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By
Colleen A. Furey, M.A.
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Approved:
Karl Stuckenberg, Ph.D.
Chair, Department of Psychology

W. Michael Nelson III, Ph.D., ABPP
Professor of Psychology
Risk Factors of Vicarious Traumatization

in Psychology Graduate Students
Dissertation Committee

Chair

W. Michael Nelson, III, Ph.D., ABPP
Professor of Psychology

Member

Anna Ghee, Ph.D.
Associate Professor of Psychology

Member

Lyn Sontag, Ph.D., ABPP
Associate Professor of Psychology
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Chapter I

Review of the Literature

Following the tragedies of September 11, 2001, country singer Alan Jackson performed a song he wrote entitled “Where Were You (When the World Stopped Turning)” live at the Country Music Awards. The song, which eventually topped the country charts, outlined the many diverse and complicated reactions Americans experienced upon hearing of the 9/11 tragedies (Jackson, 2001). Jackson sang about feelings like guilt, patriotism, distrust for others, fear, loneliness, denial, and anger. He also described many of the behaviors Americans engaged in that day as a reaction to the news. These included activities such as attending church, buying guns, giving blood, protecting children, sleeping in an effort to avoid the impact of the situation, and turning to friends, family, and even strangers for support. The song’s popularity stemmed from the listener’s ability to identify with one or several of the reactions Jackson describes in answer to the question “Where were you when the world stopped turning?” This song testifies to the dramatic and difficult reactions individuals experience when they are indirectly (or vicariously) exposed to traumatic events like the September 11th attacks. Most Americans were not in New York, Pennsylvania, or Washington D.C. on the day of the tragedy, but the vivid images on television, the dramatic narratives from witnesses, and the sudden awareness that our country was vulnerable made an important and noticeable impact on many individual’s beliefs and behaviors.

As media consumers, most of us can relate to these anxieties after reading or hearing about a traumatic event. These same reactions can be particularly complicated for mental health care providers working with survivors of trauma. Within the therapeutic environment, these clients oftentimes discuss their traumatic experience repeatedly, and in great detail. In fact, this
intense retelling of trauma is central to most interventions (Yadin & Foa, 2007) for Posttraumatic Stress Disorder (PTSD; American Psychological Association, 2000). As a result of this frequent and intense indirect traumatic exposure, clinicians working with trauma survivors may experience many of the negative reactions described in Jackson's hit song (like distrust, loneliness, anger, etc.) on a daily basis. These experiences can disrupt their belief systems and produce symptoms similar to those of PTSD. Within psychological research, this distressful reaction to indirect traumatic exposure has been termed vicarious traumatization (VT; McCann & Pearlman, 1990a).

The current research project seeks to examine the relationship between the coping style utilized by graduate psychology students currently treating trauma survivors and their severity of symptoms reflecting vicarious traumatization. Whether or not participants' personal trauma history influences their likelihood to develop VT symptoms will also be explored. Finally, the number of therapy hours a participant has devoted to work with trauma survivors will be examined in regard to its association with reported VT symptoms. In the following sections, the concept of VT will be discussed, including the literature regarding resiliency, and the populations at-risk for developing VT. Next, an overview of researched risk and protective factors for VT will be presented; primarily focusing on coping strategies, the therapist's personal traumatic history (i.e., whether a participant identifies themselves as a trauma survivor), and amount of exposure to vicarious trauma. Finally, the population of graduate psychology students will be discussed with explanations as to why they may be particularly at-risk to develop symptoms of VT.


Vicarious Traumatization

Theoretical Framework

Although research into the effects of direct traumatic exposure has been conducted over the past 50 or 60 years, the field has only begun to examine the effects of indirect exposure to trauma within the past 20 years. In 1990, McCann and Pearlman published the first theoretical paper outlining the concept and discussing the impact of VT on the mental health professional. In the article, the authors explain the significance of the theory, stating “Persons who work with victims may experience profound psychological effects, effects that can be disruptive and painful for the helper and can persist for months or years after work with traumatized persons” (McCann & Pearlman, 1990a, p. 133). At the time, the theory was created as a result of anecdotal evidence and clinical experiences of the authors during their time spent working within the field of trauma research and treatment. In order to explain how VT develops in an individual, McCann and Pearlman turned to their Constructivist Self-Development Theory (CSDT; McCann & Pearlman, 1990a).

CSDT draws on information from the fields of cognitive development (Piaget, 1971) and social cognition (Mahoney, 1981). As Varra, Pearlman, Brock, and Hodgson (2008) described, “CSDT is an integrative personality theory established as a way to understand and describe the experiences and adaptation of survivors of traumatic events” (p. 186). CSDT theorizes that individuals are continually developing schemas, which are mental sets individuals use to organize cognitions and make sense of the world. CSDT operates on the idea that these schemas are constantly evolving and changing as we find them useful or not useful in anticipating and preparing for the events of the world around us, particularly in regard to trauma. As Pearlman and Saakvitne (1995) explain, “CSDT emphasizes integration, meaning, and adaptation” (p. 56).
of new information, particularly information gathered after experiencing a traumatic event. According to CSDT, following a trauma, the survivor must take the new information gathered from the traumatic experience and either integrate the information into a new schema or adapt their previous schema. For instance, an individual’s schema concerning his or her physical safety might indicate to them that they are generally safe in their own home. If the individual is then assaulted in his or her own home, this schema will be challenged (or disrupted), as it proved not useful in helping the individual predict and prepare for the attack. Since the original schema was inadequate, the individual can integrate the information and adopt the schema that they are not safe in their own home, or they may adapt the new experience into their existing schema, concluding that they are generally safe within their own home but need to take precautions in order to maintain that safety. Adapting the schema to account for the new information generally leads to psychological recovery from trauma whereas integrating the information into a new adaptive schema generally leads to symptoms of PTSD (McCann & Pearlman, 1990b).

Symptoms of VT

McCann and Pearlman (1990b) theorized that VT occurs naturally as a result of empathically engaging with a client who is actively recovering from a traumatic experience or experiences. They argued that this empathic relationship and the exposure to the client’s trauma narratives would disrupt and perhaps shatter the clinician’s schemas as well as impact their imagery system, or their set of visual memories and experiences. These changes leave the mental health provider at risk for pathological reactions that can in many ways reflect the symptoms of their victimized clients (McCann & Pearlman, 1990b). Specifically, McCann and Pearlman theorized that VT could impact the individual’s schemas and/or cause them to experience symptoms of PTSD, particularly those symptoms related to the imagery system.
McCann and Pearlman’s (1990a) theory of VT states there are five primary schemas that may be impacted by both trauma and vicarious trauma: safety, esteem, trust/dependency, intimacy, and power/control. These five were selected as they were identified in previous research as the five schemas most impacted by traumatic exposure (McCann, Sakheim, & Abrahamson, 1988). McCann and Pearlman theorized that which specific schema(s) are disrupted for a particular individual and to what extent they are disrupted depends on what schemas were most salient for the individual prior to direct or indirect exposure to trauma. Each schema can be disrupted regarding either the individual’s belief about him/herself or others. In the following paragraphs each of the schemas and how they can be disrupted as they pertain to beliefs about the self or others will be outlined, as well as how disruptions to these beliefs can be harmful to both the therapist and their trauma survivor clients.

The five schemas impacted by VT represent an array of beliefs that can be disrupted by exposure to traumatic material. Following traumatic exposure, an individual may feel a general threat to their safety, which could lead to hypervigilance and fear. A disruption to this schema can be problematic to an individual’s functioning, as McCann and Pearlman (1990b) described, “The illusion of safety is central to maintaining a positive attitude toward future life experiences and preventing crippling anxiety and phobic avoidance. If one were to focus on all the inherent dangers of the world, expecting the worst, one would be unable to function or to take risks that are essential to life and growth” (p. 66). A disruption to the schema of safety can revolve around the safety of the individual or others. For example, a female therapist working with rape victims may become overwhelmed with fear for the safety of herself or the safety of all of her female friends and co-workers.
An individual's schemas regarding esteem refer to their conceptualization of the benevolence, compassion, or value of people. A disrupted schema regarding esteem for the self may leave a therapist feeling incompetent regarding the difficult work of trauma therapy (Pearlman & Saakvitne, 1995). This schema disruption could decrease the effectiveness of treatment or the therapist's motivation to work with trauma survivors. A disrupted schema regarding esteem for others may cause the therapist to adopt a negative and dark view of human nature (Pearlman & Saakvitne, 1995). This could be problematic for a therapist's clients, family, and friends, as the therapist might have difficulty noticing or acknowledging their strengths and positive attributes.

The schema regarding trust and dependency can also become distorted following a traumatic exposure. Pearlman and Saakvitne (1995) argue that a disruption to the schema regarding trust/dependency of the self could lead the therapist to become overly dependent on medicating clients or impair the therapist's ability to create a trusting, safe therapeutic environment for their clients. Disruption to the schema regarding trust/dependency of others could cause the therapist to become suspicious or even paranoid. This could be an extremely harmful situation for trauma survivor clients, as their therapist may lose their ability to believe that a traumatic event(s) even occurred, which could be an incredibly invalidating and harmful experience for the client (Pearlman & Saakvitne, 1995).

Schemas regarding intimacy can be challenged by VT, leaving the individual to feel alone or alien from the people around them. A therapist experiencing challenges to their schema regarding self-intimacy will avoid spending time alone and might avoid the introspection and self-monitoring that is generally considered important in psychotherapeutic work (Pearlman & Saakvitne, 1995). Pearlman and Saakvitne (1995) argue that this could negatively impact the
trauma survivor client if the therapist begins violating boundaries and involving the client in their personal life in order to avoid solitary self-reflection. A disrupted schema regarding other-intimacy can be especially problematic for a therapist as they may begin withdrawing from peers, spouses, and even co-workers whom they feel do not adequately understand the challenges of their trauma work. This can be even more problematic as confidentiality does not allow most individuals working with trauma survivors to speak to their lay peers about their challenging cases. Pearlman and Saakvitne (1995) warn that strong assaults to the Other-Intimacy schema can lead to breaches in boundaries and even sexual relationships within the therapeutic relationship, as a therapist may begin to believe that his/her trauma survivor clients are the only ones who adequately understand their worldview. Clearly, this would be unethical and damaging for both the client and the therapist.

Finally, McCann and Pearlman (1990b) argued that beliefs surrounding power/control are often impacted by direct or indirect exposure to trauma, leaving the individual feeling helpless and weak as a result of their inability to avoid or defend themselves or others from the trauma. Pearlman and Saakvitne (1995) argued that when the schema of power/control is disrupted by trauma exposure, individuals generally cope through overcompensation (i.e., trying to control everything) or surrender (i.e., giving up on controlling anything). For example, the schema regarding self-power/control can become disrupted and cause the therapist to become obsessed with attempting to control their own lives or to completely surrender and cease controlling him/herself. When the schema regarding other-power/control becomes disrupted by vicarious traumatic exposure, a therapist may yield all control and power to others in interpersonal situations or they may take control of all of their interpersonal situations. This could impact the client as the therapist could either become passive and uninvolved in the
therapeutic work or dominate the sessions and leave the client feeling passive and powerless (Pearlman & Saakvitne, 1995).

In addition to challenging and altering schemas, McCann and Pearlman (1990a) theorized that an individual’s imagery system can be negatively impacted by VT. They cited many anecdotal pieces of evidence in which therapists reported flashbacks and nightmares of their client’s traumatic experiences, which often lead to feelings of panic and instances of insomnia. Iliffe and Steed (2000), for example, found that most of the eighteen domestic violence counselors they interviewed reported experiencing upsetting visual images of their client’s violent traumatic experiences, and that most felt that some of these images would stay with them for the rest of their lives. Additionally, these participants reported experiencing powerful physical reactions to these visual images (Iliffe & Steed, 2000). These reactions mirror the reexperiencing symptoms of Posttraumatic Stress Disorder (APA, 2000). Since McCann and Pearlman (1990a) developed the theory of VT, many researchers have utilized standard measures of PTSD in order to measure VT, which broadens VT symptoms to include the hyperarousal and avoidance symptoms common to PTSD (e.g., Adams & Riggs, 2008; Gahramanlou & Brodbeck, 2008).

McCann and Pearlman (1990b) warned that although the trauma survivor is the focus of treatment, symptoms of VT in the therapist should not be ignored within the mental health field. Although it remains unclear exactly how many mental health professionals are experiencing symptoms of VT, research generally indicates that the phenomena does exist and can negatively impact the mental health professional’s general functioning (for review of this research, see page 14). The research has not yet explored how VT impacts the trauma survivor clients in treatment with a therapist experiencing symptoms of VT, but McCann and Pearlman argued that these
symptoms can become severe enough that they can greatly interfere with the successful and ethical treatment of the trauma survivor. For example, a therapist experiencing disruption in their schema regarding safety may become so anxious that they are unable to effectively listen and empathize with clients needing to process their trauma narrative. The anxiety and discomfort the therapist feels could become a significant hindrance to the successful treatment of this trauma survivor. In these instances, ignored VT symptoms could lead to further pathology for the trauma survivors so desperately seeking healing.

Terminology

Although research into VT began within the past twenty years, there have been several other attempts to document and theorize reactions the therapist might have to the survivor client. Specifically, researchers and theorists have investigated and discussed the concepts of Burnout, Countertransference, Compassion Fatigue, and Secondary Stress as reactions to the challenging therapeutic task of treating trauma survivors. Although all of these concepts have some similarities to VT, the subtle differences in definition can make more dramatic differences in what specifically is measured and addressed within the research literature.

Earlier researchers often discussed the possibility for Burnout that difficult clients can induce. These challenging client populations include individuals with serious mental disorders, chronic illnesses, low socioeconomic status, substance dependence, and other presenting situations. Burnout refers to the symptoms like cynicism, apathy, boredom, etc., that can occur in work settings in which even small behavioral goals are not being met (McCann & Pearlman, 1990a). Burnout has been researched and documented in health care providers, and research has indicated that mental health professionals are at an increased risk for burnout as compared to primary health care providers (Imai, Nakao, Tsuchiya, Kuroda, & Katoh, 2004). Although
burnout may occur as a result of working with especially complicated or challenging trauma survivors in which little therapeutic progress is made, it varies greatly from the schematic disruption resulting from empathic listening that occurs in VT. Burnout emphasizes the frustration and consequences that result from little progress in treatment; VT reflects the traumatic reaction and symptoms that occur upon empathically joining with a trauma survivor as they relive and process their traumatic experience or experiences (McCann & Pearlman, 1990a, 1990b). Some of the empirical research regarding VT has also utilized measures of Burnout, and there is generally support for the separation of the two concepts (e.g. Jenkins & Baird, 2002; Schauben & Frazier, 1995), although Kadambi and Truscott (2004) found that a measure of Burnout and a measure of VT were highly correlated, leaving question as to whether the two concepts (or their measures) are tapping into the same symptoms. These studies will be further described later in this review of the literature.

Additionally, some researchers and theorists have conceptualized the therapist’s reaction to traumatic material in treatment as Countertransference. Traditionally, this term refers to the unconscious issues a therapist may hold that become awakened and disturbed as a consequence of the therapeutic relationship (McCann and Pearlman, 1990a). Countertransference reflects the idea that the therapist’s personal qualities predict a negative reaction to secondary trauma. In contrast, Burnout holds that the attributes of the source of stress (i.e., the frustrating client) determine whether or not the therapist will experience a negative reaction. McCann and Pearlman (1990a) write that CSDT and VT integrate these lines of thought as it “views the therapist’s unique responses to client material as shaped by both characteristics of the situation and the therapist’s unique psychological needs and cognitive schemas” (p. 136). Therefore, neither Countertransference nor Burnout are adequate descriptors for the experience of VT.
Additionally, the term Compassion Fatigue is sometimes used to describe the reactions therapists have as a consequence of working with trauma survivors. This term was coined by Figley (1995) and it describes the natural process of empathic engagement that leads to distressful reactions. The term is broader than VT and includes any concerns that might arise as a result of helping others, particularly trauma survivors. For example, the Compassion Fatigue Scale (Figley, 1995) includes items similar to PTSD symptoms as well as items tapping into symptoms of Burnout. Although both Compassion Fatigue and VT emphasize the reaction to working with trauma survivors, Compassion Fatigue does not include the theory and research regarding schema disruption, which is central to the theory of VT. Figley (1995) also hypothesized that Compassion Fatigue develops over time, with more indirect traumatic exposure resulting in greater risk for distressful symptoms for the therapist. This is in contrast to VT, which theorizes that therapists with less experience will be at increased risk for distressful VT symptoms (McCann & Pearlman, 1990b). It should also be noted, however, that although Compassion Fatigue and VT are considered to be theoretically different concepts, Jenkins and Baird (2002) found that the TSIBS-L total score and the Compassion Fatigue Scale demonstrated moderate concurrent validity, $r(97) = .58$, $p < .001$, within a sample of 99 trauma counselors, suggesting the two concepts (or their assessment tools) may be more similar than originally thought.

Finally, the term Secondary Traumatic Stress is sometimes used in the literature as a synonym for VT (i.e., Ghahramanlou & Brodbeck, 2000). This term describes any situation in which an individual indirectly experiences trauma and a subsequent stressful reaction. Generally this term has no specific symptoms associated with it, although it is often used to describe PTSD-like symptoms. Danieli (1984), for example, documented an occurrence of this from
outside of the health profession. She found that children and grandchildren of Holocaust survivors were experiencing similar PTSD-like reactions to the trauma of the Holocaust, even though they had not directly witnessed these events themselves.

Assessing VT

As the theory behind VT developed, so did the need to empirically explore the concept. Researchers began exploring options for the assessment of the symptoms of VT in order to gather more information as to where, when, and to whom symptoms of VT were occurring. Generally, researchers utilized measures to either examine the disrupted schemas of VT or the PTSD-like symptoms of VT. In this section some of the measures utilized to assess for both of these sets of VT symptoms will be outlined. In a later section, more in-depth information regarding the measures utilized in the current study will be provided.

Versions of the Trauma and Attachment Beliefs Scale (TABS; Pearlman 2003) are the most common assessment tool for measuring schemas disrupted by direct trauma exposure or vicarious trauma exposure. The scale was first developed as the McPearl Belief Scale (McCann & Pearlman, 1990b) and was then developed and published as the Traumatic Stress Institute Belief Scale Revision L (TSIBS-L; 1996), to the current TABS (Pearlman, 2003). Although each scale has been developed in close proximity to the prior measure, the TABS and TSIBS-L are so equivocal that their scores can be interpreted in the same manner (Pearlman, 2003). The TSIBS-L is no longer commercially available. The TABS consists of 84 items presented with a 6-point Likert scale. The scale renders a total score as well as subscales related to the five schemas identified as relevant to VT: safety, trust/dependency, esteem, intimacy, and power.

Additionally, the Compassion Fatigue Scale (Figley, 1995) is sometimes used to measure an individual’s risk for VT. Although the concepts of Compassion Fatigue and VT are quite
similar, the Compassion Fatigue Scale includes items related to both indirect trauma exposure and items related to job-related burnout. The original scale is 13 items in length and asks participants to utilize a 10-point Likert Scale. The resulting total scale purports to indicate an individual’s risk for developing VT or Compassion Fatigue symptoms. Adams, Figley, and Boscarino (2008) found the Compassion Fatigue Scale helpful in screening social workers involved in relief efforts of the World Trade Center tragedy for psychological distress. However, since VT does not directly address or involve burnout, the usefulness of this measure in empirical studies of VT remains questionable. The Compassion Fatigue Scale was also adapted by Stamm (2002) to become the Compassion Satisfaction/Fatigue Self-Test. This test includes scales pertaining to Compassion Fatigue, Burnout, and Compassion Satisfaction, a scale that taps into some of the perceived benefits to helping trauma survivors.

In addition to measuring schema disruption, many studies include a component meant to assess for the other PTSD-like symptoms that can manifest in VT. Most commonly utilized are the Impact of Event Scale (IES; Horowitz, Wilner, & Alvarez, 1979), the Impact of Event Scale-Revised (IES-R; Weiss & Marmar, 1995) and the Symptom Checklist-90-Revised (SCL-90-R; Derogatis, 1979). Each of these scales is commonly utilized in research related to non-clinical populations, and aim to identify participants experiencing psychological symptoms or distress. The SCL-90-R is a broader instrument, and covers a variety of symptom patterns (Pauker, 2004). The IES, on the other hand, focuses on an individual’s reactions to stressful life experiences. It is one of the most widely-used assessment tools for PTSD research (McDonald, 1997) and renders two factors common to trauma reactions: intrusion and avoidance. The IES-R (Weiss & Marmar, 1995) also includes a scale that assesses for hyperarousal, another common cluster of PTSD symptoms (APA, 2000). Finally, some empirical investigations of VT simply include a
symptom checklist of PTSD diagnostic criteria in their measures (e.g., Schauben & Frazier, 1995). All of these methods are designed to tap into the disturbances in imagery, avoidance, and hyperarousal common to PTSD and theorized to be involved in VT.

As the theory and research regarding VT has developed, researchers have utilized different operational definitions and assessment tools in an effort to investigate the concept. Although the traditional definition of VT includes both schema disruption and PTSD-like symptoms (particularly disturbances to the imagery system; McCann & Pearlman, 1990a), researchers have looked at either schemas (i.e., mental sets individuals use to organize cognitions and make sense of the world), PTSD-symptoms (e.g., hyperarousal, avoidance, and reexperiencing), and/or even risk for Compassion Fatigue, and referred to the reactions as VT. It is important to consider the assessment tools utilized in these research studies as the information they provide regarding VT may be limited depending on the method of assessment. However, all of the studies highlighted in this review of the literature are featured as they add some information to our knowledge and understanding of VT.

Quantitative Research of Vicarious Traumatization

Once anecdotal evidence and clinical experience led McCann and Pearlman (1990a) to create the theory behind VT, researchers set out to empirically examine the various aspects of the concept. Many questions about VT remained unanswered. Are mental health professionals significantly at-risk to develop VT symptoms? To what extent do these symptoms really impact their lives? In what populations or settings are professionals vulnerable to developing VT symptoms? What aspects of the client population or the therapist increase the risk for VT? To explore and answer these questions, researchers have examined whether participants report symptoms of VT, how these symptoms are experienced, what factors (of the therapist, client, or
environment) are particularly associated with VT symptoms, and in what settings VT is present. In this section, I will review the major empirical studies regarding VT.

In one of the first empirical explorations of VT, Pearlman and Mac Ian (1995) conducted an investigation into the effects of VT on trauma therapists. Their research is particularly relevant to the current study as it specifically examines the role that a personal trauma history and less professional experience can play in developing VT symptoms. As such, the research method employed by these researchers is similar to the method that will be employed in the current study. Pearlman and Mac Ian (1995) created an exploratory empirical study in order to investigate the factors and variables that might indicate the existence of VT as well as those that might predict the development of VT symptoms.

Pearlman and Mac Ian (1995) utilized a participant sample of 188 self-identified trauma therapists. The participant group included 136 females and 52 males, who were predominantly Caucasian. The participants had worked with trauma survivors for an average of 9.59 years. The participants completed a general questionnaire regarding their experiences treating trauma survivors as well as the Trauma Symptom Inventory Belief Scale (TSIBS-L; Pearlman, 1996) the Symptom Checklist-90 (SCL-90-R; Derogatis, 1977), and the Impact of Event Scale (IES; Horowitz, Wilner, & Alvarez, 1980). Using correlations and multiple regressions, the data lead them to several conclusions.

Firstly, although the participants were generally experiencing trauma symptoms at a sub-clinical level, there were endorsements of disrupted beliefs and psychological symptoms among the participants, indicating the existence of VT symptoms in the sample. Specifically, therapists with a personal history of direct traumatic exposure experienced more severe symptoms of VT than therapists that denied having a traumatic history. The multiple regression revealed that
participants with a personal trauma history who had been in therapy for their traumatic histories were much more likely to have a high TSIBS-L score (indicating more disrupted schemas). The researchers further explored the role that a personal trauma history plays in VT symptoms by conducting a multivariate analysis of variance (MANOVA) exploring the differences between participants who identified as trauma survivors and those that did not. They found that participants who identified as trauma survivors had significantly higher scores on the TSIBS-L subscales of safety, self-trust, self-esteem, other-trust, and other-intimacy, as well as the SCL-90-R and the intrusion subscale of the IES.

