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PREDICTORS OF VICARIOUS TRAUMATIZATION AMONG TRAUMA CLINICIANS AND GENERAL MENTAL HEALTH PROVIDERS: A COMPARISON

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A dissertation submitted in partial fulfillment of requirements for the degree of Doctor of Philosophy in Clinical Psychology at Virginia Commonwealth University

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Abstract

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Vicarious traumatization (VT) describes the gradual, transformative shifts in internal experience that occur as a result of cumulative exposure to clients' trauma material. VT is thought to develop in the therapist due to empathic engagement with clients, resulting in profound disruptions in frame of reference. Because VT is conceptualized as a condition that develops due to frequent exposure to clients' traumatic material, a rapidly emerging body of theoretical literature suggests that clinicians can safeguard against VT by maintaining a more balanced workload (i.e., a caseload of clients with a variety of presenting problems) and limiting the number of trauma cases. However, the quantitative research base on VT is limited and has been plagued by several methodological shortcomings, most notably the lack of comparison groups of non-trauma clinicians. As such, a primary aim of the present study was to characterize the

prevalence and severity of VT among one group of clinicians treating predominantly traumatized populations, and one group providing treatment for a wider variety of presenting issues. Further, a secondary aim of this project was to identify both therapist-level and occupational-level contributors to VT. In our cross-sectional, online survey study of 114 generalist mental health providers (M_{age} = 33.36, 75.4% female, 88.6% Caucasian) and 107 trauma clinicians (M_{age} = 42.66, 81.3% female, 86.9% Caucasian) recruited from various professional organizations, levels of VT were low and not significantly different between the two provider groups. Risk factors for VT included fewer years of experience, having a greater personal history of trauma, and a personal distress empathy style. Protective factors included a perspective-taking empathy style, problem-focused and emotion-focused coping styles, and high-quality supervision. When the VT construct was examined alongside similar (but conceptually different) occupational stress constructs of secondary traumatic stress and burnout, there was a high degree of overlap, indicating that VT may not be a distinct phenomenon or unique to working with trauma clients. Results suggest that claims about the deleterious effects of trauma therapy are likely overstated, thereby refuting the original conceptualization of VT. Future research directions and implications for prevention and intervention are discussed.

Predictors of Vicarious Traumatization among Trauma Clinicians and General Mental Health Providers: A Comparison

Over the last two decades, a growing body of literature has examined the deleterious effects of trauma work on those treating traumatized populations. Therapists and other trauma workers are increasingly called upon to assist survivors of violent crime, child abuse, torture, natural disasters, war-related trauma, and acts of genocide (Cohen & Collens, 2013). Professionals who listen to reports of human cruelty and extreme loss may become overwhelmed and distressed and find it difficult to distance themselves emotionally from their clients' trauma material (Figley, 1995; Pearlman & Saakvitne, 1995a). Although the adverse impact of trauma work has been noted across various groups, such as firefighters (Brown, Mulhern, & Joseph, 2002), ambulance workers (Clohessy & Ehlers, 1999), and nurses (Tabor, 2011), the majority of research has focused on mental health providers due to the ongoing, inherently intimate nature of the client-therapist relationship (Pearlman & Saakvitne, 1995a; Chouliara, Hutchison, & Karatzia, 2009).

The early literature on indirect traumatization of mental health clinicians developed out of an examination of therapist responses to Vietnam War veterans (Pearlman & Saakvitne, 1995a). Observed reactions included existential and spiritual issues (Blank, 1985); classic symptoms of posttraumatic stress disorder (Lindy, 1988); grief, horror, and vulnerability (Scurfield, 1985); and a blunted ability to listen effectively (Haley, 1974). The clinical importance of maintaining a strong therapeutic alliance (Bordin, 1979), combined with the need to safeguard mental health professionals against personal psychological distress (Pearlman & Saakvitne, 1995a), resulted in the development of several constructs that conceptualize the experience of the trauma therapist.

McCann and Pearlman (1990) coined the term "vicarious traumatization" (VT) to describe the gradual, transformative shifts in internal experience that occur as a result of cumulative exposure to clients' trauma material. VT develops in the therapist due to empathic engagement with clients, resulting in profound disruptions in frame of reference that mirror the negative cognitive shifts observed in posttraumatic stress disorder (PTSD; Pearlman & Saakvitne, 1995a). Although VT is considered a natural response to bearing witness to clients' traumas, McCann and Pearlman (1990) suggest that the condition is inevitable, potentially permanent, and may have enduring consequences within both professional and personal relationships.

The aim of this project was to determine whether trauma therapists, in comparison to mental health clinicians treating a wider variety of client presenting issues, are indeed at greater risk for VT. The following literature review will discuss VT theory, distinguish VT from other organizational stress constructs, and highlight factors suggested to contribute to its development. The quantitative research base on risk and protective factors for VT is small, and yields conflicting findings on which therapist- and organizational-level characteristics are related to the condition. Given the negative outcomes associated with VT, the overarching aim of the proposed study is to add to the small knowledge base on predictors of VT and ultimately help inform effective prevention and mitigation efforts.

Literature Review

Vicarious Traumatization

The concept of VT is rooted in the theoretical framework of constructivist self-development theory (CSDT) (McCann & Pearlman, 1990), a personality theory that integrates psychoanalytic theory with social learning and developmental cognitive approaches. Although

CSDT was originally proposed as a framework for exploring the impact of traumatic life events upon the trauma survivor, its principles have more recently been applied to understanding the negative effects of trauma work upon the therapist (Pearlman & Saakvitne, 1995a). One of the major components of this theory, frame of reference, refers to an individual's context for viewing and understanding the world. McCann and Pearlman (1990) assert that a meaningful frame of reference for experience is a fundamental human need and is the foundation for the therapist's identity, worldview, and spirituality.

Shifts in the clinician's identity may occur whenever a specific aspect of identity is challenged (McCann & Pearlman, 1990). Work with survivors of sexual abuse, for instance, often forces the therapist to examine his or her own gender identity. Just as a female therapist may ask herself questions about her own vulnerability to sexual trauma, a male therapist may find himself reflecting on his own capacity for cruelty and exploitation. Such questions have the potential to shatter one's long-standing beliefs about identity and self-worth (Pearlman & Saakvitne, 1995a).

Disruptions in worldview occur when work with trauma clients influences one's perceptions of the world and of how and why things happen. As Pearlman and Saakvitne (1995a) assert, the therapist's values, moral principles, and life philosophy are often challenged as a result of repeated exposure to stories of trauma (Pearlman & Saakvitne, 1995a). The questions "How can people be so cruel to one another?" and "Are people fundamentally evil?" are indicative of a disrupted worldview. Further, mundane experiences are increasingly viewed through a cynical lens; the therapist with VT, for instance, may feel suspicious of every male parent he sees with a child at a park (McCann & Pearlman, 1990).

The authors use the term spirituality broadly to encompass beliefs about elusive aspects of experience, meaning and hope, connection with something beyond oneself, and awareness of all aspects of life (Pearlman & Saakvitne, 1995a). As the ability to find hope and meaning is crucial to psychological wellbeing (Frankl, 1959), disruptions in spirituality are considered a damaging aspect of VT (McCann & Pearlman, 1990). Hopelessness, emotional numbing, and a diminished capacity to connect to oneself and others are common indicators of negative shifts in spirituality (Pearlman & Saakvitne, 1995a).

