relationship. To be considered STSD, the exposure to the event must result in a response of fear, helplessness, or horror and symptoms must last for at least one month and cause clinically significant distress (APA, 2000; Bride, 2004; Figley, 1983, 1995b).

Figley (1995a, 1995b, 2002) has been a main proponent of the term secondary traumatic stress/compassion fatigue to describe the reaction of others who have close contact with survivors of trauma and their traumatic material. His conceptualization has focused predominantly on the symptoms that mirror those of Post Traumatic Stress Disorder. However, others have conceptualized secondary traumatic stress to include a broader range of psychological, cognitive, and interpersonal reactions (Dutton & Rubinstein, 1995; Stamm, 1997; Valent, 1995; Yassen, 1995).

#### *Vicarious Traumatization*

The term vicarious traumatization was introduced by McCann and Pearlman (1990b) to describe the unique phenomenon observed in therapists treating trauma victims and survivors. Vicarious traumatization is described as the transformation of an individual's inner experience resulting from empathic engagement with a client's traumatic experience. It can have a profound psychological effect on the therapist, causing painful disruptions to his or her sense of meaning, connection, identity, beliefs, psychological

needs, and interpersonal relationships. These effects are viewed as cumulative and permanent, resulting from continued involvement with multiple survivors of trauma (McCann & Pearlman, 1990b; Pearlman & Saakvitne, 1995a).

Figley (1995a, 1995b) conceptualized secondary traumatic stress to be broadly inclusive of any significant other, as well as mental health professionals, nurses, and emergency workers who have contact with a trauma survivor. McCann and Pearlman (1990b) conceptualized vicarious trauma specifically to apply to mental health therapists and only later expanded it to include other types of trauma workers. Vicarious traumatization can impact therapists either from direct exposure to trauma clients and their descriptions of trauma, supervision of trauma cases, or via readings and professional presentations related to trauma (Rosenbloom, Pratt, & Pearlman, 1995).

Disruptions in imagery are considered a hallmark symptom of vicarious traumatization. Therapists may internalize the memories of their clients, which may alter their own memory systems, causing disruptions to the therapists' psychological and interpersonal functioning. Therapists may experience the clients' traumatic imagery as flashbacks, disturbing dreams, or intrusive thoughts. This imagery is most often fragmented without context or apparent meaning (McCann & Pearlman, 1990b, 1991). These disruptions are often associated with strong emotional reactions such as sadness, anxiety, and anger and can parallel the feelings experienced by the trauma survivor (McCann & Pearlman, 1990a, 1990b; Pearlman & Saakvitne, 1995b). These feeling states may be triggered within conscious awareness or they may be repressed and out of the therapist's conscious awareness (McCann & Pearlman, 1990b).

The concept of vicarious traumatization is based on Constructivist Self Development Theory (CSDT), a developmental and interpersonal theory that explains the impact of trauma on an individual's psychological development, adaptation, and identity (McCann & Pearlman, 1990b). CSDT was developed initially to understand the differences in recovery for trauma victims but the theory has also been applied to therapists as a means to understand how trauma work can impact a therapist's own beliefs about self and the world (McCann & Pearlman, 1991, 1992a, 1992b). CSDT is rooted in the constructivist perspective which proposes that individuals actively create their own personal realities. This reality becomes the template from which the individual interprets new experiences (McCann & Pearlman, 1990b, 1992a).

The main assumptions of CSDT are: 1) individuals construct and construe their own realities, and 2) individuals develop within a particular social and cultural environment throughout their lives. The unique response of a therapist to a client's traumatic material is shaped by the interaction between the salient aspects of the traumatic event itself and the therapist's own unique psychological needs. This occurs all within the context of social and cultural variables that influence individual psychological responses (McCann & Pearlman, 1990b, 1992b; Pearlman & MacIain, 1995).

CSDT proposes that trauma disruptions can occur across several aspects of a trauma therapist's life including their self-capacities, ego resources, and frame of reference. Self-capacities refer to an individual's ability to manage strong emotions while also maintaining a positive sense of self-esteem. Ego resources include the capacity to be introspective, establish boundaries, maintain perspective, and have awareness of personal psychological needs. A therapist's frame of reference includes the components of

personal identity, worldview, and spiritual belief system, all which serve as the primary foundation for viewing and understanding the self and the world. An individual's frame of reference shapes identity and beliefs about the self, how to relate to the world, and how the world works (McCann & Pearlman, 1990b, 1992a; Pearlman & Saakvitne, 1995a).

When disruptions occur to the self-capacity of therapists, they may find it more difficult to calm and comfort the self. Attempts may be made to seek comfort in external sources such as alcohol, overspending, or overwork. They may find themselves seeking caretaking from others, but not knowing how to ask for what they need. Challenges to the ego resources of a therapist may result in overwork, difficulties in decision-making, and a loss of interest and sensitivity towards the lives of others. Finally, disruptions in the frame of reference for therapists may challenge the fundamental understanding they hold toward the self, their personal identity, and attributions as to why certain events occur in life. As a result, therapists may change their view of the world to a view that sees the world as dangerous, threatening, malevolent, and evil. They may lose their sense of hope, optimism, and a connection with others. Therapists may also find their spiritual beliefs challenged, including their sense of meaning and purpose in life (McCann & Pearlman, 1990b; Pearlman & Saakvitne, 1995a; Rosenbloom, Pratt, & Pearlman, 1995).

CSDT also proposes that trauma disruptions can challenge therapists' cognitive schemas related to core psychological needs such as safety, trust, esteem, control, and intimacy. Cognitive schemas represent a primary construct for CSDT and are understood as the beliefs, expectations, and assumptions an individual has about the self, other people, and their relationship to the world. They develop over time through the process of assimilation and accommodation and may be within or outside conscious awareness.

They become a framework on which to organize information and experiences, and over time become associated with certain emotions and feelings (McCann & Pearlman, 1992a; McCann, Sakheim, & Abrahamson, 1988).

CSDT outlines five core psychological need areas including: (1) safety - the need to feel safe and secure; (2) trust or dependence - the need to trust or depend upon others, trust one's own judgment of others, and to depend on others to meet one's needs; (3) esteem - the need to be valued by others, to have one's worth validated, and to value others; (4) control - the need to control one's own behavior, meet new life challenges and problem solve, and the need to influence and lead others; and (5) intimacy - the need to belong and feel connected to others and a larger community and to feel connected to one's own self (McCann & Pearlman, 1992a, 1992b; McCann, Sakheim, & Abrahamson, 1988; Pearlman & Saakvitne, 1995a; Rosenbloom, Pratt, & Pearlman, 1995).

Within each of the five psychological need areas there are two areas of focus: the need as it relates to the self and the need as it relates to experiences with others. These needs motivate behavior, are shaped by experience, and are believed to be most vulnerable to disruptions by trauma (McCann & Pearlman, 1991). It is theorized that disruptions to these need areas, and related cognitive schemas, direct an individual's unique response to traumatic events (McCann & Pearlman, 1992b; McCann, Sakheim, & Abrahamson, 1988).

CSDT theorizes that various symptoms occur when there is a disruption to a cognitive schema that represents a core psychological need. Symptoms related to disruptions to the safety schema may include thoughts and images related to personal vulnerability, increased fearfulness, excessive concern about personal safety, and increased fears for the

safety of loved ones. Symptoms related to disruptions to the trust/dependency schema may include diminished capacity for being independent or trusting of one's own judgment, perceived isolation from others, suspicion of others' motives, distrust, and a cynical attitude towards others. Disruptions to the esteem schema may cause feelings of bitterness, cynicism, pessimism, or feeling overwhelmed. Therapists may experience a sense of anger directed at others and toward the world in general. The excitement to meet new people and learn new ideas may be replaced by cynicism, doubt, and self-protectiveness (McCann & Pearlman, 1990b; Pearlman & Saakvitne, 1995a; Rosenbloom, Pratt, & Pearlman, 1995). Disruptions to the control schema may create feelings of loss of control as well as feelings of helplessness, depression, or terror, which may mirror the client's experience. In an attempt to manage out of control feelings, therapists may restrict activities and relationships as a means to avoid encountering challenging situations or therapists may find themselves acting more dominant and directive at work and in social settings (McCann & Pearlman, 1990b; Rosenbloom, Pratt, & Pearlman, 1995). Finally, disruptions to the intimacy schema may also create feelings of loneliness or emptiness, alienation, difficulty being alone and a sense of disconnection from family, friends, and coworkers. Therapists could choose to self-medicate with food, alcohol, or other substances or possibly engage in compulsive behaviors (i.e. excessive work or exercise). There is also the possibility of general distancing from others and a loss of interest in the difficulties encountered by family and friends in their day-to-day life (McCann & Pearlman, 1990b, 1991; Rosenbloom, Pratt, & Pearlman, 1995).

While many of the symptoms of vicarious trauma are similar to the symptomology of Secondary Traumatic Stress (i.e. intrusion, avoidant, and arousal symptoms), the

symptoms of vicarious trauma are conceptualized within the context of profound changes in the therapist's cognitive schemas and frame of reference. (McCann & Pearlman, 1991; Pearlman & Saakvitne, 1995b).

For therapists, empathic engagement with clients and exposure to traumatic material serves as the impetus for disruptions to a therapist's self-capacity, ego resources, frame of reference and core psychological need areas. It is the position of CSDT that this process is psychologically painful and can have a profound and lasting impact on the therapists' identity, emotions, relationships, interpersonal life, and their ability to meet their own basic psychological needs. However, the way that the therapist experiences disruptions depends in part upon which aspects and core psychological needs areas are most salient to the therapist (McCann & Pearlman, 1990b, 1992b; Pearlman & Saakvitne, 1995a).

#### *Countertransference and Burnout*

Throughout the literature related to secondary traumatic stress and vicarious traumatization, the concepts of countertransference and burnout are included as related phenomena. These concepts at times are confused with the concepts of secondary traumatic stress and vicarious traumatization. To maintain conceptual clarity, these two concepts will be briefly reviewed, along with how they differentiate and overlap with the concepts of secondary traumatic stress and vicarious traumatization.

*Countertransference.* Developed within the psychodynamic school of thought, countertransference is an unconscious defense mechanism that is an emotional reaction to a client by a therapist. Countertransference is a broad concept that refers to a therapist's reaction to a particular client and all that the client represents to that therapist, which may distort judgment and alter therapeutic interventions with clients (Stamm, 1997). It is the



therapist's personal characteristics that determine the response to the client, which can include the process of seeing oneself in a client, over identifying with a client, or meeting personal needs through a client (McCann & Pearlman, 1990b). Countertransference affects a therapists' work with a client during sessions and takes place within a particular therapeutic relationship (Corey, 2001; Pearlman & Saakvitne, 1995a).

Secondary traumatic stress and vicarious trauma may include, but are not limited to, what is viewed as countertransference (Figley, 1995a, 1995b). While countertransference can occur outside the context of trauma, secondary traumatic stress and vicarious traumatization are a specific reaction to traumatic material and can induce trait-like changes to personal values, beliefs and behaviors. Secondary traumatic stress and vicarious traumatization relate to how clients can affect a therapist's life, relationships, belief system, and social networks, as well as therapy work (Sabin-Farrell & Turpin, 2003; Stamm, 1997). As a therapist experiences increased levels of secondary traumatic stress and vicarious traumatization, the related disruptions in cognitive schemas become part of the counselor's unconscious personal material that may then result in countertransference reactions towards a client (Pearlman & Saakvine, 1995a; Saakvitne & Pearlman, 1996).

*Burnout.* Burnout has been defined as a collection of symptoms associated with emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach, Schaufeli, & Leiter, 2001). Burnout is conceptualized as a defensive response that occurs when an individual experiences prolonged exposure to demanding interpersonal situations in an organization or work environment that lacks adequate support (Figley, 1995b; Jenkins & Baird, 2002; Sexton, 1999). Research supports

burnout as a distinct construct from secondary traumatic stress and vicarious trauma (Schauben & Frazier, 1995) and finds job burnout and secondary trauma symptoms to be separate contributors to psychological distress (Adams, Boscarino, & Figley, 2006).

Symptoms of burnout fall into five categories: physical, emotional, behavioral, work-related, and interpersonal (Kahill, 1988). Burnout can be caused by conflict between individual values and organizational goals and demands, an overload of responsibilities, a sense of having no control over the quality of services provide, an awareness of little emotional or financial reward, a sense of loss of community within the work setting, and the existence of inequity or lack of respect at the work place (Salston & Figley, 2003). The etiology of burnout generally indicates workload, co-worker conflict, organizational stress and chronic tediousness in the workplace as precipitating factors, not targeted exposure to client trauma (Maslach & Goldberg, 1998; Pearlman & Saakvitne, 1995; Schauben & Frazier, 1995; Stamm, 1997).

Burnout symptoms emerge gradually and are the result of emotional exhaustion, feeling overwhelmed, and feeling incapable of making change. In contrast, certain secondary traumatic stress symptoms can emerge suddenly with little warning and also include a sense of helplessness, confusion, and isolation from support systems (Figley, 1995b; Sexton, 1999).

While conceptualized differently from one another, secondary traumatic stress, vicarious traumatization, and burnout do share similar characteristics. Each may result in physical, emotional, and behavioral symptoms, work related issues, and interpersonal problems (Arvay & Uhlemann, 1996; Salston & Figley, 2003). Due to these similarities, researchers have found psychometric overlap among measures for secondary traumatic

stress, vicarious traumatization, and burnout, and thus have called for further research to help differentiate the concepts (Jenkins & Baird, 2002; Kadambi & Truscott, 2003, 2004).

#### *Clarification of Terminology*

Secondary traumatic stress and vicarious traumatization are the two concepts that have been predominantly featured in the literature over the past 15 years. One of the main conceptual distinctions between secondary traumatic stress and vicarious traumatization is their theoretical origin. Figley (1995a, 1995b) conceptualized secondary traumatic stress/compassion fatigue to be inclusive of any individual, family or professional, who has contact with a trauma survivor. McCann and Pearlman (1990a, 1990b) conceptualized vicarious traumatization specifically to explain reactions of mental health professionals who engage in therapy with trauma survivors. Figley (1995c) outlines secondary traumatic stress (and the interchangeable term compassion fatigue) via the trauma transmission model, which places emphasis on empathy and exposure to traumatic material. McCann and Pearlman (1990b) conceptualize vicarious traumatization within their Constructivist Self Development Model, which highlights the unique response of each therapist, his or her empathic engagement with the client's trauma, and the vulnerable cognitive schemas of the therapist.

Vicarious traumatization and secondary traumatic stress also focus on different symptomology as a result of traumatization. Secondary traumatic stress focuses predominantly on observable symptoms that mirror post-traumatic stress responses of intrusion, avoidant, and arousal symptoms (Figley, 1995a, 1995b; Jenkins & Baird, 2002). Vicarious traumatization focuses predominantly on inner cognitive changes

related to five main psychological needs areas: safety, trust, esteem, control, and intimacy (Jenkins & Baird, 2002; McCann & Pearlman, 1990b). Vicarious traumatization is also inclusive of avoidant, intrusive, and arousal symptoms, but views them within the context of cognitive schema changes (Pearlman & Saakvitne, 1995).

Perceived on-set and duration of symptoms is another distinction among these concepts. Secondary traumatic stress symptoms are conceptualized as acute, sudden, and can occur after exposure to a single traumatized person (Figley, 1995b; O'Halloran & Linton, 2000). Conversely, vicarious traumatization reactions have been conceptualized to be long term in duration and reflect a permanent transformation of a therapist's inner experience. Changes occur as a result of cumulative exposure to many clients, and across various types of trauma contact (McCann & Pearlman, 1990a; Pearlman & Saakvitne, 1995).

Despite these theoretical distinctions, a review of the literature related to mental health counseling, vicarious traumatization, and secondary traumatic stress/compassion fatigue shows that there is considerable overlap among the use of these concepts (Canfield, 2005; Larsen, Stamm, & Davis, 2002) and that the conceptual distinctions are not consistently supported by research (Adams, Matto, & Harrington, 2001; Baird & Jenkins, 2003; Cunningham, 2003; VanDeusen & Way, 2006). For example, three major texts were published in 1995, including an edited volume by Figley (1995d), Stamm (1995), and Pearlman and Saakvitne (1995a). While each book chose a different term to explain the phenomena of working with traumatized individuals, each book also included the work and terminology of the other authors. More recent research continues to blend and combine terminology across studies and within studies. Arvay and Uhlmann (1996) use

the terms secondary victimization, burnout, compassion fatigue, and vicarious traumatization in their study, but measure only burnout, intrusion, and avoidant symptoms. Follette, Polusny, and Milbeck (1994) use the terms secondary victimization and vicarious traumatization and measure general psychological functioning and PTSD symptomology.

A review of the literature also indicates a lack of consistency in measurement of the respective concepts of vicarious traumatization and secondary traumatic stress/compassion fatigue. In regards to secondary traumatic stress/compassion fatigue, some researchers have focused solely on the assessment of intrusive and avoidant symptoms as indicators of secondary traumatic stress (Arvay & Uhlemann, 1996; Creamer & Liddle, 2005). Other research has included the assessment of arousal symptoms (Adams & Riggs, 2008; Bride, Robinson, Yegidis, & Figley, 2004; Motta, Keefer, Hertz, & Hafeez, 1999) and still others include general physical and emotional distress as indicators of secondary traumatic stress (Follette, Polusny, & Milbeck, 1994; Ghahramanlou & Brodbeck, 2000; Kassam-Adams, 1995).

Research related to vicarious traumatization has varied as well. Some research has focused solely on cognitive schema changes (VanDeusen & Way, 2006) and some solely on intrusive and avoidant symptoms (Way, VanDeusen, Martin, Applegate, & Jandle, 2004). Other research has included intrusive, avoidant, and arousal symptoms (Kadambi & Truscott, 2004; Marmaras, Lee, Siegel, & Reich, 2003) and general psychological distress (Schauben & Frazier, 1995) as indicators of vicarious traumatization.

The overlap and similarities among the concepts have led many researchers to suggest that the terms of secondary traumatic stress and vicarious traumatization actually refer to

a single core phenomena, and that the respective concepts just distinguish those struggling primarily with cognitive disruptions from those struggling primarily with PTSD symptomology (Arvey, 2001; Bride, 2004; Deighton, Gurriss, & Trause, 2007; Jenkins & Baird, 2003; Kadambi & Truscott, 2004; Linley & Joseph, 2007; Stamm, 1997)

Ultimately, the terms of vicarious traumatization and secondary traumatic stress/compassion fatigue attempt to explain the various emotional, physical, and interpersonal reactions that an individual can have as a result of contact with a traumatized persons and their traumatic material (Bride, Radey, & Figley, 2007). Both concepts have been applied to mental health therapists and both concepts highlight the key role that exposure to trauma and empathetic support plays in the transmission of trauma (Figley, 1995c; McCann & Pearlman, 1990b, 1992b; Pearlman & Saakvitne, 1995a).

#### *Symptoms of Secondary Traumatic Stress and Vicarious Traumatization*

Due to the overlap in terminology across studies and within studies, the literature will be reviewed and synthesized according to symptom domains as suggested by other researchers, rather than theoretical concepts (Collins & Long, 2003; Dutton & Rubinstein, 1995; Sabin-Farrell & Turpin, 2003). Published studies have focused predominantly on assessing for PTSD related symptomology (i.e. intrusion, avoidance, and arousal symptoms) and disruptions in cognitive schemas. Thus the literature regarding vicarious traumatization, secondary traumatic stress/compassion fatigue, and mental health therapists will be reviewed and categorized by: 1) cognitive schema disruptions, and 2) PTSD related symptoms. This review will also include a summary of the most common factors that have been addressed in the literature as associated with

each of these symptom domains. This will be followed by a review of the literature as it relates to interpersonal and sexual disruptions as symptomology of vicarious traumatization and secondary traumatic stress, an area that has received little attention.

#### *Literature Review Inclusion and Exclusion Criteria*

For this study, journal articles were reviewed that addressed vicarious trauma, secondary traumatic stress and/or compassion fatigue as it related to mental health professionals working with victims and survivors of trauma. Only quantitative empirical research in peer reviewed journals and in published books was included in this review. Selected studies included the following criteria: 1) the majority of participants in the study had to be trained mental health counselors, psychologists and/or clinical social workers, and 2) participants had to be actively engaged in therapy with clients. A total of 26 studies met criteria for the literature review. Studies were located utilizing the following data base search engines: PSYCH Info, Humanities International Index, Academic Search Premier Search, Family and Society Studies Worldwide, and Social Services Abstracts. As journal articles were collected, their reference section were back checked against previously collected articles to locate any outstanding articles.

Studies that addressed mental health professionals who work with perpetrators of violence were excluded, due to the theoretical conceptualization of vicarious traumatization and secondary traumatic stress as a phenomenon that occurs upon exposure and empathetic engagement with *victims* of trauma and their traumatic material. Moulden and Firestone (2007) conducted a literature review of vicarious traumatization and therapists who treat sexual offenders and found that the majority of research to date has not utilized commonly used measures designed to assess for secondary traumatic

stress and compassion fatigue. Additionally, factors associated with sexual offender therapists and vicarious traumatization are found to be different than those associated with trauma victim therapists (Moulden & Firestone, 2007; Vandeußen & Way, 2006; Way, VanDeusen, Martin, Applegate, & Jandle, 2004). Two studies were located that included perpetrator therapists as a separate part of a larger sample of therapists who treat trauma victims (VanDeusen & Way, 2006; Way, VanDeusen, Martin, Applegate, & Jandle, 2004). In those incidences, only results related to the trauma victim therapists were summarized.

Previous literature reviews were evaluated to locate outstanding articles and to review for trends in the literature (see Arvay, 2001; Baird & Kracen, 2006; Bride, 2004; Canfield, 2005; Dunkley & Whelan, 2006; Kadambi & Ennis, 2004; Sabin-Farrell & Turpin, 2003). It was determined that trends cited in these previous literature reviews were no longer relevant given that all of the previous reviews focused on research published prior to 2003. Since 2004 the literature has almost doubled with sixteen new articles published related to mental health therapists and secondary traumatic stress/compassion fatigue and vicarious traumatization. Many of the previous literature reviews included unpublished studies (Arvay, 2001; Baird & Kracen, 2006; Canfield, 2005) and were also broad in focus, including professionals outside of mental health therapy, such as welfare workers, child protective workers, case managers, emergency personnel, and law enforcement workers who may or may not have been engaged in therapy with clients (Bride, 2007; Dunkley & Whelan, 2006; Sabin-Farrell & Turpin, 2003). Finally, most of the previous reviews combined the symptom domains of cognitive schema disruptions and PTSD related symptoms when reviewing associated



factors, thus not accounting for factors that may influence various symptom domains differently (Arvey, 2001; Bride, 2004; Canfield, 2005; Dunkley & Whelan, 2006; Kadambi & Ennis, 2004). This review represents the most current summary of the literature as it relates specifically to mental health therapists, vicarious traumatization, and secondary traumatic stress/compassion fatigue.

### *Cognitive Schemas Disruptions*

The measurement of cognitive schema distortions has been predominately assessed by the Traumatic Stress Institute – Belief Scale Revision L (TSI-BSL; Pearlman, 1996). The TSI-BSL was developed to tap into the construct of cognitive schema disruptions, the cornerstone of vicarious traumatization as conceptualized by McCann and Pearlman (1990b). Subscales for the TSI-BSL correspond to the psychological need areas of safety, trust, esteem, intimacy, and control, all hypothesized by Constructivist Self Development Theory as most vulnerable to disruption by traumatic life experiences. Higher scores on the TSI-BSL indicate greater disruption as a whole to cognitive schemas and for each of the five psychological need areas.

While the TSI-BSL is the predominant measure of cognitive schema distortions, concerns regarding the validity of the measure have been reported. The TSI-BSL for use with trauma therapists was normed on a self-selected sample that was without adequate controls for exposure to personal and professional trauma, which may have inflated total and subscale scores (Kadambi & Ennis, 2004). Concerns have also been raised about TSI-BSL's ability to discriminate cognitive schema disruptions from symptoms of burnout (Jenkins & Baird, 2002; Kadambi & Ennis, 2004). Only two comparison studies have been conducted that assessed for effects of working with different client populations

(see Table 1). Cunningham (2003) compared cognitive schema disruptions for therapists who treat sexual assault clients versus therapists who treat cancer clients, and found a significant difference between these two groups. Therapists treating sexual abuse clients reported more cognitive schema disruptions in the areas of other-safety, other-trust, other-esteem, and self-safety. Kadambit and Truscott (2004) also compared therapists who treat sexual assault clients and cancer clients, and added a third comparison group of therapists treating a general client population. Therapists treating sexual assault clients reported higher mean TSI-BSL total scores compared to therapists treating cancer clients and general clients. Therapists treating a general client population reported higher mean TSI-BSL scores compared to therapists treating cancer clients. Despite these reported discrepancies, no significant difference was found between these three groups on TSI-BSL total scores. This study remains the only study to date which has included a general client population comparison group. However, it should be noted that the level of exposure to trauma clients within the general population client group was not measured or controlled (Kadambi & Truscott, 2004).

Two other comparison studies (see Table 2) were conducted which addressed the difference in cognitive schema disruptions for trauma therapists with and without a personal trauma history. Jenkins and Baird (2002) assessed solely for a history of sexual assault or domestic violence and found no significant difference on the TSI-BSL total scores between therapists with and without a personal trauma history. Pearlman and MacIain (1995) however, found a significant difference, with therapists who have a

Table 1  
*TSI-BSL Scores for Different Client Populations*

Study	Total	Self-Safety	Other-Safety	Other-Trust	Other-Esteem
Cunningham (2003)					
Sexual assault clients	nr	1.83(SD=.55)	2.26(SD=.48)	2.25(SD=.66)	2.20(SD=.57)
Cancer clients	nr	1.71(SD=.43)	2.03(SD=.54)	2.00(SD=.56)	1.95(SD=.44)
Kadambi and Truscott (2004)					
Total Sample	141.27(SD=26.27)	nr	nr	nr	nr
Sexual abuse clients	146.65(SD=27.24)	nr	nr	nr	nr
Cancer clients	138.10(SD=25.96)	nr	nr	nr	nr
General population clients	140.71(SD=28.28)	nr	nr	nr	nr

Total (TSI-SBL Total Score), nr (not reported)

Table 2  
*TSI-BSL Scores for Therapists With and Without a Trauma History*

Study	Total	Self-Safety	Other-Trust	Self-Trust	Other-Esteem	Self-Esteem	Self-Intimacy	Other-Intimacy
Jenkins and Baird (2002)								
With	166.1(SD=35.4)+	nr	nr	nr	nr	nr	nr	nr
Without	155.2(SD=32.2)+	nr	nr	nr	nr	nr	nr	nr
Pearlman and MacIain (2002)								
Total Sample	184	nr	nr	nr	nr	nr	nr	nr
With	190(SD=38)*	2.25(SD=.74)**	1.89(SD=.70)**	1.86(SD=.71)**	3.39(SD=.60)+	1.45(SD=.59)**	1.68(SD=.59)+	1.85(SD=.86)**
Without	174(SD=34)*	1.98(SD=.84)**	1.67(SD=.50)**	1.62(SD=.61)**	2.59(SD=.58)+	1.26(SD=.46)**	1.54(SD=.52)+	1.58(SD=.75)**

Total (TSI-SBL Total Score) nr (not reported) +no significant difference \*p<.01 \*\*p<.05

personal trauma history reporting significantly higher TSI-BSL total scores as well as higher subscale scores on self-safety, self-trust, other-trust, self-esteem, and other-intimacy, but no difference on the subscales of other-esteem and self-intimacy.