Additionally, Pearlman and Mac Ian (1995) found that newer trauma therapists had more disruptions in schemas regarding Self-Intimacy, Self-Esteem, and Self-Trust and endorsed more psychopathological symptoms. Particularly, the participants who identified as both new to the trauma field and having a personal history of trauma were the group most negatively impacted by symptoms of VT. This study validated the existence of VT symptoms in mental health professionals treating trauma survivors and identified both a personal trauma history and less professional experience as predictive variables for VT symptoms.

Dunkley and Whelan (2006) examined the impact of VT on another group of mental health professionals: telephone counselors. Like the current study, Dunkley and Whelan investigated the influence of the counselor’s personal trauma history and coping strategies on symptoms of VT. In addition, they explored the impact of supervision on the development of VT symptoms. Dunkley and Whelan hypothesized that those counselors utilizing avoidant coping strategies would have higher scores on measures of VT symptoms. Additionally, they predicted that participants who were not receiving supervision would have higher scores on measures of VT symptoms. The researchers also hypothesized that participants who reported a
stronger alliance with their supervisor would earn lower scores on the measures of VT. Finally, Dunkley and Whelan hypothesized that counselors who had a personal trauma history would have higher scores on measures of VT.

The researchers utilized a sample including 62 telephone counselors from various trauma-related agencies in Australia. Participants completed measures of VT (TABS; Pearlman, 2003), coping (Coping Scale for Adults; Frydenberg & Lewis, 1997), supervisory alliance (Supervisory Working Alliance Inventory; Eftation, Patton, & Kardash, 1990), and PTSD symptoms (IES-R; Weiss & Marmar, 1997) in an effort to explore what might influence the development of VT.

Dunkley and Whelan (2006) found that, generally, the participant group reported low levels of VT symptoms. Most participants were in the average range of the TABS total score (92%), however, 45.9% of participants had high average or extremely high scores on at least one of the TABS subscales. However, utilizing multiple regressions, the researchers found that several factors influenced the development of disrupted schemas and PTSD symptoms. Non-productive (or avoidant) coping was related to reported disruptions in schemas, whereas directly dealing with the problem (active coping) was not. The researchers also found that a strong supervisory situation was associated with fewer self-reported disrupted cognitions. Finally, although a personal history of trauma was positively correlated with VT symptoms, it did not predict the symptoms. The researchers concluded that it remained unclear how a personal history of victimization might impact the counselor's risk for VT symptoms.

Like Dunkley and Whelan, Lyndall and Bicknell (2001) explored the experience of traumatic reactions in a specific population of mental health professionals. Although the investigators did not look specifically at symptoms of VT (i.e., disrupted schemas), they did
investigate the similar concept of Compassion Fatigue and included the PTSD-like symptoms found in VT. Additionally, the investigators explored the influence of professional experience and coping strategies which are both variables included in the current study of VT.

Lyndall and Bicknell’s (2001) investigation is particularly important to our knowledge of VT as the researchers included therapists working with sexual abuse perpetrators. This client population is unique in that the abuse perpetrators were not necessarily trauma survivors, but the narratives of their inflicted abuse could traumatize the mental health professional. In addition to exploring this population, the investigators sought to explore the relationship between Secondary Traumatic Stress symptoms and how much experience the therapist has working with these clients. This is sometimes referred to as a dose-response theory (e.g., Warren, Lee, & Saunders, 2003).

The dose-response theory states that more exposure to traumatized clients will put the therapist at greater risk for developing symptoms of VT. Dose-response can refer to the intensity of the trauma exposure (e.g., Warren, Lee, & Saunders, 2003), the years of professional experience (e.g., Pearlman & Mac Ian, 1995), or the current number of trauma clients in a therapist’s caseload (e.g., Cunningham, 2003). Lyndall and Bicknell (2001) were interested in how years of experience might impact a therapist’s likelihood of developing VT or Secondary Traumatic Stress. Although McCann and Pearlman (1990a; 1990b) theorized that newer therapists would be more at-risk for developing VT symptoms, the research related to the dose-response relationship had been somewhat unclear as Follette, Polusny and Milbeck (1994) found no support for the theory and Kassam-Adams (1995), Pearlman & Mac Ian (1995), and Schauben & Frazier (1995) conducted research that did support the existence of a dose-response relationship between traumatic exposure and development of VT symptoms.
Lyndall & Bicknell (2001) utilized a sample of 67 therapists from Australia who worked with sex offenders. The participants completed the Compassion Satisfaction/Fatigue Self-Test for Helpers (Stamm, 2002) as well as the IES-R (Weiss & Marmar, 1995). Lyndall and Bicknell (2001) found that symptoms of VT were, in fact, present in their participant sample, with 46% of their participants scoring at moderate or high risk for developing Secondary Traumatic Stress and Burnout (as measured by the Compassion Satisfaction/Fatigue Self-Test for Helpers; Stamm, 2002). The researchers performed trend analyses to explore the relationship between years of experience and development of VT symptoms. Their data indicated a U-shaped relationship between years of experience and avoidant coping strategies; that is, participants with the least experience and the most experience were more likely to use avoidant coping strategies (i.e., coping strategies that do not directly deal with the problem or its consequences), placing them at higher risk for VT. The investigators argued that this unique relationship between experience and risk for VT may explain the inconsistent research regarding the dose-response relationship that had been previously conducted. This is particularly relevant to the current study, as the graduate student population generally has much less experience than other mental health professionals. The influence of coping on the development of VT symptoms will be discussed in more detail in a later section.

Like Steed and Bicknell (2001), Schauben and Frazier (1995) were particularly interested in whether or not a dose-response relationship between vicarious traumatic exposure and VT symptoms existed in their sample. Specifically, they wanted to explore if current caseload size of trauma survivors influenced the report of VT symptoms. They investigated the impact of working with sexual violence survivors on counselors. The researchers also wanted to gain more information regarding the impact of personal trauma history and gather some qualitative data
regarding counselors' experiences with VT. Finally, Schauben and Frazier (1995) wanted to
gather descriptive information regarding coping strategies the therapists commonly used to
manage their reactions to trauma survivor clients. The researchers hypothesized that therapist's
with higher percentages of violence survivors in their caseload would report more symptoms of
VT as well as more negative affect, and that this relationship would not predict increases in self-
reports of therapist burnout. That is, the investigators believed that measures of Burnout would
not be related to measures of VT, supporting the theory that the two concepts are distinctly
different. Finally, Schauben and Frazier (1995) hypothesized that participants who reported a
personal trauma history would also report more symptoms of VT.

Schauben and Frazier's (1995) study included 148 participants, consisting of 118
psychologists specializing in sexual violence and 30 sexual violence counselors. The subjects
were recruited from an organization for women psychologists as well as counselors in sexual
violence centers in a Midwestern state. All participants were female, with an average age of 44
years. Participants completed the TSIBS-L (Pearlman, 1996), a PTSD symptom checklist, a
brief questionnaire examining VT symptoms, the Brief Symptom Inventory (BSI; Derogatis,
1977), the Maslach Burnout Inventory (MBI; Maslach, 1982), and the COPE, a self-report
measure of coping strategies individuals utilize (Carver, Schier, & Weintraub, 1989). Two open-
ended questions were also utilized to gather qualitative data regarding the counselor's experience
of working with trauma survivors; this information was coded into seven different categories by
multiple raters.

Schauben and Frazier (1995) found support for the dose-response theory, as their data
indicated that larger caseloads were positively correlated with more disrupted beliefs (as
measured by the TSIBS-L), more self-reported symptoms of PTSD (as measured by the PTSD
checklist), and more self-reported VT. This data is particularly relevant as they were not associated with higher rates of self-reported Burnout, emphasizing that symptoms of VT are separate and different than symptoms of Burnout. Additionally, the researchers determined that active coping (i.e. coping strategies that directly address the stressor or its consequences) was associated with fewer PTSD and VT symptoms, less Burnout, and less negative affect; whereas avoidant coping was associated with nothing or increased symptom levels for participants. Finally, the researchers did not find support for their hypothesis that therapists with a personal trauma history would report more symptoms of VT. The data indicated that these participants were no more likely than non-trauma survivors to develop symptoms of VT. The qualitative aspect of this study revealed that many counselors experience positive experiences working with trauma survivors, such as the pleasure of experiencing growth with the client. In addition to therapist’s reporting difficulty with their own emotional reactions to trauma survivors, many participants reported that it was difficult dealing with building trust and maintaining boundaries in these relationships (Schauben & Frazier, 1995).

Cunningham (2003) examined how the type of trauma comparatively influences reports of VT. She conducted a quantitative study seeking to examine the VT impact on social workers serving two types of trauma victims: those surviving trauma at the hands of others (i.e., physical or sexual assault), and those facing the trauma of a cancer diagnosis and subsequent treatment. Cunningham hypothesized that the variable might be relevant to VT as the type of trauma can impact the likelihood of developing PTSD (APA, 2000). Cunningham had several hypotheses that explored specific schemas that are commonly disrupted by VT. She first hypothesized that participants with higher percentages of sexually abused clients in their caseload would experience more negative worldview in the areas of safety (Self- and Other-), trust of others, and
esteem of others. Additionally, she predicted that there would be a positive correlation between percentage of clients with cancer in a therapist’s caseload and negative worldview in the area of safety (Self- and Other-). Finally, Cunningham (2003) hypothesized that participants who treat sexual abuse survivors would report more disruptions in schemas related to trust of others and esteem for others than participants working with clients with cancer.

Cunningham (2003) utilized a sample of 182 social workers that were recruited from the International Society of Traumatic Stress Studies (ISTSS) and the Association of Oncology Social Workers (AOSW). Participants were predominantly female, with an average age of 45.5 years. The participants completed the TSIBS-L (Pearlman, 1996). Cunningham utilized the entire measure, although the subscales related to Self- and Other-Safety, Other-Trust, and Other-Esteem were of particular interest to the researcher.

Cunningham’s (2003) data indicated that those working primarily with sexually abused clients reported significantly more schematic disruptions than those participants working with clients with cancer on all of the schemas measured. This is not surprising given that traumatic exposure that involves violence from another human being puts an individual at higher risk for PTSD than other types of trauma (i.e., natural disasters; DSM-IV-TR, 2000). Cunningham’s data also indicated a significant negative correlation between years of experience in their field and VT symptoms, with those clinicians newer to the field at higher risk for developing VT. However, there was no significant correlation between current caseload size and symptoms of VT. Thus, the dose-response theory was supported in terms of years of experience but not in current caseload size.

Like Cunningham (2003), Way, VanDeusen, Martin, Applegate, and Jandle (2004) conducted a comparative investigation regarding the relationship between population served and
symptoms of VT. Way et al. (2004) included therapists working with sexual abuse survivors and therapists treating sexual abuse offenders in order to assess which group is more at risk for developing symptoms of VT. In addition, the researchers were interested in the level of VT in their participants, what variables (e.g., demographic, coping strategies, personal history) are associated with VT in sexual abuse populations, and if these variables also predict VT in working with other populations (i.e., sexual abuse offenders). The researchers hypothesized that VT symptoms would fall within the clinical range, personal trauma history would be associated with higher levels of VT, active coping strategies would be associated with fewer reported VT symptoms, avoidant (or negative) coping would be associated with more VT symptoms, and the symptoms of VT would be similar in clinicians treating sexual abuse survivors and clinicians treating sexual abuse offenders.

Way et al. (2004) included 347 participants from the Association for the Treatment of Sexual Abusers (ATSA) and the American Professional Society on the Abuse of Children (APSAC). The participants were divided into two groups: those who treat sexual offenders (some of whom also treated sexual assault survivors) and those who treat sexual abuse survivors. Of the participants, 40% were male, with 69% of participants over the age of 41. Participants completed demographic surveys, the IES (Horowitz, Wilner, & Alvarez, 1979), the Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998), and a brief survey of coping strategies that was created by the researchers. The CTQ was utilized to measure the therapist’s personal history of childhood maltreatment. It should be noted that this study only examined VT symptoms that are common to PTSD and that there was no measure included to assess for disrupted schemas. In order to compare the two groups on these variables, t-tests and chi-square analyses were utilized.
The researchers found that the two groups actually did not differ in their reported symptoms of VT, but that the level of VT symptoms for the majority of the participants (52%) fell within the clinical range (as measured by the IES). In order to explore their other hypotheses, Way et al. (2004) utilized a sequential multiple regression analysis. The researchers concluded that a personal maltreatment history was not associated with more symptoms of VT but less experience treating victims or offenders was positively correlated with reported VT symptoms. Additionally, the researchers did not find support for their hypothesis (and the hypothesis of the current study) that individuals using active coping strategies are more resilient to symptoms of VT. In fact, the participants reporting more traumatic reactions were actually utilizing more active coping strategies. However, as the authors point out, it is unclear whether these coping strategies came into effect before or after the symptoms of VT developed. This study highlights the prevalence of VT in therapists treating these difficult client cases, especially the difficulty experienced by therapists new to the field.

Ghahramanlou and Brodbeck (2000) researched the VT reactions of sexual trauma counselors hoping to gain information about what therapist factors influence the development of VT symptoms. The researchers hypothesized that more experience in the field, a personal trauma history, recent exposure to trauma survivors (within the last month), working in an emergency room, low job satisfaction, lower education, and younger therapist age would all be associated with increased VT symptoms.

Ghahramanlou and Brodbeck (2000) utilized a sample of 89 sexual trauma counselors working in rape crisis counseling centers throughout southern California. The participant sample consisted of 87 women and 2 men. The participants were administered two surveys created by the researchers: a demographic/work history form and a screener for personal traumatic history.
Additionally, they completed an IES (Horowitz, Wilnder, & Alvarez, 1979), the Modified Fear Survey III – Rape Related Fear Scale (MFS-Rape; Kilpatrick 1994), the Penn Inventory of PTSD (Penn; Hammarberg, 1992), and the Symptom Checklist-90-Revised Global Severity Index (SCL-90-R GSI; Derogatis, 1977). Again, the investigators in this study only examined the PTSD-like symptoms of VT and did not specifically assess for disrupted schemas.

Ghahramanlou and Brodbeck (2002) found moderate levels of psychological distress and VT symptoms in this sample. In fact, mean scores on the SCL-90-R were almost twice that of a normal sample. Utilizing regression analyses, the researchers found that younger counselors and counselors with a personal history of trauma put them at significantly higher risk for PTSD-like symptoms as well as symptoms of Secondary Traumatic Stress. These findings were strong, even when the researchers controlled for the counselors taking psychiatric medication and those in personal psychotherapy. The other variables Ghahramanlou and Brodbeck (2002) investigated as possible predictors of VT symptoms were not supported. This study lends support to personal trauma history and younger age putting therapists at increased risk for developing symptoms of VT. This is particularly relevant to the current study, as it investigates the impact of personal trauma history on VT symptoms in psychology graduate students, a typically younger population.

As previously mentioned, Pearlman and McCann (1990a, 1990b) hypothesized that VT distorted five different schemas. VanDeusen and Way (2006) examined the impact VT has on two specific schemas within clinicians treating either sexual abuse offenders or sexual abuse survivors. In their investigation, they examined the schemas of trust and intimacy for clinicians treating sexual abuse survivors or sexual offenders. The researchers hypothesized that a maltreatment history (i.e., personal trauma history) would be associated with higher levels of
disrupted cognitions related to trust and intimacy for others. Additionally, they postulated that greater use of coping strategies would be associated with lower levels of disruptions in these schemas. Finally, VanDeusen and Way (2006) hypothesized that clinicians treating offenders would report more disruptions in cognitions related to trust and intimacy with others than would clinicians treating abuse survivors.

VanDeusen and Way (2006) surveyed 111 sexual abuse survivor therapists and 272 therapists working with sexual offenders. All of the participants completed a survey with demographic/employment information as well as questions pertaining to personal history of maltreatment. In addition, the participants completed the TSIBS-L (Pearlman, 1996) and the Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998). Again, the CTQ was utilized to assess for previous traumatic exposure. The researchers utilized $t$-tests and chi-square analyses in order to compare the two clinician groups and a sequential multiple regression to test the study's hypotheses.

Van Deusen & Way (2006) found no connection between a personal history of childhood sexual trauma and disrupted schemas, although there was a significant positive correlation between childhood maltreatment (defined by the investigators as a history of sexual abuse, physical abuse/neglect, or emotional abuse/neglect) and disrupted schemas regarding trust and intimacy with others. They also found that these professionals had disrupted schemas in intimacy with others that were beyond the norms for mental health professionals. The participants, on average, did not have more disrupted beliefs regarding trust for others when compared to mental health professional norms. Like VanDeusen et al. (2004), the researchers in this study found no significant differences in schema disruption between the counselors working with sexual assault survivors versus those treating sexual offenders.
Way, VanDeusen, and Cottrell (2007) also investigated the occurrence of VT counselors providing sexual abuse treatment (both clinicians who treat survivors and clinicians who treat perpetrators). They were interested in how the clinician’s personal history of child maltreatment, age, and gender influenced the self-reported symptoms of VT (specifically, the schemas surrounding Self-Esteem and Self-Intimacy.

Way, VanDeusen, and Cottrell (2007) included 383 clinicians in their study. Participants completed the TABS (Pearlman, 2003) as well as the CTQ (Bernstein & Fink, 1998). Utilizing simultaneous multiple regression analyses, the researchers came to several conclusions. Firstly, they found that male gender predicted greater disruptions in the schemas related to Self-Esteem and Self-Intimacy. This is particularly interesting as many studies of VT include few or no male participants. The researchers hypothesized that increased risk for men may be due to guilt they experience in sexual abuse counseling as most sexual predators are male. Additionally, Way, VanDeusen, and Cottrell (2007) found that clinician age (specifically, younger age) and childhood emotional neglect predicted more disruptions in the self-intimacy schema. This study is particularly important in that it highlights that male mental health professionals are also at-risk (and perhaps even more so) for developing symptoms of VT.

Ortlepp and Friedman (2002) investigated the possibility of Compassion Fatigue (again, a broader concept that incorporates symptoms of VT with symptoms of Burnout) symptoms in a unique population. They gathered both quantitative and qualitative data regarding Compassion Fatigue from nonprofessional counselors in South Africa. Participants were bank employees that had volunteered and been specially trained to respond to their colleagues mental health needs following any of the many bank robberies in the area. Given that these individuals were not extensively trained in the areas of counseling and mental health, Ortlepp and Friedman (2002)
were particularly interested in their reaction to indirect trauma exposure. They hypothesized that indicators of Compassion Fatigue would be present, that bank robberies that involved serious injury or a death would be associated with higher rates of Compassion Fatigue, that the more bank robberies the participant worked with the higher rates of Compassion Fatigue would be present, that individuals with a personal trauma history would report more symptoms of Compassion Fatigue, that participants reporting higher rates of self-efficacy and sense of coherence would decrease their likelihood of Compassion Fatigue and increase their role satisfaction, and that trauma program coordination activities, stakeholder commitment to the program, and social support would be associated with fewer symptoms of Compassion Fatigue.

Ortlepp & Friedman (2002) included 130 participants in the quantitative phase of the study. Participants completed the Compassion Satisfaction/Fatigue Test (Stamm, 2002) in order to explore their symptoms related to VT and burnout, the Workplace Trauma Debriefers Scale (WTDS; Ortlepp, 1998) which purportedly explores aspects of debriefing such as program coordination, self-efficacy, and stakeholder commitment, and the Traumatic Stress Schedule (Norris, 1990). The Traumatic Stress Schedule was utilized to measure the participants’ previous exposure to traumatic material in their personal life. Additionally, participants completed the Crisis Support Questionnaire (Joseph, Andrews, Williams, & Yule, 1992) to investigate perceived social support related to a crisis, and the Orientation to Life Questionnaire (Antonovsky, 1987) which measures sense of coherence. Ortlepp and Friedman (2002) collected qualitative data through focused interviews with 30 of the nonprofessional counselors.

Ortlepp and Friedman (2002) found that only 11% of their participants were at moderate risk of developing Compassion Fatigue, 2% at high risk, and 8% at extremely high risk. Additionally, 95% of participants were at extremely low risk of experiencing Burnout. Most
individuals were at extremely high (3%), high (14%) or good (75%) potential for developing Compassion Satisfaction, as measured by the Compassion Satisfaction/Fatigue Test (Stamm, 2002). Additionally, self-efficacy, program coordination, stakeholder commitment, sense of coherence, and social support were significantly negatively correlated with symptoms of Compassion Fatigue and positively correlated with role satisfaction. The researchers found no support for the hypothesis that individuals with a personal trauma history would report more symptoms of Compassion Fatigue. Additionally, the participants who counseled in incidents in which a death or serious injury occurred did not report more symptoms of Compassion Fatigue than other participants. Finally, qualitative data supported the low-levels of Compassion Fatigue symptoms found in the quantitative data. Although many of the participants reported experiencing some symptoms of VT immediately following a crisis counseling intervention, none of the participants reported these symptoms lasting more than six weeks following the incident. In fact, most stated that the cognitive disruptions only lasted one to six days following the initial call to counseling. Ortlepp and Friedman (2002) concluded that these results are in line with the theory of Compassion Fatigue, which states that the more exposure to secondary trauma, the more likely an individual is to experience symptoms of Compassion Fatigue (Figley, 1995). As these participants were primarily bankers (and not trauma counselors), they may not have been exposed to enough indirect trauma to develop symptoms of Secondary Traumatic Stress.

Qualitative Research of Vicarious Traumatization

Although quantitative research provides valuable information regarding VT, some investigators have turned to qualitative methods in order to further evaluate the therapist's experience of VT. Hunter and Schofield (2006), for example, performed in-depth interviews
exploring counselors’ preferred self-care strategies for combating symptoms of VT. The researchers sought to investigate what coping resources therapist’s thought had helped them in managing their reactions to traumatized clients. Hunter and Schofield (2006) performed in-depth interviews with eight counselors in Sydney, Australia. The participants included one male and seven female counselors who ranged in age from 30 to 66.

The interviews elicited several coping themes, which the researchers categorized into self-care (e.g. relaxation, maintaining close relationships), professional (e.g., having a positive outlook, becoming detached in treatment), and organizational (e.g., supervision, balancing workload). Overall, the researchers noticed that the participants described their coping regiment as something they developed over time and experience (Hunter & Schofield, 2006). This raises questions as to the effectiveness of coping in younger, less experienced therapists working with trauma survivors.

Illife and Steed (2000) also conducted a qualitative investigation into the impact of trauma work on counselors. The researchers administered semi-structured interviews to 18 domestic violence counselors with a high caseload in order to explore their subjective experiences of VT symptoms. The participants reported cognitive disruptions, particularly in regards to their beliefs surrounding safety, world view, and gender power issues. The counselors also stated that when they began their work they often took on too much responsibility for their client (e.g. their client’s physical safety), which lead to more symptoms of VT. Additionally, the counselors often cited physical symptoms that resulted from indirect exposure to their client’s trauma, including nausea and shaking, which can also be symptoms of PTSD (APA, 2000).