In addition to the aforementioned components of frame of reference, the CSDT emphasizes the importance of self-capacities (McCann & Pearlman, 1990). Self-capacities refers to the ability to maintain a positive, stable sense of self and to manage strong affect. A clinician affected by disruptions in self-capacities may have difficulty with self-soothing (e.g., the ability to calm and comfort oneself), which oftentimes results in a reliance on external sources of comfort. These external sources of comfort, such as alcohol consumption, overeating, and overspending, serve as attempts to numb strong negative affect (Pearlman & Saakvitne, 1995a).

Similar to self-capacities, the CSDT concept of ego resources allows the clinician to meet her own psychological needs and relate to other people (McCann & Pearlman, 1990). The ability to establish boundaries, take others' perspectives, and recognize one's own psychological needs are primary examples of ego resources. Impairments in this VT component may result in symptoms such as perfectionism and over-work and a reduced ability to empathically engage with clients (Pearlman & Saakvitne, 1995a). Such disturbances clearly pose practical and ethical issues for treatment of trauma survivors, such as compromised therapeutic boundaries and misdiagnosis (Trippany et al., 2004).

The CSDT's emphasis on developmental-cognitive theory lends itself to the final component of the framework: cognitive schemas and psychological needs. McCann and Pearlman (1990) state that people construct their reality through the development of cognitive structures, or schemas; these structures are then used to understand and interpret life events. Cumulative exposure to clients' traumatic material may cause harmful changes in one's schemas within one or more of the fundamental psychological need areas of safety, trust, esteem, intimacy, and control (McCann & Pearlman, 1990). Just as these needs are sensitive to disruption by direct trauma, they are also vulnerable to the effects of VT (Pearlman & Saakvitne, 1995a) and result in significant interpersonal difficulties (McCann & Pearlman, 1990).

When safety needs are disrupted, clinicians may feel unable to protect themselves from real or imagined threats (Trippany, Kress, & Wilcoxon, 2004). Pearlman and Saakvitne (1995a) note that similarly to trauma survivors, safety is the most vulnerable need area in trauma therapists. A disrupted sense of safety translates into high levels of fearfulness and an increased sense of personal vulnerability to harm. Such a disruption is frequently manifested in hypervigilant behaviors (e.g., repeatedly checking the locks on one's home, avoiding crowds) and a heightened expectation of victimization for self and loved ones.

The second fundamental human need of "trust" refers to the ability to depend on or trust others and oneself. When trust in self is disrupted, the therapist feels less able to maintain independence, trust his perceptions of others, and trust his own feelings. The outcome may be an increased reliance on other people to meet his emotional, psychological, and physical needs (Pearlman & Saakvitne, 1995a). Disruptions in trust of others leads to increased suspiciousness of others' motives and detachment from other people; as a result, the therapist's close relationships often suffer.

Just as trust is relevant to self and other, people have a fundamental need to feel valued by oneself ("self-esteem") and to value others ("other-esteem"). Regarding disruptions in self-esteem, clinicians may feel inadequate and doubt their abilities as professionals ("If I can't help my clients, what good am I?") or as human beings ("Am I actually a good person?"). Disrupted other-esteem occurs when the clinician degrades or devalues others or simply dismisses their concerns; as such, the therapist's ability to connect with other people is diminished. Pearlman and Saakvitne (1995a) note that this outcome may be more likely to occur in therapists who work with survivors of sexual trauma due to their repeated exposure to stories of cruel, human-perpetrated acts.

Similar to esteem needs, intimacy is defined as the need to feel close and connected to other people and oneself. The primary VT symptom in this domain is emotional numbing, with behavioral sequelae of avoidance and withdrawal from others. The trauma therapist with disruptions in self-intimacy, however, may have difficulty being alone and experience intense emptiness when not around other people (Trippany et al., 2004).

The final fundamental need of control refers to one's self-management capabilities. Through her work, the therapist reflects on her clients' helplessness and may become aware of the futility in attempting to control or predict future life events. Disruptions to control schemas typically result in distress regarding one's ability to act freely in the world and take charge of one's life (Pearlman & Saakvitne, 1995b). Just as many trauma survivors attempt to exert excessive control over situations and relationships, the trauma therapist may try to compensate by taking greater control in her personal life. Conversely, she may surrender control in situations where control is indeed appropriate (Pearlman & Saakvitne, 1995a).

Although the focus on cognitive schemas and psychological needs is at the core of the CSDT framework, the authors also suggest that exposure to clients' painful memories may result in disruptions to the therapist's imagery system of memory (McCann & Pearlman, 1990). Clinicians with VT incorporate their clients' traumatic material into memory, leading to PTSD re-experiencing symptoms such as flashbacks, nightmares, and intrusive thoughts (Dunkley & Whelan, 2006a). Pearlman and Saakvitne (1995b) note that the images perhaps most likely to intrude into the therapist's psyche are those that are reported by clients in detailed and vivid language.

Although the CSDT provides a comprehensive conceptualization of VT, its authors emphasize that it is interactive: that is, it takes into account individual variability in therapist responses (McCann & Pearlman, 1990). Each therapist's reaction is a "complex interplay" between the person, the traumatic event, and the context of the work; as such, the effects of VT are unique to each therapist (Dunkley & Whelan, 2006a). The development of VT runs parallel to the development of PTSD in that an objectively traumatic event will not evoke the same response in everyone.

Characteristics within the CSDT that have been posited to interact with exposure to trauma material and produce VT are 1) work aspects such as nature of the clientele, organizational factors, professional development, and treatment setting; and 2) therapist aspects such as personal trauma history, interpersonal style, and current support system (Pearlman & Saakvitne, 1995a). Disruption in specific components of the model will differ for different people depending on which area is more or less relevant given their unique life experiences. Notably, a therapist will be most strongly affected by a client's trauma material when it connects in some way with his salient psychological needs. Clinicians who have children, for example,

may be more likely to experience disruptions in safety schemas and make them susceptible to excessive anxiety regarding their children's safety (Pearlman & Saakvitne, 1995b).

Differentiating Vicarious Traumatization from Other Effects of Trauma Work

Although vicarious traumatization (VT) is a commonly used term in the indirect trauma literature, one of the major difficulties in systematic study of the construct relates to a lack of clarity regarding terminology. Secondary traumatic stress and burnout are terms that are often used interchangeably, albeit incorrectly, with VT (Tabor, 2011). Despite conceptual overlap between these constructs and similarities in their initial presentation, VT is thought to be a distinct process (Canfield, 2005; Schauben & Frazier, 1995).

Secondary traumatic stress (STS) is a condition experienced by providers working with, and family members and close friends of, people with PTSD (Figley, 1995). It does not occur exclusively in trauma professionals (as is the case with VT) and encompasses several symptoms such as hypervigilance, avoidance, and numbing that run parallel to the symptoms seen in PTSD (Molnar et al., 2017). As Jenkins and Baird (2002) note, the symptoms of STS are nearly identical to the symptoms of PTSD; the only difference is that the traumatized individual develops PTSD, whereas the person hearing about the trauma develops STS. While the VT model does include re-experiencing symptoms as a component, the hallmark of VT is cognitive disruptions (instead of the wider range of symptoms seen in STS). In addition, the onset of the two processes differs: STS can emerge after a single traumatic exposure, while VT requires chronic exposure to traumatic material (Aparicio, Michalopoulos, & Unick, 2013).