*Factors associated with cognitive schema disruptions.* The majority of studies that have addressed cognitive schema disruptions have failed to report mean total and mean subscale data, and instead have focused primarily on looking for factors associated with cognitive schema disruptions. Across these studies, cognitive schema disruptions have been reported in the following areas: self-safety (Chrestman, 1995; Cunningham, 2003; Pearlman & MacIan, 1995), other-esteem (Cunningham, 2003; Schauben & Frazier, 1995), self-trust, self-esteem, self-intimacy (Pearlman & MacIan, 1995), other-trust (Pearlman & MacIan, 1995; VanDeusen & Way, 2006), and other-intimacy (Bober & Regehr, 2005; Pearlman & MacIan, 1995; VanDeusen & Way, 2006).

Factors that have been found to have no association with cognitive schema disruptions include gender (Adams, Matto, & Harrington, 2001; MacLean, Wade, & Encel, 2003; VanDeusen & Way, 2006), race/ethnicity (Adams, Matto, & Harrington, 2001), and receiving supervision (Bober & Regehr, 2005; VanDeusen & Way, 2006). However, higher income has been one factor that is consistently associated with fewer cognitive schemas disruptions (Adams, Matto, & Harrington, 2001; Schauben & Frazier, 1995).

Mixed results have been reported for the association between age and cognitive schema disruptions with several studies reporting no association (Baird & Jenkins, 2003; VanDeusen & Way, 2006). However, Bober and Regehr (2005) found a significant positive association between older therapists reporting more disruptions in the other-

intimacy schema area. Adams, Matto, and Harrington (2001) also found that a younger age accounted for 2.4% of the variance in the schema area of self-safety.

Years of counseling experience have been found to have a mixed association with cognitive schema disruptions. Two studies have reported no association with cognitive schema disruptions (Adams, Matto, & Harrington, 2001; VanDeusen & Way, 2006), while Baird and Jenkins (2003) also found that months of counseling experience were not associated with cognitive schema disruptions. However, for studies where an association was found, fewer years of experience were associated with more cognitive schema disruptions in the areas of other-intimacy (Bober & Regehr, 2005), other-esteem, self-safety (Cunningham, 2003), self-trust, self-intimacy, and self-esteem (Pearlman & MacIan, 1995). These findings call into question the conceptualization of vicarious trauma as a long term and permanent transformation to a therapist's inner experience (McCann & Pearlman, 1990a; Pearlman & Saakvtine, 1995).

Studies that have addressed the factor of personal trauma history have found mixed results. While several studies have reported no association (Adams, Matto, & Harrington, 2001; Bober & Regehr, 2005; Chrestman, 1995; Kadambi & Truscott, 2004), studies where a significant association was reported found that therapists with a personal trauma history had more disruptions in the areas of self-safety, self-trust, and self-esteem (Cunningham, 2003; Pearlman & MacIan, 1995). For therapists reporting a personal trauma history, specifically a childhood history of emotional neglect, more disruptions were found in the areas of other-trust and other-intimacy (Pearlman & MacIan, 1995; VanDeusen & Way, 2006). However, mixed results have been reported specifically related to the cognitive schema of other-esteem, whereas Cunningham (2003) found a

significant positive association with personal trauma history and Pearlman and MacIan (1995) found no significant association.

Measurement of personal trauma history has been inconsistent across studies and thus likely influenced these mixed findings. For example, in two studies personal trauma history was measured as an affirmative response to a single question where personal trauma was not defined (Cunningham, 2003; Pearlman & MacIan, 1995). In other studies, participants were given the option of acknowledging various personal trauma experiences ranging from rape to verbal abuse to surviving a natural disaster. However, in analysis all trauma experiences were collapsed into a single trauma variable masking the possible impact that interpersonal trauma may have versus other trauma experiences (Adams, Matto, & Harrington, 2001; Bober & Regehr, 2005; Chrestman, 1995; Kadambi & Truscott, 2004).

When looking at years of experience combined with personal trauma history, therapists with a personal trauma history and fewer years of counseling experience were found to have overall cognitive schema disruptions and disruptions in the areas of self-safety, self-trust, self-intimacy and self-esteem (Pearlman & MacIan, 1995). Kadambi and Truscott (2004) also found that fewer years counseling experience combined with a personal trauma history was predictive of overall cognitive schema disruptions, accounting for 5.6% of the variance in the TSI-BSL total score. For therapists without a personal trauma history, fewer years of counseling experience were associated with cognitive disruptions in self-intimacy and other esteem (Pearlman & MacIan, 1995).

The impact of exposure to trauma clients upon cognitive schema disruptions has also been found to vary across studies. While studies have found a positive association

between increased exposure to trauma clients and cognitive schema disruptions, specifically in the schema areas of other-esteem (Schauben & Frazier, 1995) and safety (Chrestman, 1995) other studies have failed to find an association (Adams, Matto, & Harrington, 2001; Brady, Guy, Polstra, & Brokaw, 1999; Bober & Regehr, 2005; Cunningham, 2003). Pearlman and MacIan (1995) also found no association between exposure to trauma clients and cognitive schema disruptions, but only for therapists who did not have a personal trauma history. Interestingly in this same study, therapists with a personal trauma history who were treating a higher percentage of sexual abuse survivors were found to have fewer disruptions in self-trust, self-intimacy, and self-esteem.

Other studies have also found a negative association between exposure to trauma clients and cognitive schema disruptions. Cunningham (2003) found that therapists with a higher percentage of cancer clients on their caseload had fewer cognitive disruptions reported in the areas of self-safety and other-safety. Baird and Jenkins (2003) found that a higher average of sexual assault and domestic violence clients seen in a week was associated with lower overall cognitive disruptions. These findings fail to support the theoretical position of vicarious trauma which claims that cognitive schema changes occur following cumulative and repeated exposure to trauma clients (McCann & Pearlman, 1990a; Pearlman & Saakvtine, 1995).

Measurement of exposure has also been inconsistent across studies and thus likely influenced these mixed findings. For example, one study conceptualized exposure as the number of trauma clients seen over the course of one week (Adams, Matto, & Harrington, 2001) while other studies looked at hours per week spent with trauma clients (Baird & Jenkins, 2003; Bober & Regehr, 2005), percentage of trauma clients on a



therapists' current caseload (Chrestman, 1995; Pearlman & MacIan, 1995; Schauben & Frazier, 1995), or the percentage of trauma clients seen over the course of a career (Brady, Guy, Polstra, & Brokaw, 1999).

*Summary.* In review, it appears that working with trauma clients may be disruptive to the cognitive schema areas of trauma therapists. However, the literature has failed to adequately address the questions of severity and prevalence rates of cognitive schema disruptions among trauma therapists.

Kadambi and Truscott (2004) report from their sample of 221 mental health professionals working with sexual violence clients, cancer clients, and general clients, that 5 % of their sample reported, "elevated levels" of cognitive disruptions. While this provides an indication of severity and prevalence, how these elevated levels were determined in the study is unclear. Limitations and concerns regarding the TSI-BSL also hamper attempts to determine severity levels of cognitive schema disruptions with trauma therapist populations (Kadambi & Ennis, 2004).

Studies that have focused solely on associated factors with disrupted cognitions have found increased income to be consistently associated with fewer cognitive disruptions, while gender, race/ethnicity, and receiving supervision have not been associated. Other factors, including years of counseling experience, age, personal trauma history, and exposure level to trauma all yielded mixed results. However, there appears to be a trend in the literature where fewer years of experience are associated with more cognitive disruptions (Bober & Regehr, 2005; Cunningham, 2003; Pearlman & MacIan, 1995) and, more specifically, fewer years of experience combined with a personal trauma history is predictive of more cognitive disruptions (Kadambi & Truscott, 2004; Pearlman &

MacIan, 1995). Mixed findings in the literature are likely due, in part, to limitations with the TSI-BSL (Kadambi & Ennis, 2004), as well as measurement inconsistencies among factors, specifically in relation to defining personal trauma history and exposure level to client trauma.

### *Post Traumatic Stress Disorder Symptoms*

Researchers addressing secondary traumatic stress and vicarious traumatization have used a variety of measures to assess for PTSD symptoms. To date, the majority of studies have utilized two scales: 1) the Professional Quality of Life Scale (ProQOL; Stamm, 2005), a measure to assess for compassion fatigue, and 2) the Impact of Events Scale (IES; Horowitz, Wilner, & Alvarez, 1979), a widely used measure of intrusive and avoidant symptoms. Studies that have used alternative measures will be summarized first, followed by a review of studies that have utilized the ProQOL, and a review of studies utilizing the Impact of Events Scale.

Adams, Matto, and Harrington (2001) looked at 185 clinical social workers working with a general client population within a variety of practice settings including hospitals, mental health centers, private practice, and school settings. A bothersome intrusion variable was constructed for the study made up of questions to assess for the presence, intensity, and frequency of uncomfortable client memories. When asked how bothered they were by intrusive client material, 41.4% of participants indicated “somewhat bothered,” while 5.4% indicated they were bothered “a great deal.” In a study by Deighton, Gurriss, and Traue (2007), 103 psychologists, clinical social workers, and psychiatrists, working with survivors of torture were surveyed. A total of 32% of the sample reported “PTSD related symptoms.”

Two more recent studies have utilized measures with established cutoff scores, which help to provide a more complete picture regarding the prevalence rates for clinical levels of PTSD related symptoms in trauma therapist populations. Adams and Riggs (2008) looked at vicarious trauma in 134 therapist trainees working with a general client population, including one-fourth of trainees working directly with trauma clients. The Trauma Symptom Inventory (TSI; Briere, 1995) was used to assess for intrusive experiences, defensive avoidance, anxious arousal, dissociation, and impaired self-reference (conceptualized as confused identity and low self-esteem). Of this sample, 8-14% exceeded the clinical cutoff scores across each of the five symptom areas, whereas 31% of the sample exceeded the clinical cutoff scores on one or more of the symptom areas.

Bride (2007) has been able to provide one of the most complete reviews to date of intrusive, avoidant, and arousal symptomology within a sample of 282 clinical social workers. In this study the Secondary Traumatic Stress Scale (STSS; Bride, Robinson, Yegidis, & Figley, 2003), a scale specifically designed to assess for secondary traumatic stress symptomology, was used. Of the participants in this study, 97.8% reported working with traumatized client populations and 88.9% reported that their work with clients addressed issues related to their clients' trauma. Utilizing an algorithm approach, 15.2% of the sample was found to have met the core criteria for a diagnosis of PTSD. Participants identified intrusive thoughts as the most frequently reported symptom, with 40.5% of respondents indicating that they had thought about their work with traumatized clients without intending to do so. Other reported intrusive symptoms were cued psychological reactions (19.1%), cued physiological reactions (12.4%), disturbing dreams

(5.8%), and sense of reliving the clients' trauma (5.0%). Seven avoidant symptoms were assessed in which endorsement of symptoms ranged from 10.9% for avoidance of people, places or things (that served as reminders of work with traumatized clients), to 31.6% for avoidance of clients. Other avoidance symptoms reported were: inability to recall information related to work with clients (14.9%), detachment from others (22.3%), diminished interest or participation in activities (25.5%), emotional numbing (25.9%), and sense of a foreshortened future (28.0%). Across the five-arousal symptoms assessed for, irritability (27.7%) and concentration difficulties (27.0%) were endorsed most frequently. Other arousal symptoms reported included: sleeping difficulties (24.4%), hypervigilance (13.8%), and an exaggerated startle reflex (12.1%).

*Professional Quality of Life Scale.* Figley (1995a, 1995b) developed his own measure for secondary traumatic stress, titled the Compassion Fatigue Self Test (CFST), where the assessment of intrusive, avoidant, and arousal symptoms serve as indicators of compassion fatigue. The Compassion Fatigue Self Test has been utilized in many forms, including a revised version (Gentry, Baranowsky, & Dunning, 2002) and a version called the Compassion Satisfaction and Fatigue Test (CSF; Stamm, 2002). The most updated version is now referred to as the ProQOL (Professional Quality of Life Scale: Compassion Satisfaction, Burnout and Fatigue Scale; Stamm, 2002, 2005). The ProQOL includes the same assessment of symptoms for compassion fatigue as the original scale and has two separate subscales, one for burnout symptoms and one for pleasurable/satisfying reactions to trauma work (called compassion satisfaction). Because the compassion fatigue subscale focuses on intrusion, avoidant, and arousal symptomology,

results from studies utilizing the ProQOL have been included in this section on PTSD symptoms.

Early studies using the CFST only addressed associated factors with compassion fatigue that will be summarized later. Other descriptive data were not provided. Three recent studies that have utilized the updated ProQOL (Stamm, 2005) have reported mixed findings. One study reported high levels of compassion fatigue symptomology in the sample of therapists working directly with survivors of torture (Deighton, Gurriss, & Traue, 2007). However, two other studies reported mean compassion fatigue scores that represented below average levels of intrusive, avoidant, and arousal symptomology (Linley & Joseph, 2007; Sprang, Clark, & Witt-Woosley, 2007).

The discrepant findings related to the ProQOL may reflect the different levels of exposure therapists have had to trauma clients. One study included a client population where 30% identified as trauma victims (Linley & Joseph, 2007), whereas the other study focused on a general client population where the percentage of trauma victims were unspecified (Sprang, Clark, & Witt-Woosley, 2007). Discrepancies may also be a reflection of psychometric problems with the ProQOL (Gentry, Baranowsky, & Dunning, 2002; Stamm, 2002). The content validity of the ProQOL has been called into question, due to the fact that most of the compassion fatigue content items assess for trauma symptoms and experiences, whereas none evaluate for compassion or fatigue (Jenkins & Baird, 2002).

*Impact of Events Scale.* One of the most popular measures in the secondary traumatic stress and vicarious traumatization literature has been the Impact of Events Scale (IES; Horowitz, Wilner, & Alvarez, 1979). The IES is one of the earliest developed and the

most widely used self-report instruments for the assessment of posttraumatic stress reactions (Briere & Elliott, 1998). While not developed to assess PTSD specifically, the IES has shown that it taps into the posttraumatic stress reactions of intrusion and avoidance, and is highly correlated with other PTSD measures (Joseph, 2000). The IES contains seven items evaluating posttraumatic intrusion and eight items tapping posttraumatic avoidance, yielding two subscales scores and a total scale score. It has been shown to differentiate between traumatized and non-traumatized groups, and to predict greater subjective distress among trauma victims (Briere & Elliott, 1998; Joseph, 2000).

One of the shortcomings of the IES in its application to assessing secondary traumatic stress and vicarious traumatization is that it has not been validated or normed on samples of persons indirectly exposed to trauma (Bride, Robinson, Yegidis, & Figley, 2003). Empirical studies have drawn various conclusions by utilizing different cutoff scores ranging from 26 as an indicator of moderate to severe symptoms (Kadambi & Truscott, 2004), to 35 as the cutoff for optimal PTSD diagnostic specificity (McLean, Wade, & Encel, 2003), to 40 as an indicator of symptoms similar to individuals with PTSD (Arvey & Uhlemann, 1996). Also, the IES does not include questions that assess for hyperarousal symptoms and does not assess for all forms of avoidant symptoms that are also indicative of PTSD (Joseph, 2000). A more recent version of the IES has been developed, called the Impact of Events-Revised (IES-Revised; Weiss & Marmar, 1997). The IES-Revised includes several items to assess for hyper-arousal, however only one study was found that utilized this recent scale and no data for mean scores was provided (Marmaras, Lee, Siegel, & Reich, 2003).

For this review, mean IES scores were compared against the norms established by Briere and Elliott (1998) in their sample of the general population exposed to a wide range of potentially upsetting life events. Comparison to these established norms will allow for the evaluation of therapists' responses to traumatic client material, relative to that of the general population's response to a variety of potentially traumatic events.

Reported mean IES total scores fell between the 60<sup>th</sup> and 84<sup>th</sup> percentiles (see Table 3). Two studies where mean total scores represented the 80<sup>th</sup> and 84<sup>th</sup> percentile included samples of therapists representing social workers, counselors, psychologists, and other mental health workers in contact with a wide range of traumatized clients (Arvay & Uhlemann, 1996; McLean, Wade, & Encel, 2003). Studies that looked solely at therapists working with sexual trauma survivors reported mean IES totals within the 65<sup>th</sup> and 79<sup>th</sup> percentiles (Kadambi & Truscott, 2004; Way, VanDeusen, Martin, Applegate, & Jandle, 2004). Therapists working with cancer clients reported mean total scores in the 65<sup>th</sup> and 69<sup>th</sup> percentile, while the lowest mean total score, representing the 60<sup>th</sup> and 64<sup>th</sup> percentile, was reported by Kadambi and Truscott (2004) for therapists working with a general client population. However, as noted earlier, the level of exposure to trauma clients within this group of therapists treating general clients was not measured nor controlled for.

Similarly, the reported mean IES-I (intrusion subscale) and the IES-A (avoidance subscale) scores fell between the 60<sup>th</sup> and 84<sup>th</sup> percentiles. Mean subscale scores for those working with sexual abuse victims remained between the 65<sup>th</sup> and 79<sup>th</sup> percentiles, while IES-I mean subscale scores for therapists working with cancer clients were in the 65<sup>th</sup> and 69<sup>th</sup> percentile (Kadambi & Truscott, 2004; Way, VanDeusen, Martin,

Table 3  
*IES Scores and Percentiles Based on Norms Established by Briere and Elliott (1998)*

Study	IES-T	Percentile	IES-I	Percentile	IES-A	Percentile
Arvay and Uhlemann (1996)	33.13( <i>SD</i> =7.1)	80-84	16.08( <i>SD</i> =4.0)	80-84	16.07( <i>SD</i> =4.2)	80-84
Ghahamanlou and Broadbeck (2000)	nr	-	13.0( <i>SD</i> =4.6)	75-79	13.2( <i>SD</i> =5.0)	75-79
Kadambi and Truscott (2004)						
Total sample	15.22( <i>SD</i> =13.08)	65-69	7.65( <i>SD</i> =6.54)	65-69	7.59( <i>SD</i> =7.48)	60-64
Sexual abuse clients	16.47( <i>SD</i> =14.44)	65-69	8.29( <i>SD</i> =7.10)	65-69	8.28( <i>SD</i> =8.21)	65-69
Cancer clients	16.07( <i>SD</i> =11.12)	65-69	8.10( <i>SD</i> =6.10)	65-69	7.82( <i>SD</i> =6.51)	60-64
General population clients	13.14( <i>SD</i> =12.91)	60-64	6.54( <i>SD</i> =6.17)	60-64	6.61( <i>SD</i> =7.39)	60-64
McLean, Wade and Encel (2003)	28.0( <i>SD</i> =7.9)	80-84	nr	-	nr	-
Pearlman and MacIan (1995)						
With a trauma history	nr	-	7.57( <i>SD</i> =4.3)	65-69	7.33( <i>SD</i> =5.3)	60-54
Without a trauma history	nr	-	5.62( <i>SD</i> =3.7)	60-64	5.58( <i>SD</i> =4.2)	55-59
Way, et al. (2004)	27.09( <i>SD</i> =7.31)	75-79	12.62( <i>SD</i> =4.13)	75-79	14.47( <i>SD</i> =4.29)	75-79

IES-T (Total Score) IES-I (Intrusion Subscale) IES-A (Avoidance Subscale) nr (not reported)



Applegate, & Jandle, 2004). The lowest mean subscale scores were the IES-A subscale in the 60<sup>th</sup> and 64<sup>th</sup> percentile for therapists working with cancer clients, and IES-I and IES-A subscale scores for therapists working with a general client population also in the 60<sup>th</sup> and 64<sup>th</sup> percentile. Pearlman and MacIan (1995) reported mean subscale scores for their population of therapists working with various trauma survivors and compared subscales score of therapists with and without a personal trauma history. Therapists with a trauma history reported a mean IES-I subscale score in the 65<sup>th</sup> and 69<sup>th</sup> percentile and a mean IES-A subscale in the 60<sup>th</sup> and 64<sup>th</sup> percentile. Those without a trauma history reported a mean IES-I subscale also in the 60<sup>th</sup> and 64<sup>th</sup> percentile, while the mean IES-A subscale score was within the 55<sup>th</sup> and 59<sup>th</sup> percentile.

*Factors associated with PTSD symptoms.* Factors that have been found to have no association with PTSD related symptom levels are marital status (Adams, Boscarino, & Figley, 2006; Creamer & Liddle, 2005), education level (Adams & Riggs, 2008; Creamer & Liddle, 2005) and receiving supervision (Bober & Regehr, 2005; Kadambi & Truscott, 2004; Kassam-Adams, 1995; Linley & Joseph, 2007; Way, VanDeusen, Martin, Applegate, & Jandle, 2004). For race/ethnicity the majority of studies found no association with PTSD related symptoms (Adams, Boscarino, & Figley, 2006; Adams, Matto, & Harrington, 2001). However, Adams and Riggs (2008) found that ethnic minority therapists reported lower levels of intrusive experiences when compared to white therapists.

Mixed results have been reported for a number of factors and their association with PTSD symptom levels. Several studies have found no association between age and

PTSD symptom levels (Adams & Riggs, 2008; Baird & Jenkins, 2003; Kassam-Adams, 1995; Way, VanDeusen, Martin, Applegate, & Jandle, 2004). Studies where an association has been found indicated that younger age was associated with more severe intrusion and avoidance symptomology (Adams, Boscarino, & Figley, 2006; Adams, Matto, & Harrington, 2001; Arvey & Uhlemann, 1996; Bober & Regehr, 2005).

Gender was found to have no association to PTSD related symptoms in a number of studies (Adams, Boscarino, & Figley, 2006; Adams & Riggs, 2008; Creamer & Liddle, 2005; Deighton, Gurriss, & Traue, 2007; Linley & Joseph, 2007; Way, VanDeusen, Martin, Applegate, & Jandle, 2004). However, in studies where an association was found, female therapists reported higher levels of PTSD symptoms compared to males (McLean, Wade, & Encel, 2003; Sprang, Clark, & Witt-Woosley, 2007). Being female was also found to be predictive of PTSD symptoms when combined with a personal childhood history of trauma (Kassam-Adams, 1995).

Receiving personal therapy has also been associated with more severe intrusion and avoidance symptoms (Bober & Regehr, 2005; Creamer & Liddle, 2005). Linley and Joseph (2007), however, found no difference in levels of compassion fatigue among those who are currently receiving personal therapy and those who are not. The influence of income has also shown to have mixed results. Adams, Matto, and Harrington (2001) found no association between income level and intrusive symptoms; however, Chrestman (1995) found a significant association between increased income levels and fewer PTSD symptoms.

Three factors that have received the most attention in the literature are experience level, exposure to trauma, and personal trauma history; all three factors have yielded

mixed results. Several studies have found that years of counseling experience are not associated with PTSD related symptom levels (Adams, Boscarino, & Figley, 2006; Creamer & Liddle, 2005; Deighton, Gurriss, & Traue, 2007; Kassam-Adams, 1995; Linley & Joseph, 2007). Baird and Jenkins (2003) also found that months of counseling experience were not associated with PTSD symptom levels (Baird & Jenkins, 2003). Studies where an association was found reported that fewer years experience was associated with more severe intrusion symptoms (Arvay & Uhleman, 1996; Adams, Matto, & Harrington, 2001; Way, VanDeusen, Martin, Applegate, & Jandle, 2004) and more severe avoidance symptoms (Arvay & Uhlemann, 1996; Kadambi & Truscott, 2004) and that fewer years experience has been found to significantly predict PTSD symptom levels (Kadambi & Truscott, 2004; McLean, Wade, & Encel, 2003).

The impact of exposure to trauma clients upon PTSD related symptom severity has also been found to vary across studies. As indicated earlier, the measurement of exposure has varied across studies and thus has likely influenced these mixed findings. While several studies have found no association between exposure and symptom severity (Adams, Boscarino, & Figley, 2006; Adams, Matto, & Harrington, 2001; Baird & Jenkins, 2003; Brady, Guy, Polstra, & Brokaw, 1999; Linley & Joseph, 2007) other studies have found that more exposure to trauma clients is associated with higher severity of PTSD related symptoms (Bober & Regehr, 2005; Brady, Guy, Polestry, & Brokaw, 1999; Chrestman, 1995; Creamer & Liddle, 2005; Deighton, Gurriss, & Traue, 2007; Kassam-Adams, 1995; Schauben & Frazier, 1995). More exposure to trauma clients has also been found to significantly predict PTSD symptom levels. Whereas one study found that hours per week of working with traumatized clients accounted for 7% of the total

variance in IES scores (Bober & Regehr, 2005), a second study found that a higher percentage of trauma clients on a therapist's caseload was a significant predictor of PTSD symptom levels (Schauben & Frazier, 1995). A third study found that 20% of the variance in IES scores was accounted for by younger age, number of hours per week working with trauma clients, and discussing trauma work in one's own personal therapy (Creamer & Liddle, 1999).

Measurement of personal trauma history has also varied across studies. The majority of studies that have found no association between personal trauma history and PTSD related symptom levels collapsed all forms of personal trauma history (physical, emotional, sexual, adult, and childhood) into a single trauma history variable (Adams, Boscarino, & Figley, 2006; Adams, Motto, & Harrington, 2001; Adams & Riggs, 2008; Bober & Regehr, 2005; Creamer & Liddle, 2005; Kadambi & Truscott, 2004; Linley & Joseph, 2007; Marcus & Dubi, 2006; Way, VanDeusen, Martin, Applegate, & Jandle, 2004). Schauben and Frazier (1995), however, only assessed a history of rape or incest. Studies that did find an association with personal trauma history separated childhood from adulthood trauma experiences and found that therapists with childhood trauma history reported more severe PTSD related symptoms (Kassam-Adams, 1995; Follette, Polusny, & Milbeck, 1994). Two other studies confirmed an association between personal trauma history and symptom severity. However, these studies collapsed all trauma types into a single variable (Deighton, Gurriss, & Traue, 2007; Pearlman & MacIain, 1995). Additionally, Kassam-Adams (1995) found that being female and having a childhood trauma history together accounted for 14% of the variance in IES scores. A separate study by Gharamanlou and Broadbeck (2000), found being younger, along with

having a personal trauma history and having lower satisfaction with work, together accounted for 20% of variance in PTSD symptom intensity.