*Where does VT occur?*
Much of the research regarding VT has focused on counselors, therapists, and psychologists working in trauma-focused environments. It is important to note, however, that the occurrence of VT symptoms has also been investigated and documented in an assortment of specific professional groups. These include populations like domestic violence counselors, (e.g., Iliffe & Steed, 2000; Jenkins & Baird, 2003), crisis line counselors (e.g., Dunkley & Whelan, 2006), social workers (e.g., Cunningham, 2003), and group leaders (e.g., Gabriel, 1994). In addition, symptoms of VT have been documented in non-mental health fields, such as emergency medical practitioners. Warren, Lee, and Saunders (2003) found that emergency medical practitioners in closer proximity to the 9/11 attacks reported experiencing more emotional distress than those emergency medical practitioners in a Midwestern state, as measured by a brief survey created by the researchers. Additionally, Jaffe, Crooks, Dunford-Jackson, and Town (2003) distributed an open-ended questionnaire related to symptoms of VT to 105 judges and found that 63% of the judges they surveyed had experienced one or more short- or long-term symptom of VT. Although no empirical research currently exists regarding the possibility of VT in substance abuse counselors, Fahy (2007) argued that these reactions might be even more common for those working with substance abuse clients because these clients often have histories of trauma coupled with chronic mental health symptoms which can be even more trying on the empathy of the mental health professional. The variety of situations in which symptoms of VT can develop is notable as it emphasizes that many individuals, with variable amounts of training and experience, working with a variety of clientele, are at risk for this distressing psychological reaction.
Resiliency to VT

Fortunately, not everyone who works with traumatized clients develops VT. As the articles previously reviewed indicate, the majority of participants in most VT studies are not reporting symptoms of disrupted schemas or distressful PTSD symptoms. These pieces of data have fueled critics like Bober & Regehr (2006), who argue that although many studies demonstrate that mental health professionals endorse VT symptoms, most do not reach actual clinical significance (e.g., Ortlepp & Friedman, 2002; Schauben & Frazier, 1995).

Kadambi and Truscott (2004), for example, conducted an investigation on the effects of VT on therapists working with three different populations: sexual violence survivors, individuals with cancer, and the general client population (which was used as a comparison group). The investigators hypothesized that the therapists working with trauma survivors would endorse significantly more symptoms of VT than the other therapists, and that this significant difference would be unrelated to levels of Burnout (supporting the idea that VT and Burnout are different concepts).

Kadambi and Truscott (2004) included 221 participants in their study, and divided the participants into three groups depending on their primary client population (i.e., sexual violence survivors, individuals with cancer, general population). Participants completed a demographic questionnaire, the TSIBS-L (Pearlman, 1996), the IES (Horowitz, Wilner, & Alvarez, 1980), and the Maslach Burnout Inventory-Human Services Survey (MBI; Maslach, Jackson, & Leiter, 1996).

Kadambi and Truscott's (2004) results were surprising. They found that only 5% of their participants reported symptoms of VT, as measured by elevations on the TSIBS-L and IES. In addition to this low level of VT, the researchers found no differences in group levels of VT
symptoms. That is, participants working with the general client population were just as likely to demonstrate symptoms of VT as therapists working solely with trauma survivors. Additionally, the researchers found that the TSIBS-L was significantly correlated with the MBI, suggesting that the concepts might be more overlapping than originally thought. The researchers concluded that “the majority of mental health professionals are not suffering significant emotional or psychological concerns, and in fact are coping well with the demands of their work” (p. 270).

With these findings in mind, Bober and Regehr (2006) argued that VT has been exaggerated in terms of its significance. Although this current research study is theoretically based in the assumption that VT is a significant topic to mental health professionals, one of the goals of the investigation is to further investigate if VT is a relevant issue for psychology graduate students, or if Bober and Regehr (2006) are correct in their belief that it has been overemphasized in the research literature.

Most mental health professionals are able to lead normal lives, and others appear to even thrive after indirect exposure to trauma. Since this pattern has been observed, researchers have begun investigating the possibility of Vicarious Posttraumatic Growth, or the improvement of the individual after experiencing indirect exposure to trauma (Arnold, Calhoun, & Tedeschi, 2005). Arnold, Calhoun, and Tedeschi (2005) conducted a qualitative study of vicarious posttraumatic growth with 21 mental health professionals treating traumatized clients. Firstly, all 21 participants reported experiencing some negative outcomes as a result of their work. For example, 19 of the participants reported experiencing intrusive thoughts and images of their clients’ trauma; this finding supports McCann and Pearlman’s (1990a; 1990b) theory that visual imagery is impacted by VT. Additionally, many of the participants reported experiencing negative emotional responses (e.g., sadness, anger, anxiety) and negative physical responses.
(e.g., weariness, pain) as a reaction to hearing their clients’ traumatic experiences. However, all 21 participants also reported positive outcomes of their work. Eighty-six percent of the sample reported that they had made gains in their personal qualities as a result of their work with trauma survivors, including increases in empathy, insight, tolerance, compassion, and sensitivity (Arnold, Calhoun, & Tedeschi, 2005). As Fahy (2007) points out, “It stands to reason that if there is vicarious trauma then there is also vicarious healing” (p. 203). Fahy’s suggestion appears plausible; if empathic engagement with a distraught trauma survivor client can result in sharing their distress, empathic engagement likely also allows the therapist to share in their eventual healing and growth. Although the focus of this current study will primarily explore stressful traumatic reactions, this research emphasizes the need to further explore the maladaptive and adaptive personal or behavioral factors that determine why some individuals have negative reactions to indirect exposure to trauma and others benefit from the experience.

Risk and Protective Factors for Developing VT

It is clear that some individuals are more at-risk for developing VT than others. As the previous quantitative and qualitative studies illustrate, research into VT has examined some possible factors that might influence the vulnerability of a particular therapist working with trauma survivors. Of these factors, the dose-response relationship, utilization of self-care strategies, coping strategies, and personal history of traumatic exposure have been highlighted as possible predisposing factors for developing – or resisting – the impact of VT.

The Dose-Response Relationship

Several researchers have investigated the influence caseload size and years of trauma therapy experience has on therapists working with trauma survivors. This theory of dose-response was previously mentioned in the literature review. Theoretically, these researchers
suggest that having more exposure to indirect trauma puts an individual at an increased risk for developing symptoms of VT. This is especially relevant to mental health professionals that frequently deal with high volumes of clients with trauma histories, such as social workers. As previously outlined, Schauben and Frazier (1995) found that counselors working with a higher percentage of sexual violence survivors in their caseloads (the social worker participants reported an average of 93.76% of their clients were sexual violence survivors) experienced significantly more disrupted schemas and beliefs (as measured by the TSIBS-L; Pearlman, 1996), more PTSD symptoms (as measured by a symptom checklist), and more symptoms of VT (as measured by a self-report of VT). Similarly, Warren, Lee, and Saunders (2003) found that emergency personnel who had worked directly with a victim of the 9/11 attacks or personally knew a survivor of the attacks were significantly more at-risk for VT symptoms than emergency personnel in Wisconsin who had only watched footage of the attacks on television. These findings appear to support the dose-response theory that the more frequent or more intense indirect exposure to trauma, the more at-risk individuals are to develop VT.

However, several research studies have indicated that the role of dose-response is not so clear-cut in relation to VT. Although a larger caseload (i.e. more indirect traumatic exposure) has been associated with increased reports of VT symptoms, several investigations have indicated that therapists newer to the field are actually more at-risk for symptoms of VT. This is counterintuitive, as therapists newer to the field have generally been exposed to fewer trauma narratives than field veterans. McCann and Pearlman (1990b) hypothesized that novice therapists would be more at-risk for developing symptoms of VT as they would not understand or know how to cope with these symptoms until they had gained more experience with trauma therapy. This theory has largely held up in the research. Pearlman and Mac Ian (1995), Steed &
Bicknell (2001), Cunningham (2003), Ghahramanlou and Brodbeck (2002), and Way et al. (2002) all found that newer therapists or younger therapists reported significantly more symptoms of VT than did more experienced trauma therapists. However, the relationship is not clear cut as Follette, Polusny, and Milbeck (1994) as well as Ortlepp and Friedman (2002) did not find this relationship in their data. Either way, it appears that the amount of exposure to indirect trauma plays a complicated but important role in vulnerability to symptoms of VT.

**Self-Care Strategies**

Self-care strategies are frequently discussed as an effective coping tool for combating and preventing VT symptoms. Cunningham (2003), for example, argued that social work training programs should provide students with experiences and strategies to help themselves process the experience of indirect traumatic exposure. These self-care strategies can cover a range of activities and behaviors. Hunter and Schofield (2006) conducted a qualitative study in which they asked counselors what self-care strategies had helped them cope with working with traumatized clients. Activities like relaxation, creating pre/post-session rituals, using personal therapy, physical exercise, and engaging in supervision were commonly cited as helpful self-care strategies for preventing and combating VT. Likewise, Dunkley and Whelan (2006) found that telephone counselors with a strong supervisory support were less likely to experience cognitive disruptions related to their work. Ortlepp and Friedman (2002) also found evidence for therapist-care at the organizational level, as their data demonstrated that the higher the participants’ level of sense of organizational coherence, the fewer symptoms of VT they reported.

Although many researchers have suggested that these self-care strategies should be taught to both new and experienced clinicians, it still remains unclear exactly what strategies are
helpful. Bober and Regehr (2006), for example, surveyed 259 therapists and found no
association between the belief that self-care was important and the time the participants actually
invested in these activities. Additionally, the investigators found that the actual time dedicated to
these self-care strategies was not associated with fewer reported symptoms of VT (as measured
by the IES and the TSIBS-L). As such, there are still questions as to the efficacy of these
recommended self-care strategies.

These self-care strategies represent specific types of coping. Although these self-care
strategies have been theoretically proposed as good coping methods, empirical research has
generally looked at coping in a broader context. Coping as a variable for developing VT
symptoms will be reviewed in the next section.

Coping

Coping has also been investigated as possible risk and/or protective factor in the
development of VT symptoms. Some of the studies already highlighted explored this concept,
which will be outlined in greater detail now, as it is one of the variables explored in the current
study.

Problem-focused vs. emotion-focused coping. Lazarus and Folkman (1984) created a popular
theory of coping that focuses on methods of coping (or dealing with stress) that are either
problem-focused or emotion-focused. Lazarus and Folkman (1984) theorized that when
individuals encounter a stressor, they first appraise the situation, plan an action to minimize the
impact of the stressor, and then carry out that plan. This final part of that process – acting in an
effort to minimize the impact of a stressor – is referred to as coping. According to their theory,
problem-focused coping tends to center around actively doing things that will help to fix the
problem or alleviate the stressor. This strategy generally serves an adaptive function. Emotion-
focused coping, on the other hand, deals with regulating one’s emotions (i.e. anxiety, sadness) that are associated with the stressor. This coping method can be either adaptive or maladaptive. When the emotion-focused coping takes a turn toward an *avoidance* of emotions (i.e. denial of negative affect), the individual is more likely to have difficulty in coping with the stressor (Lazarus & Folkman, 1984). The impact of poor coping can be devastating to an individual as it increases stress levels which can lead to social difficulties, psychological symptoms, and physiological challenges (Lazarus & Folkman, 1984).

Continuing with this theory of coping, Lazarus (1993, 1995) emphasized that emotion-focused coping and problem-focused coping often co-occur or alternate moment-to-moment. They can also vary depending on the environment and specific stressor. However, it has been argued that individuals may become more accustomed or habituated to use specific coping strategies for specific situations across time, which can lead to a more pronounced pattern of coping (Carver & Scheier, 1994). This current research endeavor will operate on this assumption that coping behaviors do form a pattern in relation with the specific stressor being dealt with; in this case, the stressor being indirect traumatic exposure.

*Avoidant coping strategies.* Since Lazarus and Folkman’s (1984) theory, much of the research regarding coping strategies has built on the theory and focused on the maladaptive coping techniques generally labeled as “avoidant” (Carver & Scheier, 1994). Avoidant coping strategies can involve activities like distracting one’s self, minimizing time spent alone, or drinking or sleeping in an effort to avoid interactions with or thoughts of the stressor. Although there is still controversy over whether coping can be a style or is simply a string of utilized strategies, the research has been fairly consistent in the association of avoidant coping strategies with more negative outcomes. As Carver and Scheier (1994) outline in their review of the
literature, these avoidant strategies include behaviors like wishful-thinking (Bolger, 1990), denial (Carver et al., 1993), escapism (Rhode, Lewinsohn, Tilson, & Seely, 1990), self-blame (McCrae & Costa, 1986), distraction (Carver, Scheier, & Weintraub, 1989), and giving up the goals associated with the stressor (Carver, Scheier, & Weintraub, 1989). These responses generally avoid the problem-focused approach and result in more dysfunctional coping. These avoidant coping strategies have been found maladaptive in situations like dealing with breast cancer (Carver et al., 1993) and coping with the challenging process of in vitro fertilization (Litt, Tennen, Affleck, & Klock, 1992).

*Coping strategies and vicarious traumatization.* As previously discussed, several researchers have examined the impact of coping on the development of VT. Dunkley and Whelan (2006), for example, found that avoidant coping led more telephone crisis counselors to higher rates of VT symptoms, whereas actively facing the problem and coping directly (non-avoidant) were associated with fewer symptoms. Likewise, Schauben and Frazier (1995) found that professionals working with sexual violence survivors were more likely to use active coping methods, and that these were associated with lower levels of VT. Johnson and Hunter (1997) also found support for the theory of active and avoidant coping. Their research indicated that sexual assault counselors experienced greater emotional symptoms as a result of their work and used more escape/avoidance coping strategies when compared to their counseling peers whom did not specialize in treating sexual assault survivors. Steed and Bicknell (2001) discovered a U-shaped relationship between years of experience and avoidant coping strategies. That is, therapists with the least and the most experience were more prone to use avoidant coping strategies and thus more prone to symptoms of VT. This study lends clear support to the idea
that avoidant coping strategies put individuals (particularly less experienced therapists) at
increased risk for developing symptoms of VT.

Although several studies have supported the idea that avoidant coping leads to greater
research did not reflect this relationship. In fact, the investigators found that of the participants
who were treating either sexual assault survivors or offenders, both positive and negative coping
strategies were associated with more symptoms of VT. The researchers hypothesized that
participants experiencing more symptoms of VT may have begun to engage in positive coping
strategies (and reported those strategies for the investigation) as a means of combating their
symptoms. Regardless of the reason, it is clear that coping likely plays some type of role in the
development or resiliency to VT, and therefore remains a critical variable to explore.

Therapist's Personal Trauma History

Another possible risk factor commonly discussed in the VT literature is the personal
trauma history of a therapist working with trauma survivors. This factor seems relevant given
the high level of victimization within the mental health professions. For example, Schauben and
Frazier (1995) found that 80% of their psychologist participants reported experiencing at least
one type of victimization throughout their lifetime. Within the psychology graduate student
population, Adams and Riggs (2008) found that 38.7% of participants reported a history of
personal trauma. Theoretically, many researchers believe that this history of victimization may
put the therapist at greater risk for developing VT or other countertransference issues. Pearlman
and Saakvitne (1995) explain that therapists who have dealt with their own traumatic
experience(s) may have these feelings of insecurity, distrust, isolation, etc. brought to their
attention again by vicariously experiencing their client's trauma. According to Pearlman and
Saakvitne (1995), reexperiencing their own traumatic reactions can increase the therapist’s risk for VT, and can create an iatrogenic therapeutic relationship, as the therapist may be more likely to avoid the client’s trauma in an effort to avoid their intense reactions.

Some of the research that examined this hypothesis has supported the theory. Ghahramanlou and Brodbeck (2000), Pearlman and Mac Ian (1995), and Way, Van Deusen, and Cottrell (2007) all found that participants with a personal history of trauma or maltreatment were more at-risk for symptoms of VT. However, Ortlepp and Friedman (2002), Van Deusen and Way (2006), and Way, Van Deusen, Martin, Applegate, and Jandle (2004) all investigated the therapist’s survivor status and found no connection between a personal history of trauma and symptoms of VT. This inconsistency in the research could be due to the diverse traumatic reactions and recovery that therapists may have experienced. For example, a therapist who has processed and worked through his or her traumatic experience may be even more capable of empathically accepting the client and sharing his or her own personal traumatic growth within the therapeutic relationship. Perhaps in these instances, prior experience with healing and processing trauma in their own lives may actually protect some individuals from developing symptoms of VT.

Vicarious Traumatization and Psychology Graduate Students

Although there has been little research to date concerning psychology graduate students and their risk for VT or the coping mechanisms associated with their risk for VT, its investigation appears to follow logically from the research and theoretical literature. In this section, the published empirical research indicating that graduate students may be at-risk for VT as well as the theoretical literature that suggests they may be more at-risk than other mental health professionals because of their lack of experience, lack of knowledge and/or ability for
self-care, their additional life stressors, and their newly developing coping techniques available for dealing with indirect traumatic exposure will be outlined.

*Quantitative Research of Vicarious Traumatization and Psychology Graduate Students*

To date, the only published investigation into the risk of VT for psychology graduate students was conducted by Adams and Riggs (2008). The investigators were interested in the levels of VT in this population as well as the role that personal history of trauma, experience level, trauma-specific training, and defense style play in the development of VT symptoms within this participant sample. The investigators explained that although defense mechanisms have not been examined in relation to VT, they should since unconscious defense styles influence coping styles, which have been researched as a risk/protective factor for VT. Adams and Riggs (2008) conducted this study as an exploration, and thus no formal hypotheses were stated.

Adams and Riggs (2008) included 134 participants from APA-accredited clinical and counseling psychology graduate programs in Texas. The participants completed a background questionnaire that assessed for demographics as well as prior history of victimization and training in trauma therapy. VT was measured by utilizing the Trauma Symptom Inventory (TSI; Briere, 1995), a broad-based self-report measure that taps into a variety of reactions following traumatic exposure (e.g., dissociation, depression, dysfunctional sexual behavior). Defense style was measured with the Defense Style Questionnaire (DSQ; Bond & Wesley, 1996). The measure identifies four different defense styles. The Maladaptive defense style involves the most immature defenses, and includes defenses like acting out, withdrawing, and projection. The Image-distorting defense style involves defensive “splitting the image of self and other into good and bad and includes derivatives of omnipotence, splitting, and primitive idealization” (p. 28).
The Self-sacrificing defense style and the Adaptive style are considered the more mature of the defense styles. The Self-sacrificing style involves the need to maintain an image of being helpful and altruistic. Finally, the Adaptive defense style includes positive coping strategies and defense mechanisms like suppression, humor, and sublimation (Adams & Riggs, 2008).

Adams and Riggs (2008) came to several interesting conclusions after their data analysis. They found that 38.7% of their participants reported a history of personal trauma. A quarter of the participants reported working with trauma survivor clients in therapy without any formal training related to treatment of trauma survivors. Generally, TSI total scores were not clinically significant, with clinically significant scores for only 8-15% of participants for each clinical scale. However, 31% of the sample scored in the clinically significant range for at least one scale on the TSI, indicating some clinically significant symptoms of trauma reaction. Additionally, 7.0% of participants self-reported a maladaptive/image-distorting defense style (these two defense styles were collapsed into one category due to the small sample of participants that reported these styles), 51.2% reported a self-sacrificing defense style, and 41.8% reported an adaptive defense style.

Utilizing multifactorial MANOVAs, and follow-up ANOVAs, Adams and Riggs (2008) came to several conclusions. Firstly, an Adaptive defense style was consistently associated with the lowest levels of VT as measured by the five scales on the TSI. Additionally, the participants with self-sacrificing defense style were associated with significantly higher rates of VT symptoms than those with the adaptive defense style. This is important, as over half of the sample reported a self-sacrificing defense style. The maladaptive/image-distorting style was also significantly associated with VT symptoms, particularly on the scales measuring impaired self-reference and dissociation.
Adams and Riggs (2008) also found an interesting relationship between defense style and the therapist's trauma history. Although having a personal trauma history and the adaptive defensive style did not put the individual at any increased risk for VT symptoms, having both a trauma history and self-sacrificing defense style put participants at an increased risk for VT symptoms as opposed to no trauma history and a self-sacrificing defense style. That is, if an individual employs an adaptive defense style, their risk for VT symptoms is not influenced by whether or not they have a trauma history. On the other hand, a participant with a self-sacrificing defense style is significantly more likely to develop VT symptoms if they have a personal trauma history. Surprisingly, personal trauma history did not interact with the maladaptive/image-distorting defensive style, although the investigators argued this may be due to the small size of the group that fell into this defense style category. Although these findings need more research, the investigators hypothesized that the defense styles and interaction with personal history of trauma might explain the many contradictory findings within the VT literature regarding personal trauma history as a risk factor for developing VT symptoms.

Finally, Adams and Riggs (2008) also found that participants who had less experience working with trauma survivors (0-2 semesters; as measured by the self-report of how many semesters spent working with trauma survivors) were significantly more at risk for VT symptoms than individuals who had spent more semesters working with trauma survivors. Additionally, participants who reported no training or minimal training in treatment with trauma survivors reported more VT symptoms, regardless of defense style.

Experience

The field of psychology has yet to investigate the possible susceptibility for VT in psychology graduate students training to be clinicians. However, it has been demonstrated that
less experienced counselors are more at-risk for VT (e.g., Pearlman & Mac Ian, 1995). In addition, Ortlepp and Friedman (2002) found that those counselors who felt their training was inadequate to treat trauma survivors were more at risk for VT as they often felt hopeless in their therapeutic attempts. As graduate students are generally therapeutically less-experienced and have yet to finish their training in working with survivors, it seems that they may be especially vulnerable to developing VT.

Pearlman and Saakvitne (1995) argue that newer therapists may be more vulnerable to VT symptoms because the dramatic feelings often evoked in working with trauma survivors (i.e. anger, disgust, sexual arousal, etc.) may be especially unfamiliar and frightening to the new therapist. Additionally, shame or confusion may prevent the therapist from seeking supervision regarding these complicated reactions. This lack of supervision can be devastating for both the new trauma therapist and their clients. Pearlman and Saakvitne (1995) write, “in the absence of appropriate supportive trauma therapy supervision, this new therapist is at much higher risk for becoming caught in troublesome therapeutic situations, losing self-esteem, wounding clients, and experiencing VT” (p. 345). Many psychology graduate students working with trauma survivors may not have quality supervision or may be too overwhelmed to seek it.

**Self-Care**

An increasing amount of literature has been published concerning the self-care strategies that may aid in combating VT. For example, Rothschild (2006) found that self-care is an important aspect to facilitate resilience. Sadly, however, most psychotherapists indicate that their graduate training did not provide them with adequate knowledge regarding the difficult work of treating trauma survivors (e.g., Adams & Riggs, 2008; Pope & Feldman-Summers, 1992). O’Halloran & O’Halloran (2001) published information concerning teaching self-care to
psychology graduate students, and they divided the self-care options into four categories: biobehavioral strategies (i.e. eating well, sleeping), affective and cognitive strategies (i.e., journaling, monitoring maladaptive coping strategies), relational strategies (i.e., seeking social support), and spiritual strategies (i.e. practicing alone or within a community). Although these techniques may be effective in combating VT, it appears few graduate programs are adequately preparing students to work with this difficult population (Adams & Riggs, 2008; Pope & Feldman-Summers, 1992). As previously discussed, these self-care strategies for VT have received mixed support and criticism in the literature (Bober & Regehr, 2006).

One of the primary self-care strategies often recommended in the literature surrounding VT is personal therapy for the therapist. Research shows that this is not uncommon and that most therapists and psychologists have at one time or another engaged personal therapy (e.g. Holzman, Searight, & Hughes, 1996; Norman & Rosvall, 1994). However, graduate students in psychology appear less willing to seek out these mental health services (Dearing, Maddux, & Tangney, 2005). This could be due to underlying beliefs within the mental health community that professionals should be able to care for their own symptoms and psychopathology. As Neumann and Gamble (1995) write, “implicit and explicit messages picked up in the training programs…imply the therapist should be above human frailty” (p. 344-345). Dearing, Maddux, and Tangney (2005) found that the best predictors of mental health help seeking in psychology graduate students included confidentiality issues and perceptions of the importance of personal therapy for professional development. This data is relevant as it emphasizes two possible barriers to graduate students accessing therapy for VT symptoms. Firstly, the available services in graduate programs are oftentimes within their own department, which can lead to fears of confidentiality breeches. Additionally, if Neumann and Gamble’s (1995) belief is true and
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graduate training programs are not encouraging students to seek mental health treatment in order to grow professionally, the students are less likely to take advantage of the resources that might help decrease their vulnerability to developing symptoms of VT. Given this information, it appears reasonable to hypothesize that graduate students may be reluctant to pursue personal therapy to combat symptoms of VT, leaving them (and their clients) increasingly vulnerable to the harmful effects of these symptoms.