Burnout was first introduced in the occupational stress literature to describe emotional, mental, and physical exhaustion associated with the job environment (Maslach & Jackson, 1981). Specific to human service workers who work intensely with other people's problems,

burnout is a defensive response to a prolonged lack of personal and/or organizational support (Tabor, 2011). Contributors to burnout include professional isolation, cynicism, emotional and/or physical strain, and lack of expected rewards or accomplishment. It is often associated with negative occupational outcomes such as absenteeism, tardiness, and delayed productivity (Dunkley & Whelan, 2006a). Although burnout may occur in trauma providers, the construct is more widely applicable to working with difficult populations in which structural supports are insufficient. Further, while burnout is considered preventable and transient, VT is conceptualized as an oftentimes inevitable and permanent consequence of trauma work (Pearlman & Saakvitne, 1995).

Finally, VT must also be distinguished from countertransference, a concept with psychodynamic origins that refers to the effects of the therapist's conscious and unconscious needs and wishes on how he relates to and understands the client (Walsh, 2011). Like VT, countertransference takes into account the clinician's personal characteristics in determining his or her response to the client's trauma (Dunkley & Whelan, 2006a). Countertransference reactions are specific to working with certain types of clients, however, whereas VT encompasses the therapist's cumulative emotional, cognitive, and behavioral responses across *all* clients (McCann & Pearlman, 1990). Although they are distinct constructs, VT and countertransference are suggested to be mutually influential because VT "invariably shapes countertransference… As a therapist experiences increasing levels of vicarious traumatization her counter-transference responses can become stronger and/or less available to conscious awareness" (Pearlman & McCann, 1995a).

Correlates of Vicarious Traumatization

When the term vicarious traumatization was introduced in the 1990s, the intuitive appeal of the construct prompted a rapid development of remediation and self-help literature (i.e., Neumann & Gamble, 1995; Bell, Kulkarni, & Dalton, 2003). Early reviews of the VT literature, however, suggested that because the majority of studies on VT were qualitative or descriptive in nature, intervention efforts were premature without further quantitative research (Kadambi & Ennis, 2004; Sabin-Farrell & Turpin, 2003). As such, the state of the literature has improved somewhat over the past decade.

Although much of the current research remains qualitative, risk and protective factors for VT is an area that has garnered the most quantitative attention due to its potential for informing clinician interventions (Dunkley & Whelan, 2006a). Factors that are most commonly studied include aspects of the therapist (e.g., personal trauma history) and aspects of the work context (e.g., clientele served), consistent with the original framework for VT proposed by Pearlman and Saakvitne (1995a).

Therapist factors.

Gender. Likely due to the inherent gender bias in the counseling professions, the majority of studies on VT use predominantly female samples. Women comprise 60.8% (Way, VanDeusen, & Cottrell, 2007) to 96.0% (Jenkins & Baird, 2002) of clinician samples, and men tend to be significantly under-represented. As such, some studies do not examine levels of VT by gender (e.g., Dunkley & Whelan, 2006b); researchers may consider these efforts as futile, given that lack of statistical power can contribute to difficulty in detecting a significant effect (Kazdin, 2003).

Despite many authors' failure to examine gender differences, others have considered the examination of gender differences in VT a more central research question (e.g., Kushmider, 2012). Given the research consistently documenting higher rates of PTSD among women (Tolin & Foa, 2006), it has been theorized that female clinicians are at greater risk than male clinicians for developing VT (Kushmider, 2012). The large majority of evidence, however, suggests that male and female clinicians appear to be at similar risk for acquiring the condition (Adams & Riggs, 2008; Toren, 2008; Furlonger & Taylor, 2013). These results hold true across a variety of samples, ranging from providers of traditional face-to-face therapy (Kushmider, 2012) to telephone and online counselors (Furlonger & Taylor, 2013) in both the United States and Australia.

Although most studies support the finding that male and female clinicians are at similar risk for the deleterious effects of trauma work, two studies suggest that men experience more severe cognitive disruptions (VanDeusen & Way, 2006; Way, VanDeusen, & Cottrell, 2007). In a large random sample of male and female clinicians providing sexual abuse treatment to either survivors (n = 111) or offenders (n = 272), the authors examined cognitive disruptions in the domains of trust and intimacy. For those who worked with offenders, men showed greater disruption in cognitions about trust of others and intimacy with others (VanDeusen & Way, 2006).

In a study using the same sample, Way, VanDeusen, and Cottrell (2007) examined the specific VT cognitive disruptions of self-esteem and self-intimacy. Although they did not distinguish between clinician groups (i.e., survivors vs. offenders), male gender predicted more severe disruptions in self-esteem and self-intimacy. Interestingly, although the authors hypothesized that gender, age, and childhood maltreatment history would predict greater

disrupted cognitions, only gender was a significant independent predictor. Although further research is certainly needed, these preliminary results suggest that male therapists may be at greater risk for VT in the context of sexual abuse treatment.

Personal trauma history. The notion that clinicians with a history of personal trauma are more susceptible to VT was first introduced by Pearlman and Mac Ian (1995) in their hallmark study of 188 trauma therapists. They found that in comparison to therapists without a personal trauma history, therapists with a history of trauma reported significantly greater cognitive disruptions. The authors explained that clients' material can "reawaken" the clinician's own memories and strong negative feelings, contributing to a greater likelihood that VT will develop (Pearlman & Saakvitne, 1995a). Although much of the qualitative literature supports the intuitive assertion that a personal trauma history is predictive of higher levels of VT (Jordan, 2010), the quantitative literature has yielded disparate results.

The occurrence of mixed results for this variable suggests the utility in addressing the methodological issue of differences in measurement. Measurement of personal trauma history varies significantly among the studies on VT, ranging from a one-question "Do you have a trauma history?" (Pearlman & Mac Ian, 1995) to the Childhood Trauma Questionnaire (Bernstein & Fink, 1998 in VanDeusen & Way, 2006), which assesses for several types of childhood maltreatment. Other researchers created their own questionnaires (e.g., Schauben & Frazier, 1995). This variability in measurement raises the question of whether studies have captured the entire range of traumatic exposures for which one may be exposed in a lifetime, and is problematic because the same underlying construct is not necessarily being measured across studies. The overall poor quality of the literature in this area points to the need for more extensive measurement of trauma exposure.

Apart from differences in measurement, some researchers have examined potential mediating variables to reconcile inconsistent results. Trippany and colleagues (2003) found that a personal trauma history (measured via number of occasions of lifetime sexual trauma) was a statistically significant predictor of VT in female sexual trauma therapists, but that this relationship was only seen among clinicians serving childhood, not adult, survivors of sexual violence. Therefore, the variable of clientele age could be a possible mediating factor to explain the disparate results in the literature (Trippany et al., 2003). Most existing studies on VT do not compare providers of different groups of clients, however, suggesting that personal trauma history should be further examined in the context of clientele served.

Other studies have explained discrepancies in the literature by distinguishing between specific categories of traumatic experiences. For instance, VanDeusen and Way (2006) and Way, VanDeusen, and Cottrell (2007) found that while a history of childhood sexual abuse was not associated with higher levels of VT, childhood emotional neglect was predictive of greater VT (specifically, disruptions in trust of others and self-intimacy). Such findings suggest the potential utility in differentiating between types of trauma when examining personal trauma history.

A final variable that has been suggested to moderate the relationship between personal trauma history and VT is defense style. Defense style is often used interchangeably with the term coping style, and is posited to protect an individual against internal or external stressors (Adams & Riggs, 2008). A self-sacrificing style is a maladaptive coping strategy that reflects a need to maintain an image of the self as kind, helpful, and never angry. In their study of clinical and counseling psychology graduate students, Adams and Riggs (2008) found the self-sacrificing defense style to be a risk factor for VT, and more notably, showed that the risk was amplified among students with a personal trauma history. Thus, a self-sacrificing defense style, although

problematic in itself, was most concerning in the context of a personal trauma history (Adams & Riggs, 2008). Given the preliminary nature of these results, findings point to the need for future studies to explore clinician characteristics that may interact with personal trauma history to contribute to VT.