*Summary.* In review, studies that assessed PTSD related symptoms in therapists demonstrate that therapists treating trauma clients have more severe intrusion and avoidance symptoms compared to those treating a general client population and compared to a general population of adults exposed to a variety of upsetting and potentially traumatic events. Across studies, the overall mean IES total scores for those treating trauma clients are above the 65<sup>th</sup> percentile. Overall mean IES-I subscale scores for therapists treating trauma clients and who have a personal trauma history also are above the 65<sup>th</sup> percentile. Mean IES-A subscale scores for those treating trauma clients and who have a personal trauma history fell above the 60<sup>th</sup> percentile.

Other studies confirmed that while many therapists are exposed to traumatizing material, and many therapists feel that their work impacts their emotional health, not all therapists have symptoms at the clinical level. Therapists experiencing at least one PTSD related symptom has been reported at rates of 31% (Adams & Riggs, 2008) and 32% (Deighton, Gurriss, & Traue, 2007), while therapists who experience symptoms that meet criteria for PTSD have been reported lower at 8-14% (Adams & Riggs, 2008) and 15.2% (Bride, 2007).

Factors found to have no association with PTSD symptoms include marital status, education level, and receiving supervision. Other factors addressed in the literature including gender, race/ethnicity, age, income level, receiving personal therapy, years experience, exposure to trauma and personal trauma history all yielded mixed findings. However, there appears to be consistent trends in the literature when significant

associations are found. Younger age (Adams, Boscarino, & Figley, 2006; Adams, Matto, & Harrington, 2001; Arvay & Uhlemann, 1996; Bober & Regehr, 2005), being female (Kassam-Adams, 1995; McLean, Wade, & Encel, 2003; Sprang, Clark, & Witt-Woosley, 2007), receiving personal therapy (Bober & Regehr, 2005; Creamer & Liddle, 2005) having fewer years of experience (Adams, Matto, & Harrington, 2001; Arvay & Uhleman, 1996; Kadambi & Truscott, 2004; Way, VanDeusen, Martin, Applegate, & Jandle, 2004) and higher levels of exposure to trauma clients (Bober & Regehr, 2005; Brady, Guy, Polestry, & Brokaw, 1999; Chrestman, 1995; Creamer & Liddle, 2005; Deighton, Gurriss, & Traue, 2007; Kassam-Adams, 1995; Schauben & Frazier, 1995) are all associated with more severe intrusion and avoidance symptoms. Additionally fewer years of experience (Kadambi & Truscott, 2004; McLean, Wade, & Encel, 2003) and higher levels of exposure to trauma clients (Bober & Regehr, 2005; Schauben & Frazier, 1995) were both found to significantly predict PTSD symptoms.

While the majority of studies reveal no association between personal trauma history and PTSD related symptoms, there is evidence that a childhood trauma history is associated with more severe PTSD related symptoms (Kassam-Adams, 1995; Follette, Polusny, & Milbeck, 1994). There is also evidence within the PTSD victim literature that for women the presence of and type (assaultive or non-assaultive) of prior trauma has a sensitizing effect on the development of PTSD symptoms following exposure to a later trauma (Bresalu & Anthony, 2007). Given that the majority of studies that found no association between PTSD related symptoms and prior trauma history failed to measure or differentiate between prior trauma types or childhood versus adult trauma, it may be premature to exclude personal trauma history as a relevant factor.

*Interpersonal and Sexual Disruptions*

Research on combat exposure indicates that individuals with PTSD are at risk for relationship dissatisfaction (Cook, Riggs, Thompson, Coyne, & Sheikh, 2004; Dekel & Solomon, 2006), sexual dissatisfaction (Dekel & Solomon, 2006), intimacy problems (Cook, Riggs, Thompson, Coyne, & Sheikh, 2004; Riggs, Byrne, Weathers, & Litz, 1998; Roberts, Penk, Gearing, Robinowitz, Dolan, & Patterson, 1992), and communication difficulties with significant others (Cook, Riggs, Thompson, Coyne, & Sheikh, 2004; Carroll, Rueger, Foy, Clyde, & Donahoe, 1985). Victims of sexual trauma and abuse report problems related to intimacy (Hall, 2007; Thelen, Sherman, & Borst, 1998), sexual satisfaction (Bartoi & Kinder 1998; Jackson, Calhoun, Amick, Maddever, & Habif, 1990; Orlando & Koss, 1983), and sexual dysfunction (Becker, Skinner, Abel, & Cichon, 1986; Sarwer & Durlak, 1996; VanBerlo & Ensick, 2002). Non-sexual forms of trauma exposure have also been found to impact a victim's sexual functioning (DeSilva, 1999; 2001) and damage intimacy (Mills & Turnbull, 2004). Given that symptoms of secondary traumatic stress and vicarious traumatization often mirror those of the victims that therapists come into contact with, it is likely that a therapist with secondary traumatic stress and vicarious traumatization would experience disruptions in similar areas of interpersonal and sexual functioning (Chrestman, 1995; Figley, 1995a, 1995b; McCann & Pearlman, 1990a, 1990b; Pearlman & Saakvitne, 1995b; Resick & Calhoun 2001).

Theoretically, interpersonal relationships are viewed as an area of functioning impacted by secondary traumatic stress and vicarious traumatization (Collins & Long, 2003; Pearlman & Saakvitne, 1995b; Sabin-Farrell & Turpin, 2003). Widespread

literature indicates disruptions within interpersonal relationships as a symptom of secondary traumatic stress and vicarious traumatization (Canfield, 2005; Dutton & Rubinstein, 1995; Herman, 1992; Maltz, 1991; Pearlman, 1995; Pearlman & Saakvitne, 1995b; Yassen, 1995). However, very little research evidence supports this position (Marmaras, Lee, Siegel, & Reich, 2003; Sabin-Farrell & Turpin, 2003). Of the research that is available, only limited descriptive information is provided.

Rich (1997) surveyed 135 therapists and health professionals who worked with trauma clients and who also self-identified as vicariously traumatized. Within this group 35.7% reported feeling removed from friends and family and 36.1% felt that their sex lives were less satisfying since starting their work as a trauma therapist. More recently, a study of 515 mental health social workers found that over half of the sample (53.3%) felt that secondary trauma was having a negative effect upon their personal and professional lives (Ting, Jacobson, Sanders, Bride, & Harrington, 2005). Finally, Bride (2007) found that in a sample of 294 clinical social workers, 23.3% reported feeling detached from others in their lives as a symptom of secondary traumatic stress.

One study was located that looked at attachment styles in relationships and vicarious traumatization (Marmaras, Lee, Siegel, & Reich, 2003). In this study 375 female therapists working with outpatient trauma clients were surveyed. Results reveal a significant positive relationship between the attachment styles of fearful-avoidant, preoccupied, and dismissive-avoidant with cognitive schema disruptions, and with the symptoms of intrusion, avoidance, and arousal. Therapists with a secure attachment style reported very minimal disruptions in cognitive schemas and reported very few symptoms of intrusion, avoidance and arousal. This study is important in that it demonstrates a



relationship between an aspect of interpersonal functioning (attachment style) and other well-known symptoms of secondary traumatic stress/vicarious traumatization.

*Summary.* A review of the limited literature finds that therapists are reporting interpersonal disruptions such as feelings of detachment, removal from friends, and a less satisfying sex life. Support also exists for the relationship between attachment styles in relationships and the symptoms of intrusion, avoidance, arousal, and cognitive schema disruptions. However, more research is needed to establish interpersonal and sexual disruptions as symptomology of secondary traumatic stress/vicarious traumatization. No study to date has specifically addressed the interpersonal and sexual disruptions experienced by mental health therapists as symptoms of vicarious traumatization and secondary traumatic stress. Furthermore, no study to date has utilized specific measures to assess for interpersonal relationship functioning and sexual functioning and no study has attempted to assess for influencing factors upon these disruptions.

#### *Summary and Conclusions*

Regardless of the name, secondary traumatic stress and vicarious traumatization appear to be part of the same phenomena that can impact therapists who have exposure to trauma clients and traumatic material. In the current literature, there is more evidence for the development of intrusion and avoidance symptoms as part of secondary traumatic stress/vicarious traumatization, compared to the development of cognitive schema changes. This discrepancy may be related to the quality of instruments available to measure these disruptions. The recent development of measures, such as the Secondary Traumatic Stress Scale, that are specifically related to secondary traumatic stress, have

aided in understanding this phenomena and in establishing its prevalence and severity among therapists.

Interpersonal and sexual disruptions are largely unexplored in the secondary traumatic stress/vicarious trauma literature. While disruptions in these areas of functioning are cited widely as symptoms of secondary traumatic stress/vicarious traumatization, this question has yet to be specifically addressed and studied. Very little is actually known about what types of interpersonal and sexual disruptions occur as part of secondary traumatic stress/vicarious traumatization and what factors influence the development of these symptoms.

Therapist factors that have the most support thus far in the literature as influential in the development of more severe intrusion and avoidance symptoms are: age, gender, years of counseling experience, exposure level to trauma clients, and personal therapy. These same factors may also be related to the development of interpersonal and sexual disruptions.

The literature is unclear as to the role that personal trauma history may play in the development of secondary traumatic stress/vicarious trauma. This is most likely due to the inconsistent and limited measurement of personal trauma. While the research appears to indicate that the presence of childhood trauma is influential, this has not been consistently measured. Recent research related to gender and the sensitizing effect of multiple traumas has found that for men, the presence of a prior trauma, regardless if it was an assaultive or non-assaultive type trauma, did not significantly impact the development of post traumatic stress disorder following exposure to a later trauma. For women, however, the probability of developing PTSD following a non-assaultive trauma

was impacted by the presence of a prior trauma history which included exposure to an assaultive trauma (Breslau & Anthony, 2007). This finding seems particularly relevant for female therapists and the impact that a prior trauma may have as a sensitizing agent towards the development of secondary traumatic stress/vicarious trauma. The literature thus far has failed to measure for type of prior trauma (assaultive vs. non-assaultive) and address the interaction of gender with prior trauma type. This literature prompts the following hypotheses:

*Hypotheses*

If interpersonal and sexual disruptions were symptoms of secondary traumatic stress/vicarious traumatization, these symptoms should correlate with other known and established symptoms of secondary traumatic stress/vicarious traumatization, such as intrusion, avoidance, and arousal symptoms.

*Hypothesis one.* Interpersonal and sexual disruptions (relationship satisfaction, social intimacy, constructive communication patterns, avoidance communication patterns, critical communication patterns, sexual relationship satisfaction, and sexual interest) correlate significantly with known symptoms of secondary traumatic stress/vicarious traumatization (intrusion, avoidance, and arousal symptoms).

Based on the literature, certain therapist characteristics appear more influential in the development of intrusion, avoidance, and arousal symptoms. These same therapist characteristics should be influential in predicting other symptoms of secondary traumatic stress/vicarious trauma, including interpersonal and sexual disruptions.

*Hypothesis two.* Younger age, female gender, fewer years of counseling experience, more exposure (in hours) to conducting therapy with trauma clients, and receiving

personal therapy form a statistically significant predictive equation of interpersonal and sexual disruptions in mental health therapists.

Based on the fact that most prior studies have failed to measure or differentiate age at time of first trauma and type of trauma experiences, the role that a prior personal trauma history plays in the development of secondary traumatic stress/vicarious traumatization symptoms is still not fully understood. There is evidence that childhood trauma experiences are more influential in the development of secondary traumatic stress/vicarious traumatization symptoms. Additionally, recent research on primary victims of trauma has found that for women previous exposure to an assaultive type trauma can have a sensitizing effect upon the later development of PTSD following a second exposure to trauma. Because prior trauma history for mental health therapists is rarely measured by trauma type, and has never been categorized and analyzed as assaultive or non-assaultive, it is important to assess for these variables and their interaction.

*Hypothesis three.* Female gender, younger age at first trauma, and history of prior assaultive trauma, form a statistically significant predictive model of severity for interpersonal and sexual disruptions and intrusion, avoidance and arousal symptoms in mental health therapists who have a prior history of personal trauma.

### Chapter III: Methodology

This chapter presents the research methodology for the study. Included in this chapter is a review of recruitment procedures, inclusion and exclusion criteria for participation in the study, and a description of study participants. This is followed by a review of instruments used in the study, study procedures, screening and data cleaning processes, and the data analysis procedures utilized for each hypothesis.

#### *Methods*

##### *Participants*

*Recruitment of participants.* A snowball sampling procedure was used to recruit participants for this study. Efforts were made to solicit participation from a diverse group of mental health therapists to attain adequate power for the statistical analysis. Participants were recruited through the following professional organizations: the American Mental Health Counselors Association, the Nebraska Counseling Association, the Nebraska Psychological Association, members of APA Division 42 (Psychologists in Independent Practice), members of APA Division 56 (Trauma Psychology), and members of the EMDR Association. Mental health professionals were also contacted via community mental health centers in Kansas and Nebraska. Additionally, participants were recruited through personal contacts the primary researcher had within the following settings: university counseling centers, V.A. hospitals, school settings, private counseling practices, domestic violence/sexual assault crisis centers, and counseling psychology graduate programs.

Participants were sent an invitation email which included information about the study, commitment level, and how to access the on-line questionnaire (see Appendix A).

Individuals self-selected to participate in the study and also self-selected to forward the study invitation to other mental health professionals. Individuals who chose to participate were directed to PsychData.com, a web based survey site, to complete the study questionnaire.

A power analysis was conducted using the G\*Power 3 program to determine the appropriate sample size needed for the study (Erdfelder, Faul, & Buchner, 1996). To achieve a power of .95 with a medium effect size (.15) and Alpha of .05, a sample size of 132 is required to detect a significant model. Tabachnick and Fidell (2001) also suggest the equation of  $N \geq 50 + 8m$  (whereas  $m$  is the number of independent variables) for testing multiple comparisons and  $N \geq 104 + m$  for testing individual predictors.

According to this approach a total of 90 participants would be needed for multiple comparisons and 109 participants would be needed for testing individual predictors. However, following consultation with a professional in statistical analysis, a sample size of 250-300 participants was recommended due to the decrease in power that occurs with multiple comparisons. The goal for the study was 300 participants.

*Participant inclusion and exclusion criteria.* To participate in the current study, participants must have identified as a mental health professional who is actively engaged in clinical therapy work with clients in the United States of America. Participants had to hold the professional title of: psychologist, school psychologist, psychiatrist, mental health counselor/licensed professional counselor, clinical social worker, drug and alcohol counselor, marriage and family therapist, or school counselor. Participants had to be licensed or provisionally licensed to practice under their professional title. Additionally, participants who identified as students had to be a student within a program

representative of one of the above professions. Because the study looked at interpersonal and sexual disruptions within relationships, participants also had to be currently involved in a romantic relationship.

Individuals who did not hold a license or provisional license to practice mental health services were excluded. This included lay counselors, work place peer counselors, telephone counselors, case managers, emergency personnel, law enforcement, child protective workers, welfare workers, vocational rehabilitation counselors and crisis counselors who are not also licensed as a mental health professional.

A total of 417 individuals initiated participation in the current study. Of this initial group, 35 respondents were excluded because they failed to complete any demographic items of the survey and thus their inclusion or exclusion status was unable to be determined. An additional 44 respondents were excluded because they failed to hold a license to practice mental health services and two respondents were excluded because they were retired therapists not actively seeing clients. Finally, six respondents were excluded because they were not currently in a romantic relationship.

*Participant demographics.* The final sample for this study included a total of 330 participants. In this final sample, a total of 69 participants identified as male, 257 identified as female, one participant identified as transgendered and three participants failed to identify their gender. The age range for study participants was 25 to 89 with a mean age of 51 years. The self-identified ethnicity for participants for this study was: 91.2% European American, 2.7% Latina/Latino, 2.4% African American, .6% Multi-racial, .3% Asian American, .3% American Indian, and 1.8% "other." Participants

primarily identified as married (99.1%), with .9% indicating they have a partner or significant other (.9%).

Geographic location of participants for this study represented each of the five regions of the United States with 29.7% of participants originating from the Midwest, 26.7% from the South, 23.6% from the West, 17.9% from the Northeast, and .6% from the Pacific.

The majority of participants (61.2%) in this study indicated a personal income of over \$70,000 per year. A total of 39.4% of participants indicated an income of over \$100,000, followed by 9.7% with an income between \$85,000-\$99,999, 12.1% with an income between \$70,000-\$84,999, 12.7% with an income between \$55,000-69,999, 14.2% with an income between \$40,000-\$54,999, 6.7% with an income between \$25,000-\$39,999, and .9% with an income between \$10,000-\$24,999.

The majority of participants (61.5%) identified their highest education level as a Masters Degree (M.A., M.S., M.Ed., M.S.W.) followed by 27.6% of participants with a Ph.D., 6.7% with Psy.D., .9% with a medical degree, .3% with a Bachelors Degree and 2.7% indicating “other.”

The primary profession for participants was Mental Health Counselor/Licensed Professional Counselor (29.4%). This was followed by Clinical Social Worker (25.2%), Clinical Psychologist (25.2%), Counseling Psychologist (9.1%), Marriage and Family Therapist (7.9%), Drug and Alcohol Counselor (.9%), School Counselor (.3%), Psychiatrist (.3%), and “other” (.9%). A total of .9% of the sample ( $n=3$ ) identified as students. Of this group two participants were from a Counseling Psychology graduate program and one participant was from a Marriage and Family graduate program. All



participants had to hold a professional license related to their profession. Of this group, 85.8% indicated they were also a member of a professional organization related to their profession.

The majority of the sample (51.2%) indicated their primary work setting as a private counseling practice. A total of 14.8% of the sample indicated they worked within a community mental health center followed by 7.9% at a college or university. A total of 5.8% of the sample indicated their primary work setting was a hospital or V.A., 5.2% at a crisis counseling center, .9% at a prison or correctional facility, and .9% with a school district. The mean number of years participants have been in practice in their profession was 17.8 years with a range of one year to 55 years in practice.

When asked to identify the primary capacity in which one works with clients, the majority of participants (85.2%) indicated psychotherapy followed by 10.6% who indicated crisis counseling. The remaining 3.9% indicated their primary work with clients as testing, advising, case management, or research.

The primary theoretical orientation for this sample was Cognitive-Behavioral (32.1%), followed by Psychodynamic (13.9%) and Client-Centered Theory (9.4%). Other theoretical orientations identified by participants were: Interpersonal (7.9%), Family Systems (7.0%), Integrative/Eclectic (7.3%), Feminist (5.8%), EMDR (5.2%), Psychoanalytic (3.0%), Behavioral (1.2%), and “Other” (7.0%).

### *Instruments*

A total of five measures, including one demographic questionnaire were used for this study. Intrusion, avoidance, and arousal symptoms were assessed with the *Secondary Traumatic Stress Scale* (Bride, Robinson, Yegidis, & Figley, 2003). Interpersonal

disruptions were assessed with three measures: the *Relationship Assessment Scale* (Hendrick, 1988), the *Miller Social Intimacy Scale* (Miller & Lefcourt, 1982), and three subscales (mutual constructive communication, mutual avoidance and withholding, total demand-withdraw communication) of the *Communication Pattern Questionnaire* (Christensen & Sullaway, 1984). Sexual disruptions were assessed with two subscales (interest and satisfaction) modified from the *Brief Sexual Function Questionnaire for Men* (Reynolds, Frank, Houck, Jennings, Howell, Lilienfeld, & Kupfar, 1988). The individual measures are reviewed next.

*Demographic questionnaire.* Participants were asked to complete a brief demographic questionnaire to gather descriptive data for the sample. An initial demographic questionnaire composed of 22 questions was piloted with six participants to check for readability and comprehension of questions. Based on feedback from the initial pilot, definitions of the terms “traumatic material” and “empathetic engagement” were added to questions #18 and #19 respectively, and clarification regarding “level of support” at work was added to question #20 to aid in question clarification. Additional options regarding professional identity titles were added to question #6, and question #10 was added to allow for participants to identify their “primary” work tasks separate from indicating their overall work tasks. The final demographic questionnaire included a total of 23 questions and assessed the following variables: age, gender, race/ethnicity, relationship status, education level, income level, profession, nature of work with clients, level of support received at work, theoretical orientation, employment setting, number of years working as a mental health therapist, exposure level to trauma clients, and if the individual was receiving personal therapy.

Participants were also asked about their own personal trauma history. Participants were asked to classify the type of any prior trauma they may have experienced as either assaultive or non-assaultive and then were asked to provide the age(s) at which they experienced the personal trauma or multiple traumas (see Appendix C). The classification for the two types of trauma, assaultive and non-assaultive, was based on research related to gender and the subsequent development of PTSD (Breslau & Anthony, 2007; Breslau, Chilcoat, Kessler, Peterson, & Lucia, 1999; Chung & Breslau, 2008). Additionally, the classification of assaultive and non-assaultive type trauma has received empirical support in factor analysis (Stein, Jang, Taylor, Vernon, & Livesley, 2002). The category of assaultive trauma included: physical assault, rape, sexual assault, combat, kidnapping/torture, or threat with a weapon. The category of non-assaultive trauma included: witnessing violence, discovering a dead body, an accident, natural disaster, learning about the death of a close friend/relative, or learning of a traumatic event suffered by a close friend/relative.

*Secondary Traumatic Stress Scale.* The Secondary Traumatic Stress Scale (STSS; Bride, Robinson, Yegidis, & Figley, 2003) is a 17-item self-report instrument designed to measure intrusion, avoidance, and arousal symptoms in practitioners who have experienced traumatic stress through their clinical work with traumatized clients (see Appendix D). Respondents are instructed to read each item and indicate on a five point Likert-type scale, how frequently the item is true for them. The Likert-type responses range from 1 (never) to 5 (very often). The STSS includes a total score and three subscale scores representing intrusion, avoidance, and arousal symptoms. Sample items

for the STSS include: (1) “I had trouble sleeping,” (2) “I was less active than usual,” and (3) “I was easily annoyed.”

The STSS has displayed very good internal consistency with Cronbach Alphas reported for the Full STSS at .93 and .94, Intrusion subscale at .80 and .79, Avoidance subscale at .87 and .85 and Arousal subscale at .83 and .87 (Bride, et al., 2003; Ting, Jacobson, Sanders, Bride & Harrington, 2005). In the current study, the Cronbach Alpha coefficient was .91 for the Full STSS, .73 for the Intrusion subscale, .82 for the Avoidance subscale, and .80 for the Arousal subscale. Through confirmatory factor analysis, each item of the STSS has been found to load on its intended factor with factor loadings ranging from .46 to .82, and t-values between 9.27 and 15.68 (Bride, et al., 2003; Ting et al., 2005). Evidence has also been reported for convergent and discriminate validity with appropriate variables (Bride et al., 2003).

Full scale and subscale scores can be obtained by summing the items assigned to each, with higher scores representing greater severity of symptoms. Bride (2007) has proposed a cutoff score, whereas those who obtain a score at or above 38 are considered to have PTSD due to Secondary Traumatic Stress. In a sample of 294 social workers a sensitivity of .92 and a specificity of .91 were obtained with the cutoff value of 38.

*Relationship Assessment Scale.* The Relationship Assessment Scale (RAS; Hendrick, 1988) is a seven item self-report instrument designed to measure satisfaction in romantic relationships (see Appendix E). Respondents are instructed to read each item and circle a letter on a five point Likert-type scale that best answers each item. The responses range from A (poorly, never, not much, very few) to C (average) to E (extremely well, excellent, very often, very many). Items are summed for a total score, which ranges from

7 (low satisfaction) to 35 (high satisfaction). Sample items include: (1) “How well does your partner meet your needs?” and (2) “How much do you love your partner?”

The RAS has good internal consistency with reported Cronbach Alphas of .86 and .91 (Hendrick, 1988; Vaughn & Matyastik Baier, 1999). In the current study, the Cronbach Alpha coefficient was .92. The RAS also has demonstrated good test-retest reliability at 6-7 weeks with a correlation of .85 (Hendrick, Dicke, & Hendrick, 1998). The RAS has been found to have good convergent validity with the Dyadic Adjustment Scale (Spanier, 1976), a widely used measure of adjustment in close relationships with zero-order correlation between RAS and DAS total scores reported at .84 ( $p < .01$ ; Vaughn & Matyastick Baier, 1999). The RAS also has good predictive validity, significantly distinguishing between couples who have stayed together and couples who have ended their relationship (Hendrick, 1988).

*Miller Social Intimacy Scale.* The Miller Social Intimacy Scale (MSIS; Miller & Lefcourt, 1982) is a 17-item self-report instrument designed to assess intimacy in adult relationships (see Appendix F). The measure consists of six items that assess for frequency of intimate contacts and 11 items that assess for the intensity of intimate relations. Respondents are instructed to read each item and circle a letter on a five point Likert-type scale that best describes their current intimate relationship. The responses range from A (very rarely or not much) to C (some of the time or a little) to E (almost always or a great deal). Items one through 17 are summed for an overall score, with higher scores indicating greater amounts of social intimacy in relationships. Sample items include: (1) “How often do you show him/her affection?” (2) “How often are you

willing to understand his/her feelings?” and (3) “How important is it to you that he/she show you affection?”

The MSIS has good internal consistency with reported Cronbach Alphas of .86 and .91 (Miller & Lefcourt, 1982). In a separate study, internal consistency was reported at .87 and .95 (Downs & Hillje, 1991). In the current study, the Cronbach Alpha coefficient was .92. Additionally, the MSIS has demonstrated good test-retest reliability with a one-month correlation of .84 and a two-month correlation of .96 ( $p < .001$ ; Miller & Lefcourt, 1982). The MSIS has good convergent validity demonstrating correlations with established measures of intimacy including the UCLA Loneliness Scale ( $r = -.65, p < .001$ ) and the Interpersonal Relationship Scale ( $r = .71, p < .001$ ). Discriminant validity evidence also exists (Miller & Lefcourt, 1982).

*Communication Patterns Questionnaire.* The Communication Patterns Questionnaire (CPQ; Christensen & Sullaway, 1984) is a self-report questionnaire that is purported to measure an individual's perception of communication within an intimate relationship during three phases of conflict discussion (the presentation of a problem, the discussion of a problem, and post discussion of a problem) (see Appendix G). Respondents are asked to rate each item on a nine-point Likert-type scale, indicating the likelihood of the particular pattern occurring when addressing a problem in the relationship (1= very unlikely, 9= very likely).

Three subscales from the CPQ are used for this study, including Mutual Constructive Communication (MCC), Mutual Avoidance and Withholding (MAW) and Total Demand-Withdrawal Communication (DWC). A total of 16 items are included, with higher subscale scores indicating the higher likelihood of the particular pattern occurring

when engaged in a conflict discussion. Additionally, items A3, B5, B6 and B7 were modified to make the items gender neutral and applicable to heterosexual and homosexual couples. The terms “man” and “women” were replaced with the terms “Partner A” and “Partner B.”

The first subscale is Mutual Constructive Communication (MCC) and measures the use of collaborative communication strategies among both partners. Subscale scores are tallied from the sum of four items that assess for mutual blame, threat, and verbal aggression which are subtracted from three items that assess for mutual discussion, expression of feelings, and negotiation of views. The second subscale is Mutual Avoidance and Withholding (MAW) and measures the use of avoidance, withdrawal and withholding techniques by both partners when engaged in a conflict discussion. Subscale scores are tallied from the sum of three items that assess for mutual avoidance of discussion, mutual withdrawal after discussion and mutual withholding after discussion. The third subscale is Total Demand-Withdraw Communication (DWC) and measures the use of avoidance, nagging, withdrawal and criticism by each partner when engaged in conflict discussion. Subscale scores are tallied from the sum of six items that assess for each partners tendency to withdraw from, demand of, and criticize the other partner prior to and during the discussion of a problem.