Additional Stressors

In addition to having less therapeutic experience and possessing little knowledge of self-care, psychology graduate students likely have many other responsibilities and stressors (i.e. dissertation, supervision, classes) that may interfere with their ability to effectively cope with indirect exposure to trauma. In addition, mental health students are likely holding various other roles in their life, as well as being geographically distant from their primary support systems (Dearing, Maddux, & Tangney, 2005). Finally, studies have confirmed that psychologists are likely to report feelings of depression, loneliness and anxiety (Mahoney, 1997). Given that those who work in psychotherapy have to cope with all of these additional stressors, it follows that psychology students may be more likely to use avoidant coping strategies to deal with their reactions to a client's trauma, which may place them at greater risk for VT.

Development of Coping Styles

Finally, it is important to consider Lazarus’ (2000) theoretical belief that coping styles change across situations, environments, and time. Although research has gained some information concerning the risk for VT in experienced therapists, it is important to consider that their coping styles may be at a very different stage of development than fledgling psychologists. If graduate students are utilizing less-developed coping strategies to deal with their reactions to
traumatized clients, it is necessary to determine how those strategies are impacting their experiences especially at this point in their young careers. The development of coping appeared in Steed and Bicknell's (2001) data, which indicated that the least experienced were more likely to use avoidant coping strategies and (as a result) experience more VT symptoms. Additionally, Hunter and Schofield's (2006) qualitative study of VT included eight trauma counselors who reported that they developed the coping strategies they use to manage their VT symptoms over time and with more professional experience. This information supports the idea that less experienced mental health professionals (e.g., psychology graduate students) may not have developed effective personal strategies for coping with the trying work of treating trauma survivors.
Chapter II
Rationale and Hypotheses

Most people have at some point in their lives felt uncomfortable, frightened, or even agitated as a result of hearing or watching a recreation of a traumatic event. Whether you turned off the television during media coverage of the Virginia Tech Massacre or experienced unpleasant dreams after reading a scary book, it is almost a universal challenge to cope with the impact of indirect exposure to a horrific event. Given how common these reactions to indirect trauma are in our everyday lives, it is likely that a therapist who is exposed to horrific traumatic narrative on a daily basis may experience some changes in worldview and perhaps some symptoms mirroring those of PTSD (APA, 2000). Thus, the schema disruptions, hyperarousal, intrusion, and avoidance symptoms common in VT seem plausible — and problematic.

As VT has been empirically explored and assessed, its prevalence remains largely unclear, and many questions regarding its etiology, prevention, and treatment linger. However, even if the research is slow and the prevalence rates appear relatively low (e.g., Bober & Regehr, 2006), the potential impact of VT on the individuals it touches — and those around them — makes VT a worthy empirical topic. Assaults to the schemas regarding safety, esteem, trust/dependency, intimacy, and power/control alter an individual’s worldview, attitudes, and interpersonal relationships (McCann & Pearlman, 1990a; 1990b). Additionally, the symptoms common to PTSD can dramatically disrupt an individual’s ability to function and thrive. Should this negative impact reverberate and impair the therapist’s ability to treat trauma survivors, as McCann and Pearlman (1990b) hypothesize, the effects of VT could be problematic to the survivors who need of empathy and therapeutic intervention. Given this potential for harm to
traumatization, it will investigate both schematic disruption and PTSD-like symptoms. This operational definition of VT as including both of these symptom clusters adheres to the original theory of VT as well as several subsequent studies (e.g., Bober & Regehr, 2006; Dunkley & Whelan, 2006; Kadambi & Truscott, 2004; Pearlman & MacDonald, 1995). In addition, using both schema disruption and PTSD-like symptoms as dependent variables allows this research to examine more precisely what types of VT symptoms (if any) the participants may experience.

Another problematic issue within the VT research that this study aims to address is the use of measures to assess symptoms of VT. For example, in order to measure schema disruption, studies have used the TSIBS-L (Pearlman, 1996), the TABS (Pearlman, 2003), or the Compassion Fatigue Scale (Figley, 1995). VT studies have also varied widely in their assessment of PTSD-like symptoms, utilizing the IES (Horowitz, Wilner, & Alvarez, 1979), the IES-R (Weiss & Marmar, 1995), the Brief Symptom Inventory (Derogatis, 1977), the Penn Inventory of PTSD (Hammarberg, 1992), the Modified Fear Survey III – Rape Related Fear Scale (Kilpatrick, 1994), the SCL-90-R (Derogatis, 1979), or simple researcher-created symptom checklists. Without some consistency in measurement, it is difficult to compare and interpret findings related to VT. This study will utilize the most updated versions of the most frequently used measures: the TABS and the IES-R in an effort to assess the schema disruptions and PTSD-like symptoms of VT. This will hopefully increase the potential that the findings of this study can be generalized and compared to previous and subsequent empirical investigations of VT.

The variables in the current study have been carefully selected after reviewing the relevant literature regarding VT. As previously described, the research literature has generally supported the idea that avoidant (or maladaptive) coping strategies are associated with increased reports of VT symptoms. However, to date there has been no published investigation into the
coping strategies of psychology graduate students and the subsequent relationship to symptoms of VT. However, the empirical literature provides several indications that the psychology graduate student population might be particularly at-risk for the utilization of avoidant coping strategies and subsequent VT symptoms. Dearing, Maddux, and Tangney (2005), for example, argued that graduate students generally manage more stressors than more seasoned psychologists in that they are oftentimes living in debt, far from their families, and managing the responsibilities of class, practicum, and dissertation work. These competing stressors may explain why Steed and Bicknell (2001) found that newer therapists were more likely to use avoidant coping strategies and report more symptoms of VT. Adams and Riggs (2008) also found that psychology graduate students were most likely to use a self-sacrificing defense style (which can be associated with avoidant coping strategies) and that this defense style was significantly correlated with more self-reported symptoms of VT. Finally, as previously described, several theorists and investigations have indicated that coping (and coping related to VT, specifically) may be developed over time (e.g., Hunter & Schofield, 2006; Lazarus, 2000; Steed & Bicknell, 2001). If that is the case, then psychology graduate students, who are generally newer to work with trauma survivors, may not have yet developed effective coping methods for managing the repeated exposure to indirect trauma. This lack of experience in coping might make them more vulnerable for developing symptoms of VT.

In addition to coping, the VT literature has highlighted the therapist’s personal trauma history as a possible influencing factor for developing VT symptoms. Most studies have come to the conclusion that a personal history of trauma is positively correlated with VT symptoms (e.g., Ghahramanlou & Brodbeck, 2000; Pearlman & Mac Ian, 1995; Way, Van Deusen, & Cottrell, 2007). However, others have found no link between a personal history of trauma and VT
symptoms (e.g., Ortlepp & Friedman, 2002; Van Duesen & Way, 2006; Way et al., 2004). McCann and Pearlman (1990b) originally hypothesized that a personal history of trauma would increase the risk for VT as the client’s narrative would awaken any unresolved traumatic reactions and further disrupt any schemas that had been disrupted by the original traumatic exposure. If this theory is true, psychology graduate students may be particularly vulnerable to the connection between prior trauma exposure and VT symptoms. Firstly, as graduate students tend to be younger than their professional counterparts, any childhood trauma may be more recent, and any traumatic reaction might be stronger. Additionally, Dearing, Maddux, & Tangney (2005) found many psychology graduate students do not seek personal therapy due to concerns about confidentiality and stigma within their training program. This trend could be particularly problematic given that Adams and Riggs (2008) found that 38.7% of their psychology graduate students reported a history of personal traumatic exposure. Adams and Riggs (2008) also concluded that participants who reported a self-sacrificing defense style and a personal history of trauma were more likely to report symptoms of VT. Given that over half of their participants used a self-sacrificing defense style, it follows that many graduate students with traumatic histories may be at increased vulnerability for developing symptoms of VT. In addition, Adams and Riggs (2008) found that participants who had actively dealt with their trauma exposure were less likely to report symptoms of VT, therefore, this investigation will assess the current influence the history of trauma has on the participants life.

In addition to coping strategies and personal trauma history, the VT research literature has also investigated the impact of amount of exposure to trauma survivor clients. Again, the research into this variable has resulted in somewhat inconsistent conclusions. Schauben and Frazier (1995) and Bober and Regehr (2006), for example, found that a higher current caseload
of clients was associated with increased symptoms of VT. This variable is slightly different in its application to psychology graduate students. Unlike the trauma counselors and sexual violence therapists that these studies generally include, psychology graduate students usually complete several short-term practica over the course of their training, which is usually aimed at giving the student a variety of clinical experiences. Thus, many of this study’s participants will not have experienced a high caseload of clients with a history of trauma, and if they have, it might have only been for a relatively short period of time. Therefore, this study will investigate the extent to which a participant has been exposed to clients with trauma related presenting problems by asking how many clinical hours (i.e., therapy and assessment hours) have been devoted to work with trauma survivors. As Adams and Riggs (2008) found that psychology graduate students with fewer semesters working with trauma survivors was associated with more symptoms of VT, it is expected that participants who report fewer hours spent in therapy with trauma survivors will be associated with more self-reported symptoms of VT.

Finally, the previous research regarding VT has run into difficulty as the participant samples have oftentimes been very heterogeneous. Large variability in the sample’s age, occupation, and years of experience have made it sometimes even more difficult to determine what might cause any correlations or associations in the data. Although the psychology graduate student population has some variability, all participants in this sample will be in post-graduate training in psychology, most will be in the 20-35 age range, and all exposure to indirect trauma for this study’s purpose will occur within the occupational duties of a psychology student. Additionally, although there may be some participants who had years of mental health work experience prior to enrolling in graduate school, most will be very new to the field.
In addition to the methodological advantages of the current research sample, it was selected for several other reasons. Primarily, the research literature has indicated that newer therapists may be particularly at-risk for developing symptoms of VT, yet the graduate student population has been largely ignored (Adams & Riggs, 2008). This is particularly striking since several researchers and theorists have argued that training programs should take preventative measures to protect their students from developing VT symptoms (e.g., Adams & Riggs, 2008; O’Halloran & O’Halloran, 2001). This study aims to provide more information regarding whether VT is, in fact, a relevant concern for psychology graduate students. Additionally, if the independent variables are associated with more reported VT symptoms this could provide clinical training sites with information about how to best prevent symptoms of VT in their students and which students may be particularly at-risk for developing these symptoms.

This study also aims to build and improve upon the one published study to date concerning VT in psychology graduate students. Adams and Riggs (2008) began the exploration of the topic in this specific population and found support for VT’s existence in psychology graduate students. However, they did not investigate coping strategies, instead they opted to measure how students manage the stress of indirect exposure to trauma with the psychodynamically-inclined defense mechanisms. Although these findings are informative, it is difficult to compare to other studies that have generally measured coping strategies, not defense styles (e.g., Bober & Regehr, 2006; Dunkley & Whelan, 2006; Schauben & Frazier, 1995; Way et al., 2004). Additionally, they did not investigate the disruption of schemas, which is central to theory of VT. Finally, although Adams and Riggs (2008) investigated how participants’ amount of exposure to trauma survivors impacted VT symptoms, they measured the amount of exposure through semesters spent working with some trauma survivors. This leaves plenty of room for
variability. For example, one participant may have spent a semester in community mental health and treated a survivor of domestic violence in six sessions, while another participant spent a semester working at a child abuse agency, treating only survivors of child abuse. Thus, this study will measure the amount of time exposed to indirect trauma through a report of clinical hours spent with trauma survivors, in an effort to specify our information on this variable.

Therefore, the following null hypotheses will be made in this empirical study:

HO I: There will be no statistically significant differences between Active and Avoidant Coping groups (as defined by the Brief COPE)* in terms of their self-reported levels of VT (as defined by the TABS and the IES-R).

HO II: There will be no statistically significant differences among participants with no self-reported personal trauma history, those with a self-reported personal trauma history with mild effect, and those with a self-reported trauma history with moderate effect in terms of their self-reported levels of VT (as defined by the TABS and the IES-R).

HO III: There will be no statistically significant differences among participants in the three categories of clinical hours spent with trauma survivors in terms of their self-reported levels of VT (as defined by the TABS and the IES-R).

*The factor analysis may not confirm the theorized factor structure (i.e., Active Coping and Avoidant Coping). If the factor analysis reveals statistically different factors, those factors will be used instead of Active Coping and Avoidant Coping.
Chapter III

Method

Participants

Participants for this study will include individuals who are currently enrolled in a psychology doctoral or masters program and are currently working with trauma survivors in their training experience. The study will include both male and female participants, although several studies of VT have only included female participants. This decision was made for two reasons. Firstly, Way, VanDeusen, and Cottrell (2007) found that male gender predicted greater disruption in cognitions related to self-esteem and intimacy, suggesting that male mental health workers may be impacted by VT differently than their female counterparts. Additionally, psychology graduate students (as measured by the APA Student Affiliates Enrollment survey; APA Center for Workforce Studies, 2008) are primarily female, with only 18.9% of APA graduate student members reporting male gender. Therefore, although it is expected that the majority of participants will report female gender, it is worthwhile to include male participants in order to reflect the current demographics of psychology graduate students. The participants will all participate on a voluntary basis and will not need to provide their name or any identifying information for the purposes of the study. Demographic information regarding the participants will be gathered and displayed in a table. Ideally, the demographic characteristics of the study participant sample will reflect the demographics of the psychology graduate student population.

An a priori power analysis was conducted in order to determine the ideal number of participants for this study. Utilizing an alpha level of 0.05, a standard medium effect size, and a power of 0.95, the MANOVAs in this study will ideally need 159 participants. In Adams and Riggs’ (2008) investigation of VT in psychology graduate students, 134 of the 355 packets
distributed to graduate students in Texas were returned and included in the study. Given that the current study will invite participants from all over the country and will feature a convenient online format, the researcher is optimistic that the sample size will render adequate power.

Measures

Trauma and Attachment Belief Scale: Participants will complete the Trauma and Attachment Beliefs Scale (TABS; Pearlman, 2003; see Appendix A). The TABS is the slightly updated and most current version of the TSIBS-L (Pearlman, 1996). The TABS and the TSIBS-L have been used in most VT studies specifically examining disrupted schemas (e.g., Bober & Regehr, 2006; Dunkley & Whelan, 2006; Kadambi & Truscott, 2004; Pearlman & Mac Ian, 1995). As previously mentioned in the review of the literature, Pearlman (2003) claims that the TABS and the TSIBS-L are psychometrically equivalent; with the TABS only differing in its readability (which was altered in an effort to assess adolescents) and an additional four items. Although the TSIBS-L has been utilized and psychometrically evaluated in several studies (e.g., Adams, Matto, & Harrington, 2001), the updated TABS has not been specifically evaluated in any known published studies. Pearlman (2003) offers the evaluations of the TSIBS-L and the TABS (from her own research) as evidence of the TABS’ psychometric validity.

Pearlman reported that “The TSI Belief Scale is intended to measure disruptions in beliefs about self and others that arise from psychological trauma or from vicarious exposure to trauma material through psychotherapy or other helping relationships” (Pearlman, 1996, p. 415). Pearlman defined disruptions as “a restriction of one’s beliefs that affects his or her ability to relate to others in a healthy manner” (Pearlman, 2003, p. 13). It is important to note that the TABS only examines the disrupted schemas common to VT and does not assess the broader PTSD-like symptoms commonly associated with VT. Pearlman reports that the measure is
intended to be an assessment tool for the effects of direct exposure to trauma and “It is also intended, in conjunction with other measures, to diagnose the existence of vicarious trauma in helpers” (Pearlman, 1996, p. 415). For the purposes of this study, the TABS will be used in conjunction with the IES-R to assess for VT symptoms.

As previously mentioned in the literature review, the TABS has undergone several phases of development. The most recent version of the measure is the Trauma and Attachment Beliefs Scale (TABS; Pearlman, 2003). As previously mentioned, although the TABS is the chosen measure for this study, studies examining the TSIBS-L can also be examined as evidence for the validity of the TABS. This is for several reasons. Firstly, the author of the measures reported that the TSIBS-L and the TABS are psychometrically equivalent and thus can be used interchangeably. She presents data from a study of 260 college students who took both the TSIBS-L and the TABS within several weeks of each other. The correlations between the two tests were $r=.98$ for the total score, with the subscales ranging from $r=.71$ (Other-Safety) to .92 (Other-Trust). The only improvement the TABS made on the TSIBS-L was the rewording of several items to make them more reader friendly and an additional four items. Finally, the TSIBS-L is more commonly used within the VT literature.

The TABS includes 84 items related to the theorized schemas commonly disrupted by VT. The measure is based on the theory of VT. The items are presented with a six point Likert scale ranging from 1= disagree strongly to 6= agree strongly and generally takes participants about 10 to 20 minutes to complete (in paper-and-pencil format). The participant is instructed to use the scale to indicate the extent to which they agree with the statement in the item (e.g., “I don’t believe what people tell me”). Raw scores are converted to T-scores. Higher scores reflect more disruptions in belief (T-scores above 60 are considered to be high scores). The measure
includes subscales related to the five theorized schemas in both their relation to others and self. The scales include: Self-Safety, Other-Safety, Self-Trust/Dependency, Other-Trust/Dependency, Self-Esteem, Other-Esteem, Self-Intimacy, Other-Intimacy, Self-Power, and Other-Power. Additionally, the measure renders a total score, which reflects the general level of disrupted schemas. The current study will use only the Total Score in order to assess the general disruption of schemas. Exploratory analyses will be performed on the individual scales of the TABS; however, the use of the total score is consistent with previous research (e.g., Adams, Matto, & Harrington, 2001; Dunkley & Whelan, 2006; Jenkins & Baird, 2002; Kadambi & Truscott, 2004), as the subscales of the TABS remain primarily theoretically-driven.

The normative data for the TABS was gathered from several research studies using either the TABS or the TSIBS-L including nonclinical samples, totaling 1,743 adults ranging from ages 17 to 78. The sample included 454 men, 1,281 women, and 8 participants that did not identify gender. The participant sample included Caucasian participants (49%), African American participants (6%), Asian American participants (3%), Hispanic/Latino participants (3%), and American Indian participants (1%), as well as 38% of the participant sample that did not report race/ethnicity (Pearlman, 2003). Pearlman reports that the internal consistency of the TABS total score is .96, with the subscale reliabilities ranging from .67 (Self-Intimacy) to .87 (Other-Intimacy). Additionally, the test-retest reliability is reported to be .71 for the total score and ranging from .58 (Other-Control) to .74 (Other-Trust) for the subscales. Pearlman (2003) reported that the scale adequately discriminated between survivors of child abuse and non-abuse survivors in a psychiatric population. Additionally, Pearlman and Mac Ian (1995) discriminated participants with a history of trauma and those without a history of trauma. Kadambi and Truscott (2004) also found that the TSIBS-L correlated with the IES-R, which would be
expected as these two measures represent the two aspects (i.e. schema disruption and PTSD-like symptoms) related to VT. Finally, Pearlman (2003) reports that the construct validity of the TABS is supported by her research demonstrating that the TABS is positively correlated with the Traumatic Stress Inventory (Briere, 1995) scales that reflect internal experiences of surviving trauma, like schemas.

Varra, Pearlman, Brock, and Hodgson (2008) performed a factor analysis of the TABS. They emphasized that although they were performing an empirical investigation of the measure, the TABS is still a theoretically-based attempt to assess the schematic disruptions following direct or indirect trauma exposure. Their analysis included 2,407 participants from several different studies. Although the researchers stated that they were examining the factor analysis of the TABS, the study actually includes studies evaluating the TSIBS-L. Again, this reflects the authors contention that the TABS is psychometrically equivalent to the TSIBS-L. Utilizing Principle Axis Factoring with Varimax rotation, the researchers found that the measure had three stable factors: Self, Other, and Safety. These three factors represent three important aspects of the CSTD, leaving the researchers satisfied that the theoretical basis for the measure was supported empirically.

The TSIBS-L and TABS have not been without its critics, however. Adams, Matto, and Harrington (2001), for example, examined the validity of the TSIBS-L with a sample of clinical social workers. The researchers were specifically examining the convergent and discriminant validity of the measure. Participants included 185 clinical social workers. They completed TSIBS-L as well as the MBI (Maslach, 1982), the Perceived Social Support-Friends (PSS-Fr; Procidano & Heller, 1983), and a brief questionnaire regarding personal trauma history and somatic symptoms. Adams, Motto, and Harrington (2001) analyzed their data with correlations
as well as exploratory multiple regressions. They found that TSIBS-L scores were correlated significantly with younger age, somatic symptoms, lower annual salaries, lower scores on the PSS-Fr and the MBI. They found no significant relationship between TSBIS-L scores and personal trauma history, weekly contact with clients, or a self-report of how much participants believed their work was interfering with their personal lives. The researchers concluded that instead of tapping disrupted schemas that result from indirect exposure to trauma, the TSIBS-L may instead measure broader negative affect. They also suggested that given its strong correlation with the MBI (all three subscales reaching $p < .01$ level of significance in bivariate correlations with the TSIBS-L total score), the concept of VT may significantly overlap with the concept of Burnout (i.e., symptoms of apathy, boredom, frustration, etc. resulting from inability to meet even small behavioral goals).

Although Adams, Motto, and Harrington (2001) questioned the validity of the TSIBS-L, there are several limitations to their study that should be considered in interpreting their results. Firstly, although their investigation aimed to review the validity of the TSIBS-L, they only used six subscales of the TSIBS-L, including only 49 items. Perhaps the discriminant and convergent validity of the complete measure would differ from their data. Additionally, the participants in this study were not trauma counselors; in fact, they were never questioned if they worked with any survivors of trauma. The variable “client contact” referred to clients in general, not clients that have survived trauma. Thus, it is difficult to know how the data collected would have differed had participants been exposed to trauma survivors in their caseload. Finally, Adams, Matto, and Harrington (2001) concluded that the correlation between the MBI and the TSIBS-L indicates that convergent validity is compromised and VT and Burnout may be overlapping concepts. However, as previously mentioned, Burnout may frequently occur in the same settings
that put individuals at risk for VT. For example, chronically mentally ill individuals in community mental health agencies (which includes many Clinical social workers) may place a mental health professional at significant risk for Burnout as they have great difficulty making even small gains in therapy and behavior change. However, given the high prevalence of trauma in these populations, the risk for VT may also be present. Therefore, the correlation between these two measures can (to some extent) be rationalized and even expected. Therefore, although Adams, Motto, and Harrington (2001) raise some concerns regarding the validity of the TSIBS-L in its measurement of VT disrupted schemas, more research needs to be conducted in order to raise great concerns.

It should also be noted that Pearlman (2003) reports that there may be some differences in TABS scores for individuals of various ethnicities. Pearlman cites a study of her own including 113 African Americans, 59 Asian Americans, and 51 Latinos. Although the sample size was relatively small, Pearlman (2003) found that African American participants had significantly higher scores on the subscales related to Other-Safety, Other-Trust, and Other-Esteem. Additionally, Asian American participants had significantly higher total scores and Latino participants had significantly lower-than-average scores on the subscale regarding Other-Intimacy. This indicates that more research regarding cultural differences in schema disruption should be conducted and, in the meantime, the TABS should be interpreted with caution when applied to individuals of minority cultures.

Jenkins and Baird (2002) also examined the psychometric validity of the TSIBS-L, this time in a sample of 99 sexual assault and domestic violence counselors. The researchers compared the TSIBS-L with the Compassion Fatigue Self-Test for Psychotherapists (Figley, 1995) and the MBI (Maslach, Jackson, & Leiter, 1996). They also measured traumatic
experience and symptoms using the SCL-90-R and the TSI Life Events Checklist (Pearlman & Saakvitne, 1995). Their data demonstrated concurrent validity between the TSIBS-L and the Compassion Fatigue Self-Test, and moderate convergence with the MBI (measuring burnout). They also found strong convergence with the SCL-90-R (measuring general distress), but adequate independent shared variance. Their investigation generally supports the TSIBS-L as a good indicator of distress within mental health professionals, overlapping with the concept of Compassion Fatigue (and its measure) as much as is theoretically expected.

As Pearlman (2003) suggests, the TABS needs to be used in conjunction with other measures in order to assess for VT. Specifically, broader traumatic reactions need to be assessed in order to determine if an individual is experiencing any of the full spectrum of possible VT symptoms.