Empathy. The creators of the VT theory assert that the primary pathway by which VT develops is through empathic engagement with trauma clients (McCann & Pearlman, 1990). Although an empathic connection is widely considered crucial for effective therapeutic intervention, this becomes problematic when clinicians frequently bear witness to horrifying trauma accounts (Canfield, 2005). By empathically engaging with their clients, clinicians are, in effect, sharing in their traumatic experiences. This is thought to increase their susceptibility to VT (McCann & Pearlman, 1990).

Despite the variable being at the core of the VT framework, only two studies – both dissertation studies - empirically examined the role of empathy in the development of VT (Marmaras, 2000; Electris, 2013). Marmaras (2000) used the Interpersonal Reactivity Index (IRI; Davis, 1983) to measure empathy style in 375 trauma therapists. Results showed that clinicians with greater empathy demonstrated more severe disruptions in cognitive schemas. An examination of the standardized betas, however, showed that the personal distress empathy style, or the propensity for anxiety and discomfort resulting from exposure to another person's negative experiences, was the only significant predictor of VT. This suggested that not all types of empathy were equal contributors to the development of VT symptoms. At least in this sample of female trauma therapists, the tendency to experience feelings of distress in response to clients' trauma material was the only empathy style to put one at risk for VT (Marmaras, 2000).

In the other study to examine the role of empathy, Electris (2013) included three measures to tap into empathy's different components. The Questionnaire Measure of Emotional Empathy (Mehrabian & Epstein, 1972) was used to measure "empathic emotional responsiveness," or the ability to respond vicariously to the emotions of another. Emotional over-identification, a component of empathy, was measured via three instruments assessing levels of absorption (the tendency for imaginative and self-involving experiences), differentiation of self (the capacity to maintain individuality while maintaining closeness), and maintenance of emotional separation (the ability to separate one's self emotionally within interpersonal relationships).

Results were consistent with those found by Marmaras (2000), in that not all types of empathy were associated with elevated VT symptoms. In a sample of 201 mid-career male and female trauma clinicians, greater emotional over-identification mediated the relationship between emotional empathy and VT. Empathy was found to be distinct from emotional over-identification, and the relationship between those variables influenced whether clinicians would be vulnerable or resilient to VT. For therapists with emotional empathy and a capacity for appropriate emotional boundaries, empathy was actually shown to be protective and was associated with fewer cognitive disruptions. However, emotional empathy in the context of over-identification contributed to greater VT symptoms (Electris, 2013).

These were the first studies to empirically challenge the theoretical assumption that empathy alone is responsible for the development of VT. Therefore, it is important that future research highlights the specific empathy styles to determine which clinicians are at greatest risk. According to Marmaras (2000), "it is not empathy that leads to the negative effects of trauma work, but the loss of emotional boundaries." As the preliminary evidence disputes the notion that

VT is an inevitable outcome of empathic engagement with trauma clients, further research is needed to determine the need for refinement of the VT conceptual model.

Coping style. There are two primary psychological concepts within the constructivist-self development theory (CSDT) framework that are suggested to mitigate the effects of VT. Self-capacities refer to the ability to maintain a positive, stable sense of self and to manage strong effect; similarly, ego resources are defined as the capacity to establish boundaries and recognize one's own psychological needs (McCann & Pearlman, 1990). Both of these concepts have been studied under the umbrella term "coping," or the conscious strategies used by individuals in response to stressful or upsetting situations (Camerlengo, 2002).

Due to its potentially malleable nature, coping is a variable that has received considerable attention in the VT literature (Dunkley & Whelan, 2006b). Coping styles are frequently categorized into either problem-focused or emotion-focused strategies. Whereas problem-focused coping is considered highly effective in stress reduction and involves active attempts to solve or address a problem, emotion-focused strategies are designed to regulate affect through the use of pre-occupation, fantasy, or avoidance (Camerlengo, 2002). Of the two styles, emotion-focused coping is generally associated with greater psychological distress (Endler & Parker, 1990) and therefore is hypothesized to be associated with VT.

Although it is difficult to make direct comparisons between the extant studies due to the differences in measurement of coping, results converge around several common themes. Camerlengo (2002) investigated the role of coping style, job-related stress, and personal victimization history in the development of VT among 92 community mental health professionals. She found that of these three variables, coping style emerged as the strongest

predictor of VT. Specifically, a problem-focused/task-oriented coping style was associated with fewer cognitive disruptions, whereas emotion-focused coping was related to more disruptions.

Consistent with these results, several other studies found that problem-focused coping (i.e., planning, seeking instrumental support) was associated with lower levels of VT, whereas escape or avoidance (i.e., denial or behavioral disengagement) was related to elevated VT (Schauben & Frazier, 1995; Johnson & Hunter, 1997). Seeking emotional support, engaging in leisure and self-care activities, and using humor also appear to be protective (Bober & Regehr, 2006; Michalopoulos & Aparicio, 2012; Schauben & Frazier, 1995; Johnson & Hunter, 1997).

Two studies did not find support for the role of coping style in VT; however, both suffered from methodological limitations that may have precluded the emergence of significant results (VanDeusen & Way, 2006; Furlonger & Taylor, 2013). In contrast to expectations, VanDeusen and Way (2006) found that a greater use of positive personal and professional coping strategies was not associated with lower levels of VT. It should be noted that although all aforementioned studies used a psychometrically validated instrument of coping, VanDeusen and Way (2006) used their own researcher-created questionnaire. As it had not been psychometrically validated, it is unknown the extent to which the measure had sufficient construct validity.

Although Furlonger and Taylor's (2013) study of 38 telephone and e-mail counselors included a psychometrically validated instrument of coping, their small sample size was a significant methodological flaw. Further, the nature of the sample as telephone and online counselors suggests that their work likely involved crisis or case management services more so than ongoing processing of traumatic material (as would be the case within a traditional

therapeutic relationship). These results may not be generalizable to the traditional face-to-face therapy model, a possible reason for inconsistent findings.

In summary, the therapist-level variables of gender, personal trauma history, empathy, and coping are deserving of further attention. Preliminary evidence suggests that these correlates may serve as risk and protective factors for some therapists, which is notable given that the VT literature has been criticized for focusing too heavily on organizational contributors to VT that are naturally less amenable to intervention (Dunkley & Whelan, 2006b). Also, an empirical examination of these variables will allow us to test the components of the Constructivist Self-Development Theory framework that have been largely accepted despite lack of rigorous scientific inquiry. For example, empathy is given a central role in the framework, yet preliminary evidence suggests that empathy is multifaceted and different types of empathy are not all equal contributors to VT. Further research is necessary on these individual vulnerabilities or personal strengths to guide effective mitigation efforts.

Organizational factors.

Clientele served. The CSDT asserts that pervasive exposure to clients' trauma material lays the foundation for the development of VT. A major criticism of the VT literature, however, is that comparison groups of non-trauma clinicians are rarely utilized (Chouliara et al., 2009). Therefore, it is unknown whether trauma therapists are uniquely affected by VT (as the framework suggests) or whether it is a condition applicable to the mental health profession as a whole. Despite this methodological flaw, the widely embraced consensus is that trauma providers are at greatest risk for VT (Kadambi & Ennis, 2004). To our knowledge, however, only five studies have addressed this question by comparing levels of VT in therapists providing trauma versus non-trauma treatment (Brady et al., 1999; Johnson & Hunter, 1997; Jones, 2008;

Kadambi & Truscott, 2004; Cunningham, 2003). In three of the five studies, trauma providers were at significantly greater risk than generalist clinicians (Cunningham, 2003; Jones, 2008; Johnson & Hunter, 1997); in the other two studies, trauma providers and generalist therapists had similar levels of VT (Brady et al., 1999; Kadambi & Truscott, 2004).