The CPQ has demonstrated internal consistency across all subscales. Cronbach Alphas for the three subscales to be used in this study include: mutual constructive communication, Alpha = .78 for women .80 for men; total demand-withdraw communication, Alpha = .55 for women .69 for men; and mutual avoidance and withholding Alpha = .66 for women and .66 for men (Hahlweg, Kaiser, Christensen,

Fehm-Wolfsdorf, & Groth, 2000). In a separate study, Cronbach Alphas for the CPQ subscales of mutual constructive communication, total demand-withdraw communication, and mutual avoidance and withholding ranged from .62 to .86 with a mean of .71 (Christensen & Shenk, 1991). In the current study, the Cronbach Alpha coefficients for the subscales of mutual constructive communication was .78, for total demand-withdraw communication the Alpha was .80 and for mutual avoidance and withholding the Alpha was .76.

The CPQ has been found to have good convergent validity with the KPI Observation System (Hahlweg et al, 2000), an observational coding system for verbal and nonverbal problem solving behaviors in couples, with significant correlations in expected directions between the CPQ subscales (except for the Man Demand-Woman Withdraw subscale) and various KPI communication variables (Hahlweg, et al., 2000). The CPQ has demonstrated discriminate validity, with the various subscales being able to significantly discriminate between couples high in marital adjustment and those low in marital adjustment (Noller & White, 1990), as well as discriminate between non-distressed couples and couples who are separated or starting couples therapy (Christensen & Shenk, 1991). Finally, there is evidence that despite the self-report nature of the assessment, the CPQ is an accurate measure of conflict patterns. Correlations between partners on the assessment of communication have been reported at .73 to .80 (Christensen, 1988).

*Brief Sexual Function Questionnaire.* The Brief Sexual Function Questionnaire (BSFQ) is a self-report inventory purported to measure sexual interest and satisfaction (see Appendix H) modified from the Brief Sexual Function Questionnaire for Men (BSFQ-M; Reynolds, Frank, Houck, Jennings, Howell, Lilienfeld, & Kupfar, 1988).



Two subscales of the BSFQ-M are used for this study, the sexual interest subscale (BSFQ-Interest) and the sexual relationship satisfaction subscale (BSFQ-Satisfaction). While the original BSFQ-M was developed for use with men, items selected for use in this study utilized gender-neutral language.

The interest subscale (BSFQ-Interest) includes the sum total of two items that assess for interest in sexual activity on a seven point Likert-type scale ranging from one (not at all) to seven (more than once a day), with higher scores indicating more interest in sexual activity. The satisfaction subscale (BSFQ-Satisfaction) includes the sum total of three items that assess for sexual relationship satisfaction on a seven point Likert-type scale ranging from 1 (completely satisfied) to 7 (completely dissatisfied), with higher scores representing more dissatisfaction. Modifications will be made to two items on the satisfaction subscale to include a statement directing those participants without a current intimate partner to consider their *most recent* intimate relationship when answering each item.

The original BSFQ-M has demonstrated internal consistency for each item of the inventory, including items for the satisfaction and interest subscales ( $r > 0.7$ ). For the current study, the Cronbach Alpha coefficient for the interest subscale was .86 and .87 for the satisfaction subscale. Total scale test-retest reliability for 2-3 weeks, using the Guttman reliability coefficient is reported at .94. While test-retest reliability for the satisfaction subscale is reported at .93 ( $p < .001$ ) and for the interest subscale is reported at .72 ( $p < .001$ ; Reynolds, et al., 1988).

Concurrent validity has also been demonstrated for the satisfaction and interest subscales. Whereas the BSFQ-M interest subscale was found to correlate significantly

with a visual analogue measures of sexual interest derived from a daily log ( $r = .67$ ,  $p < .0001$ ). The satisfaction subscale was also significantly and positively correlated with the satisfaction factor of the Derogatis Sexual Function Inventory ( $r = .54$ ,  $p < .0001$ ), a widely used and well-studied inventory of sexual functioning (Derogatis & Melisanatos, 1979). The satisfaction and interest subscales of the BSFQ-M have also been found to discriminate between depressed males and a healthy male control group (Reynolds, et al., 1988).

### *Procedure*

Individuals who chose to complete the questionnaire were directed to PsychData.com, a web based survey site. PsychData.com was selected as the host site for this questionnaire because it was specifically designed to meet industry standards for internet security as well as IRB standards for the protection of human subjects.

Once participants were directed to PsychData.com, they read an informed consent statement and performed a specific action which confirmed their participation in the study. Participants were asked to read an informed consent statement (see Appendix B) indicating that they understood the purpose of the research, the confidentiality of any personal information provided in connection with the research, and the expectations of them as participants. The informed consent form indicated that each participant was making a voluntary decision whether or not to participate in the research study and that there is no obligation or subsequent repercussions for not participating or for withdrawing from the study at any time. Contact information for the primary researcher, her advisor, and the University of Nebraska-Lincoln Institutional Review Board was included in the consent statement. At the end of the informed consent text the following statement was

printed: “If you have read and understand the above statements, please click on the “Continue” button below to indicate your consent to participate in this study.”

Participants were then directed to the study questionnaire that included a total of 81 items and took approximately 20-30 minutes to complete. The five primary measures used were organized into four sections and counterbalanced using a latin square design to address the effect of maturation and fatigue. The four sections included: a) *Secondary Traumatic Stress Scale*, b) *Relationship Assessment Scale & Miller Social Intimacy Scale*, c) three subscales of the *Communication Patterns Questionnaire*, and d) *Brief Sexual Functioning Questionnaire*. The survey ended with the *Demographic Questionnaire* and personal trauma questions to reduce a priming effect related to sensitive personal questions. The four sections were altered every two weeks, over the course of 165 days between January and June of 2009, according to the following design:

Dates	Instrument Sequence			
	1	2	3	4
1.11.09 – 1.24.09	A	B	C	D
1.25.09 – 2.7.09	D	A	B	C
2.8.09 – 2.21.09	C	D	A	B
2.22.09 – 3.7.09	B	C	D	A
3.8.09 – 3.21.09	A	B	C	D
3.22.09 – 4.4.09	D	A	B	C
4.5.09 – 4.18.09	C	D	A	B
4.19.09 – 5.2.09	B	C	D	A
5.3.09 – 5.16.09	A	B	C	D
5.17.09 – 5.30.09	D	A	B	C
5.31.09 – 6.6.09	C	D	A	B
6.7.09 – 6.24.09	B	C	D	A

All questions displayed to the participant and their responses were instantly encrypted and remained so until they were received at the PsychData.com database. Limited identifying information was collected (gender, age, education, profession, region of

country, employment setting, income). Names of participants and IP addresses were not collected.

Initial questionnaire data were stored at PsychData.com via a secure and isolated database with access to the primary researcher only through the use of a username and password. After the completion of data collection, all data were downloaded from PsychData.com to the primary researcher's personal computer and stored in a password-protected file.

### *Screening and Data Cleaning*

*Error checks.* Descriptive statistics were analyzed for each demographic and survey item. Each item was reviewed for out-of-range values, plausible means and standard deviations. Three errors in data entry were located and corrected (case ID#s: 923501, 928899, and 1032722).

*Missing values.* Missing values among individual scale items, demographic, and predictor variables were assessed by inspecting frequency data and reviewing the total number of missing values for each variable. According to Tabachnick and Fidell (2001, pg. 58), "the pattern of missing data is more important than the amount missing" and suggest that those variables with more than 5% of data missing be evaluated for potential patterns among the missing data.

A total of 28,122 data points were possible in this survey; of those 618 were missing, yielding a total of 2.2% missing data points. Evaluation of demographic and predictor variables found one variable with greater than 5% of values missing. The item asking "hours within the past month involved in empathetic engagement with a trauma client" had 5.8% of values missing. The range of missing values for all other variables was .3%

to 3.1%. Evaluation of individual scale items found three items with greater than 5% of their total values missing. The identified items and their percentage of values missing included: CPQ item 6 “During a discussion of a relationship problem, both members express their feelings to each other” (5.2%), CPQ item 12 “During a discussion of a relationship problem, partner B criticizes while partner A defends self (you are partner A)” (5.2%), and BSFQ item 5 “Overall, how satisfied do you think your partner is with you’re your sexual relationship?” (5.2%). All remaining survey items had between .3% and 4.9% of values missing.

To assess for randomness and potential patterns among the missing data, dummy codes were created for the four items with elevated missing data, whereas 1 = a recorded score and 2 = a missing score. An independent samples t-test ( $\alpha = .05$ ) was used to assess for any significant difference between those items with a recorded score and those items missing a score, across four selected demographic and predictor variables (age, percentage of caseload comprised of trauma clients, hours within the past month exposed to traumatic client material, hours within the past month conducting therapy with trauma clients).

No significant difference between groups (recorded score vs. missing value) for the two items of “hours within the past month involved in empathetic engagement with a trauma client” and CPQ item 12 was found across the four demographic and predictor variables. For item CPQ 6 a significant difference in age was found for those with a recorded score ( $M = 50.62, SD = 11.99$ ) and for those missing a score ( $M = 58.47, SD = 15.48; t(322) = -2.58, p < .05$  (two-tailed)). The magnitude of the differences in the means was small (eta squared = .02). For item BSFQ 5 a significant difference in age

was found for those with a recorded score ( $M = 50.65$ ,  $SD = 12.16$ ) and for those missing a score ( $M = 59.57$ ,  $SD = 12.45$ ;  $t(322) = -2.68$ ,  $p < .05$  (two-tailed). The magnitude of the differences in the means was small (eta squared = .02).

Among these two items, it appears that there is a possible pattern for age among those cases with missing values. Participants with missing values were significantly older than those without missing values; however the magnitude of this difference was small.

It was determined that for all continuous variables in the study, missing values would be substituted with the mean value for the specified variable. This procedure was used as it is a more conservative approach to dealing with missing values and the overall mean for the distribution as a whole is not disturbed for each variable (Tabachnick & Fidell, 2001). For the categorical variables of gender, receiving personal therapy and trauma type, any case (participant) with a missing value in analysis was excluded using the pairwise exclusion of cases option in SPSS.

*Univariate outliers.* Utilizing descriptive statistics, the dichotomous categorical variables of membership in a professional organization (y/n) and utilization of personal therapy (y/n) were reviewed for possible outliers. Outliers were assessed by inspecting the frequency of each variable and looking for extreme splits (90-10) between the numbers of cases in each category within the variable. It has been suggested that categories with a 90-10 split or more should be deleted as cases included in the small category may have more influence than cases included in the large category (Tabachnick & Fidell, 2001). Neither of the two dichotomous categorical variables assessed violated the 90-10 split and thus all were retained in the data file. The nine remaining categorical variables of gender, ethnicity, relationship status, education, program affiliation,

professional title, country, income, and trauma type were reviewed looking for any minimum or maximum values outside the possible range of acceptable codes. None of the nine variables reviewed had unacceptable values recorded and thus all were retained in the data file.

A total of nine continuous demographic and predictor variables were screened for outliers. The demographic and predictor variables included age, years in practice, hours within the past month doing therapy with clients, hours within the past month conducting therapy with trauma clients, percentage of caseload comprised of trauma clients, hours within the past month exposed to traumatic client material, hours within the past month involved in empathetic engagement with a trauma client, age at time of first trauma (any type), and age at time of first assaultive trauma.

A total of 11 outliers were found via inspection of maximum scores, mean scores, standard deviations and visual inspection of histogram plots. Additionally, the 11 outliers were found to have z-score calculations greater than 3.29 ( $p < .001$ , two-tailed test). All 11 outliers were concentrated among the four variables of hours within the past month doing therapy with clients, hours within the past month conducting therapy with trauma clients, hours within the past month exposed to traumatic client material and hours within the past month involved in empathetic engagement with a trauma client. Two outlier data points were altered by assigning them a new value one unit larger than the next most extreme score in the distribution in order to retain the value in the data set but reduce its overall impact (Tabachnick & Fidell, 2001). The remaining nine outlying data points were found to be concentrated solely among three cases (participants) and it was

determined to remove these extreme cases from the final data set, thus taking the final data set of 330 cases down to 327 total cases.

A total of 11 outcome variables were screened for outliers utilizing descriptive statistics. The outcome variables included: STSS Total, STSS Intrusion, STSS Avoidance, STSS Arousal, RAS Total, MSIS Total, MCC Score, MAW Score, DWC Score, BSFQ-Interest, and BSFQ-Satisfaction.

A total of 20 outliers were found via visual inspection of histogram plots, visual inspection of box plots, and review of the 5% trimmed mean. The 20 outliers were concentrated among the following six outcome variables: STSS Total, STSS Intrusion, STSS Avoidance, MSIS Total, MCC Score, and DWC Score. The impact of the identified outliers on variable normality was examined by reviewing skewness and kurtosis values for the identified six outcome variables prior to and after outlier modification. Outlier modification included assigning each outlier a value one unit larger than the next most extreme score in the distribution (Tabachnick & Fidell, 2001).

The impact of outlier modification on variable normality was then compared against skewness and kurtosis values following variable transformation. The approach which most minimized the impact of the identified outliers (outlier modification or variable transformation) was then selected. Two variables (MSIS Total, and MCC Score) were improved through a reflected square root transformation. Four variables (STSS Total, STSS Intrusion, STSS Avoidance, and DWC Score) were improved through a square root transformation (see Table 1).

*Normality.* The test of normality is the assumption that each variable is normally distributed and thus residuals of analysis are also normally distributed and independent.



While many inferential statistics are robust to violations of normality, statistical inference becomes less robust as distributions depart from normality (Tabachnick & Fidell, 2001).

Tabachnick and Fidell (2001) advocate the use of variable transformation to improve normality when needed.

Table 4  
*Skewness Values: Outcome Variables*

Outcome Variable	Original Skewness	Transformed Skewness	Transformation Performed
1. STSS Total	.670	.383	square root
2. STSS-Intrusion	.821	.462	square root
3. STSS-Avoidance	.728	.389	square root
4. STSS-Arousal	.594	.303	square root
5. RAS Total	-1.14	.313	reflected sq rt
6. MSIS Total	-1.47	.396	reflected sq rt
7. MCC Score	-1.25	.363	reflected sq rt
8. MAW Score	.908	.431	square root
9. DWC Score	.515	-.012	square root
10. BSFQ-Interest	.025	-.710	square root
11. BSFQ-Satisfaction	-.609	.116	reflected sq rt

*Note:* STSS Total (Secondary Traumatic Stress Scale Total Score), STSS-Avoidance (Secondary Traumatic Stress Scale, avoidance subscale score), STSS-Intrusion (Secondary Traumatic Stress Scale, intrusion subscale score), STSS-Arousal (Secondary Traumatic Stress Scale, arousal subscale score), RAS Total (Relationship Assessment Scale total score), MSIS (Miller Social Intimacy Scale total score), MCC Score (Mutual Constructive Communication subscale score), MAW (Mutual Avoidance and Withholding subscale score), DWC Score (Demand-Withdrawal communication subscale score), BSFQ-Interest (Brief Sexual Functioning Questionnaire, sexual interest subscale), BSFQ-Satisfaction (Brief Sexual Functioning Questionnaire, sexual relationship satisfaction subscale).

Each of the 11 outcome variables were assessed for normality via inspection of histogram plots along with inspection of skewness and kurtosis values. This process was conducted in conjunction with the inspection of univariate outliers. The skewness of a variable is related to the symmetry of the distribution, whereas kurtosis is related to the peakedness of a distribution. According to Tabachnick and Fidell (2001) in large samples (100+) underestimates of variance that occur with positive or negative kurtosis

disappear. Likewise, in a large sample a variable with significant skewness often does not deviate enough from normality to make a substantive difference in the analysis.

Four outcome variables (STSS Arousal, RAS Total, MAW Score and BSFQ-Satisfaction) were found to be candidates for variable transformation due to non-normality. Two variables (RAS Total and BSFQ-Satisfaction) were improved through a reflected square root transformation, while two variables (STSS Arousal and MAW Score) were improved through a square root transformation (see Table 4).

Finally, five continuous predictor variables (age, years in practice, hours within the past month conducting therapy with trauma clients, age of first trauma, and age of first assaultive trauma) were assessed for normality via inspection of histogram plots along with inspection of skewness and kurtosis values. Three variables were found to be candidates for variable transformation due to non-normality. These included the variables of: “hours within the past month conducting therapy with trauma clients,” “age of first trauma,” and “age of first assaultive trauma” which were all substantially improved via square root transformation. The remaining two variables were retained in their original states (see Table 5).

Table 5  
*Skewness Values: Predictor Variables*

Predictor Variable	Original Skewness	Transformed Skewness	Transformation Performed
1. Age	-.294	-.424	reflected sq rt
2. Years in practice	.301	-.335	square root
3. Hrs. past month with trauma clients	.824	.030	square root
4. Age first trauma	1.45	.348	square root
5. Age first assaultive trauma	1.32	.146	square root

### *Data Analysis*

*Hypothesis one.* Interpersonal and sexual disruptions (relationship satisfaction, social intimacy, constructive communication patterns, avoidance communication patterns, critical communication patterns, sexual relationship satisfaction, and sexual interest) will significantly correlate with known symptoms of secondary traumatic stress/vicarious traumatization (intrusion, avoidance, and arousal symptoms).

To assess for the relationship between interpersonal and sexual disruptions and known symptoms of secondary traumatic stress/vicarious traumatization, hypothesis one was evaluated by use of a Spearman *rho* correlation analysis. Original analysis was to have been a Pearson *r* correlation. However, following the review of bivariate scatterplots the variables in question were found to violate the assumption of linearity. Thus, the non-parametric alternative of a Spearman *rho* correlation was selected to address this research question due to the less stringent assumptions associated with this statistic. Non-transformed variables were used in this analysis.

The variables of intrusion symptoms (STSS Intrusion), avoidance symptoms (STSS Avoidance) and arousal symptoms (STSS Arousal) were entered along with relationship satisfaction (RAS Total), social intimacy (MSIS Total), constructive communication patterns (MCC Score), avoidance communication patterns (MAW Score), critical communication patterns (DWC Score), sexual interest (BSFQ-Interest), and sexual relationship satisfaction (BSFQ-Satisfaction).

*Hypothesis two.* Younger age, female gender, fewer years of counseling experience, more exposure (in hours) to conducting therapy with trauma clients, and receiving

personal therapy will form a statistically significant predictive equation of interpersonal and sexual disruptions in mental health therapists.

To assess the predictive power of the proposed equation, hypothesis two was evaluated by standard multiple regression where all predictor variables were entered simultaneously. Predictor variables included: age (AGE), gender (GDR), years of counseling experience (YRS), hours within the past month conducting therapy with trauma clients (square root; SRHRS), and receiving personal therapy (PERT). Dependent variables were the following: relationship satisfaction (reflected square root; RSRRAS Total), social intimacy (reflected square root; RSRMSIS Total), constructive communication patterns (reflected square root; RSRMCC Score), avoidance communication patterns (square root; SRMAW Score), critical communication patterns (square root; SRDWC Score), sexual interest (BSFQ-Interest) and sexual relationship satisfaction (reflected square root; RSRBSFQ-Satisfaction). Analysis was performed using SPSS REGRESSION and SPSS FREQUENCIES for evaluation of assumptions.

*Hypothesis three.* Female gender, younger age at first trauma and history of prior assaultive trauma will form a statistically significant predictive model of severity for interpersonal and sexual disruptions and intrusion, avoidance and arousal symptoms in mental health therapists who have a prior history of personal trauma.

Hypothesis three was evaluated by standard multiple regression where all predictor variables were entered simultaneously, to assess the power of the proposed predictive model. Predictor variables included: gender (GDR), prior trauma type (TRMA), and age at first trauma (square root; SRAGETR) Dependent variables were the following: relationship satisfaction (reflected square root; RSRRAS Total), social intimacy

(reflected square root; RSRMSIS Total), constructive communication patterns (reflected square root; RSRMCC Score), avoidance communication patterns (square root; SRMAW Score), and critical communication patterns (square root; SRDWC Score), intrusion symptoms (square root; SRSTSS-Intrusion), avoidance symptoms (square root; SRSTSS-Avoidance), and arousal symptoms (square root; SRSTSS-Arousal), sexual interest (BSFQ-Interest), and sexual relationship satisfaction (reflected square root; RSRBSFQ-Satisfaction). Analysis was performed using SPSS T-TEST, SPSS REGRESSION, and SPSS FREQUENCIES for evaluation of assumptions.

## Chapter IV: Results

Chapter four begins with a review of initial data analysis, including descriptive statistics of the study variables. This is followed by a review of the three research questions. Included in each research question review is a re-statement of the study hypothesis, statistical analysis utilized to address the research question, tests for violations of assumptions, and results. The chapter will conclude with a narrative summary of the results and a summary table.

### *Initial Analysis*

#### *Descriptive Statistics*

Normative statistics (mean, standard deviation) for each of the outcome variables untransformed (STSS Total, STSS-Intrusion, STSS-Avoidance, STSS-Arousal, RAS Total, MSIS Total, MCC Score, MAW Score, DWC Score, BSFQ-Interest, BSFQ-Satisfaction) are presented in Table 6.

Table 6  
*Outcome Variables (n=327)*

Item	Mean	SD
STSS Total	32.0	10.1
STSS-Intrusion	8.9	2.8
STSS-Avoidance	13.6	4.7
STSS-Arousal	9.6	3.5
RAS Total	27.6	5.9
MSIS Total	71.6	10.0
MCC Score	12.0	9.1
MAW Score	9.2	5.3
DWC Score	19.7	9.5
BSFQ-Interest	8.3	2.7
BSFQ-Satisfaction	14.3	5.1

*Note:* STSS-Total (Secondary Traumatic Stress Scale Total Score), STSS-Avoidance (Secondary Traumatic Stress Scale, avoidance subscale score), STSS-Intrusion (Secondary Traumatic Stress Scale, intrusion subscale score), STSS-Arousal (Secondary Traumatic Stress Scale, arousal subscale score), RAS Total (Relationship Assessment Scale total score), MSIS (Miller Social Intimacy Scale total score), MCC Score (Mutual Constructive Communication subscale score), MAW (Mutual Avoidance and Withholding communication subscale score), DWC Score (Demand-Withdrawal communication subscale score), BSFQ-Interest (Brief Sexual Functioning Questionnaire, sexual interest subscale), BSFQ-Satisfaction (Brief Sexual Functioning Questionnaire, sexual relationship satisfaction subscale).

Several survey items assessed for exposure to therapy and exposure to trauma clients within the previous month. Participants were asked to gauge their level of exposure in terms of hours within the previous month. Participants were also asked to estimate the percentage of their current caseload currently comprised of trauma clients. A summary of exposure items, including item means, standard deviations, and range are presented in Table 7.

Table 7  
*Participant Exposure to Therapy and Trauma Clients (n=327)*

Item	Mean	SD	Range
1. Number of hours within the past month spent doing therapy	76.0	40.4	4 - 201
2. Number of hours within the past month spent doing therapy with trauma clients	42.4	32.8	0 - 150
3. Number of hours within the past month spent exposed to traumatic material from your trauma clients	23.7	24.2	0 - 111
4. Number of hours within the past month involved in empathetic engagement with your trauma clients	37.9	32.6	0 - 150
5. Percentage of current case load that includes trauma clients	56.8	34.5	0 - 100

*Prevalence of secondary traumatic stress.* Among participants, total scores on the STSS (Bride, Robinson, Yegidis, & Figley, 2003) ranged from 17, indicating no secondary traumatic stress symptoms, to 67, which represents a per-item mean of 3.94 out of 5. The distribution of STSS Total scores was positively skewed, indicating that most respondents were experiencing no secondary traumatic stress symptoms or low levels of symptoms. A smaller number of participants were experiencing severe secondary traumatic stress symptoms.

Utilizing normative scores outlined by Bride (2007), the majority of participants were found to be experiencing mild to no symptoms of secondary traumatic stress (70.7%,  $n =$

231), while 15.3% ( $n = 50$ ) were experiencing moderate secondary traumatic stress symptoms and 14% ( $n = 46$ ) were experiencing high to severe symptoms (see Table 8).

Table 8  
*Distribution of STS Symptom Severity Among Participants ( $n=327$ )*

Symptom Severity Level	$n$	STSS Score	Percentage
Little to no STS	128	17-28	39.2
Mild STS	103	28-37	31.5
Moderate STS	50	38-43	15.3
High STS	21	44-48	6.4
Severe STS	25	49+	7.6

*Note:* STS (secondary traumatic stress), STSS (Secondary Traumatic Stress Scale; Bride, 2007).

According to Bride (2007), individuals who obtain an STSS Total score of 38 or higher are considered to have PTSD due to secondary traumatic stress. Of the current study sample 29.3% ( $n=96$ ) participants obtained a score of 38 or higher. A Chi-square test for independence (with Yates Continuity Correction) indicated no significant association between gender and secondary traumatic stress symptom severity,  $X^2(1, n = 323) = 1.23, p = .268, \phi = -.070$ . Females were not more likely to have PTSD due to secondary traumatic stress compared to males.

*Prevalence of personal therapy.* The majority of participants (79.5%,  $n = 257$ ) indicated they were not engaged in personal therapy of their own. Among male participants, 17.6% indicated they were currently engaged in personal therapy; and among female participants, 20.8% indicated they were currently engaged in personal therapy of their own. A Chi-square test for independence (with Yates Continuity Correction) indicated no significant association between gender and receiving personal therapy,  $X^2(1, n=322) = .17, p = .68, \phi = .033$ . Females were not more likely to be engaged in personal therapy compared to males.



Among participants who met criteria for PTSD due to secondary traumatic stress (STSS Total score of 38 or higher), 20% ( $n=19$ ) indicated they were engaged in personal therapy. For participants who did *not* meet criteria for PTSD due to secondary traumatic stress, 20% ( $n=46$ ) indicated they were also engaged in personal therapy. A Chi-square test for independence (with Yates Continuity Correction) indicated no significant association between secondary traumatic stress symptom severity and receiving personal therapy,  $X^2(1, n = 325) = .00, p = 1.0, \phi = .000$ . Participants with clinical levels of secondary traumatic stress were not more likely to be engaged in personal therapy than participants with non-clinical levels of secondary traumatic stress.

*Level of work support.* Participants rated the current level of support they receive at their work setting related to working with trauma clients. Work support included activities such as staff trainings, consultations with other staff, economic support, and encouragement of self care practices. A total of 24.2% ( $n = 79$ ) of participants indicated they receive “a lot of support” at their work, whereas 27.5% ( $n = 90$ ) indicated they receive “moderate support,” 33.3% ( $n = 109$ ) indicated they receive “some support,” and 11.9% ( $n = 39$ ) indicated they receive “no support.” A Chi-square test for independence indicated no significant association between receiving personal therapy and level of work support,  $X^2(3, n = 316) = .58, p = .90, \phi = .04$ . Participants engaged in personal therapy were not more likely to receive a different level of work support than those participants not engaged in personal therapy.