*Impact of Event Scale-Revised:* In order to assess for broader reactions to indirect traumatic exposure, participants in the current study will complete the Impact of Event Scale-Revised (IES-R; Weiss & Marmar, 1995; see Appendix B). The IES-R has been included in studies of VT in order to measure the broader PTSD-like symptoms of VT (e.g., Dunkley & Whelan, 2006; Steed & Bicknell, 2001).

As previously described, the IES-R builds upon the work of the original Impact of Event Scale (IES; Horowitz, Wilner, & Alvarez, 1979). The IES includes subscales measuring the reaction an individual experience related to a specific traumatic event. The original IES includes items pertaining to Intrusion and Avoidance, and has been used in several studies of VT (e.g., Bober & Regehr, 2006; Ghahramanlou & Brodbeck, 2000; Pearlman & Mac Ian, 1995; Kadarnibi & Truscott, 2004; Way et al., 2004). The IES-R maintained most of these items and added a subscale measuring symptoms of Hyperarousal, another symptom cluster in the diagnosis of
PTSD (APA, 2000). In addition, an Intrusion item was added to tap into the dissociative symptom that can be present in PTSD (APA, 2000).

The IES-R is meant to measure symptoms the individual has experienced in the past seven days. Although some studies have taken liberties with expanding that window of time (e.g., Adkins, Weather, McDevitt-Murphy, & Daniels, 2008), Weiss (2004) emphasizes that the psychometrics established for the IES-R only apply when the standard instructions (emphasizing events in the last seven days) are utilized. Therefore, although the IES-R will only provide information regarding participants’ most current symptoms and experiences, the current study will maintain the standard instructions in order to utilize the original psychometrics of the IES-R.

The IES-R includes 22 items ranked on a Likert scale ranging from 0 (Not at all) to 5 (Often), indicating the degree of distress an individual experienced relative to the item (e.g., “I was jumpy and easily startled”). Instead of a more traditional sum of scores indicating more symptoms, the subscales of the IES-R are converted into mean response which can be interpreted using the Likert scale.

It should be noted that the IES-R does not include cut-off scores or normative data for score interpretation. This was done for several reasons. Weiss (2004) argued that assessing symptoms of traumatic reactions is different than assessing more homogeneous disorders such as Major Depressive Disorder or Obsessive Compulsive Disorder (APA, 2000). Weiss wrote that PTSD has a clear etiological component (unlike other psychological diagnoses), and that component (the traumatic stressor) can vary greatly in individuals in a norm sample. For example, high scores on the IES-R are perfectly normal and healthy in the week following a violent sexual assault. However, those same high scores on the IES-R may be interpreted as more psychopathological in someone who was involved in a minor car wreck three years ago.
Weiss (2004) concluded that in order to create adequate cut-off or normative scores for diagnostic interpretation, individual large-n studies with individuals who experienced the exact same trauma, received the same diagnosis of PTSD, and completed the measure at the exact same time would need to be conducted. However, even if that were to occur, the norms would only apply to individuals in the exact same situation, which would be extremely rare as traumatic experiences (even within the same traumatic event) tend to vary so widely (Weiss, 2004). Therefore, although the IES-R provides descriptors for scores describing to what extent the symptoms are distressing the individual (i.e., moderately, quite a bit, extremely), there are no cutoffs to provide qualitative descriptors of participants self-reported symptoms. Although this aspect of the IES-R may be viewed as a weakness, Weiss (2004) stated, “The argument, therefore, that norms are neither particularly useful nor especially meaningful appears to be supported by the virtual absence of norms for any measure of PTSD, either symptoms or diagnosis” (p. 185).

The IES-R has been used in many studies, particularly considering it has only been available for less than 15 years. It has been so popular that it has been translated and studied in several languages including Chinese, French, German, Japanese, and Spanish (Weiss, 2004). The psychometric properties of the IES-R were gathered using a sample of police officers exposed to traumatic events as well as a non-trauma exposed control group. In addition to the IES-R, participants completed several other measures of traumatic reaction, in order to examine the convergent and divergent validity of the IES-R (Pole, Best, Weiss, & Marmar, 2001).

Weiss (2004) reported that estimates of internal consistency using coefficient alpha are Intrusion = .89, Avoidance = .84, and Hyperarousal = .82. No psychometric data was provided for the total score of the IES-R by Weiss (2004). However, in other investigations, the total
score has demonstrated high internal consistency, with Chronbach’s alpha of 0.95 in a population of traumatized substance abusers (Rash, Coffey, Baschnagel, Drobos, & Saladin, 2008) and 0.96 in a population of Vietnam veterans (Creamer, Bell, & Failla, 2003) Convergent and divergent data for the IES-R was gathered and the IES-R and its subscales have strong correlations with measures such as the Mississippi Scale for Combat-Related PTSD, Civilian Version (MCSCV; Keane, Caddell, & Taylor, 1988; Lauterbach, Vrana, King, & King, 1997); the Michigan Alcohol Screening Test (MAST; Selzer, 1971); the Peritraumatic Dissociative Experiences Questionnaire (PDEQ; Marmar, Weiss, & Metzler, 1997); and the Peritraumatic Distress Inventory (PDI; Brunet et al., 2001).

For the purposes of this study, PTSD-like symptoms will be assessed with the IES-R total score. The use of the total score is in line with several other studies (i.e., Ben-Fizra, Palgi, & Essar, 2008; Saladin et al., 2003). However, the subscales of the IES-R will be included in explorative analyses.

The Brief COPE: Participants in the current study will complete the Brief COPE (Carver, 1997; see Appendix C), a short survey investigating individuals preferred coping strategies. The Brief COPE is a shorter form of the original COPE (Carver, Scheier, & Weintraub, 1989). The original COPE was created to measure a variety of coping strategies, but also provide a flexible measure that could be used in various research capacities. The measure’s creators used the definition of coping as defined by Lazarus and Folkman (1984) as executing a response in an effort to minimize the impact of a potential threat. Keeping with the theory of Lazarus and Folkman (1984), most of the scales on the COPE can be easily categorized into addressing the stressor directly (i.e., Active Coping) or avoiding the problem (i.e. Avoidant Coping). The
original COPE had 60 items and 15 scales. Carver, Scheier, & Weintraub (1989) intentionally included some scales that were based on empirical data and some that were theoretically guided.

The Brief COPE was created by Carver (1997) and it is an abbreviated form of the original COPE with several small changes. The Brief COPE cuts down on some of the redundancy of the items in the original COPE. The Brief COPE has 14 scales, with 2 items each. The items were selected from the original scales if they had high loading on the relevant factor in the factor analyses of the original COPE and if they could be clearly understood by a non-student population. For the Brief COPE, Carver (1997) renamed several existing scales, deleted two scales that were found not useful in previous research, and added the scale “self-blame” in accordance with other coping research. The scales of the Brief COPE are: Active Coping, Planning, Positive Reframing, Acceptance, Humor, Religion, Using Emotional Support, Using Instrumental Support, Self-distraction, Denial, Venting, Substance Use, Behavioral Disengagement, and Self-blame.

The Brief COPE was psychometrically evaluated using a sample of individuals “seriously affected” (Carver, 1997, p. 95) by Hurricane Andrew from the Miami, Florida area. The normative study utilized a relatively small sample size, however Carver (1997) points out that all of the participants were individuals who had experienced the same real-life traumatic stressor (as opposed to an undergraduate student convenience sample). The sample also included adequate diversity, including women (66%), non-Hispanic White participants (40%), African American participants (34%), Hispanic participants (17%), Asian participants (5%; Carver, 1997).

The Brief COPE was first administered 3-6 months following the hurricane, again six months following the first administration, and finally, a third administration a year later. Carver
(1997) reports the Chronbach’s Alpha for the Brief COPE scales range from .50 (Venting) to .90 (substance use). Carver (1997) states that these statistics are adequate as defined by Nunnally (1978) which requires a value of .50 to be minimally acceptable. All scales but Venting, Denial, and Acceptance were above 0.60, indicating internal reliability of the scales. The factor structure of the Brief COPE rendered 9 eigenvalues greater than 1.0, which accounted for 72.4% of the variance in responding. Carver (1997) concludes that “although the factor structure emerging from the Brief COPE in this sample was not perfect, it was remarkably similar to that reported earlier for the full inventory”. Carver (1997) also reports the Brief COPE’s scales test-retest reliability range from .46-.86. However, this information may not be as relevant as many theorists argue that coping is a dynamic process that changes over time (e.g., Carver, Scheier, & Weintraub; Lazarus & Folkman, 1984).

Coping is still a widely debated topic in psychological research. Although Lazarus and Folkman (1984) remains a seminal work that many researchers and theorists return to, there are still areas hotly debated in coping. As previously mentioned, one such debated topic is whether coping is a dispositional trait or a situationally-based variable. The Brief COPE can be used to measure either type of coping. Carver, Scheier, & Weintraub (1989) found that changing the wording on the original COPE to measure either the individual’s habitual style of coping or their coping in a given situation renders similar factor analyses with somewhat higher internal consistency in dispositional coping. Whether or not coping is a process or a style will not be a major concern in the current study as the measure will focus on the current coping with therapeutic work with trauma survivors (regardless of whether the type of coping used to manage reactions to indirect trauma exposure are indicative of their permanent coping style). Carver (1997) also instructs that the Brief COPE is not an “all-or-nothing” measure and that certain
subscapes can be utilized individually or that the scales can be grouped into various theoretical indices.

Depending on research goals and theoretical stances, investigators have utilized the Brief COPE scales in a variety of ways. Some studies have simply used all of the scales and looked at correlations between each scale and the other measures or variables in the investigation or included only the scales that prove internally reliable in their own sample (i.e. Kelly, Tyrka, Price, & Carpenter; 2008; Ott, Sanders, & Kelber, 2007; Schroevers & Teo, 2008). Other studies have grouped the scales together into theoretically-based indices and then confirmed the factors with confirmatory analyses (e.g., David & Knight, 2008; Meyer, 2001; Schnider, Elhai, & Gray, 2007). Some studies have used categories established from previous investigations with the Brief COPE (e.g. Kim & Knight, 2008; Lopez & Crespo, 2008). Finally, many studies have collected data and then performed factor analyses to create applicable factors for the study sample (e.g., Bellizzi & Blank, 2006; Cohen, Ben-Zur, Rosenfeld, 2008; Jacobson, 2006; Miyazaki, Bodenhorn, Zalaquett, Ng, 2008; Saroglou & Anciaux, 2004; Shipley & Gow; 2006). The results of the factor analyses for these various studies generally indicate two, three, or four factors; although one study found as much as seven factors (Miyazaki, Bodenhorn, Zalaquett, Ng, 2008). Usually, however, the factors indicate some type of avoidant or maladaptive factor including the scales Denial, Behavioral Disengagement, Self-Blame, and Substance Use (e.g., David & Knight, 2008).

For the current study, the Brief COPE will be used to assess the preferred coping strategy of participants in managing their reactions to working with survivors of trauma. This study will use the subscales of the Brief COPE (which were designed for research flexibility) to reflect Lazarus and Folkman’s (1984) theory of active and avoidant coping. This method also adheres to the
theoretical background of the COPE (Carver, Scheier, & Weintraub, 1989). Similarly to other investigations utilizing the Brief COPE (e.g., Bellizzi & Blank, 2004; David & Knight, 2008; Meyer, 2001), the subscales will be grouped into two categories: Avoidant Coping and Active Coping. The Avoidant Coping category will include: Self-distraetion, Denial, Venting, Substance Use, Behavioral Disengagement, and Self-Blame. The Active Coping category will include Positive Reframing, Humor, Religion, Using Emotional Support, Using Instrumental Support, and Active Coping. The subscales Planning and Acceptance were not included in this study as they did not clearly fit into a category of Lazarus and Folkman’s (1984) coping theory (Carver, Scheier, & Weintraub, 1989). These categories (i.e., Active Coping and Avoidant Coping) will be confirmed (and altered if needed) with a Principal Component Analysis with Varimax Rotation. For the purposes of this study, the participant will be fall into either category (i.e., Active Coping or Avoidant Coping) depending on which category has a higher score.

Although some have criticized the original COPE as only useful in health-related research (i.e., Coyne & Racioppo), the Brief COPE has been used in many diverse fields of research with many different populations. These topics of investigation include coping with: severe mental illness (Meyer, 2001), Complicated Grief (Schnider, Elhai, & Gray), caregiving, (e.g., Kim & Knight, 2008; Lopez & Crespo, 2008; Ott, Sanders, & Kelber, 2007), test anxiety (Cohen, Ben-Zur, & Rosenfeld, 2008), heterosexism (David & Knight, 2008), and sexual assault (Ullman, Filipas, Townsend, & Starzynski, 2007). Additionally, the Brief COPE has been used in many different populations, including: various countries in the continent of Asia (e.g., Schroeters & Teo, 2008); French individuals (Saroglou & Anxiaux, 2004), international undergraduate students (Miyazaki, Bodenhorn, Zalaquette, & Kok-Mun Ng, 2008), Israeli undergraduate students (Cohen, Ben-Zur, Rosenfeld, 2008), Korean Americans (Kim & Knight, 2008) and gay
men (David & Knight, 2008). In addition, the Brief COPE has been used via internet administration (Miyazaki, Bodenhorn, Zalaquett, & Kok-Mun Ng, 2008). Finally, the original COPE has been used in research for VT (Schauben & Frazier, 1995) and Compassion Fatigue (Jacobson, 2006).

*The Background Questionnaire* (see Appendix F): The Background Questionnaire will also assess for two variables important to this study: the number of therapy hours spent working with trauma survivors and the participant’s personal trauma history. This section of the Background Questionnaire will begin with a definition of trauma. This definition will draw upon the DSM-IV-TR (APA, 2000) criteria for a traumatic event. Additionally, examples of different types of traumas will be provided, including the categories outlined by Adams and Riggs (2008). Although some research regarding VT has focused on only trauma via victimization from others, this study will adhere to the broader definition of trauma found in the DSM-IV-TR (APA, 2000). This method allows comparability to the only other investigation into VT in graduate students (Adams & Riggs, 2008) and adheres to McCann and Pearlman’s (1990) original theory of VT. If participants indicate that they have experienced trauma, they will be prompted to indicate the extent to which the trauma is currently impacting their lives. Participants will then estimate the number of therapy hours spent in session with trauma survivors. These reported hours will hopefully be more accurate in this group than retrospective reports of others as the internship process for psychology graduate students requires that students keep a count of hours spent in therapy with various types of clients.

In addition to hours in contact with trauma clients, participants will be asked if, given the previous definition of trauma, they have experienced direct exposure to trauma in their own personal life. Although some VT studies have utilized questionnaires specifically designed to
assess for a previous exposure to trauma (e.g., Way, VanDeusen, & Cottrell, 2007) the personal identification of trauma survivor status was chosen for several reasons. Firstly, it decreases the time required of participants, which will hopefully increase the participant return rate. Additionally, given that all participants will be training in psychology and working with trauma survivors, it seems reasonable that (after prompting with a reminder of the DSM-IV-TR diagnostic criteria for a traumatic event) participants should be able to identify whether their clients and themselves are survivors of trauma. Finally, this method of collecting data regarding trauma survivor status has been used in several studies of VT (e.g., Adams, Matto, & Harrington, Gharamanlou & Brodbeck, 2000; Pearlman & Mac Ian, 1995), and it appears that there is no harm to the participants in assessing trauma in this simple, non-invasive manner. The participants will then indicate the extent to which the trauma exposure is currently impacting their life, using a four category response (see Appendix F).

Finally, the Background Questionnaire will ask participants to indicate how they keep track of their clinical hours. This is exploratory information that will hopefully help confirm the validity of participants’ self-reports of their clinical hours spent with trauma survivors.

Procedure

The current study will receive approval from the University’s Internal Review Board. To reach participants, the Clinical Directors of psychology graduate programs in the United States will be contacted via e-mail (see Appendix D). Specific programs will be selected at random. The e-mail will outline the general purpose of the current study, emphasize that it has received approval from the Xavier University Internal Review Board, and ask them to forward an e-mail and internet link to their doctoral and/or masters students in clinical or counseling psychology. Included in the e-mail will be another message written specifically for the participants.
The e-mail to study participants (see Appendix E) will provide a brief overview of the purpose of the study. It will specifically state that individuals should only participate in the study if they are currently conducting therapy with a trauma survivor or multiple trauma survivors in a clinical context (i.e., therapy or assessment). The e-mail will also state how much time participation will require (generally, about 10 to 15 minutes) and that completing the measures indicates their consent. The e-mail will guarantee anonymity and offer two small-denomination gift certificates (20 dollars) to a popular internet bookstore as incentive for participation. If participants would like to enter their names in the raffle for these gift certificate incentives, they will be instructed to e-mail their name to the primary investigator. This method keeps the participant’s name and contact information completely independent from their completed measures, thereby maintaining confidentiality.

In order to meet ethical standards, following completion of the study’s measures, a generic message will appear to participants stating that if their answers raised any concerns for them they are encouraged to seek professional consultation or the services of a mental health professional (see Appendix G).

In such studies, the response rates are of concern. As will be discussed in a later section, the internet-based method of administration was chosen in an effort to increase response rates. Gately and Stabb (2005) conducted an internet-based survey study on psychology graduate students with a method similar to the current study, but without the incentive of gift certificates. They sent the link to an unspecified number of APA-accredited graduate schools in the country and had a return rate of 202 completed questionnaires (including four separate surveys). Additionally, Adams and Riggs (2008) achieved a usable response rate of 36.3% in their investigation of VT in psychology graduate students. However, they used a mail-in procedure.
Schillewaert & Meulemeester (2006) found that both students and young adults were more likely to respond to surveys and measures administered online when compared with mail-in or telephone administrations. Hopefully the gift certificate incentive and the relatively brief and convenient nature of the survey battery will encourage a healthy response rate.

Once individuals decide to participate in the study, they will click on a link to an internet survey website that has been tailored to this study’s research needs. Before completing this section, participants will be assured that they will not be asked any identifying information in an effort to maintain confidentiality. Participants will complete a brief Background Questionnaire (see Appendix F) in an effort to gain descriptive information of the participating sample. The Background Questionnaire will ask for information such as the participant’s gender, age, years completed in graduate school, and ethnicity. The ethnicity options provided will reflect those in the APA graduate student member survey (APA Center for Workplace Studies, 2008).

In addition to this Background Questionnaire, participants will complete the TABS, the IES-R, and the Brief COPE. The measures will be counterbalanced in order to avoid any potential order effects. Before the IES-R and the Brief COPE the participant will be prompted to respond to the items in relation to their work with trauma survivors. In total, participation in the study should take an average of 10 to 15 minutes. Upon completion of the measures, the participant will be thanked for his or her time and reminded that they can e-mail the Investigator if they wish to enter the incentive raffle.

Although most published studies of VT have been conducted via postal mail or in person, this study will benefit from internet administration for several reasons. As Ahern (2005) outlines, there are many benefits to conducting psychological research online. He stated that it benefits the investigator as it generally costs less, allows a larger sample size, decreases the time
needed to collect and analyze date, and increases the accuracy of data analysis. Ahern (2005) also emphasizes that internet administration can benefit the participant as it increases anonymity, allows the participant to work at their own pace and ease, and increases a sense of control for the participant. Other researchers have found that completing research measures online decreases social desirability effects (Joinson, 1999) and increases self-disclosure (Davis, 1999). Finally, internet administration drastically reduces paper use for the study, benefitting the environment.

Despite these many benefits, internet data collection is not without its critics. Buchanan (2000), for example, points out that administering measures online allows the researcher very little control over the testing environment. Schillewaert & Meulmeester (2005) expanded on this point and argued that many individuals divide their attention while online (e.g. browsing multiple windows, watching videos, listening to music), which might influence their responses. One of the most hotly debated topics regarding internet data collection, however, is the validity of paper-and-pencil methods that are transferred to the internet for research. Buchanan et al. (2005), for example, argued that traditionally paper-and-pencil measures can be invalid online for two reasons. Firstly, Buchanan et al. (2005) point out that the computer as a medium can increase disinhibition, leading to higher self-reports of symptoms and generally greater self-disclosure than samples utilizing paper-and-pencil methods. Additionally, there may be sampling effects as participants from different cultures and socioeconomic classes may not be able to access the internet to participate. Buchanan et al. (2005) argue, however, that the more challenging problem arises when factor analyses of measures used online simply do not produce the same results they do when the measure is administered in paper-and-pencil format. This was the case for Buchanan et al. (2005). The researchers found that a factor analysis of the Prospective Memory Questionnaire (PMQ; Hannon, Adams, Harrington, Fries-Dias, & Gibson,
1995) revealed only two factors when administered online, whereas a factor analysis of the paper-and-pencil administration of the same measure resulted in four factors. As such, Buchanan et al. (2005) insist that all traditionally paper-and-pencil measures should be psychometrically examined in its use online.

Although researchers like Buchanan et al. (2005) have argued that measures should be psychometrically evaluated for its use online, many other studies have concluded that most measures used online maintain validity (e.g., Fouladi, McCarthy, & Moller, 2002; Reynolds & Stiles, 2007). Although no known studies have examined the psychometric properties of the TABS, the IES-R, or the Brief COPE in their use online, the internet was chosen as the administration method for the current study as it provided a number of benefits. Firstly, although the internet has been criticized as culturally-insensitive to some populations, Schillewaert & Meuleneester (2006) found that the internet was a more successful research tool than the telephone or postal mail in reaching both students and young adults. Given the average age of psychology graduate students and their status as students, the internet should produce better return rates for participants. Additionally, as previously mentioned, utilizing the internet for this research study will decrease costs, decrease the need for paper, and decrease the time needed to devote to data collection. Internet administration should also reduce the number of incomplete sets of measures as participants will be prompted to answer any items they may have unintentionally skipped, therefore reducing pieces of missing data.

Finally, although these measures have not been psychometrically evaluated in regards to their online use, the majority of measures empirically examined in their online use have been validated, leading most theorists to support the use of the internet to gather data. Krantz and Dalai (2000), for example, stated that, generally, measures administered online and with paper
and pencil are remarkably similar; and Buchanan et al. (2005) even wrote that "Any differences found between on-line and off-line versions of scales are usually relatively minor" (p. 150).

Thus, although administering this study’s measures online might pose some slight risk for invalidity, the benefits appear to outweigh the risks.
Chapter IV
Proposed Analyses

The goal of this research endeavor is to investigate the occurrence of VT in psychology graduate students as well as the role that personal history of trauma, clinical hours spent with trauma survivors, and style of coping have on the development of symptoms of VT.

The data analyses will include descriptive statistics regarding the participant sample, including information collected in the Background Questionnaire (see Appendix F). Additionally, correlational tables for the study variables (i.e., demographic characteristics, the dependent variables, and independent variables) will be presented. This will include the exploratory correlations of both the TABS and IES-R subscales.

The descriptive analyses will also include a comparison between men and women participants. If the male participants mean scores are significantly different than the female participants, the subsequent statistical analyses will be conducted by gender so that more information can be gathered regarding gender differences on the three hypotheses of this study. However, if there are too few male participants to conduct these separate analyses, they may be excluded from the study.

As one of the primary goals of this study is to determine whether psychology graduate students treating trauma survivors are, indeed, at risk for developing symptoms of VT, scores (both total and subscales) on the IES-R and the TABS will be presented in tables. Additionally, the TABS (the only measure with norms) scores will be presented in a table with reference to the norms. This comparison will provide information regarding whether or not psychology graduate students are, in fact, experiencing more symptoms of schema disruption than the normative samples.
Clarification of Variables

This study involves two dependent variables (the TABS total score and the IES-R total score) that represent the two components of VT. Both of these dependent variables are theoretically related (as they represent the theoretical symptoms of VT) and are continuous.

The study also includes three separate independent variables (personal history of trauma, clinical hours spent with trauma survivors, and style of coping as indicated by the Brief COPE). These independent variables are all categorical in nature.