In Johnson and Hunter's (1997) study of sexual assault counselors (n = 41) and counselors from a range of other therapy areas (n = 32), the sexual assault counselors group experienced greater cognitive disruptions in both intimacy and power schemas. However, the measure of VT used in this study, a researcher-created Beliefs and Values questionnaire, had not been psychometrically validated and was based solely on the theoretical model of VT proposed by McCann and Pearlman (1990; Johnson & Hunter, 1997). Particularly at the time of the study's publication, there was a considerable dearth of empirical literature on the components of VT; this raises questions about the measure's construct validity and suggests that the study's results should be interpreted with caution.

In the second study to investigate VT in trauma versus non-trauma treatment providers, Jones (2008) found that therapists treating sexual offenders (compared to generalist therapists) endorsed greater cognitive disruptions in the VT areas of Other-Safety, Other-Trust, and Other-Esteem. Although the difference between the groups was statistically significant, the author noted that the effect size was "small and unimpressive" (Jones, 2008).

Cunningham (2003) studied two groups of social work clinicians working with two types of trauma: the human-induced trauma of sexual abuse and the naturally-caused trauma of cancer. Although working with both populations is stressful, exposure to stories of intentional human cruelty is thought to be most damaging to the clinician (Pearlman & Saakvitne, 1995). As hypothesized, clinicians in this sample who worked primarily with clients that had been sexually

abused had significantly higher VT than clinicians working with cancer patients in the cognitive schemas of other-safety, other-trust, and other-esteem.

Brady and colleagues (1999) surveyed a national sample of 1,000 female psychotherapists: 505 from the American Professional Society on the Abuse of Children Psychology Division and 495 from the American Psychological Association who reported a specialty area in psychotherapy. Results showed that therapists who worked with sexual abuse survivors were *not* at increased risk for VT compared to those working with general clients. It should be noted, however, that even though there were no differences in VT, the sexual abuse clinician group did report more secondary traumatic stress symptoms (Brady et al., 1999).

In the other study to find a lack of differences between groups, Kadambi and Truscott (2004) compared levels of VT in three separate groups of mental health professionals working primarily with three different client populations: sexual violence, cancer, and general practice. It was hypothesized that therapists working with client populations that had experienced traumatic stressors (the sexual violence and cancer groups) would exhibit significantly higher VT than those working with clients with a variety of mental health issues (the general practice group). Contrary to hypotheses, however, no significant differences between the groups were found for either VT or secondary traumatic stress. Further, the measures of VT and burnout were highly correlated in this sample, suggesting psychometric overlap between the constructs. The authors concluded that there was weak evidence supporting VT as a phenomenon unique to trauma therapists and called for further research to examine exposure to clients' traumatic material as the "active ingredient" in stress reactions among clinicians (Kadambi & Truscott, 2004).

In addition to the research that compares VT in trauma clinicians versus non-trauma clinicians, a major empirical question is whether therapists who provide treatment to survivors of

sexual trauma are at greater risk for VT compared to therapists working with survivors of other types of trauma. One study of 53 therapists found that among several different types of interpersonal violence exposure (i.e., wife assault, child abuse, rape, and torture), only working with victims of rape was associated with higher VT. The most significant schema disruptions were related to personal control (Bober & Regehr, 2006b).

Providing somewhat contrasting results, however, is Brady and colleagues' (1999) previously described study of 1,000 female psychotherapists that found that those working with survivors of sexual abuse were no more likely to endorse VT than those working with general therapy clients (Brady et al., 1999). Interestingly, though, clinicians working with survivors of sexual abuse were more likely to experience secondary traumatic stress (STS) symptoms as measured by the Impact of Event Scale (Horowitz, Wilner, & Alverez, 1979), suggesting that hearing accounts of sexual abuse may be likely to contribute to PTSD-like symptoms rather than cognitive disruptions (Brady et al., 1999).

It is difficult to draw meaningful conclusions from results of these two sexual trauma studies. Although both studies used the same measure of VT (the TSI Belief Scale – Revision L; Pearlman, 1996), the samples were very different. Whereas Bober and Regehr (2006) had a small sample size of 53 (which included both men and women), Brady and colleagues' (1999) national sample was likely more representative of the United States mental health provider population (n = 1,000) and was comprised of only women. Further, sexual trauma was defined quite differently: hearing accounts of rape (Bober & Regehr, 2006), for instance, is likely a qualitatively different experience than hearing accounts of child sexual abuse (Brady et al., 1999). Further research is clearly needed in this area to determine whether sexual trauma, and which type, contributes to VT. It will also be helpful to continue to differentiate between STS

and VT, as research with sexual abuse providers has shown differential effects for these constructs (Brady et al., 1999).

Another comparison investigated in the literature involves the impact of work with child survivors of trauma versus adult survivors of trauma. To our knowledge, only two studies have addressed this question. In Trippany and colleagues' (2003) study of 114 female sexual trauma therapists, those serving child survivors of sexual trauma did not have significantly higher VT scores than those serving adult survivors of sexual trauma. Similarly, Brady and colleagues (1999), in their national sample of female psychotherapists, found that clinicians with a greater number of children trauma survivors in their caseloads did not exhibit more severe VT. These results were unexpected given some authors' suggestions that exposure to trauma accounts of children is especially emotionally provocative for therapists (Figley, 1995). One hypothesis is that because children may have a limited ability to fully articulate their trauma experiences, therapists who work with child clients may actually be exposed to less vividly detailed accounts of abuse (Brady et al., 1999).

Finally, some authors have suggested that although sexual abuse treatment is difficult in general, VT is especially likely to develop among therapists treating sexual offenders (Pearlman & Saakvitne, 1995). Clinical anecdotes describe the difficulty in managing intense negative emotions such as anger and disgust, while remaining empathic towards offenders who oftentimes present with distorted cognitions (e.g., denial, minimization; VanDeusen & Way, 2006). Two studies have examined levels of VT in clinicians treating sexual offenders versus sexual abuse survivors (Jones, 2008; VanDeusen & Way, 2006).

Jones (2008) demonstrated that sexual offender therapists, compared to sexual abuse therapists, experienced greater VT cognitive disruptions in the areas of other-safety, other-trust,

and other-esteem. VanDeusen and Way (2006), however, examined the two specific VT areas of trust and intimacy and found no differences in VT severity between clinicians working with sexual abuse survivors and those working with offenders. The only exception to this finding was for male clinicians working with sexual offenders; in comparison to female clinicians working with sexual offenders, male therapists reported greater trust and intimacy disruptions (Way et al., 2007). As VanDeusen and Way (2006) did not examine all potential VT disruption areas and limited their findings to manifestations of VT through trust and intimacy, it is unknown whether cognitive disruptions would be observed in other schema areas.

Ultimately, more research is needed to determine whether treatment of sexual trauma contributes to greater VT risk in comparison to treatment involving other types of trauma. Also, as preliminary evidence suggests that sexual offender treatment providers may be at elevated risk for development of VT, it will be important to examine levels of VT in a subgroup of therapists who provide this unique type of trauma treatment. Finally, as a few studies have shown that male clinicians are at increased risk for VT compared to their female counterparts, it is imperative that future research makes efforts to ensure male clinicians are adequately represented. A large sample size is needed to allow greater power to draw statistical comparisons by gender.