Additionally, a Chi-square test for independence indicated no significant association between secondary traumatic stress symptom severity and level of work support,  $X^2(3, n = 317) = 6.18, p = .103, \phi = .140$ . Participants with clinical levels of secondary

traumatic stress were not more likely to receive a different level of work support than participants with non-clinical levels of secondary traumatic stress.

### *Research Question One*

#### *Research Question and Hypothesis*

The first research question addressed in this study was: What is the strength of the relationship between interpersonal and sexual disruptions and known symptoms of secondary traumatic stress/vicarious traumatization among mental health therapists? It was hypothesized that interpersonal and sexual disruptions (relationship satisfaction, social intimacy, constructive communication patterns, avoidance communication patterns, critical communication patterns, sexual relationship satisfaction, and sexual interest) would significantly correlate with known symptoms of secondary traumatic stress/vicarious traumatization (intrusion, avoidance, and arousal symptoms).

#### *Statistical Analysis*

A Spearman *rho* correlation analysis was conducted with each of the known symptoms for secondary traumatic stress/vicarious trauma (intrusion, avoidance, and arousal symptoms) entered along with the seven variables representing interpersonal and sexual disruptions. Relationship satisfaction as measured by the RAS Total, social intimacy as measured by the MSIS Total, constructive communication patterns as measured by the MCC Score, avoidance communication patterns as measured by the MAW Score, critical communication patterns as measured by the DWC Score, sexual interest as measured by the BSFQ-Interest, and sexual relationship satisfaction as measured by the BSFQ-Satisfaction.

### *Tests for Violations of Assumptions*

Prior to performing the correlation analysis, bivariate scatterplots were reviewed to assess for violations of linearity and homoscedasticity. A scatterplot was reviewed for each of the combinations of interpersonal and sexual disruption variables with each of the intrusion, avoidance, and arousal variables. Variables that have a strong linear relationship display a scatterplot with a vague cigar shape where data points are clumped around an imaginary straight line. A weak relationship among variables displays a scatterplot with no pattern among the data points. After review of each of the scatterplots it was determined that the variables in question violated the assumption of linearity for a Pearson  $r$  correlation. Non-parametric techniques do not make the same assumptions about the population distribution and thus the non-parametric technique of a Spearman  $\rho$  correlation was selected for analysis (Pallant, 2007). Due to the selection of the Spearman  $\rho$  correlation, original untransformed variables were used in this analysis.

### *Results*

*Relationships among independent variables.* Relationship satisfaction (RAS Total) displayed a large, positive correlation with social intimacy (MSIS Total),  $\rho = .756$ ,  $n = 327$ ,  $p < .01$ , and constructive communication patterns (MCC Score),  $\rho = .594$ ,  $n = 327$ ,  $p < .01$ , a medium, positive correlation with sexual relationship satisfaction (BSFQ-Satisfaction),  $\rho = .456$ ,  $n = 327$ ,  $p < .01$ , and a small, positive correlation with sexual interest (BSFQ-Interest),  $\rho = .120$ ,  $n = 327$ ,  $p < .05$ . Relationship satisfaction (RAS Total) displayed a large, negative correlation with avoidance communication patterns (MAW Score),  $\rho = -.520$ ,  $n = 327$ ,  $p < .01$ , and a medium, negative correlation with critical communication patterns (DWC Score),  $\rho = -.462$ ,  $n = 327$ ,  $p < .01$ .

Social intimacy (MSIS Total) displayed a large, positive correlation with constructive communication patterns (MCC Score),  $\rho = .660, n = 327, p < .01$ , a medium, positive correlation with sexual relationship satisfaction (BSFQ-Satisfaction),  $\rho = .412, n = 327, p < .01$ , and a small, positive correlation with sexual interest (BSFQ-Interest),  $\rho = .203, n = 327, p < .01$ . Social intimacy (MSIS Total) displayed a large, negative correlation with avoidance communication patterns (MAW Score),  $\rho = -.621, n = 327, p < .01$ , and with critical communication patterns (DWC Score),  $\rho = -.501, n = 327, p < .01$ .

Collaborative communication patterns (MCC Score) displayed a large, negative correlation with avoidance communication patterns (MAW Score),  $\rho = -.696, n = 327, p < .01$  and critical communication patterns (DWC Score),  $\rho = -.729, n = 327, p < .01$ .

Collaborative communication patterns (MCC Score) displayed a small, positive correlation with sexual interest (BSFQ-Interest),  $\rho = .242, n = 327, p < .01$ , and with sexual relationship satisfaction (BSFQ-Satisfaction),  $\rho = .381, n = 327, p < .01$

Avoidance communication patterns (MAW Score) displayed a large, positive correlation with critical communication patterns (DWC Score),  $\rho = .672, n = 327, p < .01$ . Avoidance communication patterns (MAW Score) displayed a small, negative correlation with sexual interest (BSFQ-Interest),  $\rho = -.166, n = 327, p < .01$ , and with sexual relationship satisfaction (BSFQ-Satisfaction),  $\rho = -.343, n = 327, p < .01$ .

Critical communication patterns (DWC Score) displayed a small, negative correlation with sexual interest (BSFQ-Interest),  $\rho = -.161, n = 327, p < .01$ , and with sexual relationship satisfaction (BSFQ-Satisfaction),  $\rho = -.276, n = 327, p < .01$ .

Finally, the variables of sexual interest and sexual relationship satisfaction displayed a small, positive correlation with each other,  $\rho = .167, n = 327, p < .01$  (see Table 9).

Overall, moderate to large significant correlations were found within the interpersonal functioning variables (relationship satisfaction, social intimacy, constructive communication patterns, avoidance communication patterns, and critical communication patterns), while small to moderate significant correlations were found between the interpersonal functioning variables and the sexual disruption variables (sexual interest and sexual relationship satisfaction).

Table 9

*Spearman rho Correlations between Intrusion, Avoidance, and Arousal Symptoms and Measures of Interpersonal and Sexual Disruptions*

Scale	1	2	3	4	5	6	7	8	9	10
1. STSS-Intrusion	-	.696**	.691**	.004	-.022	-.060	.117*	.187**	-.090	-.017
2. STSS-Avoidance		-	.796**	-.139*	-.165**	-.203**	.210**	.295**	-.093	-.088
3. STSS-Arousal			-	-.118*	-.161**	-.209**	.189**	.311**	-.059	-.088
4. RAS Total				-	.756**	.594**	-.520**	-.462**	.120*	.456**
5. MSIS Total					-	.660**	-.621**	-.501**	.203**	.412**
6. MCC Score						-	-.696**	-.729**	.242**	.381**
7. MAW Score							-	.672**	-.166**	-.343**
8. DWC Score								-	-.161**	-.276**
9. BSFQ-Interest									-	.167**
10. BSFQ-Satisfaction										-

Note: STSS-Intrusion (Secondary Traumatic Stress Scale, intrusion subscale), STSS-Avoidance (Secondary Traumatic Stress Scale, avoidance subscale), STSS-Arousal (Secondary Traumatic Stress Scale, arousal subscale), RAS Total (Relationship Assessment Scale total score), MSIS Total (Miller Social Intimacy Scale total score), MCC Score (Mutual Constructive Communication subscale score of the Communications Pattern Questionnaire), MAW Score (Mutual Avoidance and Withholding subscale score of the Communications Pattern Questionnaire), DWC Score (Demand-Withdrawal Communication subscale score of the Communications Pattern Questionnaire), BSFQ-Interest (Brief Sexual Functioning Questionnaire, sexual interest subscale), BSFQ-Satisfaction (Brief Sexual Functioning Questionnaire, sexual relationship satisfaction subscale).

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

*Variables associated with intrusion symptoms.* There was a small, positive correlation between intrusion symptoms and avoidance communication,  $\rho = .117$ ,  $n = 327$ ,  $p < .05$ . The shared variance among these two variables was 1.4%. There was also a small, positive correlation between intrusion symptoms and critical communication,  $\rho =$

.187,  $n = 327$ ,  $p < .01$ . The shared variance among these two variables was 3.5% (see Table 9).

Among mental health therapists, more severe intrusion symptoms were significantly associated with increased use of avoidance communication patterns and increased use of critical communication patterns.

*Variables associated with avoidance symptoms.* There was a small, negative correlation between avoidance symptoms and relationship satisfaction,  $\rho = -.139$ ,  $n = 327$ ,  $p < .05$ . The shared variance among these two variables was 1.9%. There was also a small, negative correlation between avoidance symptoms and social intimacy,  $\rho = -.165$ ,  $n = 327$ ,  $p < .01$ . The shared variance among these two variables was 2.7%.

Among the variables assessing various aspects of communication patterns there was a small, negative correlation between avoidance symptoms and constructive communication,  $\rho = -.203$ ,  $n = 327$ ,  $p < .01$ . The shared variance among these two variables was 4.1%. This was consistent with the other two communication patterns variables where there was a small, positive correlation between avoidance symptoms and avoidance communication,  $\rho = .210$ ,  $n = 327$ ,  $p < .01$ , and a small, positive correlation between avoidance symptoms and critical communication,  $\rho = .295$ ,  $n = 327$ ,  $p < .01$  (see Table 9). The shared variance between avoidance symptoms and avoidance communication was 4.4%, while the shared variance between avoidance symptoms and critical communication was 8.7%.

Among mental health therapists, more severe avoidance symptoms were significantly associated with low levels of relationship satisfaction, less social intimacy, decreased use

of constructive communication, increased use of avoidance communication patterns and increased use of critical communication patterns.

*Variables associated with arousal symptoms.* There was a small, negative correlation between arousal symptoms and relationship satisfaction,  $\rho = -.118, n = 327, p < .05$ . The shared variance among these two variables was 1.4%. There was also a small, negative correlation between arousal symptoms and social intimacy,  $\rho = -.161, n = 327, p < .01$ . The shared variance among these two variables was 2.6%.

Among the variables assessing various aspects of communication patterns there was a small, negative correlation between arousal symptoms and constructive communication,  $\rho = -.209, n = 327, p < .01$ . The shared variance among these two variables was 4.4%. This was consistent with the other two communication patterns variables where there was a small, positive correlation between arousal symptoms and avoidance communication,  $\rho = .189, n = 327, p < .01$ . There was also a medium, positive correlation between arousal symptoms and critical communication,  $\rho = .311, n = 327, p < .01$  (see Table 9). The shared variance between arousal symptoms and avoidance communication was 3.6%, while the shared variance between arousal symptoms and critical communication was 9.7%.

Among mental health therapists, more severe arousal symptoms were significantly associated with low levels of relationship satisfaction, less social intimacy, decreased use of constructive communication, increased use of avoidance communication patterns and increased use of critical communication patterns.

In summary, moderate to large significant correlations were found within the interpersonal functioning variables, while small to moderate significant correlations were

found between the interpersonal functioning variables and the sexual disruption variables. No association was found between intrusion symptoms, avoidance symptoms, arousal symptoms, sexual interest, and sexual relationship satisfaction. More severe intrusion symptoms were significantly associated with high levels of avoidance communication patterns and high levels of critical communication patterns.

More severe avoidance symptoms were significantly associated with low levels of relationship satisfaction, less social intimacy, decreased use of constructive communication, increased use of avoidance communication patterns and increased use of critical communication patterns. More severe arousal symptoms were significantly associated with low levels of relationship satisfaction, less social intimacy, decreased use of collaborative communication, increased use of avoidance communication patterns and increased use of critical communication patterns.

### *Research Question Two*

#### *Research Question and Hypothesis*

The second research question addressed in this study was: Which therapist characteristics are most influential in predicting interpersonal and sexual disruptions? It was hypothesized that younger age, female gender, fewer years of counseling experience, more exposure (in hours) to conducting therapy with trauma clients, and receiving personal therapy would form a statistically significant predictive equation of interpersonal and sexual disruptions in mental health therapists.

No significant relationship was found between sexual disruptions and known symptoms of secondary traumatic stress/vicarious traumatization (research question one); therefore the dependent variables of sexual interest (BSFQ-Interest) and sexual



relationship satisfaction (BSFQ-Satisfaction) were removed from analysis for research question two.

### *Statistical Analysis*

Standard multiple regression, with the simultaneous entry of variables, was used to assess the ability of therapist characteristics to predict interpersonal disruptions associated with secondary traumatic stress/vicarious traumatization. Transformed variables were used for analysis of research question two. Predictor variables included: gender (GDR), years of counseling experience (YRS), receiving personal therapy (PERT), and hours within the past month conducting therapy with trauma clients (square root; SRHRS). Dummy codes were used for gender (0 = female, 1 = male) and receiving personal therapy (0 = yes, 1 = no). Dependent variables were the following: relationship satisfaction (reflected square root; RSRRAS Total), social intimacy (reflected square root; RSRMSIS Total), constructive communication patterns (reflected square root; RSRMCC Score), avoidance communication patterns (square root; SRMAW Score), and critical communication patterns (square root; SRDWC Score).

To address research question two, multiple comparisons were involved across the five models (i.e. dependent variables). To control for Type I errors, Holm's method was used to adjust the alpha values. A Holm's correction involved ranking each regression model from smallest  $p$ -value to largest  $p$ -value. The alpha value was then adjusted for each comparison by dividing .05 by the number of dependent variables (5). The dependent variables were reduced by one for each comparison moving from smallest  $p$ -value to largest  $p$ -value.

The first model was evaluated against corrected alpha = .01 (.05/5). The second model was evaluated against corrected alpha = .0125 (.05/5-1). The third model was evaluated against corrected alpha = .016 (.05/5-2). The fourth model was evaluated against corrected alpha = .025 (.05/5-3). The fifth model was evaluated against corrected alpha = .05 (.05/5-4). Individual variables within each model were assessed at alpha = .05. Analysis was performed using SPSS REGRESSION and SPSS FREQUENCIES for evaluation of assumptions.

#### *Tests for Violations of Assumptions*

The sample size ( $n = 327$ ) obtained for the current study satisfied the suggested recommendations concerning the number of cases needed for testing the multiple correlation and individual predictors in multiple regression (Tabachnick & Fidell, 2001). A total of five standard multiple regression equations were inspected for violations of assumptions, one model for each dependent variable: relationship satisfaction (reflected square root; RSRRAS Total), social intimacy (reflected square root; RSRMSIS Total), constructive communication patterns (reflected square root; RSRMCC Score), avoidance communication patterns (square root; SRMAW Score), and critical communication patterns (square root; SRDWC Score). Independent variables included: age (AGE), gender (GDR), years of counseling experience (YRS), hours within the past month conducting therapy with trauma clients (square root; SRHRS), and receiving personal therapy (PERT).

Multicollinearity was checked via a review of a correlation matrix between the variables in the model. Low correlations were found between the independent variables and the five dependent variables (-.002 to -.144). A high bivariate correlation was found

between the independent variables of age and years of counseling experience (.706) which suggested that these two variables were capturing redundant information. Highly correlated independent variables can inflate the size of error terms and weaken analysis (Tabachnick & Fidell, 2001). Review of Tolerance and VIF values indicated no other problems with multicollinearity among variables.

Normality, multivariate outliers, homoscedasticity, and linearity were assessed via inspection of the Standardized Residual Normal Probability Plots (P-P) and residual scatterplots. Inspection of the Standardized Residual Normal Probability Plots (P-P) found one model with slight deviations from normality. This included the regression equation with the dependent variable of avoidance communication patterns (square root; SRMAW Score). No major heteroscedasticity or violations of linearity were detected via visual review of residual scatterplots. One multivariate outlier was detected within each model via inspection of Mahalanobis distance values, where the identified outlier (22.25) exceeded the critical chi-square value of 20.52.

Due to the high correlation between the independent variables of age and years of counseling experience, age was removed from the regression model. Additionally, the single case (participant) which produced the multivariate outlier was also removed from the study sample, taking the new study sample for research question two, down to  $n=326$ .

The five standard multiple regressions were repeated with a sample size of  $n=326$ , and with the following four independent variables: gender (GDR), years of counseling experience (YRS), hours within the past month conducting therapy with trauma clients (square root; SRHRS), and receiving personal therapy (PERT). The test assumptions of

multicollinearity, normality, multivariate outliers, homoscedasticity, and linearity were reviewed again.

Multicollinearity between the independent variables and dependent variables remained low (.000 to -.144) across each of the five models. Review of Tolerance and VIF values indicated no other problems with multicollinearity among variables. No major heteroscedasticity or violations of linearity were detected via visual review of residual scatterplots. No multivariate outliers were detected via visual inspection of residual scatterplots and review of Mahalanobis distance values (critical chi-square value 18.47).

Visual inspection of Standardized Residual Normal Probability Plots (P-P) indicated no major deviations from normality for regression equations with the following dependent variables: relationship satisfaction (reflected square root; RSRRAS Total), social intimacy (reflected square root; RSRMSIS Total), constructive communication patterns (reflected square root; RSRMCC Score), and critical communication patterns (square root; SRDWC Score). The regression equation for the dependent variable of avoidance communication patterns (square root; SRMAW Score) did indicate a deviation from normality. Subsequently, this model may under report the strength of the relationship between variables and increase the likelihood of a Type II error (Osborne & Waters, 2002).

### *Results*

Correlations among the independent and dependent variables will be reviewed first, followed by the regression results for each of the five dependent variables. Regression results include a summary table with each model tested (see Table 11). The table summary includes  $R$ ,  $R^2$ , adjusted  $R^2$ , the  $p$ -value, and the  $F$  statistic for each model.

Also included in the table are the standardized regression coefficients ( $\beta$ ), the squared semipartial correlation coefficients ( $sr^2$ ), and the  $p$ -value for each independent variable of the model.

*Correlations among variables.* A Pearson product-moment correlation was conducted between the four independent variables of (gender (GDR), years of counseling experience (YRS), hours within the past month conducting therapy with trauma clients (square root; SRHRS), and receiving personal therapy (PERT), and the five dependent variables of relationship satisfaction (reflected square root; RSRRAS Total), social intimacy (reflected square root; RSRMSIS Total), constructive communication patterns (reflected square root; RSRMCC Score), avoidance communication patterns (square root; SRMAW Score), and critical communication patterns (square root; SRDWC Score).

Three significant correlations were found (see Table 10). There was a small, positive correlation between gender and constructive communication patterns,  $r = .115$ ,  $n = 320$ ,  $p < .05$ , with females associated with decreased use of constructive communication patterns. There was a small, positive correlation between receiving personal therapy and relationship satisfaction,  $r = .110$ ,  $n = 320$ ,  $p < .05$ , where receiving no personal therapy was associated with higher levels of relationship satisfaction. Finally, there was a small, negative correlation between hours within the past month conducting therapy with trauma clients (square root) and relationship satisfaction,  $r = -.144$ ,  $n = 320$ ,  $p < .01$ , where more hours seeing clients was associated with lower levels of relationship satisfaction.

Table 10  
*Pearson Correlations Among Independent and Dependent Variables*

Independent Variables	Dependent Variables				
	RSRRAS	RSRMSIS	RSRMCC	SRMAW	SRDWC
GDR	.085	-.021	.115*	.018	-.085
YRS	.047	-.029	.094	-.036	-.050
PERT	.110*	.067	-.034	.000	.021
SRHRS	-.144**	-.108	-.070	.047	.040

*Note:* Dependent variables: RSRRAS (reflected square root Relationship Assessment Scale total score), RSRMSIS (reflected square root Miller Social Intimacy Scale total score), RSRMCC (reflected square root Mutual Constructive Communication subscale score), SRMAW (square root Mutual Avoidance and Withholding subscale score), SRDWC (square root Demand-Withdrawal communication subscale score). Independent variables: GDR (gender, 0=Female, 1=Male), YRS (years of counseling experience), PERT (receiving personal therapy, 0=Yes, 1=No), SRHRS (square root of hours within the past month conducting therapy with trauma clients).

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

*Relationship satisfaction.* The regression model for the dependent variable of relationship satisfaction (reflected square root; RSRRAS Total) was not significantly different from zero,  $F(4, 316) = 2.77, p = .027$ . The adjusted alpha = .01 for multiple comparisons (Holm's method). Female gender, fewer years of counseling experience, receiving personal therapy, and more hours within the past month conducting therapy with trauma clients (square root) was not predictive of relationship satisfaction (reflected square root) in mental health therapists.

*Constructive communication.* The regression model for the dependent variable of constructive communication (reflected square root; RSRMCC Score) was not significantly different from zero,  $F(4, 316) = 1.86, p = .117$ . The adjusted alpha = .0125 for multiple comparisons (Holm's method). Female gender, fewer years of counseling experience, receiving personal therapy, and more hours within the past month conducting therapy with trauma clients (square root) was not predictive of constructive communication patterns (reflected square root) in mental health therapists.

Table 11  
*Standard Multiple Regression Results for Interpersonal Disruptions*

Variables	<i>R</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	<i>F</i>	$\beta$	<i>sr</i> <sup>2</sup>	<i>p</i>
1. RSRRAS (DV)	.184	.034	.022	2.77			.027
GDR					.062	.004	.282
YRS					.016	.000	.781
PERT					.090	.008	.107
SRHRS					-.124	.014	.028
2. RSRMCC (DV)	.152	.023	.011	1.86			.117
GDR					.090	.007	.125
YRS					.070	.005	.228
PERT					-.051	.023	.365
SRHRS					-.062	.004	.270
3. RSRMSIS (DV)	.129	.017	.004	1.34			.252
GDR					-.027	.000	.646
YRS					-.031	.000	.591
PERT					.057	.003	.315
SRHRS					-.106	.011	.063
4. SRDWC (DV)	.098	.010	-.003	.773			.544
GDR					-.073	.005	.212
YRS					-.030	.001	.611
PERT					.030	.001	.592
SRHRS					.034	.001	.552
5. SRMAW (DV)	.068	.005	-.008	.365			.834
GDR					.036	.001	.539
YRS					-.044	.002	.449
PERT					.008	.000	.882
SRHRS					.050	.024	.382

*Note:* The five models are listed in order of lowest p-value to highest p-value. Dependent variables: RSRRAS (reflected square root Relationship Assessment Scale total score), RSRMCC (reflected square root Mutual Constructive Communication subscale score), RSRMSIS (reflected square root Miller Social Intimacy Scale total score), SRDWC (square root Demand-Withdrawal communication subscale score), SRMAW (square root Mutual Avoidance and Withholding communication subscale score). Predictor variables: GDR (gender, 0=Female, 1=Male), YRS (years of counseling experience), PERT (receiving personal therapy, 0=Yes, 1=No), SRHRS (square root of hours within the past month conducting therapy with trauma clients).

*Social intimacy.* The regression model for the dependent variable of social intimacy (reflected square root; RSRMSIS Total) was not significantly different from zero,  $F(4, 316) = 1.34, p = .252$ . The adjusted alpha = .016 for multiple comparisons (Holm's method). Female gender, fewer years of counseling experience, receiving personal therapy, and more hours within the past month conducting therapy with trauma clients

(square root) was not predictive of social intimacy disruptions (reflected square root) in mental health therapists.

*Critical communication.* The regression model for the dependent variable of critical communication (square root; SRDWC Score) was not significantly different from zero,  $F(4, 316) = .773, p = .544$ . The adjusted alpha = .025 for multiple comparisons (Holm's method). Female gender, fewer years of counseling experience, receiving personal therapy, and more hours within the past month conducting therapy with trauma clients (square root) was not predictive of critical communication patterns (square root) in mental health therapists.

*Avoidance communication.* The regression model for the dependent variable of avoidance communication (square root; SRMAW Score) was not significantly different from zero,  $F(4, 316) = .365, p = .834$ . The adjusted alpha = .05 for multiple comparisons (Holm's method). Female gender, fewer years of counseling experience, receiving personal therapy, and more hours within the past month conducting therapy with trauma clients (square root) was not predictive of avoidance communication patterns (square root) in mental health therapists.

In summary, a statistically significant relationship was found between female gender and decreased use of constructive communication patterns. More hours in the past month conducting therapy with trauma clients (square root) and receiving personal therapy both had a statistically significant relationship to lower relationship satisfaction. As a predictive model, female gender, fewer years of counseling experience, receiving personal therapy, and more hours within the past month conducting therapy with trauma clients (square root) were not predictive of interpersonal disruptions.



### *Post hoc Analysis*

Post hoc analysis was conducted to look at the predictive power of the identified therapist characteristics of gender (GDR), years of counseling experience (YRS), hours within the past month conducting therapy with trauma clients (square root; SRHRS), and receiving personal therapy (PERT) on previously established symptoms of secondary traumatic stress (intrusion, avoidance, and arousal symptoms). Standard multiple regression, with simultaneous variable entry, was performed and transformed variables were used for intrusion symptoms (square root; SRSTSS-Intrusion), avoidance symptoms (square root; SRSTSS-Avoidance), and arousal symptoms (square root; SRSTSS-Arousal).

Preliminary analysis was conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity, and homoscedasticity. To control for Type I errors, Holm's method was used to adjust the alpha levels. For post hoc analysis, the family wise error rate was calculated at eight total tests (five from the original analysis and three for post hoc analysis). The first post hoc model was evaluated against corrected alpha = .006 (.05/8). The second post hoc model was evaluated against corrected alpha = .007 (.05/8-1). The third post hoc model was evaluated against corrected alpha = .008 (.05/8-2). Individual predictor variables within each model were assessed at alpha = .05.

Correlations among the independent and dependent variables will be reviewed first, followed by the regression results for each post hoc dependent variable. Regression results include a summary table with each model tested (see Table 12). The table summary includes  $R$ ,  $R^2$ , adjusted  $R^2$ , the  $p$ -value, and the  $F$  statistic for each model. Also included in the table are the standardized regression coefficients ( $\beta$ ), the squared

semipartial correlation coefficients ( $sr^2$ ), and the  $p$ -value for each independent variable of the model.

*Correlations among variables.* A Pearson product-moment correlation was conducted between the four independent variables of gender (GDR), years of counseling experience (YRS), hours within the past month conducting therapy with trauma clients (square root; SRHRS), and receiving personal therapy (PERT), and the three post hoc dependent variables of intrusion symptoms (square root; SRSTSS-Intrusion), avoidance symptoms (square root; SRSTSS-Avoidance), and arousal symptoms (square root; SRSTSS-Arousal).

Four significant correlations were found (see Table 13). There was a small, negative correlation between gender and intrusion symptoms,  $r = -.163$ ,  $n = 320$ ,  $p < .01$ , with females associated with more severe intrusion symptoms. There was a small, negative correlation between years of counseling experience and intrusion symptoms,  $r = -.170$ ,  $n = 320$ ,  $p < .01$ , where fewer years of experience was associated with more severe intrusion symptoms. There was a small, negative correlation between years of counseling experience and avoidance symptoms,  $r = -.197$ ,  $n = 320$ ,  $p < .01$ , where fewer years of experience was associated with more severe avoidance symptoms. Finally, there was a small, negative correlation between years of counseling experience and arousal symptoms,  $r = -.127$ ,  $n = 320$ ,  $p < .05$ , where fewer years of experience was associated with more severe arousal symptoms.