Firstly, Personal history of trauma will be represented as either “No”, “Yes with mild effect”, and “Yes with moderate effect”, creating a categorical variable. The four response choices regarding the effect of trauma will be divided into the two effect variables, with “None” and “Somewhat” making up “Yes with mild effect” and “A fair amount” and “A great deal” making up the category “Yes with moderate effect”.

As there is no available research to this author’s knowledge regarding the number of clinical hours psychology graduate students have spent working with trauma survivors, participants will simply enter in their own number of hours in the Background Questionnaire (see Appendix F). These responses will then be evenly split into three categories.

Finally, in order to assess the coping style utilized to manage indirect trauma exposure, the Brief COPE scales will be divided into two groups: Avoidant and Active coping strategies. In order to confirm this theoretical factor model, a Principal Factor Analysis with Varimax Rotation will be performed. As previously described, the Brief COPE was created so that researchers could use the many scales in different manners for their various theoretical or empirical needs (Carver, 1997). Many researchers have done what the current study proposes: create theoretical categories and confirm the fit of these factors with Principal Factor Analysis.
with Varimax Rotation (e.g., David & Knight, 2008; Meyer, 2001; Schneider, Elhai, & Gray, 2007). If the factors are adequately supported, participants will fall into one of the categories (Avoidant Coping or Active Coping) depending on which category they have the highest score. If the Principal Factor Analysis with Varimax Rotation indicates that there are different statistically significant factors for the participants, those factors will be used in the data analyses instead of the theoretically created Active and Avoidant coping categories.

Rationale for Proposed Analyses

The research design involves three independent variables (coping strategies, number of clinical hours, and personal history of trauma) and two dependent variables (schema disruption and PTSD-like symptoms) that combine to represent the concept of VT. Each independent variable will be analyzed separately through the Multivariate Analysis of Variance (MANOVA) technique and follow-up for any simple effects with Analysis of Variance (ANOVA) tests.

Weinfurt (2002) described the MANOVA as used "to examine the effects of one or more independent variables on two or more dependent variables" (p. 334). He went on to write "a MANOVA tests the null hypothesis that a collection of means on the dependent variables...is equal for all levels of the independent variables" (p. 334). A MANOVA takes two related dependent variables and creates a composite variable (in the current study, the composite variable represents VT). The MANOVA allows the investigator to examine if there is a difference in means related to a combination of the dependent variables, which an ANOVA does not allow (Grimm & Yarnold, 2002). In a MANOVA, the dependent variables must be continuous and the independent variables must be categorical, as is the case with the variables in the current study. Additionally, the MANOVA minimizes the risk of making a Type I error.
(Barker & Barker, 1984). Utilizing follow-up ANOVAs for simple effects will allow the investigation of specific variables, putting an emphasis on direct relationships among variables.

As previously stated, the null hypotheses of the current study indicate that there will be no statistically significant differences between groups of the independent variables (as defined by the Brief COPE, the number of clinical hours, and personal history of trauma) in terms of their self-reported levels of VT (as defined by the TABS total score and the IES-R total score). As described below, utilizing a series of MANOVAs and follow-up ANOVAs will provide information that will either confirm or deny the accuracy of the null hypotheses. All of the MANOVAS will utilize the Wilks’s Lambda and an alpha level of .05 in order to determine significance.

As previously mentioned, before any of the following data analyses are performed the theoretical factor structure of the Brief COPE will be evaluated utilizing Principal Component Analysis with Varimax Rotation. If the factor analysis indicates that there are different, more statistically appropriate factors, those factors will be used for the rest of the statistical analyses in this research endeavor.

In order to address the potential significance of Personal History of Trauma, a MANOVA will be conducted to assess whether participants with a self-reported personal history of trauma differ from participants without a self-reported personal history of trauma in terms of levels of VT (as measured by the TABS total score and the IES-R total score). Two separate follow-up ANOVAs will also be conducted to determine if the two groups in the Personal Trauma History variable differ in terms of their schema disruption (as measured by the TABS total score) and PTSD-like symptoms (as measured by the IES-R total score).
In order to address the potential significance of Number of Hours in Clinical Contact, a MANOVA will be conducted to assess whether the three groups of Number of Hours in Clinical Contact are statistically different in terms of levels VT (as measured by the TABS total score and the IES-R total score). Two separate follow-up ANOVAs will also be conducted to determine if the three groups of Number of Hours in Clinical Contact statistically significantly differ in terms of schema disruption (as measured by the TABS total score) and PTSD-like symptoms (as measured by the IES-R total score).

In order to address the potential significance of Coping Style (as indicated by the Brief COPE), a MANOVA will be conducted to assess whether participants in the Active Coping and Avoidant Coping groups (or other statistically supported factors) differ significantly in terms of levels of VT (as measured by the TABS total score and the IES-R total score). Two separate follow-up ANOVAs will also be conducted to determine if Coping Style groups differ significantly in levels of schema disruptions (as measured by the TABS total score) and PTSD-like symptoms (as measured by the IES-R total score). Individual $t$-tests may also be performed in order to assess the importance of any specific Brief COPE subscale (indicating a specific coping strategy) in accounting for variance in the dependent variables. These analyses will be conducted with the .05 level of significance.

Finally, if the MANOVAs in these analyses are not statistically significant, exploratory follow-up ANOVAs will be conducted for the sake of future studies, which may find the information gathered from the ANOVAs relevant and/or interesting.
Limitations of the Proposed Study

There are several limitations to the proposed study. Firstly, the concept of VT remains largely theoretical. As such, the concept does not (yet) have a strong empirical background, particularly in regards to the population of psychology graduate students.

Additionally, the TABS (Pearlman, 2003) has not yet been fully independently psychometrically evaluated (although the prior version, the TSIBS-L, has been psychometrically evaluated), although there is some reason to believe that the two scales are psychometrically equivalent (Pearlman, 2003). As previously stated, the TABS and the TSIBS-L are both theoretically-driven, although there has been some support for the measure’s factor structure (i.e. Varra, Pearlman, Brock, & Hodgson, 2008).

Although the IES-R (Weiss & Marmar, 1995) is a commonly used measure, the short Likert-type scale utilized in the measure allows for little variability in answering. Additionally, the Brief COPE is being used in a theoretical manner (although the theoretical grouping of subscales will be evaluated using Principal Component Analysis followed by varimax rotation). In summary, the measures included in this study have their limitations.

Another limitation of this study is the focus on current VT, as opposed to experienced VT. In accordance with the IES-R’s focus on the past seven days, participants are included only if they are currently working with trauma survivors in some type of clinical setting. Although this will provide information regarding current symptoms of VT and current coping strategies, it will not provide information regarding participants’ history of VT, which could be informative. Ideally the cross-sectional nature of the study (i.e., sampling from students in different stages of their graduate training and assessing for the hours exposed to trauma survivors) will provide some insight into the general occurrence of VT in the psychology graduate student population.
Finally, it is unclear how easy it will be to achieve the desired sample size. Although using the internet to administer measures will hopefully increase return rates, the psychology graduate student population is a very busy group of individuals who may not have the time or motivation to participate in such a study. Hopefully the gift certificate incentive as well as the brief nature of the measures will encourage individuals to participate.
References


*Behavior Research Methods, Instruments & Computers, 32,* 521-527.


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Appendix A

Trauma and Attachment Belief Scale

This questionnaire is used to learn how individuals view themselves and others. As people differ from one another in many ways, there are no right or wrong answers. Please check the number next to each item which you feel most closely matches your own beliefs about yourself and your world. Try to complete every item. Use the following response scale.

1 = Disagree Strongly
2= Disagree
3= Disagree Somewhat
4= Agree Somewhat
5= Agree
6= Agree Strongly

1. I believe I am safe.
2. You can’t trust anyone.
3. I don’t feel like I deserve much.
4. Even when I am with friends and family, I don’t feel like I belong.
5. I can’t be myself around people.
6. I never think anyone is safe from danger.
7. I can trust my own judgment.
8. People are wonderful.
9. When my feelings are hurt, I can make myself feel better.
10. I am uncomfortable when someone else is the leader.
11. I feel like people are hurting me all the time.
12. If I need them, people will come through for me.
13. I have bad feelings about myself.
14. Some of my happiest times are with other people.
15. I feel like I can’t control myself.
16. I could do serious damage to someone.
17. When I am alone, I don’t feel safe.
18. Most people ruin what they care about.
19. I don’t trust my instincts.
20. I feel close to lots of people.
21. I feel good about myself most days.
22. My friends don’t listen to my opinion.
23. I feel hollow inside when I am alone.
24. I can’t stop worrying about others’ safety.
25. I wish I didn’t have feelings.
26. Trusting people is not smart.
1 = Disagree Strongly
2= Disagree
3= Disagree Somewhat
4= Agree Somewhat
5= Agree
6= Agree Strongly

27. I would never hurt myself.
28. I often think the worst of others.
29. I can control whether I harm others.
30. I'm not worth much.
31. I don't believe what people tell me.
32. The world is dangerous.
33. I am often in conflicts with other people.
34. I have a hard time making decisions.
35. I feel cut off from people.
36. I feel jealous of people who are always in control.
37. The important people in my life are in danger.
38. I can keep myself safe.
39. People are no good.
40. I keep busy to avoid my feelings.
41. People shouldn't trust their friends.
42. I deserve to have good things happen to me.
43. I worry about what other people will do to me.
44. I like people.
45. I must be in control of myself.
46. I feel helpless around adults.
47. Even if I think about hurting myself, I won't do it.
48. I don't feel much love from anyone.
49. I have good judgment.
50. Strong people don't need to ask for help.
51. I am a good person.
52. People don't keep their promises.
53. I hate to be alone.
54. I feel threatened by others.
55. When I am with people, I feel alone.
56. I have problems with self-control.
57. The world is full of people with mental problems.
58. I can make good decisions.
59. I often feel people are trying to control me.
60. I am afraid of what I might do to myself.
61. People who trust others are stupid.
62. I am my own best friend.
63. When people I love aren't with me, I believe they are in danger.
1 = Disagree Strongly  
2 = Disagree  
3 = Disagree Somewhat  
4 = Agree Somewhat  
5 = Agree  
6 = Agree Strongly  

27. I would never hurt myself.  
28. I often think the worst of others.  
29. I can control whether I harm others.  
30. I'm not worth much.  
31. I don't believe what people tell me.  
32. The world is dangerous.  
33. I am often in conflicts with other people.  
34. I have a hard time making decisions.  
35. I feel cut off from people.  
36. I feel jealous of people who are always in control.  
37. The important people in my life are in danger.  
38. I can keep myself safe.  
39. People are no good.  
40. I keep busy to avoid my feelings.  
41. People shouldn't trust their friends.  
42. I deserve to have good things happen to me.  
43. I worry about what other people will do to me.  
44. I like people.  
45. I must be in control of myself.  
46. I feel helpless around adults.  
47. Even if I think about hurting myself, I won't do it.  
48. I don't feel much love from anyone.  
49. I have good judgment.  
50. Strong people don't need to ask for help.  
51. I am a good person.  
52. People don't keep their promises.  
53. I hate to be alone.  
54. I feel threatened by others.  
55. When I am with people, I feel alone.  
56. I have problems with self-control.  
57. The world is full of people with mental problems.  
58. I can make good decisions.  
59. I often feel people are trying to control me.  
60. I am afraid of what I might do to myself.  
61. People who trust others are stupid.  
62. I am my own best friend.  
63. When people I love aren't with me, I believe they are in danger.
1 = Disagree Strongly
2 = Disagree
3 = Disagree Somewhat
4 = Agree Somewhat
5 = Agree
6 = Agree Strongly

64. Bad things happen to me because I am a bad person.
65. I feel safe when I am alone.
66. To feel okay, I need to be in charge.
67. I often doubt myself.
68. Most people are good at heart.
69. I feel bad about myself when I need help.
70. My friends are there when I need them.
71. I believe that someone is going to hurt me.
72. I do things that put other people in danger.
73. There is an evil force inside of me.
74. No one really knows me.
75. When I am alone, it's as if there's no one there, not even me.
76. I don't respect the people I know best.
77. I can usually figure out what's going on with people.
78. I can't do good work unless I am the leader.
79. I can't relax.
80. I have physically hurt people.
81. I am afraid I will harm myself.
82. I feel left out everywhere.
83. If people really knew me, they wouldn't like me.
84. I look forward to time I spend alone.
Appendix B

Impact of Event Scale-Revised

INSTRUCTIONS: Below is a list of difficulties people sometimes have after stressful life events. Please check each item, indicating how frequently these comments were true for you DURING THE PAST SEVEN DAYS with respect to your clinical interactions with trauma survivors. If they did not occur during that time, please select 0 ("Not at all").

0 = Not at all
1 = A little bit
2 = Moderately
3 = Quite a bit
4 = Extremely

1. Any reminder brought back feelings about it.
2. I had trouble staying asleep.
3. Other things kept making me think about it.
4. I felt irritable and angry.
5. I avoided letting myself get upset when I thought about it or was reminded of it.
6. I thought about it when I didn’t mean to.
7. I felt as if it hadn’t happened or wasn’t real.
8. I stayed away from reminders about it.
9. Pictures about it popped into my mind.
10. I was jumpy and easily startled.
11. I tried not to think about it.
12. I was aware that I still had a lot of feelings about it, but I didn’t deal with them.
13. My feelings about it were kind of numb.
14. I found myself acting or feeling like I was back at that time.
15. I had trouble falling asleep.
16. I had waves of strong feelings about it.
17. I tried to remove it from my memory.
18. I had trouble concentrating.
19. Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart.
20. I had dreams about it.
21. I felt watchful and on guard.
22. I tried not to talk about it.
Appendix C

The Brief COPE

These items deal with ways you've been coping with the stress in your life related to your clinical work with trauma survivors. There are many ways to try to deal with problems. These items ask what you've been doing to cope with your experiences in therapy with trauma survivors. Obviously, different people deal with things in different ways, but I'm interested in how you've tried to deal with it. Each item says something about a particular way of coping. I want to know to what extent you've been doing what the item says. How much or how frequently. Don't answer on the basis of whether it seems to be working or not—just whether or not you're doing it. Use these response choices. Try to rate each item separately in your mind from the others. Make your answers as true FOR YOU as you can.

1 = I haven't been doing this at all
2 = I've been doing this a little bit
3 = I've been doing this a medium amount
4 = I've been doing this a lot

1. I've been turning to work or other activities to take my mind off things.
2. I've been concentrating my efforts on doing something about the situation I'm in.
3. I've been saying to myself "this isn't real".
4. I've been using alcohol or other drugs to make myself feel better.
5. I've been getting emotional support from others.
6. I've been giving up trying to deal with it.
7. I've been taking action to try to make the situation better.
8. I've been refusing to believe that it has happened.
9. I've been saying things to let my unpleasant feelings escape.
10. I've been getting help and advice from other people.
11. I've been using alcohol or other drugs to help me get through it.
12. I've been trying to see it in a different light, to make it seem more positive.
13. I've been criticizing myself.
14. I've been getting comfort and understanding from someone.
15. I've been giving up the attempt to cope.
16. I've been looking for something good in what is happening.
17. I've been making jokes about it.
18. I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.
19. I've been expressing my negative feelings.
20. I've been trying to find comfort in my religion or spiritual beliefs.
21. I've been trying to get advice or help from other people about what to do.
22. I've been blaming myself for things that happened.
23. I've been praying or meditating.
24. I've been making fun of the situation.
Appendix D

E-Mail Message to Clinical Directors

Dear Dr. __________,

Hello! My name is Colleen Furey and I am currently a fourth-year Clinical Psy.D. student at Xavier University. Your e-mail was obtained from a list of Clinical/Counseling Psychology Programs as well as your department website. I appreciate you taking the time to read this e-mail.

I am seeking participants for my dissertation, which focuses on Psychology Graduate Students and their reactions to clinical work with trauma survivors. Hopefully the data gathered from this investigation will help inform the training and supervision of psychology graduate students as they manage their reactions to working with trauma survivors in clinical settings. I am writing to you in hopes that you would be willing to forward the e-mail below to the students in your program.

Students must currently be working with at least one trauma survivor in some type of clinical setting in order to participate. Participation only requires completing several short measures via the internet. Once participants complete the measures they can enter a lottery to win one of two $20 gift certificates to Amazon.com.

You can either copy and paste the message below in an e-mail to your students or simply forward this e-mail if it is more convenient.

If you have a chance, I would appreciate an e-mail reply letting me know if you sent this message to your students. This will aid me in estimating my response rate. I have also attached the documentation of the study’s IRB approval from Xavier University. If you have any questions, please do not hesitate to contact me. Thank you very much for your time and help, I genuinely appreciate it!

Sincerely,

Colleen Furey
Xavier University Doctoral Candidate
Clinical Psychology
Email: FureyC@xavier.edu
Phone: 314.608.2084

This research study has been reviewed and approved by Xavier University’s Institutional Review Board. They can be contacted at Xavier University IRB, 3800 Victory Parkway, Cincinnati, OH 45207-7351. Phone: 513 745-2870. Fax: 513 745-4267. E-mail: irb@xavier.edu
Appendix E

E-Mail Message to Participants

Dear fellow graduate psychology students,

My name is Colleen Furey and I am a fourth-year student in Xavier University’s Clinical Psy.D. program. I am seeking individuals currently enrolled in psychology graduate programs (either doctoral or masters) to complete online surveys concerning their reactions to treating and/or assessing trauma survivors in their practicum or other clinical settings. In order to participate in this investigation, individuals must be currently working in a practicum or other clinical setting in which they are treating and/or assessing clients with a history of trauma. The practicum may be in any setting with any client population as long as participants are currently treating or assessing at least one individual who has survived trauma.

The survey will be completed online and should take approximately 10-15 minutes to complete. Participation is completely anonymous. However, following completion of the survey, participants may enter a lottery to receive one of two $20 gift certificates to Amazon.com.

Your participation in this study is voluntary and you may withdraw from participating at any time by simply closing the survey using your web browser. There are no known risks involved in completing the surveys, and your completion indicates your consent to participate.

If you wish to participate in this study, please click below or copy and paste the link below into your web browser:

http://www.surveymonkey.com/

Thank you for your participation! If you know of any other psychology graduate students currently working with trauma survivors in their practicum setting, please feel free to forward this e-mail.

If you have any questions, please feel free to contact me at FureyC@xavier.edu.

Colleen Furey
Xavier University Doctoral Candidate
Clinical Psychology
Email: FureyC@xavier.edu

This research study has been reviewed and approved by Xavier University’s Institutional Review Board. They can be contacted at Xavier University IRB, 3800 Victory Parkway, Cincinnati, OH 45207-7351. Phone: 513 745-2870. Fax: 513 745-4267. E-mail: irb@xavier.edu.
Appendix F
Background Questionnaire

The information you provide in the following Questionnaire and measures is completely confidential. Instead of your name, the data you provide will be tracked using a serial number. As such, your participation in this study will not require any identifying information. If you have any questions or comments regarding your privacy or the study please contact Colleen Furey at FureyC@xavier.edu.

1. Gender: ____ Male ____ Female ____ Transgender

2. Age: _____

3. Ethnicity: _____ African American/Black
   _______ American Indian or Alaskan Native
   _______ Asian
   _____ Caucasian/White
   _______ Hispanic
   _______ Native Hawaiian or Pacific Islander
   ____ Other
   _____ Multiple Racial/Ethnic Background

4. Graduate School Years Completed ____ 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6
   ______ 7+

5. Graduate Program: _____ Doctoral _____ Masters

The DSM-IV-TR (APA, 2000) defines a traumatic event as “an event or events that involve actual or threatened death or serious injury, or a threat to the physical integrity of self or others” (p. 218). These events can include, but are not limited to: surviving natural disasters, child sexual abuse, child physical abuse, child emotional abuse, adult sexual assault, witnessing or participating in combat, domestic violence, or witnessing someone being seriously injured or killed (Adams & Riggs, 2008). With this definition in mind, please answer the next two questions:

6. Approximately how many total hours have you spent in clinical work with a survivor of trauma? _____
7. According to the previous definition, would you describe yourself as a survivor of trauma? _____ Yes _____ No

8. If you answered "Yes" to the previous question, to what extent does the trauma currently affect you?
   _____ Not at all
   _____ Somewhat
   _____ A fair amount
   _____ A great deal

9. In what way do you keep track of your clinical hours in your graduate program?
   _____ A diary or journal
   _____ Time 2 Track or other online program
   _____ Personal spreadsheet
   _____ Log
   _____ No standard method
   _____ Other: _____________________________________________
Appendix G

Debriefing Message to Participants

Participants,

If your participation in this study has raised any concerns about your current thoughts, behaviors, or feelings, you are encouraged to seek professional supervision or the services of a mental health professional.
Chapter V: Dissertation

Abstract

Three risk factors for Vicarious Trauma (VT) in psychology graduate students working with trauma survivors were investigated: personal history of trauma, number of clinical hours spent working with trauma survivors, and preferred coping strategies. Participants (N=137) completed a Trauma and Attachment Belief Scale (TABS), an Impact of Event Scale-Revised (IES-R) to measure the self-reported altered schemas and PTSD-like symptoms common to VT, as well as the Brief COPE to assess their preferred coping strategies. Participants who identified as trauma survivors currently experiencing moderate effect from their trauma scored significantly higher on the TABS and the IES-R total scores as compared to non-trauma survivor participants. In addition, participants who identified as trauma survivors experiencing a moderate effect from their trauma scored significantly higher than trauma survivors experiencing a mild effect from their trauma on the TABS and IES-R total scores. Participants who reported engaging in more active coping strategies scored significantly lower on the TABS than did participants who reported engaging in more avoidant coping strategies. Participants’ self-reported number of clinical hours spent with trauma survivors did not significantly differentiate levels of VT symptoms. Limitations of this study as well as implications for future research are outlined.
Risk Factors of Vicarious Traumatization in Psychology Graduate Students

Vicarious Trauma (VT) refers to the negative consequences individuals can experience following indirect exposure to trauma and was initially described by McCann and Pearlman (1990). They theorized that VT occurs naturally as a result of empathically engaging with a client who is actively recovering from a traumatic experience or experiences and argued that this empathic relationship and exposure to the client’s trauma narratives impacts the clinician’s schemas, or cognitive structures that represent beliefs and expectations of the world, as well as their imagery system. In addition to disrupting schemas, it has been hypothesized that VT can cause professionals to develop symptoms similar to those associated with Posttraumatic Stress Disorder (PTSD; American Psychiatric Association, 2000). Over the last 20 years, empirical research has documented symptoms of Vicarious Trauma in many different populations, including mental health professionals (Pearlman & Mac Ian, 1995), domestic violence counselors (e.g., Iliffe & Steed, 2000), crisis line counselors (e.g., Dunkley & Whelan, 2006), social workers (e.g., Cunningham, 2003), and group leaders (e.g., Gabriel, 1994). These populations are frequently noted to have moderate levels of VT symptoms (e.g., Pearlman & Mac Ian, 1995), although some populations have found high levels of symptoms of VT (e.g., Way, VanDeusen, Martin, Applegate, & Jandle, 2004). Research has also investigated the symptoms, consequences, and risk factors associated with the experience of VT (e.g., Sexton, 1999).

Symptoms and Impact of VT
McCann and Pearlman’s (1990) theory of VT states that there are five primary schemas that may be impacted by both trauma and/or VT: safety, esteem, trust/dependency, intimacy, and power/control. Each schema can be disrupted regarding either the individual’s belief about him/herself or others. A disrupted schema related to safety may cause a clinician to feel that they are generally unsafe in the world. Esteem refers to a clinician’s conceptualization of the benevolence, compassion, or value of individuals. The schema pertaining to trust/dependency can become altered by VT so that clinicians feel incompetent, alone, or overly dependent on others. Schemas regarding intimacy can be challenged by VT and cause the individual to feel alone or alien from the people around them. Finally, beliefs surrounding power/control are often thought to impact and leave the individual feeling helpless and weak as a result of their inability to avoid or defend themselves or others from the trauma. Since McCann and Pearlman (1990) developed the theory of VT, many researchers have utilized standard measures of PTSD in order to measure VT, which broadens VT symptoms to include the reexperiencing, hyperarousal, and avoidance symptoms common to PTSD (e.g., Adams & Riggs, 2008; Ghahramanlou & Brodbeck, 2008).