Experience level. McCann and Pearlman (1990) originally conceptualized VT as a condition that develops from cumulative, gradual exposure to clients' traumatic experiences; it follows, then, that greater experience level (or longer tenure in the field) would be a risk factor for development of the condition (Pearlman & Saakvitne, 1995a). Despite many attempts to validate this variable as a predictor of VT, the majority of studies on this variable found that less experience in the field is associated with higher levels of VT. With the exception of two studies

(Bober & Regehr, 2006; Sartor, 2012), a total of nine studies reviewed demonstrated that less experience is a risk factor for the development of VT (Finklestein, Stein, Greene, Bronstein, & Solomon, 2015; Knight, 2010; Pearlman & Mac Ian, 1995; Michalopoulos & Aparicio, 2012; Adams & Riggs, 2008; VanDeusen & Way, 2006; Devilly, Wright, & Varker, 2009; Toren, 2008; Marmaras, 2000).

It should be noted that methodological shortcomings exist within those two studies that produced inconsistent results (Bober & Regehr, 2006; Sartor, 2012). First, Sartor's (2012) study was a dissertation with quite a small sample size (n = 82); this was one of the smallest of all studies reviewed with regard to this variable. Studies with small samples are at risk for low statistical power, or an increased likelihood that the investigator will conclude there is no statistical effect even if one indeed exists (Kazdin, 2003). Although less clinical experience may have actually been a significant predictor of VT in Sartor's (2012) study, low power could have precluded the emergence of such a finding.

Also in contrast to other published findings, Bober and Regehr's study (2006) of Canadian therapists found that more experienced individuals had greater disruptive beliefs regarding intimacy with others. Notably, although 259 therapists were included in the full sample, only 53 participants completed the measure of VT (the TSI Belief Scale Revision L; Pearlman, 1996). It is unclear how these 53 participants were selected, thereby raising concerns about random selection and external validity of the results (Kazdin, 2003).

Due to the greater quantity and quality of studies supporting the conclusion, it appears that less clinical experience is a risk factor for VT. Student clinicians, particularly those earlier in their training, seem to be particularly susceptible. Knight (2010), for example, found that undergraduate social work students were significantly more likely to experience VT than their

field instructors. Also, in the context of graduate training, Adams and Riggs (2008) demonstrated that clinical and counseling psychology students with fewer years of clinical experience were at greater risk for VT compared to their more advanced counterparts. Further, student therapists in this sample who had received more formal trauma-specific training reported significantly lower levels of VT.

In addition to finding higher levels of overall VT among clinicians with less experience, five studies examined experience level in relation to specific components of VT. Among therapists newer to the field, the most commonly seen cognitive disruptions were in the areas of safety (Knight, 2010; Pearlman & Mac Ian, 1995; Devilly, Wright, & Varker, 2009); trust (Knight, 2010; Pearlman & Mac Ian, 1995; VanDeusen & Way, 2006); and intimacy (Knight, 2010; Pearlman & Mac Ian, 1995; VanDeusen & Way, 2006).

Supervision. In the remediation literature, a consistent recommendation suggested to safeguard against VT is receiving adequate clinical supervision (Jordan, 2010; Newell & MacNeil, 2010). Similar to many of the other potential protective factors included in this review, however, the literature has provided equivocal results.

Participation in formal supervision. Many authors, including McCann and Pearlman (1990), have highlighted the importance of supervision as a critical self-care strategy among trauma workers. In this review, five studies addressed the question of whether clinicians' participation in formal supervision would result in lower levels of VT. Three of the five studies did not find support for this variable as a protective factor (Furlonger & Taylor, 2013; Dunkley & Whelan, 2006b; Trippany et al., 2003) and two did find support (Electris, 2013; Pearlman & Mac Ian, 1995). However, until further research is conducted, it would be ill advised to disregard the potentially protective role of supervision.

With regard to the three studies that did not find supervision to be a protective factor, an examination of sample composition is important. Two of these samples were crisis telephone (Dunkley & Whelan, 2006b) and e-mail counselors (Furlonger & Taylor, 2013); these counseling experiences are qualitatively different from that of traditional face-to-face clinicians. The physical separation afforded with telephone or Internet counseling, for instance, may make it easier for clinicians to distance themselves psychologically from their clients' trauma material and thereby reduce the likelihood of emotional distress. In addition, due to the nature of crisis counseling, clinicians are presumably less likely to establish ongoing, empathic relationships with their clients. Indeed, both studies' samples endorsed relatively low levels of VT compared to other samples (Dunkley & Whelan, 2006b; Furlonger & Taylor, 2013). This suggests that the availability of supervision may not have been particularly necessary for these counselors. In addition, both of these studies had relatively small samples, raising concerns about the generalizability of results.

More meaningful comparisons can be drawn between the three studies that found conflicting results but were all samples of clinicians providing face-to-face therapy (Trippany et al., 2003; Electris, 2013; Pearlman & Mac Ian, 1995). In Trippany and colleagues' (2003) study of 114 female trauma therapists, participation in formal peer supervision was not associated with reduced levels of VT. Providing contrasting findings, Electris' (2013) study of 201 mid-career clinicians demonstrated that higher levels of supervision were associated with less disrupted cognitions. Similarly, in Pearlman and Mac Ian's (1995) hallmark study of 188 trauma therapists, the novice counselors who experienced the most severe VT were not receiving supervision. All three studies' samples appeared to be experiencing similar levels of VT, although this was

difficult to determine due to variability in measurement of VT. Assessment of participation in supervision was relatively similar.

Trippany and colleagues (2003) study, which found no support for the protective role of supervision, contained a number of methodological flaws. First, their response rate of 31.7% was one of the lowest of the 25 studies included in this review. Also, the sample was comprised only of women and thus it is unclear what effect supervision may have on severity of VT in men. Although Electris (2013) did not examine the relationship between supervision and VT by gender, male clinicians in her study did endorse relatively high levels of VT. Therefore, it is necessary for future studies on supervision to include diverse samples of both men and women.

Supervisory working alliance. Just as the therapeutic working alliance is considered a powerful change agent in therapy for clients, the relationship between supervisor and therapist is described as central to the therapist's professional development (Bordin, 1983). Bordin (1983) notes that the goals of the supervisory working alliance are stated from the supervisee's viewpoint, and include the "mastering of specific skills, enlarging of one's understanding of clients, enlarging one's awareness of process issues, increasing awareness of self and impact on process, overcoming personal and intellectual obstacles to learning, and deepening one's understanding of theory." Some authors have suggested that a strong supervisory working alliance is especially important during provision of trauma treatment (McCann & Pearlman, 1990). Two studies have found that a strong therapist-supervisor alliance is indeed associated with lower levels of VT (Dunkley & Whelan, 2006b; Toren, 2008), whereas two studies did not find support for this relationship (Furlonger & Taylor, 2013; Williams et al., 2012). All four of these studies used the TABS as their measure of VT and the Supervisee Form from the Supervisory Working Alliance Inventory (SWAI; Efstation, Patton, & Kardash, 1990) as their

measure of perceived alliance. Although this consistency in measurement increases the comparability of results, there were significant differences between the studies' samples.