*Avoidance symptoms.* The regression model for the dependent variable of avoidance symptoms (square root; SRSTSS-Avoidance) was significantly different from zero,  $F(4, 320) = 4.24$ ,  $p = .002$ . The adjusted alpha = .006 for multiple comparisons (Holm's

Table 12  
*Pearson Correlations Among Independent and Dependent Variables*

Independent Variables	Dependent Variables		
	SRSTSS-Intrusion	SRSTSS-Avoidance	SRSTSS-Arousal
GDR	-.163**	-.098	-.082
YRS	-.170**	-.197**	-.127*
PERT	-.029	-.078	-.089
SRHRS	.098	.102	.097

*Note:* Dependent variables: SRSTSS-Intrusion (square root Secondary Traumatic Stress, intrusion subscale score), SRSTSS-Avoidance (square root Secondary Traumatic Stress, avoidance subscale score), SRSTSS-Arousal (square root Secondary Traumatic Stress, arousal subscale score). Predictor variables: GDR (gender, 0=Female, 1=Male), YRS (years of counseling experience), PERT (receiving personal therapy, 0=Yes, 1=No), SRHRS (square root of hours within the past month conducting therapy with trauma clients).

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

method). One independent variable, years of counseling experience ( $\beta = -.178$ ,  $t(320) = -3.11$ ,  $p = .002$ ), contributed significantly to the prediction of avoidance symptoms (square root; SRSTSS-Avoidance). A total of 2.9% of the variance in avoidance symptoms was uniquely explained by years of counseling experience. The four independent variables in combination contributed another .022 in shared variability. Altogether, 5.1% (3.9% adjusted) of the variability in avoidance symptoms (square root) was predicted by the four therapist characteristics. Specifically, being female, having fewer years of counseling experience, more hours within the past month conducting therapy with trauma clients (square root), and receiving personal therapy was predictive of 5.1% (3.9% adjusted) of the variance in avoidance symptoms (square root; SRSTSS-Avoidance).

*Intrusion symptoms.* The regression model for the dependent variable of intrusion symptoms (square root; SRSTSS-Intrusion) was significantly different from zero,  $F(4, 320) = 4.10$ ,  $p = .003$ . The adjusted alpha = .007 for multiple comparisons (Holm's method). Two independent variables contributed significantly to the prediction of

Table 13  
*Standard Multiple Regression Results for Intrusion, Avoidance, and Arousal Symptoms*

Variables	<i>R</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	<i>F</i>	$\beta$	<i>sr</i> <sup>2</sup>	<i>p</i>
1. STSS-Avoidance (DV)	.226	.051	.039	4.25			.002 <sup>+</sup>
GDR					-.037	.001	.524
YRS					-.178	.029	.002*
PERT					-.052	.003	.348
SRHRS					.082	.006	.144
2. STSS-Intrusion (DV)	.222	.049	.037	4.25			.003 <sup>^</sup>
GDR					-.117	.012	.043*
YRS					-.113	.016	.021*
PERT					-.005	.000	.934
SRHRS					.076	.006	.171
3. STSS-Arousal (DV)	.174	.030	.018	2.47			.044
GDR					-.041	.002	.482
YRS					-.106	.010	.068
PERT					-.069	.005	.218
SRHRS					.077	.006	.171

*Note:* Dependent variables: SRSTSS-Avoidance (square root Secondary Traumatic Stress, avoidance subscale score), SRSTSS-Intrusion (square root Secondary Traumatic Stress, intrusion subscale score), SRSTSS-Arousal (square root Secondary Traumatic Stress, arousal subscale score). Predictor variables: GDR (gender, 0=Female, 1=Male), YRS (years of counseling experience), PERT (receiving personal therapy, 0=Yes, 1=No), SRHRS (square root of hours within the past month conducting therapy with trauma clients).

+  $p < .006$     ^  $p < .007$     \*  $p < .05$

intrusion symptoms (square root; SRSTSS-Intrusion), gender ( $\beta = -.117$ ,  $t(320) = -2.03$ ,  $p = .043$ ) and years of counseling experience ( $\beta = -.133$ ,  $t(320) = -2.33$ ,  $p = .021$ ). A total of 1.2% of the variance in intrusion symptoms was uniquely explained by gender, and 1.6% of the variance was uniquely explained by years of counseling experience.

The four independent variables in combination contributed another .021 in shared variability. Altogether, 4.9% (3.7% adjusted) of the variability in intrusion symptoms (square root) was predicted by the four therapist characteristics. Specifically, being female, having fewer years of counseling experience, more hours within the past month conducting therapy with trauma clients (square root), and receiving personal therapy was predictive of 4.9% (3.7% adjusted) of the variance in intrusion symptoms (square root; SRSTSS-Intrusion).

*Arousal symptoms.* The regression model for the dependent variable of arousal symptoms (square root; SRSTSS-Arousal) was not significantly different from zero,  $F(4, 320) = 2.47, p = .044$ . The adjusted alpha = .008 for multiple comparisons (Holm's method). Female gender, fewer years of counseling experience, receiving personal therapy, and more hours within the past month conducting therapy with trauma clients (square root) was not predictive of arousal symptoms (square root) in mental health therapists.

In summary, female gender was significantly associated with more severe intrusion symptoms. Fewer years of counseling experience was significantly associated with more severe intrusion, avoidance, and arousal symptoms. As a model, female gender, fewer years of counseling experience, receiving personal therapy, and more hours within the past month conducting therapy with trauma clients (square root) was predictive of intrusion and avoidance symptoms, and was not predictive of arousal symptoms. The independent variable of fewer years of counseling experience was a statistically significant unique predictor for intrusion and avoidance symptoms, while gender was a statistically significant unique predictor for intrusion symptoms.

### *Research Question Three*

#### *Research Question and Hypothesis*

The third research question addressed in this study was: Among therapists with a personal trauma history, how do gender, age at first trauma experience and type of prior personal trauma (assaultive vs. non-assaultive) interact to predict secondary traumatic stress/vicarious traumatization symptoms? It was hypothesized that female gender, younger age at first trauma, and a history of prior assaultive trauma would form a

statistically significant predictive model of severity for interpersonal and sexual disruptions and intrusion, avoidance and arousal symptoms in mental health therapists who have a prior history of personal trauma.

### *Statistical Analysis*

No significant relationship was found between sexual disruptions and known symptoms of secondary traumatic stress/vicarious traumatization (research question one), therefore, the dependent variables of sexual interest (BSFQ-Interest) and sexual relationship satisfaction (BSFQ-Satisfaction) were removed from analysis for research question three.

Standard multiple regression, with the simultaneous entry of variables, was used to assess the predictive power of certain therapist characteristics to predict interpersonal disruptions associated with secondary traumatic stress/vicarious traumatization and intrusion, avoidance and arousal symptoms. Transformed variables were used for analysis of research question three.

Predictor variables included: gender (GDR), prior trauma type (TRMA), and age at first trauma (square root; SRAGETR). Dummy codes were used for gender (0 = female, 1 = male) and prior trauma type (0 = assaultive trauma history, 1 = non assaultive trauma only history). Dependent variables were the following: relationship satisfaction (reflected square root; RSRRAS Total), social intimacy (reflected square root; RSRMSIS Total), constructive communication patterns (reflected square root; RSRMCC Score), avoidance communication patterns (square root; SRMAW Score), critical communication patterns (square root; SRDWC Score), intrusion symptoms (square root; SRSTSS-

Intrusion), avoidance symptoms (square root; SRSTSS-Avoidance), and arousal symptoms (square root; SRSTSS-Arousal).

To address research question three, multiple comparisons were involved across the eight models (i.e. dependent variables). To control for Type I errors, Holm's method was used to correct the alpha values. The first model was evaluated against corrected alpha = .006 (.05/8). The second model was evaluated against corrected alpha = .007 (.05/8-1). The third model was evaluated against corrected alpha = .008 (.05/8-2). The fourth model was evaluated against corrected alpha = .01 (.05/8-3). The fifth model was evaluated against corrected alpha = .0125 (.05/8-4). The sixth model was evaluated against corrected alpha = .016 (.05/8-5). The seventh model was evaluated against corrected alpha = .025 (.05/8-6). The eighth model was evaluated against corrected alpha = .05 (.05/8-7). Individual predictor variables within each model were evaluated against alpha = .05. Analysis was performed using SPSS T-TEST, SPSS DESCRIPTIVES, SPSS REGRESSION, and SPSS FREQUENCIES.

#### *Tests for Violations of Assumptions*

The sample size ( $n=288$ ) obtained for the current study satisfied the suggested recommendations concerning the number of cases needed for testing the multiple correlation and individual predictors in multiple regression (Tabachnick & Fidell, 2001). A total of eight standard multiple regression equations were inspected for violations of assumptions, one model for each dependent variable: relationship satisfaction (reflected square root; RSRRAS Total), social intimacy (reflected square root; RSRMSIS Total), constructive communication patterns (reflected square root; RSRMCC Score), avoidance communication patterns (square root; SRMAW Score), critical communication patterns

(square root; SRDWC Score), intrusion symptoms (square root; SRSTSS-Intrusion), avoidance symptoms (square root; SRSTSS-Avoidance), and arousal symptoms (square root; SRSTSS-Arousal). Independent variables included: gender (GDR), trauma type (TRMA), and age of first trauma (square root; SQAGETR).

Multicollinearity was checked via a review of a correlation matrix between the variables in the model. Low correlations were found between the independent variables and the nine dependent variables (-.002 to -.170). Review of Tolerance and VIF values indicated no other problems with multicollinearity among variables.

Normality, multivariate outliers, homoscedasticity, and linearity were assessed via inspection of the Standardized Residual Normal Probability Plots (P-P) and residual scatterplots. No major deviations from normality were detected from review of the Standardized Residual Normal Probability Plots (P-P). No heteroscedasticity nor multivariate outliers were detected via visual review of residual scatterplots. The absence of multivariate outliers was confirmed by review of Mahalanbis distance values, whereas no values exceeded the critical chi-square value of 16.27.

Four models (SRSTSS-Intrusion, RSRRAS Total, RSRMCC Score, and SRDWC Score) displayed unusual patterns among the residual scatterplots, where residuals were plotted in three distinct groupings along the x axis. This deviation from a rectangular pattern is an indication of a possible violation of linearity. While a failure of linearity among residuals doesn't invalidate an analysis, it does weaken it. According to Tabachnick and Fidell (2001), "The power of the analysis is reduced to the extent that the analysis cannot map the full extent of the relationships among the IV's and the DV" (page 121). Thus the regression results for these four models may under-report the



strength of the relationship, and increase the likelihood of a Type II error (Osborne & Waters, 2002).

### *Results*

A total of 38.3% ( $n = 125$ ) of study participants indicated they had experienced at least one prior assaultive trauma, while 50.8% ( $n = 163$ ) indicated they had experienced only a prior non-assaultive trauma. A total of 35.5% ( $n = 116$ ) of study participants indicated they had experienced both a prior assaultive type and non-assaultive type trauma, while 9.8% ( $n = 32$ ) of study participants indicated no experience of prior trauma and 2.1% ( $n = 7$ ) of study participants skipped the question.

Among female participants, 39.3% ( $n = 101$ ) reported a history of assaultive trauma. Compared to 33.3% ( $n = 23$ ) of men who reported an assaultive trauma history. A Chi-square test for independence (with Yates Continuity Correction) indicated no significant association between gender and type of trauma history (assaultive or non-assaultive only),  $X^2(1, n = 284) = 1.33, p = .249, \phi = -.077$ . Females were not more likely to have an assaultive trauma history than males.

The age range for experiencing a first trauma (either type) was 0 to 60 with a mean age of 14.8 years and a mode of 5 years of age. Of the current sample, 70.1% of participants reported their first trauma as occurring in childhood (prior to age 17), and 29.9% reported their first trauma as occurring in adulthood (18 and older). There was no significant difference in age of first trauma experience for males ( $M = 16.39, SD = 10.65$ ) and females ( $M = 14.44, SD = 11.28, t(282) = -1.22, p = .223$  (two-tailed)). Females did not differ from males in terms of age of first trauma experience.

The age range for those whose first trauma was assaultive was 0 to 43, with a mean of 11.2 years and a mode of 5 years of age. There was no significant difference in age of first assaultive trauma experience for males ( $M = 12.41$ ,  $SD = 8.76$ ) and females ( $M = 10.93$ ,  $SD = 7.92$ ,  $t(125) = -.810$ ,  $p = .419$  (two-tailed)). Females did not differ from males in terms of age of first assaultive trauma experience.

Correlations among the independent and dependent variables will be reviewed next, followed by the regression results for each of the eight dependent variables. Regression results include a summary table with each model tested (see Table 16). The table summary includes  $R$ ,  $R^2$ , adjusted  $R^2$ , the  $p$ -value, and the  $F$  statistic for each model. Also included in the table are the standardized regression coefficients ( $\beta$ ), the squared semipartial correlation coefficients ( $sr^2$ ), and the  $p$ -value for each independent variable of the model.

*Correlations among variables.* A Pearson product-moment correlation was conducted between the three independent variables of gender (GDR), prior trauma type (TRMA), and age at first trauma (square root; SRAGETR), and the eight dependent variables of relationship satisfaction (reflected square root; RSRRAS Total), social intimacy (reflected square root; RSRMSIS Total), constructive communication patterns (reflected square root; RSRMCC Score), avoidance communication patterns (square root; SRMAW Score), critical communication patterns (square root; SRDWC Score), intrusion symptoms (square root; SRSTSS-Intrusion), avoidance symptoms (square root; SRSTSS-Avoidance), and arousal symptoms (square root; SRSTSS-Arousal). Independent variables included: gender (GDR), trauma type (TRMA), and age of first trauma (square root; SQAGETR).

One significant correlation was found among the interpersonal functioning dependent variables (see Table 14). There was a small, positive correlation between type of trauma history and social intimacy,  $r = .145$ ,  $n = 283$ ,  $p < .05$ , with a non-assaultive trauma history associated with more social intimacy.

Table 14  
*Pearson Correlations Among Independent Variables and Interpersonal Dependent Variables*

Independent Variables	Interpersonal Dependent Variables				
	RSRRAS	RSRMSIS	RSRMCC	SRMAW	SRDWC
GDR	.095	-.027	.112	.010	-.093
SRAGETR	.033	-.003	.014	.003	-.002
TRMA	.110	.145*	.065	-.046	-.026

*Note:* Dependent variables: RSRRAS (reflected square root Relationship Assessment Scale total score), RSRMSIS (reflected square root Miller Social Intimacy Scale total score), RSRMCC (reflected square root Mutual Constructive Communication subscale score), SRMAW (square root Mutual Avoidance and Withholding subscale score), SRDWC (square root Demand-Withdrawal communication subscale score). Independent variables: GDR (gender, 0=Female, 1=Male), SRAGETR (square root of age at time of first trauma), TRMA (trauma type, 0=Assaultive trauma history, 1=Non Assaultive trauma only history)  
\*\*  $p < .01$  (two-tailed), \*  $p < .05$  (two-tailed)

Four significant correlations were found among the intrusion, avoidance, and arousal symptom dependent variables (see Table 15). There was a small, negative correlation between gender and intrusion symptoms,  $r = -.155$ ,  $n = 283$ ,  $p < .01$ , where being female was associated with more severe intrusion symptoms. There was a small, negative correlation between type of trauma history and intrusion symptoms,  $r = -.131$ ,  $n = 283$ ,  $p < .05$ , where having an assaultive trauma history was associated with more severe intrusion symptoms. There was a small, negative correlation between type of trauma history and avoidance symptoms,  $r = -.170$ ,  $n = 283$ ,  $p < .05$ , where having an assaultive trauma history was associated with more severe avoidance symptoms. Finally, there was a small, negative correlation between type of trauma history and arousal symptoms,  $r = -.146$ ,

$n=283$ ,  $p < .05$ , where having an assaultive trauma history was associated with more severe arousal symptoms.

Table 15  
*Pearson Correlations Among Independent Variables and Intrusion, Avoidance, and Arousal Symptoms*

Independent Variables	Dependent Variables		
	SRSTSS-Intrusion	SRSTSS-Avoidance	SRSTSS-Arousal
GDR	-.155**	-.094	-.076
SRAGETR	-.037	-.110	-.099
TRMA	-.131*	-.170*	-.146*

*Note:* Dependent variables: SRSTSS-Intrusion (square root Secondary Traumatic Stress, intrusion subscale score), SRSTSS-Avoidance (square root Secondary Traumatic Stress, avoidance subscale score), SRSTSS-Arousal (square root Secondary Traumatic Stress, arousal subscale score). Independent variables: GDR (gender, 0=Female, 1=Male), SRAGETR (square root of age at time of first trauma), TRMA (trauma type, 0=Assaultive trauma history, 1=Non Assaultive trauma only history)

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

*Intrusion symptoms.* The regression model for the dependent variable of intrusion symptoms (square root; SRSTSS-Intrusion) was not significantly different from zero,  $F(3, 280) = 3.78$ ,  $p = .011$ . The adjusted alpha = .006 for multiple comparisons (Holm's method). Female gender, experiencing an assaultive type trauma and having a younger age of first trauma (square root) was not predictive of intrusion symptoms (square root; SRSTSS-Intrusion).

*Avoidance symptoms.* The regression model for the dependent variable of avoidance symptoms (square root; SRSTSS-Avoidance) was not significantly different from zero,  $F(3, 280) = 3.60$ ,  $p = .014$ . The adjusted alpha = .007 for multiple comparisons (Holm's method). Female gender, experiencing an assaultive type trauma and having a younger age of first trauma (square root) was not predictive of avoidance symptoms (square root; SRSTSS-Avoidance).

Table 16  
*Standard Multiple Regression Results for Intrusion, Avoidance, and Arousal Symptoms*

Variables	<i>R</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	<i>F</i>	$\beta$	<i>sr</i> <sup>2</sup>	<i>p</i>
1. STSS-Intrusion (DV)	.197	.039	.029	3.78			.011
GDR					-.147	.020	.013
SRAGETR					.027	.014	.670
TRMA					-.130	.001	.041
2. STSS-Avoidance (DV)	.193	.037	.027	3.60			.014
GDR					-.078	.006	.186
SRAGETR					-.046	.018	.468
TRMA					-.146	.002	.023
3. STSS-Arousal (DV)	.166	.027	.017	2.63			.050
GDR					-.062	.004	.295
SRAGETR					-.045	.013	.479
TRMA					-.124	.002	.053
4. RSRMSIS (DV)	.162	.026	.016	2.53			.058
GDR					-.033	.001	.574
SRAGETR					-.067	.004	.298
TRMA					.174	.026	.007
5. RSRRAS (DV)	.141	.020	.009	1.89			.130
GDR					.088	.008	.140
SRAGETR					-.019	.000	.772
TRMA					.111	.01	.086
6. RSRMCC (DV)	.127	.016	.006	1.54			.205
GDR					.182	.012	.067
SRAGETR					.058	.000	.743
TRMA					.165	.004	.316
7. SRDWC (DV)	.096	.009	-.001	8.61			.462
GDR					-.092	.008	.124
SRAGETR					.017	.000	.797
TRMA					-.025	.001	.700
8. SRMAW (DV)	.053	.003	-.008	.258			.855
GDR					.012	.000	.837
SRAGETR					.024	.000	.714
TRMA					-.056	.003	.390

*Note:* Dependent variables: SRSTSS-Intrusion (square root Secondary Traumatic Stress, intrusion subscale score), SRSTSS-Avoidance (square root Secondary Traumatic Stress, avoidance subscale score), SRSTSS-Arousal (square root Secondary Traumatic Stress, arousal subscale score), RSRMSIS (reflected square root of the Miller Social Intimacy Scale total score), RSRRAS (reflected square root of the Relationship Assessment Scale total score), RSRMCC (reflected square root of the Mutual Constructive Communication subscale score), SRDWC (square root of the Demand Withdrawal Communication subscale score), SRMAW (square root of the Mutual Avoidance and Withholding communication subscale score). Predictor variables: GDR (gender, 0=Female, 1=Male), SRAGETR (square root of age at time of first trauma), TRMA (trauma type, 0=Assaultive trauma history, 1=Non Assaultive trauma only history).

*Arousal symptoms.* The regression model for the dependent variable of arousal symptoms (square root; SRSTSS-Arousal) was not significantly different from zero,  $F(3, 280) = 2.63, p = .05$ . The adjusted alpha = .008 for multiple comparisons (Holm's method). Female gender, experiencing an assaultive type trauma and having a younger age of first trauma (square root) was not predictive of arousal symptoms (square root; SRSTSS-Arousal).

*Social intimacy.* The regression model for the dependent variable of social intimacy (reflected square root; RSRMSIS Total) was not significantly different from zero,  $F(3, 280) = 2.52, p = .058$ . The adjusted alpha = .01 for multiple comparisons (Holm's method). Female gender, experiencing an assaultive type trauma and having a younger age of first trauma (square root) was not predictive of social intimacy (reflected square root; RSRMSIS Total).

*Relationship satisfaction.* The regression model for the dependent variable of relationship satisfaction (reflected square root; RSRRAS Total) was not significantly different from zero,  $F(3, 280) = 1.89, p = .130$ . The adjusted alpha = .0125 for multiple comparisons (Holm's method). Female gender, experiencing an assaultive type trauma and having a younger age of first trauma (square root) was not predictive of relationship satisfaction (reflected square root; RSRRAS Total).

*Constructive communication.* The regression model for the dependent variable of constructive communication patterns (reflected square root; RSRMCC Score) was not significantly different from zero,  $F(3, 280) = 1.53, p = .205$ . The adjusted alpha = .016 for multiple comparisons (Holm's method). Female gender, experiencing an assaultive

type trauma and having a younger age of first trauma (square root) was not predictive of constructive communication patterns (reflected square root; RSRMCC Score).

*Critical communication.* The regression model for the dependent variable of critical communication (square root; SRDWC Score) was not significantly different from zero,  $F(3, 280) = .861, p = .452$ . The adjusted alpha = .025 for multiple comparisons (Holm's method). Female gender, experiencing an assaultive type trauma and having a younger age of first trauma (square root) was not predictive of critical communication patterns (reflected square root; SRDWC Score).

*Avoidance communication.* The regression model for the dependent variable of avoidance communication (square root; SRMAW Score) was not significantly different from zero,  $F(3, 280) = .258, p = .855$ . The adjusted alpha = .025 for multiple comparisons (Holm's method). Female gender, experiencing an assaultive type trauma and having a younger age of first trauma (square root) was not predictive of avoidance communication patterns (reflected square root; SRMAW Score).

In summary, a statistically significant relationship was found between female gender and more severe intrusion symptoms. Having an assaultive trauma history was significantly associated with more severe intrusion, avoidance, and arousal symptoms. As a predictive model, female gender, experiencing an assaultive type trauma and having a younger age of first trauma (square root) was not predictive of interpersonal disruptions, or intrusion, avoidance, or arousal symptoms.

### *Summary of Results*

A summary of the results will now be presented starting with initial analysis followed by a review of each research question, corresponding hypothesis, and the results related to each research question (see Table 17).

#### *Initial Analysis*

Initial analysis found that 29.3% of participants were experiencing PTSD symptoms due to secondary traumatic stress. Of this group, 7.6% were experiencing “severe” levels of symptoms. Participants who met criteria for PTSD due to secondary trauma stress were not more likely to be engaged in personal therapy or to be receiving a different level of work support for working with trauma victims compared to participants who did not meet criteria for PTSD due to secondary traumatic stress. Participants who were engaged in personal therapy were not more likely to have received a different level of work support for working with trauma victims than those participants who were not engaged in personal therapy. Finally, no gender differences between males and females were found for secondary traumatic stress symptom severity or in receiving personal therapy.

#### *Research Question One*

The first research question in the current study asked: *What is the strength of the relationship between interpersonal and sexual disruptions and known symptoms of secondary traumatic stress/vicarious traumatization among mental health therapists?* It was hypothesized that interpersonal and sexual disruptions would significantly correlate with known symptoms of secondary traumatic stress/vicarious traumatization.

Results of a Spearman *rho* correlation found no association between intrusion symptoms, avoidance symptoms, arousal symptoms, sexual interest, and sexual



relationship satisfaction. However, significant correlations were found between intrusion symptoms, avoidance symptoms, arousal symptoms, and interpersonal disruptions. Specifically, mental health therapists experiencing more severe intrusion symptoms were also experiencing increased use of avoidance communication patterns and increased use of critical communication patterns. Additionally, mental health therapists experiencing more severe avoidance and arousal symptoms were also experiencing less relationship satisfaction, less social intimacy, decreased use of constructive communication patterns, increased use of avoidance communication patterns and increased use of critical communication patterns. Thus, hypothesis one was partially supported.

#### *Research Question Two*

The second research question in the study was: *Which therapist characteristics are most influential in predicting interpersonal and sexual disruptions?* It was hypothesized that younger age, female gender, fewer years of counseling experience, more hours within the past month conducting therapy with trauma clients, and receiving personal therapy would form a statistically significant predictive equation of interpersonal and sexual disruptions in mental health therapists. Age was removed from the final model due to the high correlation between age and years of counseling experience. The high correlation suggested redundancy between the variables. Additionally, sexual interest and sexual relationship satisfaction were also removed from analysis due to their non-association with intrusion, avoidance, and arousal symptoms.

Results indicated that therapist characteristics of female gender, fewer years of experience, more hours within the past month conducting therapy with trauma clients, and, receiving personal therapy was not predictive of relationship satisfaction, social

intimacy, constructive communication patterns, avoidance communication patterns, or critical communication patterns in mental health therapists. Thus, hypothesis two was not supported.

While the identified therapist characteristics were not predictive of interpersonal disruptions, these same therapist characteristics were found to be predictive of previously established secondary traumatic stress/vicarious trauma symptoms. Post hoc analysis confirmed these same therapist characteristics as predictive of intrusion and avoidance symptoms. Female gender, fewer years of counseling experience, more hours within the past month conducting therapy with trauma clients and receiving personal therapy predicted more severe intrusion and avoidance symptoms.

### *Research Question Three*

The third research question in the current study asked: *Among therapists with a personal trauma history, how do gender, age at first trauma experience, and type of prior personal trauma (assaultive vs. non-assaultive) interact to predict secondary traumatic stress/vicarious trauma symptoms?* It was hypothesized that female gender, younger age at first trauma, and a history of prior assaultive trauma would form a statistically significant predictive model of severity for interpersonal and sexual disruptions and intrusion, avoidance and arousal symptoms in mental health therapists who have a prior history of personal trauma. Sexual interest and sexual relationship satisfaction were removed from analysis due to their non-association with intrusion, avoidance and arousal symptoms.

Initial analysis looked for gender difference among assaultive trauma history, age of first trauma experience, and age of first assaultive trauma experience. No gender differences were found.