**Potential Risk Factors for VT**

**Amount of Exposure to Secondary Trauma.** Several researchers have investigated the influence caseload size and number of years of clinical experience have on therapists working with trauma survivors (dose-response theory). Theoretically, having more exposure to indirect trauma is seen as putting an individual at an increased risk for developing symptoms of VT. For example, Schauben and Frazier (1995) found that counselors working with a higher percentage of sexual violence survivors in their
caseloads experienced significantly more disrupted schemas and beliefs (as measured by the TSIBS-L; Pearlman, 1996), more PTSD symptoms (as measured by a symptom checklist developed by the researchers based on the criteria in the DSM-III-R; APA, 1987), and more symptoms of VT (as measured by a self-report of VT). These findings lend support to the dose-response theory that the more frequent exposure to trauma, the more at risk individuals are to develop VT.

However, several research studies have indicated that the role of dose-response is not so clear-cut in relation to VT. Although a larger caseload (i.e., more indirect traumatic exposure) has been associated with increased reports of VT symptoms, several investigations have found that therapists newer to the field are actually more at-risk for symptoms of VT. This is counterintuitive, as therapists newer to the field have generally been exposed to fewer trauma narratives than field veterans. McCann and Pearlman’s (1990) contention that novice therapists would be more at-risk for developing symptoms of VT as they would not understand or know how to cope with these symptoms until they had gained more experience with trauma therapy has been supported in the research (Pearlman and Mac Ian, 1995; Lyndall and Bicknell, 2001; Cunningham, 2003; Ghahramanlou and Brodbeck, 2000; and Way et al., 2004). Thus, it appears that the amount of exposure to indirect trauma plays a complicated but important role in vulnerability to symptoms of VT.

Preferred Coping Strategies. Several researchers have examined the impact of coping on the development of VT. Generally, research is based on the theory of Lazarus and Folkman (1984), which categorizes coping into avoidant coping (e.g., distracting one’s self, minimizing time spent alone, drinking or sleeping in an effort to avoid
interactions with or thoughts of the stressor) and problem-focused or active coping. Dunkley and Whelan (2006), for example, found that avoidant coping led to more telephone crisis counselors to higher rates of VT symptoms, whereas actively facing the problem and coping directly were associated with fewer symptoms. Likewise, Schauben and Frazier (1995) found that professionals working with sexual violence survivors were more likely to use active coping methods, and that these were associated with lower levels of VT. Johnson and Hunter (1997) also found support for this theory. Their research indicated that sexual assault counselors experienced greater emotional symptoms as a result of their work and used more escape/avoidance coping strategies when compared to their counseling peers whom did not specialize in treating sexual assault survivors. Lyndall and Bicknell (2001) discovered a U-shaped relationship between years of experience and avoidant coping strategies. That is, therapists with the least and the most experience were more prone to use avoidant coping strategies and thus more prone to symptoms of VT.

Although several studies suggest that avoidant coping leads to greater vulnerability for VT symptoms, Way, VanDeusen, Martin, Applegate, and Jandle’s (2004) study suggests otherwise. In fact, the investigators found that of the participants who were treating either sexual assault survivors or offenders, both positive and negative coping strategies were associated with more symptoms of VT. The researchers hypothesized that participants experiencing more symptoms of VT may have begun to engage in positive coping strategies (and reported those strategies for the investigation) as a means of combating their symptoms. Regardless of the reason, it seems clear that coping likely plays some type of role in the development or resiliency to VT.
**Personal Trauma History.** Another possible risk factor commonly discussed in the VT literature is the personal trauma history of a therapist working with trauma survivors. Within the psychology graduate student population, Adams and Riggs (2008) found that 38.7% of participants reported a history of personal trauma. Theoretically, many researchers believe that this history of victimization may put the therapist at greater risk for developing VT or other countertransference issues. Pearlman and Saakvitne (1995) suggest that therapists who have dealt with their own traumatic experience(s) may have their traumatic reactions renewed by vicariously experiencing their client’s trauma which might create an iatrogenic therapeutic relationship, as the therapist may be more likely to avoid the client’s trauma in an effort to avoid their own intense reactions.

Research findings are mixed in this regard as some found that participants with a personal history of trauma or maltreatment were more at-risk for symptoms of VT (Ghahramanlou and Brodbeck, 2000; Pearlman and Mac Ian, 1995; Way, Van Deusen, and Cottrell, 2007) while others found no connection between a personal history of trauma and symptoms of VT (Ortlepp and Friedman, 2002; Van Desuen and Way, 2006; and Way, Van Deusen, Applegate, and Jandle, 2004).

**Psychology Graduate Students and VT**

To date, Adams and Riggs (2008) is the only published investigation into the risk of VT in psychology graduate students, including 134 participants from APA-accredited clinical and counseling psychology graduate programs in Texas. The investigators explored symptoms of VT in this population as well as the role that personal history of trauma, experience level, trauma-specific training, and defense style play in the development of VT symptoms within this participant sample. Utilizing five scales on the
Trauma Symptom Inventory (TSI; Briere, 1995), Anxious Arousal, Intrusive Experiences, Defensive Avoidance, Dissociation, Impaired Self-Reliance, 31% of the sample scored in the clinically significant range on at least one scale. Data also indicated that an Adaptive defense style was consistently associated with the lowest levels of VT as measured by the five scales on the TSI. Additionally, the participants with self-sacrificing defense style were associated with significantly higher rates of VT symptoms than those with the adaptive defense style. Regarding survivor status, trauma survivors were found to be more likely to experience VT symptoms if they had a self-sacrificing defense style. Adams and Riggs (2008) also found that participants who had less experience working with trauma survivors (0-2 months) were significantly more at-risk for VT symptoms than individuals who had spent more semesters working with trauma survivors.

Although Adams and Riggs (2008) is the only published study regarding VT and psychology graduate students to date, there are several reasons that this population might be at increased vulnerability to developing symptoms of VT. One such factor is graduate students’ lack of experience and training. Ortlepp and Friedman (2002) found that those counselors who felt their training was inadequate to treat trauma survivors were more at risk for VT as they often felt hopeless in their therapeutic attempts. As graduate students are generally therapeutically less-experienced and have yet to finish their training in working with survivors, it seems that they may be especially vulnerable to developing VT. In addition, psychotherapists indicate that their graduate training did not provide them with adequate knowledge regarding the difficult work of treating trauma survivors (e.g., Adams & Riggs, 2008; Pope & Feldman-Summers, 1992 One indication that
graduate students may not be engaging in adequate self-care is the hesitancy of many psychology graduate students to seek mental health services (Dearing, Maddux, & Tangney, 2005).

Coping may also be a risk factor for VT in psychology graduate students. Research indicates that the least experienced clinicians may be more likely to use avoidant coping strategies and (as a result) experience more VT symptoms (Lyndall & Bicknell, 2001). Additionally, Hunter and Schofield’s (2006) qualitative study of VT included eight trauma counselors who reported that they developed the coping strategies they use to manage their VT symptoms over time and with more professional experience. This information lends some support to the notion that less experienced mental health professionals (e.g., psychology graduate students) may not have developed effective personal strategies for coping with the trying work of treating trauma survivors. Thus, the purpose of this study is to evaluate whether graduate students are experiencing symptoms of VT and whether they are more likely to report symptoms of VT depending on their trauma survivor status, the number of clinical hours they have spent with trauma survivors, and their preferred coping strategies.

**Method**

**Procedure**

APA-accredited graduate programs were randomly selected and electronically solicited to participate in the study. The random sample was chosen via an Excel shuffle application applied to a list of 295 programs; when data collection ceased, 123 programs were contacted. A copy of the IRB approval (see Appendix A) was electronically sent to each director of clinical training that was randomly selected for participant solicitation
along with a description of the study. If the graduate program decided to participate, they forwarded an e-mail to their students with a link to the surveys required for participation (see Proposal Appendices D and E). Consent was obtained by clicking the “submit” button.

Participants

For information regarding participant demographics, please see Table 1. In terms of self-identifying themselves as trauma survivors, 29.9% of participants indicated that they did and 70.1% indicated that they did not. More specifically, none reported that their trauma was currently impacting them “A great deal,” while 14.3% reported it impacted them “A fair amount,” 65.3% “Somewhat,” and 20.4% “Not at all.” Regarding the amount of experience they had working with trauma survivors, participants’ reports varied widely, ranging from 2 hours to 900 hours ($M = 252.71$ and $SD = 462.12$).

Of the 123 programs that were solicited, 22 psychology graduate programs that responded that they would participate (17.9% response rate) and 163 individuals completed the surveys. The response rate was lower than expected, as Adams and Riggs (2008) study of VT in psychology graduate students reached a response rate of 36.3%, which may be due to the method of data collection; Adams and Riggs utilized a mail-in method whereas the current study involved internet collection of data. Ten participants were excluded because they indicated that they had never worked with trauma survivors and sixteen were excluded because they only partially completed the surveys. Thus, the final sample included 137 participants.

Measures
**Demographic Survey.** In addition to collecting information regarding gender, race, education, and number of clinical hours spent with trauma survivors (see Table 2), participants were asked to indicate whether they identified themselves as trauma survivors, based on the DSM-IV-TR (APA, 2000) definition of a traumatic event. If participants identified as a trauma survivor, they were prompted to indicate the extent to which the trauma was currently impacting their life. Of the participants, 20.4% indicated “Not at All” and 65.3% indicated “Somewhat” and were classified as Trauma Survivors with Mild Effect; 14.30% reported that their trauma history was impacting their lives “A fair amount” (with none reporting “A great deal”) and were categorized as Trauma Survivors with Moderate Effect.

**Trauma and Attachment Belief Scale.** The Trauma and Attachment Beliefs Scale (TABS; Pearlman, 2003) is the updated and most current version of the TSIBS-L (Pearlman, 1996). The TABS and the TSIBS-L have been used in most VT studies specifically examining disrupted schemas (e.g., Bober & Regehr, 2006; Dunkley & Whelan, 2006; Kadambi & Truscott, 2004; Pearlman & Mac Ian, 1995). The scales are “intended to measure disruptions in beliefs about self and others that arise from psychological trauma or from vicarious exposure to trauma material through psychotherapy or other helping relationships” (Pearlman, 1996, p. 415). The TABS is an 84 item six point Likert scale (1 = Disagree Strongly, 6 = Agree Strongly) related to the theorized schemas commonly disrupted by VT. Besides a total score, the TABS includes subscales related to the five theorized schemas in both their relation to others and self: Self-Safety, Other-Safety, Self-Trust/Dependency, Other-Trust/Dependency, Self-Esteem, Other-Esteem, Self-Intimacy, Other-Intimacy, Self-Power, and Other-
Power. Pearlman (2003) reports that the internal consistency of the TABS total score is .96, with the subscale reliabilities ranging from .67 (Self-Intimacy) to .87 (Other-Intimacy). Additionally, the test-retest reliability is reported to be .71 for the total score (Pearlman, 2003). Because the TABS only examines the disrupted schemas common to VT, for the purposes of this study, the TABS was used in conjunction with the IES-R to assess for VT symptoms.

**Impact of Event Scale-Revised.** The IES-R (Weiss, 1995) has been included in studies of VT in order to measure the broader PTSD-like symptoms of VT (e.g., Dunkley & Whelan, 2006; Lyndall & Bicknell, 2001) and includes subscales measuring Intrusion, Avoidance, and Hyperarousal. The IES-R is meant to measure symptoms the individual has experienced in the past seven days. It includes 22 items ranked on a 5-point Likert scale (0 = Not at All, 4 = Extremely) indicating the distress an individual experienced relative to the item. Instead of a traditional sum of scores (total score) indicating more symptoms, the total score and three subscales of the IES-R are converted into mean responses that are interpreted using the Likert scale. Weiss (2004) reported that estimates of internal consistency using coefficient alpha are Intrusion = .89, Avoidance = .84, and Hyperarousal = .82. The total score has demonstrated high internal consistency, with Chronbach’s alpha of .95 in a population of traumatized substance abusers (Rash, Coffey, Baschnagel, Dreobes, & Saladain, 2008) and .96 in a population of Vietnam veterans (Creamer, Bell, & Failla, 2003). For the purposes of this study, PTSD-like symptoms was assessed with the IES-R total score and is consistent with several other studies (i.e., Ben-Ezra, Palgi, & Essar, 2008; Saladin et al., 2003).
The Brief COPE. The Brief COPE (Carver, 1997) is a shorter form of the original COPE, which was created to measure a variety of coping strategies based on the work of Lazarus and Folkman (1984) as executing a response in an effort to minimize the impact of a potential threat. Keeping with the theory of Lazarus and Folkman (1984), most of the scales on the COPE can be categorized into addressing the stressor directly (i.e., Active Coping) or avoiding the problem (i.e., Avoiding Coping). The 4-point Brief COPE (1 = I haven’t been doing this at all, 4 = I’ve been doing this a lot) has 14 scales, with 2 items each. The scales of the Brief COPE are: Active Coping, Planning, Positive Reframing, Acceptance, Humor, Religion, Using Emotional Support, Using Instrumental Support, Self-distraction, Denial, Venting, Substance use, Behavioral Disengagement, and Self-blame. Similar to other published studies (e.g., Bellizzi & Blank, 2006; Cohen, Ben-Zur, Rosenfeld, 2008), a Principal Component Analysis was conducted to confirm the factor structure for this data set of the Brief COPE.

Results

Preliminary Analyses

As an initial step in examining the data, the interpretative ranges of participants’ TABS an IES-R total scores (based on normative data) are presented in Table 3. The TABS total scores were converted into T-scores and interpreted given the measure’s normative data. This analysis resulted in 64.2% of participants’ TABS scores falling in the Average range to Very High range, 46.72% in the Average range, 10.95% in the High Average range, and 6.57% fell in the Very High range. Although the IES-R has no normative data, the author suggests using the total score (a mean based on item endorsements) as a general interpretation. With this guideline, the IES-R total scales
were skewed, with 89.05% of participants falling into the range that indicates that their PTSD-like symptoms within the last week have impacted them “A little bit.”

Due to the large number of female participants (82.5%), an independent samples t-test was conducted to insure that male and female participants were not significantly different in their TABS and IES-R scores. It was found that male and female participants did not significantly differ on their TABS total scores, \( t(135) = 1.31, p = .19 \), nor on their IES-R total scores, \( t(135) = -.44, p = .67 \). Therefore, both male and female participants were included in the subsequent analyses.

As a preliminary examination of the relationships among the three measures analyzed in this study (the TABS, IES-R, and Brief COPE), a correlational matrix was run (see Table 4). As predicted, the TABS and IES-R total scores were significantly positively correlated \( (r = .31) \), representing the related VT symptoms of PTSD-like symptoms and disrupted schemas.

In order to examine if the data supported the Active and Avoidant coping variables, a Principal Component Analysis was performed (Catell, 1996). Prior to performing the analysis, the data was evaluated to ensure that it met the assumptions and expectations of the analysis. The correlation matrix indicated the presence of many coefficients of 0.3 and above and the Kaiser-Meyer-Olkin value was 0.827, exceeding the recommended value of 0.6 (Kaiser, 1970, 1974) and Bartlett’s Test of Sphericity (Bartlett, 1954) reached statistical significance, supporting the use of Principal Component Analysis for this set of data. The Principal Component Analysis revealed the presence of six components with eigenvalues exceeding 1; however, the screeplot featured a distinct break between the second and third component and supported a two-
factor model (Cattell, 1966) which explained a total of 47.92% of the variance (see Table 5). This was similar to Bellizzi and Blank’s (2006) factor analysis of the Brief COPE in breast cancer survivors, which produced Active and Avoidant coping factors that explained a total of 48% of the variance. It should be noted, however, that four items were dropped from the factor analysis due to inadequate loadings on the two factors (items 8, 20, 23, 24). The factors appeared congruent with Lazarus’ theory of Active Coping and Avoidant Coping (see Appendix B). For this model, Active Coping included 11 items (from the scales measuring Emotional Support, Active Coping, Venting, Using Instrumental Support, Positive Reframing, and Humor) and Avoidant Coping included 9 items (from the scales measuring Self-Distraction, Denial, Substance Use, and Behavioral Disengagement). Participants were classified as either using more Active Coping or Avoidant Coping based on their scores.

Main Analyses

In order to evaluate the relationship between personal trauma history and VT symptoms, a multivariate analysis of variance (MANOVA) was performed and significant differences were found among participants who identified as survivors of trauma with mild effect, survivors of trauma with moderate effect, and non-survivors of trauma, $F(4, 266) = 12.60, p = .01$. Tests for simple effects indicated that both the TABS, $F(1, 134) = 9.52, p = .01$, and the IES-R, $F(1, 134) = 21.40, p = .01$, scores reached statistical significance. Post-hoc comparisons using the Tukey HSD test indicated that the mean TABS score for Non-Survivors ($\bar{M} = 169.84, SD = 31.93$) was significantly different from Survivors with Moderate Effect ($\bar{M} = 222.83, SD = 40.74$). In addition, the mean TABS score for Survivors with Moderate Effect with significantly
different from Survivors with Mild Effect \((M = 186.03, SD = 33.28)\). There was not a significant difference between Non-Survivors and Survivors with Mild Effect. Regarding the IES-R scores, post-hoc comparisons using the Tukey HSD test indicated that the mean IES-R score for Non-Survivors \((M = 1.33, SD = .34)\) was significantly different from Survivors with Moderate Effect \((M = 2.45, SD = 1.08)\). In addition, Survivors with Moderate Effect were significantly different on the IES-R as compared to Survivors with Mild Effect \((M = 1.39, SD = .38)\). However, these findings should be considered in light of the fact that the cell including “survivors of trauma with moderate effect” only included six participants.

In order to determine the relationship between self-reported clinical experience with trauma survivors and symptoms of VT, a second MANOVA was performed. There were no significant differences among participants who had little clinical experience with trauma survivors (0-150 hours), moderate clinical experience with trauma survivors (151-300 hours), and much experience with trauma survivors (over 300 hours) on the measures assessing VT, \(F(4, 264) = .328, p = .859\).

In order to evaluate the relationship between preferred coping strategy and VT symptoms, a third MANOVA was performed. Participants who reported engaging in Active Coping and participants who reported engaging primarily in Avoidant Coping differed significantly on the measures assessing VT, \(F(2, 134) = 6.09, p = .003\), Wilks’ Lambda = .91. Tests for simple effects indicated that the TABS score was the only variable that reached statistical significance, \(F(1, 135) = 12.096, p = .001\). Mean scores indicated that participants who reported engaging in more Avoidant coping strategies scored significantly higher on the TABS \((M = 203.50, SD = 41.92)\) than those
who reported engaging in more Active coping strategies ($M = 172.70$, $SD = 32.06$). However, these analyses should be considered in light of the fact that the Avoidant Coping cell included only 16 participants, as opposed to the Active Coping cell, which included 121 participants.

**Discussion**

This study was designed to explore risk factors (i.e., personal history of trauma, hours spent with trauma survivors, and preferred coping strategies) for Vicarious Trauma in psychology graduate students. Although participants generally reported low current levels of PTSD-like symptoms (as measured by the IES-R, 89.05% of participants are impacted by the symptoms “a little bit”), the TABS total scores reflected higher rates of disrupted schemas or belief systems. In fact, 10.95% of participants’ TABS scores fell in the High Average Range and 6.57% of participants’ TABS scores fell in the Very High Range as compared to TABS normative data. These findings are consistent with other studies (e.g., Ortlepp & Friedman; Schauben & Frazier) who found that most participants did not report clinically significant symptoms of VT. Adams and Riggs (2008) used five scales from the Trauma Symptom Inventory (TSI; Briere, 1995) and found that, of their psychology graduate students, scale means were not clinically significant, with only 8-15% of the participants earning clinically significant scores on each scale. Although these numbers indicate that the majority of psychology graduate students working with trauma survivors are functioning well, it also indicates that a notable minority are reporting schema disruptions and some PTSD-like symptoms. Thus, although VT is not epidemic among the psychology graduate population, it does appear that for some students, their work with trauma survivors is reportedly negatively influencing their life.
Regarding risk factors, the study found that survivors of trauma who reported moderate effects of their direct traumatic exposure reported significantly more VT symptoms (as measured by the TABS and IES-R) than non-trauma survivors and survivors who reported a mild effect. These results are consistent with previous research studies (e.g., Ghahramanalou & Brodbeck, 2000; Pearlman & Mac Ian, 1995; Way, Van Deusen, & Cottrell, 2007) that found that clinicians with a personal trauma history reported significantly more VT symptoms.

Another risk factor suggested in previous studies was the number of clinical hours that a participant spent with trauma survivors. The results in the present study indicated that this did not significantly influence participants’ self-report of VT symptoms, contrary to other studies (e.g., Schauben & Frazier, 1995) that have found that therapist’s experience with trauma survivors is associated with symptoms of VT. Other studies, however, have found that clinicians who have less experience with trauma survivors report more VT symptoms (e.g., Cunningham, 2003; Ghahramanalou & Brodbeck, 2002). The finding regarding clinical hours in this study may be partly due to the fact that, as graduate students, most of the participants are novices to the field, and are mostly inexperienced with trauma survivors, creating a homogenous participant pool for this variable. These differences may be more present in studies including participants at different stages of their career. Thus, those with more training or assessed at later parts of their careers may report more symptoms of VT.

Finally, the study investigated whether engaging in more Active Coping or Avoidant Coping significantly impacted participants’ self-reported symptoms of VT. Although few participants reported engaging in more Avoidant Coping strategies (n=16
or 11.68%), those who did report more disrupted schemas (as measured by the TABS) than their peers who used more Active Coping strategies. This indicates that individuals who engage in Avoidant Coping strategies (e.g., drinking, distraction) are significantly more likely to report disrupted schemas regarding safety, intimacy, power/control, esteem, and trust. Like other studies (e.g., Schauben & Frazier, 1995; Dunkley & Whelan, 2006), this study suggests that engaging in Active Coping strategies puts graduate students at less risk for reporting symptoms of VT. However, unlike Lyndall and Bicknell (2001) who found that newer therapists (working with sexual offenders) were more likely to use avoidant coping strategies, most graduate student participants in this study reportedly used primarily active coping strategies to manage their reactions to working with trauma survivors. This may be due to the specific client population (i.e., sexual offenders) or a difference in training between psychology graduate students and the counselor participants. An alternate reason for this finding may be that graduate students who were engaging in avoidant coping strategies were unlikely to voluntarily participate in the study as another means of avoiding their indirect exposure to trauma and its effects. Finally, given that many of the items on the Brief COPE are face valid, social desirability may have led some graduate participants to answer in an invalid manner.

These findings prompt several recommendations for graduate students and graduate programs. For example, graduate students who are still experiencing consequences of direct traumatic exposure appear to be at increased risk for both disrupted and schemas and PTSD-like symptoms common to VT. Graduate students who identify as trauma survivors may want to seek out extra supervision or even their
own counseling in an effort to prevent and address symptoms of VT. The data also
highlights the importance of providing information and supervision to psychology
graduate students regarding VT during all stages of their training, as it is not only those
who are just beginning to work with trauma survivors who are likely to report the
symptoms of VT. Finally, the findings suggest that instead of focusing on specific self-
care strategies, which has been critiqued in the research literature (e.g., Bober & Regehr,
2006), it may be more effective to generally discuss Active versus Avoidant coping
strategies.

The current study has several limitations. The response rate (17.9%) is a concern,
as it was difficult to recruit participants. The response rate was lower than expected, as
Adams and Riggs (2008) study of VT in psychology graduate students reached a
response rate of 36.3%, and may be due to the length of the self-reports. In addition, one
of the symptoms of VT can be avoiding the topic of trauma and VT (Pearlman &
McCann, 1990), which may lead some potential participants who are experiencing VT to
avoid participation in the study. In addition, many of the participants reported engaging
in more Active Coping strategies than Avoidant Coping strategies. This provided a small
cell (n= 16) of participants for the multivariate analysis of variables (MANOVA), which
may limit the generalizability of the data. Additionally, IES-R scores of participants
were generally low, which may be due to the fact that the measure asks only for
symptoms that have occurred only within the last seven days. As a result, it is unknown
whether some participants may have experienced PTSD-like symptoms (e.g.,
hyperarousal, avoidance, intrusions) at another time in their training. In addition,
participants did not report the type of personal trauma they had experienced in their
personal lives; it is unknown if certain types of trauma survivors (e.g., child or sexual abuse survivors) influenced the reported VT symptoms. Participants also did not report the type of trauma survivors they had worked with in their clinical experience; perhaps work with specific client populations (or severity) influences VT symptoms. Finally, the self-report nature of the assessments in this study may be limiting as it requires participants to answer with insight, honesty, and openness.