Dunkley and Whelan (2006b) found that among 62 telephone crisis counselors, a strong supervisory working alliance was associated with lower levels of disruption in beliefs. As mentioned previously, this same study found that participation in supervision was not a significant predictor, indicating that it was the quality of the relationship (not merely the availability of supervision) that buffered against VT for these counselors. The other study of non-traditional therapists in this review found a conflicting result; in their study of 38 telephone and e-mail counselors, Furlonger and Taylor (2013) showed no differences in VT level for those who perceived a stronger alliance. Although this study had a high response rate (thereby minimizing concerns about selection bias), the authors note that their findings should be interpreted with caution given their small sample size.

Of the studies that sampled traditional face-to-face mental health clinicians, Toren (2008) demonstrated that counselors-in-training (master's degree students) who reported a stronger working alliance with their supervisors displayed lower levels of VT. Specifically, students who perceived lower levels of role ambiguity (i.e., uncertainty about supervision expectations) and a lower degree of role conflict (i.e., conflict in role associated with being a counselor-in-training, student, colleague, and supervisee) reported less severe VT symptoms. These findings were inconsistent with Williams and colleagues' (2012) study of 131 mental health counselors, which found that a strong perceived alliance was not associated with less VT. However, their range of scores on the SWAI was limited; as most participants reported a strong alliance, the authors suggest that clinicians who experience poor supervisory relationships were likely not represented (Williams et al., 2012).

Although results on the alliance variable are mixed, it appears that at least for some therapists, perception of a strong working alliance with their supervisor may protect against VT. Supervision may be particularly beneficial for students (Electris, 2013; Toren, 2008), although more research is needed that compares the effects of supervision on VT amongst trainees versus more experienced clinicians. Obtaining supervision is consistently recommended in the literature as a strategy for militating against VT, yet it may be that quality of supervision is more important than the availability of supervision itself (Dunkley & Whelan, 2006b). Future research should examine levels of VT in relation to both quantity and quality of supervision received by clinicians.

Aims and Hypotheses

The term "vicarious traumatization" (VT) was introduced by McCann and Pearlman (1990) to describe the gradual, transformative shifts in internal experience that occur as a result of cumulative exposure to clients' trauma material. VT is thought to develop in the therapist due to empathic engagement with clients, resulting in profound disruptions in frame of reference that mirror the negative cognitive shifts observed in posttraumatic stress disorder (PTSD). Although VT is considered a natural response to bearing witness to clients' traumas, McCann and Pearlman (1990) suggest that the condition is inevitable, potentially permanent, and may have enduring consequences within both professional and personal relationships.

A rapidly emerging body of theoretical literature suggests that clinicians can safeguard against VT by maintaining a more balanced workload (i.e., a caseload of clients with a variety of presenting problems) and engaging in certain self-care and wellness strategies (e.g., Trippany et al., 2004; Newell & MacNeil, 2010). The quantitative research on VT is limited, however, and thus it is unknown whether these remediation efforts are effective or even necessary. It remains

unclear which individual and institutional characteristics serve as risk factors for development of VT, and whether there is a certain type of clinician most susceptible.

Although it appears to be taken as fact that trauma providers are at greater risk for vicarious traumatization than general mental health therapists, much of the extant research has been limited by a lack of comparison groups (Kadambi & Ennis, 2004). To our knowledge, only five studies have compared levels of VT in therapists providing trauma versus non-trauma treatment (Brady et al., 1999; Johnson & Hunter, 1997; Jones, 2008; Kadambi & Truscott, 2004; Cunningham, 2003), and these investigations did not reveal consistently higher levels of VT among trauma therapists. This calls into question the formulation of VT proposed by McCann and Pearlman (1990).

This project will serve as a unique contribution to the VT literature in several ways. First, we recruited a large enough sample size that allows for high statistical power and therefore a greater ability to detect a significant difference in VT between the trauma and non-trauma control group if a difference indeed exists. This allows for multiple other comparisons to be made between groups, such as between male and female clinicians. In addition, we sampled therapists who are at different stages in their careers, such that experience level can be examined as both an independent predictor of VT and in conjunction with other previously identified relevant variables (e.g., supervision). In addition, all measures are well-validated instruments that have been used in previous studies and are shown to adequately tap into the construct of interest.

A criticism proposed by some researchers is that claims about the deleterious effects of trauma work are overstated, and that there is a high degree of overlap between VT and other occupational stress constructs such as secondary traumatic stress (PTSD symptoms rather than cognitive disruptions; Finklestein et al., 2015) and burnout (emotional exhaustion associated

with lack of supports in the job environment; Devilly et al., 2009). One suggestion is that trauma work may only be detrimental within the context of burnout and work-related stressors, such as being new to the profession (Devilly et al., 2009), although other authors have rejected this claim (Schauben & Frazier, 1995). This study adds to the extant literature by examining the VT construct alongside other occupational stress constructs (burnout and secondary traumatic stress) to determine the extent to which they overlap with each other. Also, as some variables have been shown to be differentially associated with secondary traumatic stress versus VT (e.g., type of clientele served), both conditions are included as dependent variables in analyses.

In our project, we examined levels of VT among one group of mental health providers who work predominantly or exclusively with trauma clients and one group of mental health providers without (or with significantly fewer) trauma-related cases. In addition to the primary research question, there were several secondary aims. Some studies have highlighted the role of organizational-level factors (i.e., experience level, clientele served, supervision) and therapist-level factors (i.e., gender, having a personal history of trauma, empathy, coping style) as important predictors of VT, yet a cohesive evidence base on these factors is lacking. Common methodological limitations of these studies include small sample sizes and low statistical power (Bober and Regehr, 2006), use of non-validated measures (Johnson & Hunter, 1997), and failure to control for confounding variables (Furlonger & Taylor, 2013). Our study aims to address these limitations in an effort to increase the methodological rigor of the VT research base. In addition, the literature has been criticized for an over-emphasis on organizational or institutional contributors to VT, with insufficient attention paid to individual psychological vulnerabilities that may be more amenable to intervention (e.g., coping; Dunkley & Whelan, 2006b). As such, our study aims to capture both individual-level and organizational-level correlates of VT.

VT is suggested to have pervasive, deleterious effects on the therapist's inner psychological experience, leading to negative changes in his or her personal and professional relationships (Canfield, 2005). Also, VT may have potentially detrimental consequences for client treatment such as compromised therapeutic boundaries (Pearlman & Saakvitne, 1995; Canfield, 2005). The overarching goal of the study is to add to the small body of quantitative literature on risk and protective factors for VT and ultimately help guide remediation and intervention efforts. This study has the following specific hypotheses:

Hypothesis 1. In keeping with McCann and Pearlman's (1990) original conceptualization of VT, we hypothesize that trauma providers will endorse higher levels of VT than generalist providers. Three out of the five reviewed studies found significant differences between groups, and these studies contained diverse samples of clinicians and used instruments with established psychometric properties.

Hypothesis 2. Aspects of the therapist that will be significantly related to VT severity among trauma provider therapists are personal trauma history, empathy, and coping style. These will not be risk factors for VT among generalist providers. Trauma provider therapists with a personal history of trauma (as measured by lifetime number of potentially traumatic events experienced) will endorse higher levels of VT. Also, it is hypothesized that trauma provider clinicians with greater empathy will demonstrate more severe VT and that the "personal distress" empathy style will be most predictive. Regarding coping style, trauma providers who utilize active, problem-focused coping strategies will have lower levels of VT than those who use emotion-focused strategies.