Therapist characteristics of female gender, prior assaultive trauma history, and younger age at first trauma were found to not be predictive of intrusion symptoms, avoidance symptoms, arousal symptoms, relationship satisfaction, social intimacy, constructive communication patterns, avoidance communication patterns, or critical communication patterns in mental health therapists. Thus, hypothesis three was not supported.

Table 17  
*Summary of Results*

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**Hypothesis One:** Interpersonal and sexual disruptions correlate significantly with known symptoms of secondary traumatic stress/vicarious traumatization.

**Results:** Hypothesis one partially supported.

- No association found between sexual disruptions (sexual interest and sexual relationship satisfaction) and intrusion, avoidance, and arousal symptoms.
  - Increased use of avoidance communication patterns and increased use of critical communication patterns were associated with more severe intrusion symptoms.
  - Less relationship satisfaction, less social intimacy, decreased use of constructive communication patterns, increased use of avoidance communication patterns and increased use of critical communication patterns were associated with more severe avoidance and arousal symptoms.
- 

**Hypothesis Two:** Younger age, female gender, fewer years of counseling experience, more hours within the past month conducting therapy with trauma clients, and receiving personal therapy form a statistically significant predictive equation of interpersonal and sexual disruptions in mental health therapists.

**Results:** Hypothesis two not supported for interpersonal disruptions.

- Age removed from final model.
- Sexual interest and sexual relationship satisfaction removed from analysis.
- Significant correlation found between females and decreased use of constructive communication patterns. Lower levels of relationship satisfaction were significantly correlated to more hours in the past month conducting therapy with trauma clients, and being engaged in personal therapy.
- Predictive model of female gender, fewer years of experience, more hours within the past month conducting therapy with trauma clients, and, receiving personal therapy was not predictive of relationship satisfaction, social intimacy, constructive communication patterns, avoidance communication patterns, or critical communication patterns in mental health therapists.

**Post hoc Analysis:** Model predictive of intrusion and avoidance symptoms.

- Significant correlation found between females and more severe intrusion symptoms. Significant correlations found between fewer years of counseling experience and more severe intrusion, avoidance, and arousal symptoms.
  - Predictive model of female gender, fewer years of counseling experience, more hours within the past month conducting therapy with trauma clients and receiving personal therapy predicted more severe intrusion and avoidance symptoms.
- 

**Hypothesis Three:** Female gender, younger age at first trauma, and a history of prior assaultive trauma form a statistically significant predictive model of severity for interpersonal and sexual disruptions and intrusion, avoidance, and arousal symptoms in mental health therapists who have a prior history of personal trauma.

**Results:** Hypothesis three not supported.

- Sexual interest and sexual relationship satisfaction removed from analysis.
  - No gender differences found for type of trauma history (assaultive vs. non-assaultive), age of first trauma, or age of first assaultive trauma.
  - Significant correlation found between females and more severe intrusion symptoms. Significant correlations between having an assaultive trauma history and more severe intrusion, avoidance, and arousal symptoms.
  - Predictive model of female gender, prior assaultive trauma history, and younger age at first trauma were found to not be predictive of intrusion symptoms, avoidance symptoms, arousal symptoms, relationship satisfaction, social intimacy, constructive communication patterns, avoidance communication patterns, or critical communication patterns in mental health therapists.
-

## Chapter V: Discussion

The current literature on mental health therapists and secondary traumatic stress/vicarious traumatization categorizes possible symptoms into three primary areas: a) cognitive schema disruptions, b) Post Traumatic Stress Disorder (PTSD) related symptoms, and c) interpersonal disruptions (Collins & Long, 2003; Dutton & Rubinstein, 1995; Sabin-Farrell & Turpin, 2003; Yassen, 1995). Research to date has focused predominantly on exploring symptoms in the first two areas, leaving little to no research addressing potential interpersonal disruptions that may occur as part of symptomology of secondary traumatic stress/vicarious traumatization (Canfield, 2005; Figley, 2002; Herman, 1992; Maltz, 1991; McCann & Pearlman, 1990b; Pearlman, 1995; Pearlman & Saakvitne, 1995b; Rosenbloom, Pratt, & Pearlman, 1995). In addition, prior studies related to negative changes in relationship functioning relied solely upon therapist self-reports (Bride, 2007; Rich, 1997; Ting, Jacobson, Sanders, Bride, & Harrington, 2005).

A primary goal of the current study was to explore the prevalence of interpersonal and sexual disruptions as potential symptoms of secondary traumatic stress/vicarious trauma among practicing mental health therapists. It was also a goal of the current study to identify various predictive therapist characteristics (age, gender, years of experience, attending personal therapy, exposure to trauma clients, personal trauma history) in the development of secondary traumatic stress/vicarious trauma.

Finally, the current study sought to explore the specific role that gender and prior trauma history play in the development of secondary traumatic stress/vicarious traumatization. Recent research on gender and post traumatic stress disorder has found that a history of assaultive trauma can have a sensitizing effect on females who then go

on to later develop PTSD following a second trauma (Breslau & Anthony, 2007). The current study sought to explore the possible sensitizing effect of prior assaultive trauma on female therapists and the subsequent development of secondary traumatic stress/vicarious traumatization.

Included in this chapter is a review of study conclusions, implications, and limitations of the current study. Recommendations for future research will be commented on throughout.

### *Conclusions*

*Interpersonal and sexual disruptions.* The current study represents the first attempt to empirically establish interpersonal and sexual disruptions as secondary traumatic stress/vicarious trauma symptomology by measuring changes in interpersonal and sexual functioning. It was assumed that if interpersonal and sexual disruptions were part of secondary traumatic stress/vicarious trauma symptomology that an association would be found with other established symptoms (intrusion, avoidance, and arousal symptoms). In contrast to previously made claims, evidence was not found for the association between sexual disruptions and secondary traumatic stress/vicarious trauma.

Upon initial inspection, significant results among interpersonal disruptions suggest that when elevated intrusion, avoidance, and arousal symptoms are present in mental health therapists, these therapists also experience changes in their interpersonal functioning. Interpersonal disruptions include: a decrease in relationship satisfaction, a decrease in social intimacy, a decrease in the use of constructive communication patterns, and an increase in the use of avoidance and critical communication patterns. However, the strength of the relationships between interpersonal disruptions and intrusion,

avoidance, and arousal symptoms were small to moderate, with shared variance among these symptom variables between 1.4% and 9.7%. One variable, critical communication patterns, displayed a medium strength relationship with avoidance symptoms ( $\rho = .295$ ,  $p < .01$ ) and arousal symptoms ( $\rho = .311$ ,  $p < .01$ ). The shared variance accounted for by critical communication patterns was 8.7% in avoidance symptoms and 9.7% in arousal symptoms.

In contrast, moderate to large significant correlations were found within the interpersonal functioning variables themselves (relationship satisfaction, social intimacy, constructive communication patterns, avoidance communication patterns, and critical communication patterns), with shared variances between these variables at 21.3% and 57.2%. Based on the strength of these associations within the interpersonal functioning variables, it suggests that when interpersonal disruptions are part of a therapist's experience these disruptions occur across several facets of relationship functioning.

As a first attempt at establishing interpersonal and sexual disruptions as part of secondary traumatic stress/vicarious trauma symptomology, the findings are tentative. No evidence was found for the association between sexual disruptions and secondary traumatic stress/vicarious trauma. Evidence found for the association between interpersonal disruptions and secondary traumatic stress/vicarious trauma is insufficient. Significant correlations were found among the variables relating elevated levels of intrusion, avoidance, and arousal symptoms with changes in interpersonal functioning. However, apart from an increase use of critical communication patterns, the actual shared variance among the remaining variables was minimal. The weak associations with intrusion, avoidance, and arousal symptoms suggest that the presence of interpersonal

disruptions is not necessarily indicative of secondary traumatic stress/vicarious trauma. Also, in large enough samples (100+) very small correlations can reach statistical significance. This doesn't necessarily suggest a meaningful association between the variables (Pallant, 2007).

The tentative results could be due to how interpersonal and sexual disruptions were conceptualized for the current study, which was limited by the operationalization of interpersonal and sexual disruption constructs as defined by the measures themselves. Interpersonal functioning encompasses more than the isolated aspects addressed by the measures used in the study (i.e. relationship satisfaction, social intimacy and communication patterns). Likewise, sexual functioning encompasses more than the isolated aspects of sexual interest and sexual relationship satisfaction. It may be that other aspects of interpersonal and sexual disruptions are more strongly associated with secondary traumatic stress/vicarious trauma and these aspects were simply not captured in the current study.

Critical communication showed the strongest association with avoidance and arousal symptomology. Critical communication was the only variable in the study that asked about relationship conflict or conflict behaviors (i.e. criticizing, demanding, and nagging ones partner). All other interpersonal variables captured global assessments of satisfaction within a relationship or assessed for the presence/absence of positive behaviors. It would be beneficial for future research studies to assess specifically for relationship conflict or conflict behaviors and their association with secondary traumatic stress/vicarious trauma.



Also, the current study only measured PTSD related symptoms as part of secondary traumatic stress/vicarious traumatization, not cognitive schema disruptions. It is possible that interpersonal and sexual disruptions show a stronger association with disruptions to cognitive schemas. McCann and Pearlman (1990b, 1991) propose that cognitive schema disruptions (in the areas of safety, trust, esteem, control, and intimacy) are hallmark symptoms of vicarious trauma. While the literature has shown that working with trauma clients may be disruptive to cognitive schemas, it has also failed to adequately address the questions of severity and prevalence rates of cognitive schema disruptions among trauma therapists.

Finally, it is possible that interpersonal and sexual disruptions are simply not part of the symptomology of secondary traumatic stress/vicarious trauma. Most previous assertions to interpersonal and sexual disruptions as secondary traumatic stress/vicarious trauma symptomology were based on anecdotal claims or theoretical positions (Canfield, 2005; Figley, 2002; McCann & Pearlman, 1990b; Pearlman, 1995; Pearlman & Saakvitne, 1995b). To clarify this association, additional research is needed to provide more evidence as to the association of interpersonal and sexual disruptions as part of secondary traumatic stress/vicarious trauma symptomology. Future research should incorporate expanded conceptualizations of interpersonal and sexual disruptions, look more specifically at conflict within relationships as an indicator of interpersonal disruptions, and look for potential associations with cognitive schema disruptions.

*Predictive therapist characteristics.* Therapist characteristics of female gender, fewer years of counseling experience, receiving personal therapy, and more hours within the past month conducting therapy with trauma clients were looked at as potential predictors

of secondary traumatic stress/vicarious trauma symptoms. The identified therapist characteristics were selected due to their relevance in the literature as promising predictive variables.

A number of characteristics were found to be significantly associated with interpersonal disruptions. Female gender was associated with a decrease in use of constructive communication patterns. More hours within the past month conducting therapy with trauma clients and being engaged in personal therapy were both associated with lower levels of relationship satisfaction. While these variables had a significant relationship to some interpersonal disruptions, they were not predictive of these symptoms or symptom severity. As a model, the identified therapist characteristics of female gender, fewer years of counseling experience, receiving personal therapy, and more hours within the past month conducting therapy with trauma clients were not predictive of interpersonal disruptions.

These same therapist characteristics, however, were predictive of intrusion and avoidance symptoms. The identified therapist characteristics had a shared variance of 3.0% with intrusion symptoms and 5.1% with avoidance symptoms. In comparison to other studies where similar combinations of therapist characteristics were used as predictor variables, the models explained anywhere from 7% to 27% of the variance in intrusion and avoidance symptoms (Bober & Reehr, 2005; Creamer & Liddle, 1999; McLean, Wade, & Encel, 2003; Way, VanDeusen, Martin, Applegate, & Jandle, 2004).

Within this model, the variable of fewer years of counseling experience was a statistically significant unique predictor for elevated intrusion symptoms ( $\beta = -.133$ ,  $t(320) = -2.33$ ,  $p = .021$ ) and elevated avoidance symptoms ( $\beta = -.178$ ,  $t(320) = -3.11$ ,  $p$

=.002). Fewer years of counseling experience accounted for 1.6% of the variance in intrusion symptoms and 2.9% of the variance in arousal symptoms. The relationship between fewer years of counseling experience and elevated intrusion and arousal symptoms is consistent with findings in other studies (Arvay & Uhleman, 1996; Adams, Matto, & Harrington, 2001; Kadambi & Truscott, 2004; McLean, Wade, & Encel, 2003; Way, VanDeusen, Martin, Applegate, & Jandle, 2004).

The variable of female gender was also a statistically significant unique predictor for intrusion symptoms ( $\beta = -.117$ ,  $t(320) = -2.03$ ,  $p = .043$ ). Being female accounted for 1.2% of the variance in intrusions symptoms. This is consistent with a number of other studies in the literature that found female gender predictive of more severe symptoms of secondary traumatic stress/vicarious trauma (McLean, Wade, & Encel, 2003; Sprang, Clark, & Witt-Woosley, 2007).

While several therapist characteristics were associated with interpersonal disruptions, the small size of the association suggests other moderating variables are involved in influencing symptom severity in interpersonal disruptions. The fact that the therapist characteristics were not predictive of interpersonal disruptions, but were predictive of intrusion and avoidance symptoms suggests that interpersonal disruptions are not necessarily part of secondary traumatic stress/vicarious trauma symptomology and that when interpersonal disruptions are present among mental health therapists their etiology is different. Mental health therapists are clearly not immune to interpersonal disruptions, but it appears that these disruptions don't automatically accompany secondary traumatic stress/vicarious traumatization.

*Personal trauma history and gender.* Another goal of the current study was to explore the role that gender, prior trauma history, and age at prior trauma play in the development of secondary traumatic stress/vicarious trauma among therapists with a personal trauma history. The current study represents the first time that trauma history was measured and analyzed as either assaultive or non-assaultive type within the context of secondary traumatic stress/vicarious trauma (Breasalu & Anthony, 2007). Previous studies that included personal trauma history measured simply for the presence or absence of a prior trauma. All trauma experiences, regardless of type or severity, were collapsed into a single dichotomous yes/no variable (Adams, Boscarino, & Figley, 2006; Adams, Motto, & Harrington, 2001; Adams & Riggs, 2008; Bober & Regehr, 2005; Creamer & Liddle, 2005; Kadambi & Truscott, 2004; Linley & Joseph, 2007; Marcus & Dubi, 2006; Way, VanDeusen, Martin, Applegate, & Jandle, 2004).

Among mental health therapists who participated in the current study, 38.3% reported a history of assaultive trauma and 50.8% reported a history of non-assaultive trauma only. Combined, the occurrence of a prior traumatic event for this sample was 89.1%, a much higher rate than reported in other studies (60%, Pearlman & MacIan, 1995; 58.2%, Kadambi & Truscott, 2004). This discrepancy is most likely due to how prevalence rates for prior trauma experiences have been operationalized across studies and the subjective nature of the variable itself.

Because most prior studies assessed only for the presence or non-presence of a prior trauma history, the definition of prior trauma experience was left up to the participant to define. As a result, participants with different emotional and physical reactions to a traumatic event may reach different conclusions about the level of impact a similar type

trauma has on their life. This different reaction may lead the one participant to affirm “yes” as to the experience of a prior traumatic event, and lead another participant to affirm “no” as to the experience of a prior traumatic event. The current study was an attempt to bring more objectivity to the measure of prior trauma history by moving away from self-defined prior trauma experiences towards the use of assaultive and non-assaultive trauma definitions.

A total of 39.3% of female participants and 33.3% of male participants reported a history of assaultive trauma. Analysis confirmed no significant association between gender and prior trauma history type. This finding was in contrast to other studies (of the general population) where men are more likely to experience an assaultive type trauma (Breasalu & Anthony, 2007; Breaslau, et.al, 1999). Among participants with a personal trauma history, 70.1% reported their first trauma as occurring in childhood (prior to age 17), and 29.9% reported their first trauma as occurring in adulthood (18 and older). Analysis confirmed no significant association between gender and age of first trauma experience.

When placed in a regression model, female gender, assaultive trauma history and younger age of first trauma did not form a statistically significant predictive model for interpersonal disruptions, or intrusion, avoidance, and arousal symptoms. In comparison, Kassam-Adams (1995) found 14% of the variance in intrusion and avoidance symptoms explained by female gender and the presence of a childhood trauma history, whereas, Ghahramanlou and Brodbeck (2000) found 5% of the variance in intrusion and avoidance symptoms explained solely by having a personal trauma history. Part of the discrepant findings may be due to the different instruments used in the various studies. Most prior

studies addressing secondary traumatic stress/vicarious trauma relied predominantly upon instruments designed to assess primary victims exposed to trauma, such as the Impact of Events Scale. The current study used a measure designed specifically for the assessment of intrusion, avoidance, and arousal symptoms as part of secondary traumatic stress/vicarious trauma.

The discrepancies may also be due to the multiple comparisons involved in addressing research question three. To account for the multiple comparisons the alpha level for research question three was adjusted to reduce the possibility of a Type I error, as a result the probability for a false negative (Type II error) increased. While the proposed model of gender, prior trauma type and first trauma age was not significant for any of the dependent variables under the adjusted alphas for multiple comparisons, two models were significant at the non-adjusted level of  $p < .05$ . Female gender, assaultive trauma history and younger first trauma age explained 3.7% of the variance in avoidance symptoms ( $R^2 = .037$ ,  $p = .014$ ), whereas female gender, assaultive trauma history and *older* first trauma age explained 3.9% of the variance in intrusion symptoms ( $R^2 = .039$ ,  $p = .011$ ). Within these two models, having an assaultive trauma history made a statistically significant unique contribution (at the .05 level) to the variance in intrusion symptoms (1.4%) and avoidance symptoms (1.8%); female gender made a statistically significant unique contribution (at the .05 level) to the variance in intrusion symptoms (2.0%).

This raises the possibility that prior studies may have unintentionally masked an association between trauma history and secondary traumatic stress/vicarious trauma by failing to distinguish between assaultive type and non-assaultive type personal trauma histories (Adams, Boscarino, & Figley, 2006; Adams, Motto, & Harrington, 2001;

Adams & Riggs, 2008; Bober & Regehr, 2005; Creamer & Liddle, 2005; Kadambi & Truscott, 2004; Linley & Joseph, 2007; Marcus & Dubi, 2006; Way, VanDeusen, Martin, Applegate, & Jandle, 2004).

This also raises the question, are females more susceptible to the development of certain secondary traumatic stress/vicarious trauma symptoms, compared to men? Post hoc analysis related to research question two also found that female gender was a statistically significant unique predictor, explaining 1.2% of the variance in intrusion symptoms. Prior studies that found no association between gender and secondary traumatic stress/vicarious trauma symptoms failed to separate out particular symptom categories. Rather, composite or total scores on the dependent measures were looked at where all symptom categories were combined. As a result, gender difference may have been masked in these studies (Adams, Boscarino, & Figley, 2006; Creamer & Liddle, 2005; Deighton, Gurriss, & Traue, 2007; Linley & Joseph, 2007).

The current study represents the first time that prior personal trauma was assessed for a possible sensitizing effect (through the categorization of assaultive and non-assaultive type traumas) on the later development of secondary traumatic stress/vicarious trauma in women. If you look at the significance of the regression models without adjusting for multiple comparisons, the current study partially supports this premise. Female gender and assaultive trauma history both contributed statistically significant ( $p < .05$ ) unique variance to intrusion symptoms. This suggests that for the development of intrusion symptoms, being female along with having an assaultive trauma history predicts more severity of symptoms. The overall unique variance explained by female gender and assaultive trauma history was 3.4%.

Because this study was a first attempt at classifying prior trauma as assaultive and non-assaultive, and the use of multiple comparisons resulted in a severely reduced level of significance, it is recommended that future research continue to assess prior trauma history as assaultive and non-assaultive to better understand the possible association. It is also recommended to assess for gender differences within specific secondary traumatic stress/vicarious trauma symptoms, as females may be more susceptible to intrusion symptoms. Future research could also help to clarify the sensitizing effect of prior trauma by measuring personal trauma history in more detail. It would be beneficial to measure and further differentiate among types of assaultive trauma experiences. The present study grouped all assaultive trauma experiences together, which may have masked differential outcomes for those who had a prior experience of sexual assault vs. a physical assault or threat with a weapon. The nature, intensity, response, and process of trauma recovery are all important elements to understand and measure in determining the level of impact the trauma may have had on an individual's emotional and physical well being.

*Secondary traumatic stress prevalence.* Previous studies have found between 5% and 15.2% of mental health therapists reporting clinical levels of secondary traumatic stress/vicarious traumatization (Adams & Riggs, 2008; Bride, 2007; Kadambi & Truscott, 2004). In the current study, 29.3% of participants were found to be experiencing what constitutes clinical levels of PTSD symptoms (intrusion, avoidance, and arousal symptoms) due to secondary traumatic stress. This is a higher percentage than reported in other studies.



The discrepancy in prevalence may be due to the make-up of the study sample and the dependent measures used to assess secondary traumatic stress/vicarious trauma. In comparison to the other studies, Adams and Riggs (2008) looked solely at therapist trainees where only 25% of participants were exposed to trauma clients. Secondary traumatic stress/vicarious trauma was measured by selected subscales of the Trauma Symptom Inventory (Briere, 1995) a measure that was developed neither for use to screen for PTSD or secondary traumatic stress/vicarious trauma.

Kadambi and Truscott (2004) looked at therapists who were predominantly treating sexual trauma clients, cancer patients and a general client population. In this sample, 69.6% reported moderate to profound amounts of exposure to traumatic material of clients and the mean years of experience was 11.49. Secondary traumatic stress/vicarious trauma was measured by the Impact of Events Scale (IES; Horowitz, Wilner, & Alvarez, 1979) and the authors concluded that only 5% of their sample showed clinical levels of symptoms. However, there was no indication of how they determined this number. To demonstrate the subjective nature of reporting prevalence rates, the suggested cutoff score of 26 was applied to this same sample and 20.8% of the sample qualified as having moderate to severe traumatic stress (Horowitz, Wilner, & Alvarez, 1980; Kadambi & Truscott, 2004).

Bride (2007) developed the Secondary Traumatic Stress Scale (STSS; Bride, Robinson, Yegidi, & Figley, 2004), specifically to assess the frequency of intrusion, avoidance, and arousal symptoms associated with secondary traumatic stress/vicarious trauma resulting from working with traumatized populations. Bride (2007) looked at a sample primarily of white females, all of whom were master's level social workers with a

mean of 16.15 years of experience. Of this sample, 15.2% displayed clinical levels of secondary traumatic stress/vicarious trauma.

Results from the current study found that participants with clinical levels of secondary traumatic stress/vicarious trauma, as measured by the STSS, were almost double (29.3%) of that reported by Bride (2007). Participants in the current study were also predominantly white females, with master's degrees, and a mean of 17.7 years of experience. However, unlike Bride's (2007) sample, the current sample was inclusive of mental health therapists beyond social work, including other professionals such as licensed mental health counselors (29.4%), Clinical Psychologists (25.2%), Counseling Psychologists (9.1%), and Marriage and Family Therapists (7.9%). Thus, it is possible that the difference in reported clinical levels of secondary traumatic stress/vicarious trauma in the current study may be due to the application of the STSS measure beyond the original sample of clinical social workers in Bride's (2007) study.

It is recommended that future studies include a wide range of mental health professionals and publish prevalence rates for secondary traumatic stress/vicarious trauma. The lack of reported prevalence rates in the literature has led some researchers to assert that the problem of secondary traumatic stress/vicarious trauma among mental health therapists has been exaggerated (Kadambi & Ennis, 2004; Sabin-Farrell & Turpin, 2003). This concern could be addressed through the use of a standardized measure across studies, the inclusion of a range of professionals who are mental health therapists, and the publishing of prevalence rates.

### *Limitations*

The results of the current study should be interpreted within the context of several identified limitations. Missing values present in the current study were corrected through the use of mean value substitution. While this is a more conservative approach to dealing with missing data, it does cause the variance of a variable to be reduced and thus any correlation that a variable may have with other variables is also reduced increasing the likelihood of a Type II error (Tabachnick & Fidell, 2001). Analysis of missing values detected a pattern for age among cases with missing values. Participants with missing values were found to be significantly older than those without missing values; however the overall magnitude of this difference was small.

For research question one, a Spearman *rho* correlation was used due to the violation of linearity for a Pearson *r* correlation. The Spearman *rho* is a less sensitive test than a Pearson *r* correlation. Because of this, there is an increased risk of a Type II error for results related to the first research question. Research question two and three utilized multiple regression analysis which performs best when there is a strong correlation between independent and dependent variables. For both research questions two and three, correlations between the identified independent and dependent variables were low (.000 to -.144, and -.002 to -.170). Because of this there is an increased risk of a Type II error for results related to the second and third research question.

For research question three, four models (SRSTSS-Intrusion, RSRRAS Total, RSRMCC Score, and SRDWC Score) displayed unusual patterns among the residual scatterplots indicating possible violations of linearity. The regression results for these four models may have under-reported the strength of the relationship between the variables, and increased the likelihood of a Type II error.

Because the current study relied upon the use of correlation and regression analysis, any results presented in the current study do not establish a cause and effect relationship among the study variables; rather the results only establish relationships among the variables. Also, because multiple comparisons were conducted for this study, the alpha level was adjusted to be more conservative and thus increasing the possibility for Type II errors.

The external validity of the current study is challenged by the use of a non-random sample of mental health therapists. Participants in the current study self-selected for participation and introduced the potential for selection bias among the study participants. It is possible that those individuals who felt affected by their work with trauma clients were more likely to complete the survey because they identified with the topic and saw the research as relevant. Additionally, because the current study was an on-line survey where individuals were solicited via email for participation; only individuals with internet and computer access were able to participate in the study.

The current study is also not inclusive of all individuals who work within a counseling capacity and come into contact with trauma victims. Only licensed professional therapists were included in this study. Individuals who are emergency personnel, child protective workers, lay counselors, work place peer counselors, some drug and alcohol counselors, non-licensed crisis counselors and non-licensed telephone counselors are examples of those who were not included in this study.

Finally, response bias is another possible limitation to the current study. Several items on the survey addressed sensitive and personal topics (i.e. personal trauma history

questions, sexual interest and sexual satisfaction questions). It is possible that social desirability may have influenced responses to these items.

### *Implications for Theory and Practice*

In comparison to other published prevalence rates for secondary traumatic stress/vicarious traumatization, the current study suggests that the prevalence for secondary traumatic stress/vicarious traumatization among mental health therapists is actually higher than previously believed. The current study reports clinical levels of secondary traumatic stress/vicarious traumatization for close to one-third (29.3%) of participants. Some researchers have attempted to discount the legitimacy of secondary traumatic stress/vicarious trauma. However, the current study firmly establishes that secondary traumatic stress/vicarious trauma is a real occupational hazard for mental health therapists.

It is important for training programs to normalize secondary traumatic stress/vicarious trauma as a reaction that can impact roughly 1/3 of therapists. This can help to lessen the stigma therapists may internalize about the disorder. Normalizing secondary traumatic stress/vicarious trauma also challenges the idea that therapists are somehow “superhuman” and immune to the particular stresses of therapeutic work with clients. Teaching students about secondary traumatic stress/vicarious trauma, its symptoms and risk factors can prepare students to recognize secondary traumatic stress/vicarious trauma not only in themselves but in their future colleagues. Preparing students with resources they can turn to regarding secondary traumatic stress/vicarious trauma is also an important step. Students can carry this information with them as they transition to the world of work and are no longer under the protective arm of school.