Although the participants in this study generally reported low levels of VT symptoms, it remains an important topic to be addressed in the research literature and in graduate programs. Given that the majority of participants in the current study scored in the average range or below on the TABS, resiliency to VT symptoms should become a greater focus of research. Like Arnold, Calhoun, & Tedeschi (2005) point out, some of these students may already be experiencing symptoms of Vicarious Posttraumatic Growth. Further research is needed to investigate both the positive and negative consequences of psychological training involving trauma survivors, and what mitigating factors might facilitate resilience.

Another topic of future research worth exploring is the role supervision has on the rates of VT symptoms in psychology graduate students. Many of the Active Coping strategies included in this study involved “seeking instrumental support,” which may include supervision. Supervisory alliance may also factor into whether students seek that type of Active Coping in managing their reactions to VT. In addition, future research may want to investigate whether the clinician’s theoretical orientation and preferred treatment strategies (e.g., empirically validated treatments versus traditional psychodynamic interventions) may influence their self-report of VT symptoms.
References


Table 1

Demographic Variables for Total Sample of Participants

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total Sample ((n = 137))</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
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<tr>
<td>Male</td>
<td>17.5%</td>
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<tr>
<td>Female</td>
<td>82.5%</td>
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<tr>
<td><strong>Age</strong></td>
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<tr>
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<tr>
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<td>Range (in years)</td>
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<td><strong>Race/Ethnicity</strong></td>
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<tr>
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<tr>
<td>Other</td>
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<tr>
<td><strong>Type of Graduate Program</strong></td>
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<td>Master’s</td>
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<tr>
<td>Doctoral</td>
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<tr>
<td><strong>Years Completed in Graduate Program</strong></td>
<td></td>
</tr>
<tr>
<td>One Year</td>
<td>16.1%</td>
</tr>
<tr>
<td>Two Years</td>
<td>16.1%</td>
</tr>
<tr>
<td>Three Years</td>
<td>20.4%</td>
</tr>
<tr>
<td>Four Years</td>
<td>26.3%</td>
</tr>
<tr>
<td>Five Years</td>
<td>10.9%</td>
</tr>
<tr>
<td>Six Years</td>
<td>7.3%</td>
</tr>
<tr>
<td>Seven Years or More</td>
<td>2.9%</td>
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</table>
Table 2

Participants’ Report of Hours Spent in Clinical Contact with Trauma Survivors

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total Sample (n = 137)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Clinical Hours with Trauma Survivors</td>
<td></td>
</tr>
<tr>
<td>Mean (in hours)</td>
<td>252.71</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>462.12</td>
</tr>
<tr>
<td>Range</td>
<td>2-900</td>
</tr>
<tr>
<td>Hours by Categories</td>
<td></td>
</tr>
<tr>
<td>0-150 hours</td>
<td>92</td>
</tr>
<tr>
<td>151-300 hours</td>
<td>22</td>
</tr>
<tr>
<td>Over 300 hours</td>
<td>23</td>
</tr>
<tr>
<td>Method of Recording Hours</td>
<td></td>
</tr>
<tr>
<td>Diary or Journal</td>
<td>2.2%</td>
</tr>
<tr>
<td>Time 2 Track or other Online Program</td>
<td>46.0%</td>
</tr>
<tr>
<td>Personal Spreadsheet</td>
<td>25.5%</td>
</tr>
<tr>
<td>Log</td>
<td>14.6%</td>
</tr>
<tr>
<td>No Standard Method</td>
<td>4.4%</td>
</tr>
<tr>
<td>Other</td>
<td>7.3%</td>
</tr>
</tbody>
</table>
Table 3

Participants TABS Total Score Interpretive Ranges (Based on TABS Normative Data)

<table>
<thead>
<tr>
<th>Interpretive Range Sample</th>
<th>T-Scores</th>
<th>Total Sample ((n = 137))</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely Low</td>
<td>(\leq 29)</td>
<td>1</td>
<td>0.73%</td>
</tr>
<tr>
<td>Very Low</td>
<td>30-39</td>
<td>24</td>
<td>17.52%</td>
</tr>
<tr>
<td>Low Average</td>
<td>40-44</td>
<td>24</td>
<td>17.52%</td>
</tr>
<tr>
<td>Average</td>
<td>45-55</td>
<td>64</td>
<td>46.72%</td>
</tr>
<tr>
<td>High Average</td>
<td>56-59</td>
<td>15</td>
<td>10.95%</td>
</tr>
<tr>
<td>Very High</td>
<td>60-69</td>
<td>9</td>
<td>6.57%</td>
</tr>
<tr>
<td>Extremely High</td>
<td>(\geq 70)</td>
<td>0</td>
<td>0.00%</td>
</tr>
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</table>

Participants IES-R Total Score Interpretive Ranges

<table>
<thead>
<tr>
<th>Interpretive Range Sample</th>
<th>Average Score</th>
<th>Total Sample ((n = 137))</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at All</td>
<td>0</td>
<td>3</td>
<td>2.19%</td>
</tr>
<tr>
<td>A little bit</td>
<td>1</td>
<td>122</td>
<td>89.05%</td>
</tr>
<tr>
<td>Moderately</td>
<td>2</td>
<td>10</td>
<td>7.30%</td>
</tr>
<tr>
<td>Quite a bit</td>
<td>3</td>
<td>1</td>
<td>0.73%</td>
</tr>
<tr>
<td>Extremely</td>
<td>4</td>
<td>1</td>
<td>0.73%</td>
</tr>
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Table 4

Exploratory Analysis: Correlations of Total and Subtest Scores

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<tr>
<th>Variable</th>
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<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. TABS Total</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Self-Trust</td>
<td>.63**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Other-Trust</td>
<td>.74**</td>
<td>.38**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Self-Esteem</td>
<td>.82**</td>
<td>.57**</td>
<td>.46**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Other-Esteem</td>
<td>.74**</td>
<td>.41**</td>
<td>.76**</td>
<td>.55**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Self-Intimacy</td>
<td>.64**</td>
<td>.44**</td>
<td>.32**</td>
<td>.57**</td>
<td>.45**</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Other-Intimacy</td>
<td>.77**</td>
<td>.36**</td>
<td>.56**</td>
<td>.59**</td>
<td>.56**</td>
<td>.44**</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Self-Control</td>
<td>.83**</td>
<td>.49**</td>
<td>.47**</td>
<td>.69**</td>
<td>.54**</td>
<td>.59**</td>
<td>.59**</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>9. Other-Control</td>
<td>.68**</td>
<td>.25**</td>
<td>.44**</td>
<td>.47**</td>
<td>.38**</td>
<td>.41**</td>
<td>.52**</td>
<td>.63**</td>
<td>--</td>
</tr>
<tr>
<td>10. Self-Safety</td>
<td>.79**</td>
<td>.46**</td>
<td>.55**</td>
<td>.58**</td>
<td>.48**</td>
<td>.43**</td>
<td>.48**</td>
<td>.61**</td>
<td>.49**</td>
</tr>
<tr>
<td>11. Other-Safety</td>
<td>.62**</td>
<td>.32**</td>
<td>.44**</td>
<td>.41**</td>
<td>.39**</td>
<td>.23**</td>
<td>.33**</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. IES-R Total</td>
<td>.31**</td>
<td>.07</td>
<td>.25**</td>
<td>.16</td>
<td>.17*</td>
<td>.18*</td>
<td>.27**</td>
<td>.31**</td>
<td>.24**</td>
</tr>
<tr>
<td>13. Intrusion</td>
<td>.24**</td>
<td>.03</td>
<td>.19*</td>
<td>.10</td>
<td>.09</td>
<td>.08</td>
<td>.22*</td>
<td>.26**</td>
<td>.18*</td>
</tr>
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<td>14. Avoidance</td>
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<td>.12</td>
<td>.27**</td>
<td>.19*</td>
<td>.21*</td>
<td>.27**</td>
<td>.25**</td>
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<td>.19*</td>
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<tr>
<td>15. Hyperarousal</td>
<td>.30**</td>
<td>.03</td>
<td>.23**</td>
<td>.17</td>
<td>.17</td>
<td>.13</td>
<td>.25**</td>
<td>.29**</td>
<td>.29**</td>
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<td>Brief COPE</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>16. Active</td>
<td>-.06</td>
<td>-.21*</td>
<td>-.02</td>
<td>-.02</td>
<td>-.09</td>
<td>-.14</td>
<td>-.04</td>
<td>.03</td>
<td>.01</td>
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<td>.21*</td>
<td>.23**</td>
<td>.35**</td>
<td>.26**</td>
<td>.34**</td>
<td>.34**</td>
<td>.34**</td>
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</table>

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level
Table 4

Continued

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<thead>
<tr>
<th>Variable</th>
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<td></td>
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<tr>
<td>10. Self-Safety</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Other-Safety</td>
<td>.61**</td>
<td>--</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>12. IES-R Total</td>
<td>.30**</td>
<td>.25**</td>
<td>--</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
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<td>.25**</td>
<td>.92**</td>
<td>--</td>
<td></td>
<td></td>
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<td></td>
</tr>
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<td>14. Avoidance</td>
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<td>.21*</td>
<td>.90**</td>
<td>.72**</td>
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<td>15. Hyperarousal</td>
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<td>.21*</td>
<td>.85**</td>
<td>.73**</td>
<td>.63**</td>
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</tr>
<tr>
<td>Brief COPE</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>16. Active</td>
<td>-.01</td>
<td>.02</td>
<td>.26**</td>
<td>.29**</td>
<td>.13</td>
<td>.30</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>17. Avoidant</td>
<td>.29**</td>
<td>.20*</td>
<td>.49**</td>
<td>.40**</td>
<td>.48**</td>
<td>.42**</td>
<td>.41**</td>
<td>--</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level
Table 5

Summary of Items and Factor Loadings for Oblim Rotation, Two-Factor Solution for the Brief COPE (N = 137)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loading</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. I’ve been concentrating my efforts on doing something about the situation I’m in.</td>
<td>.579</td>
<td>.409</td>
</tr>
<tr>
<td>5. I’ve been getting emotional support from others</td>
<td>.820</td>
<td>.643</td>
</tr>
<tr>
<td>7. I’ve been taking action to try to make the situation better.</td>
<td>.671</td>
<td>.455</td>
</tr>
<tr>
<td>9. I’ve been saying things to let my unpleasant feelings escape.</td>
<td>.521</td>
<td>.409</td>
</tr>
<tr>
<td>10. I’ve been getting help and advice from people.</td>
<td>.882</td>
<td>.644</td>
</tr>
<tr>
<td>12. I’ve been trying to see it in a different light, to make it seem more positive.</td>
<td>.712</td>
<td>.496</td>
</tr>
<tr>
<td>14. I’ve been getting comfort and understanding from someone.</td>
<td>.882</td>
<td>.732</td>
</tr>
<tr>
<td>16. I’ve been looking for something good in what is happening.</td>
<td>.716</td>
<td>.482</td>
</tr>
<tr>
<td>17. I’ve been making jokes about it.</td>
<td>.412</td>
<td>.297</td>
</tr>
<tr>
<td>19. I’ve been expressing my negative feelings.</td>
<td>.646</td>
<td>.541</td>
</tr>
<tr>
<td>21. I’ve been trying to get advice or help from other people about what to do.</td>
<td>.820</td>
<td>.638</td>
</tr>
<tr>
<td>1. I’ve been turning to work or other activities to take my mind off things.</td>
<td>.219</td>
<td>.458</td>
</tr>
<tr>
<td>3. I’ve been saying to myself “this isn’t real.”</td>
<td>.032</td>
<td>.275</td>
</tr>
</tbody>
</table>
Table 5

*Continued*

Summary of Items and Factor Loadings for Oblim Rotation, Two-Factor Solution for the Brief COPE (N = 137)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loading 1</th>
<th>Factor Loading 2</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. I’ve been using alcohol or drugs to make myself</td>
<td>-.120</td>
<td>.676</td>
<td>.430</td>
</tr>
<tr>
<td>feel better.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. I’ve been giving up trying to deal with it.</td>
<td>-.089</td>
<td>.742</td>
<td>.525</td>
</tr>
<tr>
<td>11. I’ve been using alcohol or drugs to help me get through it.</td>
<td>-.175</td>
<td>.685</td>
<td>.439</td>
</tr>
<tr>
<td>13. I’ve been criticizing myself.</td>
<td>.226</td>
<td>.534</td>
<td>.398</td>
</tr>
<tr>
<td>15. I’ve been giving up the attempt to cope.</td>
<td>-.111</td>
<td>.650</td>
<td>.399</td>
</tr>
<tr>
<td>18. I’ve been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.</td>
<td>.320</td>
<td>.522</td>
<td>.460</td>
</tr>
<tr>
<td>22. I’ve been blaming myself for things that happened.</td>
<td>.194</td>
<td>.599</td>
<td>.456</td>
</tr>
</tbody>
</table>
November 30, 2009

Colleen Furey, M.A.
1047 Dana Avenue, Apt. 3
Cincinnati, Ohio 45229

Re: Protocol Application #0615 “Risk factors for vicarious traumatization in psychology graduate students”

Dear Ms. Furey:

Thank you for your prompt, thorough and detailed response to the IRB reviewers’ requests for modification to your above referenced study. We found your responses to be thoughtful, complete and appropriate. We are able to approve your study based on the revised materials. Therefore, your above-referenced study, as modified is approved in the Expedited category under Federal Guidelines 45CFR46. Your approval expires on November 30, 2010 and a Progress Report is due by that date. The form can be found online at www.xavier.edu/irb/forms.

One of the reviewers made the following suggestion, which you are not required to follow. However, the reviewer suggested that you may wish to maintain the professional tone of your email and survey by changing the title of the final SurveyMonkey screen from “Thanks!” to “Thank You”. We want to emphasize that this is a suggestion and does not impact the IRB’s approval of your study.

Please note that if you wish to modify your study, it will be necessary to obtain IRB approval prior to implementing the modification. If any adverse events occur, please notify the IRB immediately.

We truly appreciate your efforts and attention to compliance within the spirit of human subject’s protection. Great success with your research and your thesis!

Sincerely,

[Signature]

Kathleen J. Hart, Ph.D., ABPP
Interim Chair, Institutional Review Board
Xavier University

c: Advisor: W. Michael Nelson, PhD, ABPP

KH/dm
Appendix B

Items Included in “Active” and “Avoidant” Scales Following Principal Component Analysis

Active Scale:

2. I’ve been concentrating my efforts on doing something about the situation I’m in. (Active Coping)

5. I’ve been getting emotional support from others. (Emotional Support)

7. I’ve been taking action to try to make the situation better. (Active Coping)

9. I’ve been saying things to let my unpleasant feelings escape. (Venting)

10. I’ve been getting help and advice from people. (Using Instrumental Support)

12. I’ve been trying to see it in a different light, to make it seem more positive. (Positive Reframing)

14. I’ve been getting comfort and understanding from someone. (Emotional Support)

16. I’ve been looking for something good in what is happening. (Positive Reframing)

17. I’ve been making jokes about it. (Humor)

19. I’ve been expressing my negative feelings. (Venting)

21. I’ve been trying to get advice or help from other people about what to do. (Using Instrumental Support)

Avoidant Scale:

1. I’ve been turning to work or other activities to take my mind off things. (Self-Distraction)

3. I’ve been saying to myself “this isn’t real.” (Denial)

4. I’ve been using alcohol or drugs to make myself feel better. (Substance Use)

6. I’ve been giving up trying to deal with it. (Behavioral Disengagement)

11. I’ve been using alcohol or drugs to help me get through it. (Substance Use)
Appendix B (continued)

13. I’ve been criticizing myself. (Self-Blame)

15. I’ve been giving up the attempt to cope. (Behavioral Disengagement)

18. I’ve been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping. (Self-Distraction)

22. I’ve been blaming myself for things that happened. (Self-Blame)
Appendix C

Exploratory Post-hoc Analyses

Following completion of the proposed analyses, several exploratory analyses were performed in order to further understand the data. These analyses will be briefly outlined.

First, given the relatively small number of participants that fell in the category of trauma survivors experiencing moderate effects (n=6), another MANOVA was conducted to determine if there were significant differences in VT symptoms for participants who identified as non-trauma survivors and those who did (regardless of the impact the trauma was having on their life). There was a statistically significant difference between survivors and non-survivors on the combined dependent variables, F (2, 134) = 7.39, p = .01. When the results for the dependent variables were considered separately, both the TABS, F(1, 135) =12.05, p = .01, and IES-R, F(1, 135) =6.48, p = .01, scores reached statistical significance. Specifically, trauma survivors scored significantly higher on both measures than did participants who identified as non-trauma survivors.

Another MANOVA was conducted to determine whether a more equal split of hours spent with trauma survivors would produce significant differences in VT symptoms. For this analysis, participants were divided into three categories: 2-45 hours (n=42), 50-120 hours (n=44), 150-2800 hours (n=50). There was no statistically significant difference between these groups of participants, F (4, 266) = 1.01, p = .40. This reflects the previous analyses conclusion that the number of hours a participant reported spending with trauma survivors was not significantly associated with increased symptoms of VT.
An additional MANOVA was conducted to determine whether the number of years in graduate school a participant completed was associated with increased self-reported symptoms of VT. There was no statistically significant difference between the seven groups of participants (representing one through seven or more years of graduate school), $F(12, 260) = 1.24, p = .26$. Again, this appears to reflect that the amount of experience or training a participant had did not influence their self-reported levels of VT symptoms.

Finally, a MANOVA was conducted to explore whether an interaction of years in graduate school and the previously mentioned categories of hours spent with trauma survivors might influence self-reported levels of VT symptoms. There was no statistically significant difference found with this interaction, $F(20, 234) = 1.37, p = 14$. 
Risk Factors of Vicarious Traumatization in Psychology Graduate Students

Problem

Over the last 20 years, empirical research has documented symptoms of Vicarious Trauma in many different mental health populations, particularly counselors and psychologists (e.g., Pearlman & Mac Ian, 1995; Iliffe & Steed, 2000; Dunkley & Whelan, 2006). These populations are frequently noted to have moderate levels of VT symptoms (e.g., Pearlman & Mac Ian, 1995), although some populations have found high levels of symptoms of VT (e.g., Way, Van Deusen, Martin, Applegate, & Jandle, 2004). However, there has only been one study regarding the presence of VT symptoms in psychology graduate students published to the author’s knowledge (Adams & Riggs, 2008). The current study examined three risk factors for VT in psychology graduate students: personal trauma history, preferred coping strategies, and clinical hours spent with trauma survivors.

Method

Participants

Participants were 137 psychology graduate students \( (n = 24 \text{ male}, \ 17.5\%; \ n = 113 \text{ female}, \ 82.5\% \) who were currently working with survivors of trauma in clinical settings \( (M_{\text{age}} = 29.10; \ SD = 6.01 \text{ years}) \). There were no significant differences in self-reported VT symptoms for male and female participants.

Procedure

APA-accredited graduate programs were randomly selected and electronically solicited to participate in the study (17.9\% return rate). If the graduate program decided to participate, they forwarded an e-mail to their students with a link to the surveys required for participation.
Results

The TABS total scores were interpreted given the measure’s normative data - 46.72% of participants fell in the Average Range, 10.95% in the High Average Range and 6.57% in the Very High Range, indicating that the majority of participants were reporting some disrupted schemas common to VT. The IES-R total scores were skewed, with 89.05% of participants falling into the range that indicates that their PTSD-like symptoms within the last week have impacted them “A little bit.”

A MANOVA indicated that there were significant differences between participants who identified as survivors of trauma with mild effect, survivors of trauma with moderate effect, and non-survivors of trauma, $F(4, 266) = 12.60, p = .00$. Tests for simple effects indicated that both the TABS score, $F(1, 134) = 9.52, p = .01$, and the IES-R score, $F(1, 134) = 21.40, p = .01$, reached statistical significance. Post-hoc comparisons using the Tukey HSD test indicated that the mean TABS score for Non-Survivors ($M = 169.84, SD = 31.93$) was significantly different from Survivors with Moderate Effect ($M = 222.83, SD = 40.74$). In addition, the mean TABS score for Survivors with Moderate Effect was significantly different from Survivors with Mild Effect ($M = 186.03, SD = 33.28$). There was not a significant difference between Non-Survivors and Survivors with Mild Effect. Regarding the IES-R scores, post-hoc comparisons using the Tukey HSD test indicated that the mean IES-R score for Non-Survivors ($M = 1.33, SD = .34$) was significantly different from Survivors with Moderate Effect ($M = 2.45, SD = 1.08$). In addition, Survivors with Moderate Effect were significantly different on the IES-R as compared to Survivors with Mild Effect ($M = 1.39, SD = .38$).
A second MANOVA indicated that there were no significant differences among participants who had little clinical experience with trauma survivors (0-150 hours), moderate clinical experience with trauma survivors (151-300 hours), and much experience with trauma survivors (over 300 hours) on the measures assessing VT, $F(4, 268) = .378, p = .824$.

A third MANOVA indicated that participants who reported engaging in Active Coping and participants who reported engaging primarily in Avoidant Coping significantly differed on the measures assessing VT, $F(2, 134) = 6.09, p = .003$, Wilks’ Lambda = .91. Tests for simple effects indicated that the TABS score was the only variable that reached statistical significance, $F(1, 135) = 12.096, p = .001$. Mean scores indicated that participants who reported engaging in more Avoidant coping strategies scored significantly higher on the TABS ($M = 203.50, SD = 41.92$) than those who reported engaging in more Active coping strategies ($M = 172.70, SD = 32.06$).

**Discussion**

Although participants generally reported low current levels of PTSD-like symptoms (as measured by the IES-R) the TABS total scores reflected higher rates of disrupted schemas, indicating that a strong minority are reporting schema disruptions and some PTSD-like symptoms. Survivors of trauma who reported moderate effects from their direct traumatic exposure scored significantly higher on the TABS and IES-R than non-trauma survivors and survivors who reported a mild effect indicating that graduate students who identify as trauma survivors may want to seek out extra supervision or even their own counseling in an effort to prevent and address symptoms of VT.

A second risk factor explored in the study was whether the number of clinical hours that a participant spent with trauma survivors would significantly impact their self-
reported symptoms of VT. Results indicated that this did not significantly influence
participants’ self-report of VT symptoms. However, the present data does highlight the
importance of providing information and supervision to psychology graduate students
regarding VT during all stages of their training.

Although few participants reported engaging in more Avoidant Coping strategies
\( n=16 \) or 11.68\%, the data indicated that those who did scored significantly higher on the
TABS. Thus, individuals who engage in Avoidant Coping strategies were significantly
more likely to report disrupted schemas. Thus, instead of focusing on specific self-care
strategies, which has been critiqued in the research literature (e.g., Bober & Regehr,
2006), it may be more effective to generally discuss Active versus Avoidant coping.

The current study has several limitations. The response bias is a concern, as one
of the symptoms of VT can be avoiding the topic of trauma and VT (Pearlman &
McCann, 1990), which may lead some potential participants who are experiencing VT to
avoid participation in the study. The small number of participants (\( N=137 \)) may not be
large enough and lead to some small cells. Additionally, IES-R scores of participants
were generally low, which may be due to the fact that the measure specifies that the
reported symptoms must have occurred within the last seven days.

Given that the majority of participants in the current study scored in the average
range or below on the TABS, resiliency to VT symptoms should become a focus of
research. Further research is needed to investigate both the positive and negative
consequences of psychological training involving trauma survivors, and what mitigating
factors might facilitate resilience.