As research continues to refine and verify risk factors related to the development of secondary traumatic stress/vicarious traumatization, training programs can apply this information to their training. Results from the current study suggest that fewer years of experience is a contributing factor to secondary traumatic stress/vicarious trauma symptom severity. This is of particular relevance to training programs as they prepare students to enter the workforce as “new” professionals. While training cannot take the place of time and experience within a field, training programs can prepare students for the challenges they may face as a new professional.

Having an assaultive trauma history is also a contributing factor. Training programs have long encouraged students to engage in personal therapy as a means to address issues that may impact their work with clients. This is particularly relevant for female students who have an assaultive trauma history. The strong encouragement to seek personal therapy will not only benefit the student in the present but can also potentially protect them later on from the development of intrusion type symptoms.

In professional work settings when new therapists are hired, special attention should be paid to this group as they are more susceptible to secondary traumatic stress/vicarious traumatization. Work settings can implement targeted education to new therapists as they acclimate to full time work with clients, addressing risk factors for secondary traumatic stress/vicarious traumatization. Work settings can also conduct periodic screening efforts to promptly identify traumatized therapists. These steps at identifying therapists early who may be suffering from secondary traumatic stress/vicarious traumatization allow for the work setting to respond with appropriate resources and support.

Therapists who go into private practice, or who are isolated in rural areas of the country, do not have the same level of support readily available. For therapists in isolated settings, special emphasis needs to be given to scheduling regular/on-going peer consultation and/or supervision. Regular contact with other professionals can help identify any development of secondary traumatic stress/vicarious trauma symptoms.

The results of the current study are also relevant to understanding and expanding current theories related to secondary traumatic stress/vicarious traumatization. While fewer years of counseling experience had a unique level of impact on intrusion and avoidance symptoms, and being female had a unique level of impact on elevated intrusion symptoms, exposure to trauma clients did not uniquely influence symptom severity. Given that the respective theories behind secondary traumatic stress and vicarious trauma are based partially on exposure to *trauma* clients, this raises some concerns about the true etiology of secondary traumatic stress/vicarious trauma.

It may be that the amount of empathetic engagement with trauma clients is more influential upon symptom severity than is general exposure to trauma clients (Figley, 1995c; McCann & Pearlman, 1990b, 1992b). The results from the current study also suggest that experience level as a therapist is more influential upon symptom severity than the amount of exposure to trauma clients. Secondary traumatic stress/vicarious trauma may occur as a result of an underdeveloped skill set. It may be that with time therapists develop the means to effectively work with trauma clients while also protecting themselves. Or it is possible that therapists who are more severely impacted by their work with trauma clients simply leave the field.

The current study also attempted to empirically establish interpersonal and sexual disruptions as symptomology of secondary traumatic stress/vicarious trauma. Results failed to support sexual disruptions as secondary traumatic stress symptomology. Small correlations between interpersonal variables and secondary traumatic stress/vicarious trauma, along with large to moderate correlations within the interpersonal variables, suggest that therapists are susceptible to interpersonal disruptions. However, when these disruptions occur they are not necessarily part of secondary traumatic stress/vicarious trauma. Because prior references to interpersonal disruptions as symptoms of secondary traumatic stress/vicarious trauma were based on anecdotal evidence and theory, the current findings begin an empirical foundation on which to build further research and inform secondary traumatic stress/vicarious trauma theory regarding interpersonal disruptions as potential symptomology.

Finally, results related to prior trauma history and symptom severity suggest that having an assaultive trauma history can have a sensitizing effect for female therapists in the development of intrusion symptoms. Current theory has not distinguished male and female therapists as more or less vulnerable to particular symptoms. This distinction could be particularly important in understanding symptom development and treatment.

Working with trauma clients places exceptional demands upon mental health therapists. A special and unique relationship occurs where one listens to and supports another person as they share graphic and painful experiences from their life. Research related to secondary traumatic stress/vicarious trauma has grown vastly in the past six years and much has been learned about how trauma therapy impacts the lives of mental health therapists and what contributes to the development of secondary traumatic



stress/vicarious trauma. Continued research is still needed to address gaps in the literature and to fully explain the phenomenon of secondary traumatic stress/vicarious trauma, with the ultimate goal of supporting mental health professionals dedicated to helping victims of trauma.

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## Appendix A

## Electronic Invitation for Study Participation

**Are you a mental health therapist who is primarily involved in clinical work with clients?**

**Complete this on-line questionnaire <https://www.psychdata.com/s.asp?SID=126537> and be a part of research on mental health therapists and vicarious trauma.**

It is estimated that between 5 % and 15.2% of therapists suffer from symptoms of secondary traumatic stress and vicarious trauma at clinical levels (Bride, 2007; Kadambi & Truscott, 2004). Symptoms of secondary traumatic stress and vicarious trauma often include intrusive images or thoughts, avoidance of reminders, and reactivity to certain cues related to clients and their traumatic material. However, very little research has focused on the potential interpersonal disruptions that may occur for a therapist as part of secondary traumatic stress and vicarious trauma. This study will help contribute to the body of knowledge regarding secondary traumatic stress and vicarious trauma by exploring the impact of clinical work on therapists and their interpersonal lives.

If you are interested in participating in this study, please complete an **anonymous** on-line questionnaire. Your participation is completely voluntary and the questionnaire will take approximately 20-30 minutes to complete. You can complete the questionnaire by clicking on the following link <https://www.psychdata.com/s.asp?SID=126537>. I also ask that you please forward this email invitation to other mental health therapists you know and encourage them to participate.

The Institutional Review Board at the University of Nebraska-Lincoln has determined that this project meets the criteria for human subjects (SSIRB Protocol # 2008109343EP). If you have any questions or concerns about this study, please feel free to contact me at [rrkeilig@hotmail.com](mailto:rrkeilig@hotmail.com) or 402-617-7402.

Thank you so much for your time and help.

Sincerely,

Rachael A. Robinson-Keilig, M.A.  
Doctoral Candidate  
Counseling Psychology  
University of Nebraska-Lincoln  
[rrkeilig@hotmail.com](mailto:rrkeilig@hotmail.com)

Faculty Supervisor:  
Michael Scheel, Ph.D.  
Professor of Counseling Psychology  
38 Teachers College Hall  
Lincoln, NE 68588-0345  
[mscheel2@unl.edu](mailto:mscheel2@unl.edu)

## Appendix B

**INFORMED CONSENT FORM**

IRB# 2008109343EP

**Identification of Project:**

An Investigation of Interpersonal Disruptions and Secondary Traumatic Stress among Mental Health Therapists

**Purpose of the Research:**

You are being invited to participate in this research project because you are a mental health therapist. The purpose of this study is to understand the interpersonal disruptions that may occur for mental health therapists as part of secondary traumatic stress and vicarious traumatization. As a participant in this study you will be asked to complete a questionnaire that will take approximately 20-30 minutes. The information gathered from the questionnaire will contribute to the body of knowledge regarding secondary traumatic stress and vicarious trauma among mental health therapists. You must be a mental health therapist who is primarily involved in clinical work with clients to participate.

**Procedures:**

If you choose to participate you will be asked to complete a questionnaire containing three types of questions: (1) demographic questions, (2) open ended questions, and (3) rating questions. The various questions will require you to reflect upon your work as a mental health therapist, as well as your interpersonal relationships. You will be asked to self assess for the presence of traumatic stress symptoms and self assess your level of functioning and satisfaction with your interpersonal relationships and sexual relationships. Finally, you will be asked a number of demographic questions related to age, professional title, income, exposure to trauma clients, and information about your own personal trauma history. You will need a computer with internet access to complete the questionnaire and your participation will take approximately 20-30 minutes of your time.

**Risks and/or Discomforts:**

Some of the questions included in this questionnaire are of a sensitive nature and ask you to disclose private information regarding your own personal trauma history and information regarding your interpersonal relationships, such as communication patterns during conflict, level of intimacy with your partner, relationship satisfaction, and current interest in sexual activity and current level of sexual satisfaction. Some people are uncomfortable in disclosing this information. Steps will be taken so that this information remains completely confidential and anonymous. The purpose of asking this information is to better understand the interpersonal disruptions that may develop as part of secondary traumatic stress and vicarious traumatization. These questions are being asked to capture the full range of interpersonal functioning, including sexual functioning. If at anytime you wish to skip over a question or end the questionnaire completely, you are free to do so. In the event of problems resulting from participation in the study, please contact Rachael Robinson-Keilig, the primary investigator, at 402-617-7402 or rrkeilig@hotmail.com.

**Benefits:**

Information gained from this study will help advance the knowledge base regarding secondary traumatic stress and vicarious trauma among mental health therapists. There are no known direct benefits to participating in this study.

**Confidentiality:**

All information related to this study will be collected via a secure web site (PsychData.com). All questions displayed and your responses will be instantly encrypted until they are received at the PsychData.com database. Data related to the study will be stored on a secure computer that has restricted access and within a password protected file. Responses will not be linked to any identifying information. Questionnaire responses will be entered into an excel file database and saved on a restricted access computer and within a password protected file. The information obtained from this study may be published in academic journals or presented at academic meetings. All data will be reported as aggregated data.

**Compensation:**

There will be no compensation for participating in this research.

**Opportunity to Ask Questions:**

At any time prior to or during the completion of the questionnaire you may ask questions regarding this project and have those questions answered. You may contact Rachael Robinson-Keilig, the primary investigator, at any time at [rrkeilig@hotmail.com](mailto:rrkeilig@hotmail.com), or by cell phone at (402) 617-7402. If you have questions concerning your rights as a research subject that have not been answered by the investigator or to report any concerns about the study, you may contact the University of Nebraska-Lincoln Institutional Review Board, telephone (402) 472-6965.

**Freedom to Withdraw:**

You are free to decide not to participate or to withdraw at any time from the study without adversely affecting your relationship with the investigator or the University of Nebraska-Lincoln. Your decision will not result in any loss or benefits to which you are otherwise entitled.

**Consent, Right to Receive a Copy:**

You are voluntarily making a decision whether or not to participate in this research study. Your completion of the on-line questionnaire indicates that you have decided to participate in the study having read and understood the information presented. In order to keep a copy of this informed consent for your records, please “print screen” before clicking continue or contact the primary investigator for a copy of the informed consent form.

**Name and Phone Number of Investigator(s):**

Rachael A. Robinson-Keilig, M.A.  
Principal Investigator  
[rrkeilig@hotmail.com](mailto:rrkeilig@hotmail.com)

Cell (402) 617-7402

Michael J. Scheel, Ph.D.  
Faculty Advisor  
[mscheel2@unl.edu](mailto:mscheel2@unl.edu)

Office (402) 472-0573

**If you have read and understand the above statements, please click on the “Continue” button below to indicate your consent to participate in this study.**

## Appendix C

### Demographic Questionnaire

Instructions: Please complete the following demographic information. If at anytime you wish to skip over a question or end the questionnaire completely, you are free to do so.

1. Age: \_\_\_\_\_
2. Gender: \_\_\_\_\_
3. Your primary ethnic or racial group affiliation:
  - (a) European American      (d) Latina/Latino
  - (b) African American      (e) American Indian
  - (c) Asian American      (f) Other (please specify) : \_\_\_\_\_
4. Your relationship status:
  - (a) Married      (d) Separated/divorced
  - (b) Single      (e) Other (*Please Specify*): \_\_\_\_\_
  - (c) Partnered/significant other
5. Your highest education level completed :
  - (a) Ph.D      (d) M.A. / M.S. / M.Ed. / M.S.W.
  - (b) Psy.D      (e) B.A. / B.S.
  - (c) M.D.      (f) Other : \_\_\_\_\_
6. Your profession:
  - (a) Counseling Psychologist      (e) Psychiatrist      (i) Drug & Alcohol Counselor
  - (b) Clinical Psychologist      (f) Marriage & Family Therapist      (j) Student
  - (c) School Psychologist      (g) School Counselor      (k) Other : \_\_\_\_\_
  - (d) Clinical Social Worker      (h) Mental Health Couns/Licensed Prof. Counselor
- 6a. If a student, what type of program are you in?
  - (a) Counseling Psychology      (d) Medical program      (g) Marriage & Family Program
  - (b) Clinical Psychology      (e) Community Counseling      (h) School Psychology
  - (c) Social Work      (f) School Counseling      (i) Other: \_\_\_\_\_
7. Do you hold a professional license (or a provisional license) to practice within your identified profession?
  - (a) Yes      (b) No

8. Are you a member of a professional organization related to your profession (for example, the American Mental Health Counselors Association, the American Psychological Association, the American Counseling Association, or the National Social Work Association)?

- (a) Yes (b) No

9. In what capacity do you work with clients (indicate all that apply)?:

- (a) Psychotherapy (d) Case Management (g) Crisis Counseling  
 (b) Testing/Assessment (e) Research (h) Other (*Please Specify*): \_\_\_\_\_  
 (c) Advising (f) Medication Management

10. In what capacity do you **primarily** work with clients (please select only one)?

- (a) Psychotherapy (d) Case Management (g) Crisis Counseling  
 (b) Testing/Assessment (e) Research (h) Other (*Please Specify*): \_\_\_\_\_  
 (c) Advising (f) Medication Management

11. Your primary theoretical orientation (please select only one):

- (a) Cognitive-Behavioral (d) Interpersonal (g) Psychodynamic  
 (b) Psychoanalytic (e) Family Systems (h) Feminist theory  
 (c) Behavioral (f) Client-centered (i) Other

12. Your primary employment setting:

- (a) Hospital/V.A. (e) Private Counseling Practice  
 (b) Community Mental Health Center (f) College/University  
 (c) Crisis Center (g) School District  
 (d) Prison or Other Correctional Facility (h) Other (*Please Specify*): \_\_\_\_\_

13. Region of the country you practice in:

- (a) West (AZ, CA, CO, ID, MT, NM, NV, OR, UT, WA, WY)  
 (b) Midwest (IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI)  
 (c) Northeast (CT, MA, ME, NH, NY, NJ, PA, RI, VT)  
 (d) South (AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV)  
 (e) Pacific (AK, HI)



14. Your estimated household income (check one):

- |                      |                   |                   |
|----------------------|-------------------|-------------------|
| (a) Less than 10,000 | (d) 40,000-54,999 | (g) 85,000-99,999 |
| (b) 10,000-24,999    | (e) 55,000-69,999 | (h) above 100,000 |
| (c) 25,000-39,999    | (f) 70,000-84,999 |                   |

15. Number of **years** you have been in practice as a mental health therapist: \_\_\_\_\_

16. **Percentage** of current caseload that includes trauma clients: \_\_\_\_\_

\*A trauma client is a person who has been exposed to a shocking and emotionally overwhelming event. The event or situation was most likely sudden, uncontrollable and perceived as negative by the individual. The event may have involved actual or threatened death, serious injury, or a threat to self or others physical well-being. The event may have been a one-time occurrence or an on-going, repeated trauma.

17. Number of **hours** within the past month spent doing therapy with clients: \_\_\_\_\_

18. Number of **hours** within the past month spent doing therapy with trauma clients: \_\_\_\_\_

19. Number of **hours** within the past month spent exposed to traumatic material from your trauma clients: \_\_\_\_\_

\*Traumatic material would include vivid or graphic descriptions of a traumatic event and/or the strong emotional expression from the client in response to a traumatic event.

20. Number of **hours** within the past month involved in empathetic engagement with your trauma clients: \_\_\_\_\_

\*Empathetic engagement is defined as: engagement with the internal private world of a client so as to experience, understand, and attune with the client's subjective experience and communicate that understanding back to the client.

21. Please indicate the level of support you currently receive at your work setting, related to your work with trauma clients. Level of support may include, but is not limited to: staff trainings, economic support, encouragement of self care practices, encouragement of consultation with other staff, etc.

- (1) No support    (2) Some support    (3) Moderate support    (4) A lot of support

22. Are you currently receiving personal therapy:    (a) yes    (b) no

23. Have you experienced any of the following personal life traumas?

- (a) Yes / No: Physical assault, rape, sexual assault, combat, kidnapping/torture, or threat with a weapon
- Age at time of trauma \_\_\_\_\_
  - Age at time of 2<sup>nd</sup> trauma (if multiple traumas have been experienced) \_\_\_\_\_
  - Age at time of 3<sup>rd</sup> trauma (if multiple traumas have been experienced) \_\_\_\_\_

(b) Yes / No: Witnessing violence, discovering a dead body, an accident, natural disaster, learning about the death of a close friend/relative, or learning of a traumatic event suffered by a close friend/relative.

a. Age at time of trauma \_\_\_\_\_

b. Age at time of 2<sup>nd</sup> trauma (if multiple traumas have been experienced) \_\_\_\_\_

c. Age at time of 3rd trauma (if multiple traumas have been experienced) \_\_\_\_\_

## Appendix D

## Secondary Traumatic Stress Scale

Instructions: The following is a list of statements made by persons who have been impacted by their work with traumatized clients. Read each statement, and then indicate how frequently the statement has been true for you within the past *seven (7) days* by circling the corresponding number next to the statement. If at anytime you wish to skip over a question or end the questionnaire completely, you are free to do so.

Question	Never	Rarely	Occasionally	Often	Very Often
1. I felt emotionally numb.	1	2	3	4	5
2. My heart started pounding when I thought about my work with clients.	1	2	3	4	5
3. It seemed as if I was reliving the trauma(s) experienced by my clients(s).	1	2	3	4	5
4. I had trouble sleeping.	1	2	3	4	5
5. I felt discouraged about the future.	1	2	3	4	5
6. Reminders of my work with clients upset me.	1	2	3	4	5
7. I had little interest in being around others.	1	2	3	4	5
8. I felt jumpy.	1	2	3	4	5
9. I was less active than usual.	1	2	3	4	5
10. I thought about my work with clients when I didn't intend to.	1	2	3	4	5
11. I had trouble concentrating.	1	2	3	4	5
12. I avoided people, places, or things that reminded me of my work with clients.	1	2	3	4	5
13. I had disturbing dreams about my work with clients.	1	2	3	4	5
14. I wanted to avoid working with some clients.	1	2	3	4	5
15. I was easily annoyed.	1	2	3	4	5
16. I expected something bad to happen.	1	2	3	4	5
17. I noticed gaps in my memory about client sessions.	1	2	3	4	5

## Appendix E

## Relationship Assessment Scale

Instructions: Indicate, by circling the appropriate letter in the answer field, how you would describe your current intimate/romantic relationship. If you are not currently in an intimate relationship, please consider your most recent intimate/romantic relationship in your response. If at anytime you wish to skip over a question or end the questionnaire completely, you are free to do so.

Question:	Poorly	.....	Average	.....	Extremely Well
1. How well does your partner meet your needs?	A	B	C	D	E
	Unsatisfied		Average		Extremely Satisfied
2. In general, how satisfied are you with your relationship?	A	B	C	D	E
	Poor		Average		Excellent
3. How good is your relationship compared to most?	A	B	C	D	E
	Never		Average		Very Often
4. How often do you wish you hadn't gotten in this relationship?	A	B	C	D	E
	Hardly at all		Average		Completely
5. To what extent has your relationship met your original expectations?	A	B	C	D	E
	Not much		Average		Very much
6. How much do you love your partner?	A	B	C	D	E
	Very Few		Average		Very many
7. How many problems are there in your relationship?	A	B	C	D	E

## Appendix F

## Miller Social Intimacy Scale

Instructions: A number of phrases are listed below that describe close relationships. Indicate, by circling the appropriate letter in the answer field, how you would describe your current intimate/romantic relationship. If you are not currently in an intimate/romantic relationship, please consider your most recent intimate/romantic relationship in your response. If at anytime you wish to skip over a question or end the questionnaire completely, you are free to do so.

	Very Rarely		Some of the Time		Almost Always
1. When you have leisure time how often do you choose to spend it with him/her alone?.	A	B	C	D	E
2. How often do you keep very personal information to yourself and do not share it with him/her?.	A	B	C	D	E
3. How often do you show him/her affection?	A	B	C	D	E
4. How often do you confide very personal information to him/her?	A	B	C	D	E
5. How often are you able to understand his/her feelings?	A	B	C	D	E
6. How often do you feel close to him/her?	A	B	C	D	E
	Not Much		A Little		A Great Deal
7. How much do you like to spend time alone with him/her?	A	B	C	D	E
8. How much do you feel like being encouraging and supportive to him/her when he/she is unhappy?	A	B	C	D	E
9. How close do you feel to him/her most of the time?	A	B	C	D	E

- |                                                                                                       |   |   |   |   |   |
|-------------------------------------------------------------------------------------------------------|---|---|---|---|---|
| 10. How important is it to you to listen to his/her personal disclosures?                             | A | B | C | D | E |
| 11. How satisfying is your relationship with him/her?                                                 | A | B | C | D | E |
| 12. How affectionate do you feel towards him/her?                                                     | A | B | C | D | E |
| 13. How important is it to you that he/she understand your feelings?                                  | A | B | C | D | E |
| 14. How much damage is caused by a typical disagreement in your relationship with him/her?            | A | B | C | D | E |
| 15. How important is it to you that he/she be encouraging and supportive to you when you are unhappy? | A | B | C | D | E |
| 16. How important is it to you that he/she show you affection?                                        | A | B | C | D | E |
| 17. How important is your relationship with him/her in your life?                                     | A | B | C | D | E |

## Appendix G

## Communication Patterns Questionnaire

Directions: We are interested in how you and your intimate/romantic partner typically deal with problems in your relationship. Please rate each item on a scale of 1 (= very unlikely) to 9 (= very likely). If you are not currently in an intimate/romantic relationship, please consider your most recent intimate/romantic relationship in your response. If at anytime you wish to skip over a question or end the questionnaire completely, you are free to do so.

**A. WHEN SOME PROBLEM IN THE RELATIONSHIP ARISES,**

	Very Unlikely									Very Likely
1. <u>Mutual Avoidance</u> . Both members avoid discussing the problem.	1	2	3	4	5	6	7	8	9	
2. <u>Mutual Discussion</u> . Both members try to discuss the problem.	1	2	3	4	5	6	7	8	9	
3. <u>Discussion/Avoidance</u> . Partner A tries to start a discussion while Partner B tries to avoid a discussion. ( <i>you are Partner A</i> )	1	2	3	4	5	6	7	8	9	
Partner B tries to start a discussion while Partner A tries to avoid a discussion. ( <i>you are Partner A</i> )	1	2	3	4	5	6	7	8	9	

**B. DURING A DISCUSSION OF A RELATIONSHIP PROBLEM,**

1. <u>Mutual Blame</u> . Both members blame, accuse, and criticize each other.	1	2	3	4	5	6	7	8	9
2. <u>Mutual Expression</u> . Both members express their feelings to each other.	1	2	3	4	5	6	7	8	9
3. <u>Mutual Threat</u> . Both members threaten each other with negative consequences.	1	2	3	4	5	6	7	8	9
4. <u>Mutual Negotiation</u> . Both members suggest possible solutions and compromises.	1	2	3	4	5	6	7	8	9

- |                                                                                                                                              | Very<br>Unlikely |   |   |   |   |   |   |   | Very<br>Likely |
|----------------------------------------------------------------------------------------------------------------------------------------------|------------------|---|---|---|---|---|---|---|----------------|
| 5. <u>Demand/Withdraw.</u>                                                                                                                   |                  |   |   |   |   |   |   |   |                |
| Partner A nags and demands while Partner B withdraws, becomes silent, or refuses to discuss the matter further. ( <i>you are Partner A</i> ) | 1                | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9              |
| Partner B nags and demands while Partner A withdraws, becomes silent, or refuses to discuss the matter further. ( <i>you are Partner A</i> ) | 1                | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9              |
| 6. <u>Criticize/Defend.</u>                                                                                                                  |                  |   |   |   |   |   |   |   |                |
| Partner A criticizes while partner B defends self. ( <i>you are Partner A</i> )                                                              | 1                | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9              |
| Partner B criticizes while Partner A defends self. ( <i>you are Partner A</i> )                                                              | 1                | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9              |
| 7. <u>Verbal Aggression.</u>                                                                                                                 |                  |   |   |   |   |   |   |   |                |
| Partner A calls Partner B names swears at them, or attacks their character. ( <i>you are Partner A</i> )                                     | 1                | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9              |
| Partner B calls Partner A names swears at them, or attacks their character. ( <i>you are Partner A</i> )                                     | 1                | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9              |
| <b>C. AFTER A DISCUSSION OF A RELATIONSHIP PROBLEM,</b>                                                                                      |                  |   |   |   |   |   |   |   |                |
| 1. <u>Mutual Withdrawal.</u> Both withdraw from each other after the discussion.                                                             | 1                | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9              |
| 2. <u>Mutual Withholding.</u> Neither partner is giving to the other after the discussion.                                                   | 1                | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9              |



## Appendix H

## Brief Sexual Functioning Questionnaire

Instructions: This questionnaire covers material that is sensitive and personal. It is important, however, that each question be answered accurately and honestly. Your responses will be kept completely confidential. If at anytime you wish to skip over a question or end the questionnaire completely, you are free to do so.

1. During the past month, how frequently have you felt sexual drive? This feeling may include wanting to have a sexual experience, planning to have sex, feeling frustrated due to lack of sex, etc.

- (1) Not at all
- (2) Once
- (3) 2 or 3 times
- (4) Once a week
- (5) 2 or 3 times per week
- (6) Once a day
- (7) More than once a day

2. During the past month, how frequently have you had sexual thoughts, fantasies, or erotic dreams?

- (1) Not at all
- (2) Once
- (3) 2 or 3 times
- (4) Once a week
- (5) 2 or 3 times per week
- (6) Once a day
- (7) More than once a day

3. Overall, during the past month, how satisfied have you been with your sex life?

- (1) Completely satisfied
- (2) Moderately satisfied
- (3) Slightly satisfied
- (4) Neither satisfied, nor dissatisfied
- (5) Slightly dissatisfied
- (6) Moderately dissatisfied
- (7) Completely dissatisfied

4. Overall, how satisfied are you with your sexual relationship with your present partner? If you are currently not in an intimate/romantic relationship, consider your *most recent* intimate/romantic relationship and your satisfaction with that sexual relationship.

- (1) Completely satisfied
- (2) Moderately satisfied
- (3) Slightly satisfied
- (4) Neither satisfied, nor dissatisfied
- (5) Slightly dissatisfied
- (6) Moderately dissatisfied
- (7) Completely dissatisfied

5. Overall, how satisfied do you think your partner is with your sexual relationship? If you are currently not in an intimate/romantic relationship, consider your *most recent* intimate/romantic relationship and your satisfaction with that sexual relationship.

- (1) Completely satisfied
- (2) Moderately satisfied
- (3) Slightly satisfied
- (4) Neither satisfied, nor dissatisfied
- (5) Slightly dissatisfied
- (6) Moderately dissatisfied
- (7) Completely dissatisfied