Hypothesis 3. Aspects of the occupation that will be significantly related to VT severity among trauma provider therapists are experience level, percentage of trauma clients on caseload,

overall amount of therapy provided, and supervision. These will not be risk factors for VT among generalist therapists. Regarding experience level, trauma providers newer to the field are hypothesized to endorse greater VT. For the clientele served variable, we hypothesize that trauma provider clinicians with a greater percentage of trauma survivors on their caseload will have higher levels of VT; work with sexual trauma survivors (particularly child survivors of sexual abuse) will predict the highest levels of VT. Individuals who work with sexual offender clients will endorse greater VT compared to those who do not. In terms of organizational support, trauma provider therapists who report receiving more supervision (individual supervision, group supervision, and/or informal peer supervision) will have lower levels of VT than those who receive less supervision. Further, for those trauma providers receiving individual supervision, the quality of supervision (as measured by a stronger perceived alliance) will be associated with less VT. Higher quality supervision will be particularly protective for therapist trainees as compared to more experienced clinicians in our trauma provider sample.

Hypothesis 4. We hypothesize that VT is an occupational hazard unique to working with trauma clients. Therefore, although VT scores will correlate with secondary traumatic stress (STS) scores (as both result from exposure to traumatic material of clients), both VT and STS will have weaker correlations with burnout. We expect to observe this pattern of correlations within both the trauma provider and generalist provider groups, but hypothesize that the correlations will be weakest in the trauma provider group.

Method

Overview

This study characterizes levels of vicarious traumatization (VT) among two groups of mental health clinicians: one group that primarily or exclusively treats trauma survivors, and a

comparison group that works in general mental health practice. Participants are mental health providers of varying educational degrees and experience levels, recruited online via professional societies. This study is a cross-sectional online survey, which assesses for the presence and/or severity of VT, and the extent to which certain therapist- and organizational-level factors contribute to the condition.

Participants

If a participant indicated that less than 45% of their cases were trauma cases, then the participant was categorized as a generalist provider. If a participant reported that greater than 45% of their cases were trauma cases, then they were classified as a trauma provider. This is consistent with recommendations in the literature that suggest that 45% is likely to be the threshold for which trauma work becomes detrimental for clinicians (Schauben & Frazier, 1995; Cunningham, 2003). There were 114 participants in the generalist provider sample, with a mean age of 33.36 (*SD* = 8.62). Female clinicians comprised 75.4% of the sample and 88.6% were Caucasian. There were 107 participants in the trauma provider sample, with a mean age of 42.66 (SD = 14.33). Female clinicians comprised 81.3% of the sample and 86.9% were Caucasian. Potential participants were initially identified and recruited based on the inclusion and exclusion criteria outlined below.

Participants were recruited via 1) posting on the International Society for Traumatic Stress Studies (ISTSS) research participation website; 2) posting on the Association for Behavioral and Cognitive Therapies (ABCT) Facebook page; 3) e-mailing individual members of the Association of Traumatic Stress Specialists whose contact information was listed in the membership directory; 4) e-mailing individual Directors of Clinical Training for APA-approved clinical and counseling psychology doctoral programs listed on the American Psychological

Association program directory website, and asking them to forward the e-mail to their colleagues and students; and 5) word of mouth (i.e., directly contacting colleagues and asking them to participate and to pass along the study information to their colleagues). For recruitment strategies that involved e-mailing, all potential participants were contacted only once, with the exception of known colleagues or peers, who received an initial e-mail and then one follow-up reminder e-mail approximately one month later. A sample of IRB-approved recruitment materials is included in Appendix D.

It is unknown exactly how many potential participants received information about our study. While approximately 7,000 people "follow" the ABCT Facebook page, for instance, it is not known how many of these people are clinicians (versus researchers or other interested consumers). In addition, approximately 50 people received the "word of mouth" e-mail directly, although it cannot be determined how many times those recipients forwarded the e-mail to other colleagues. Recruitment e-mails were sent to approximately 100 Directors of Clinical Training; however, it is unknown how many of these e-mails were actually forwarded to the respective program's student or faculty body.

To qualify for participation, respondents confirmed that they spoke and read English and were over 18 years of age and capable of consent. Participants were required to self-identify as mental health professionals, and have obtained, at a minimum, a Bachelor's degree. Participants also must have had at least one year providing direct professional mental health services to clients or patients.

Procedure

For recruitment strategies involving e-mail, potential participants received an e-mail containing a description of the study and its aims, which included a link to take the survey at an

external, secure electronic data storage system, RedCAP. For recruitment strategies that involved website postings (e.g., ABCT Facebook page, ISTSS research participation website), potential participants were taken directly to the survey by clicking on the embedded link. Data collection occurred between February 2016 and August 2016. At the beginning of the survey, all participants answered a series of screening questions to confirm that they met inclusion and exclusion criteria. If eligible to participate, all participants answered questionnaires in the same order, beginning with demographic and occupational items and continuing on to assessment of indirect trauma constructs (vicarious traumatization, secondary traumatic stress, and burn-out) and assessment of therapist- and organizational-level characteristics. The personal trauma history questionnaire was administered towards the end of the survey in order to reduce the possibility of priming of psychological distress. The entire survey required an average of 31 minutes (M = 31.01, range = 11 to 115) to complete.

At the end of the study, participants were given the option of entering their e-mail, which was separated from their survey responses, for a chance to win a $25 Amazon.com gift card. One in every 10 participants was randomly selected to receive a gift card. Selected participants were notified by e-mail at the conclusion of the project.

Measures

Participants completed several different standardized measures. In addition to having established reliability and validity, measures were selected if they are commonly used in the relevant literature to evaluate our constructs of interest. Measures used included assessment of occupational stress constructs (such as vicarious traumatization), and several therapist and organizational factors frequently identified in the literature as related to vicarious traumatization. A researcher-created demographics questionnaire was included, as was a set of control items

embedded within the survey to detect random responding. Appendix A includes a complete set of assessment instruments, and all measures are described briefly below.

Demographics. Age, gender, race/ethnicity, marital status, state and country of practice, type of professional (e.g., psychologist, social worker), and type of organizational setting (e.g., hospital/medical center, private practice) were collected. Clinicians were asked to indicate their primary theoretical orientation: cognitive-behavioral, psychoanalytic or psychodynamic, systems, humanistic-existential, or eclectic/other. Also, participants indicated whether or not their current role involves serving as a clinical supervisor.

Vicarious traumatization. The Trauma and Attachment Belief Scale (TABS; Pearlman, 2003) is one of the most recently developed instruments to assess the impact of directly and indirectly experienced trauma (Molnar et al., 2017). Although the scale was originally designed to measure trauma in client populations, many studies of clinicians have used the TABS to measure vicarious trauma (e.g., Dunkley & Whelan, 2006b; Knight, 2010). The measure is based on Constructivist Self-Development Theory and contains 84 items that assess for disruptions in beliefs across five need areas most vulnerable to the effects of trauma: safety, trust, esteem, intimacy, and control (McCann & Pearlman, 1990). Within each of these need areas, separate sets of items reflect beliefs about both oneself and others. Items are answered using a 6-point Likert scale (1 = Disagree strongly to 6 = Agree strongly), yielding a total score indicating overall level of schema disruption and 10 subscale scores: Self-Safety, Other-Safety, Self-Trust, Other-Trust, Self-Esteem, Other-Esteem, Self-Intimacy, Other-Intimacy, Self-Control, and Other-Control. Example items include "I never think anyone is safe from danger," "Trusting people is not smart," "I hate to be alone," "I have problems with self-control," and "When my feelings are hurt, I can make myself feel better."

The total raw score for the TABS ranges from 84 to 504, although raw scores (for both the total composite and subscale scores) are translated into standardized T-scores to determine levels of VT and percentile rank. Based on the TABS manual, interpretive ranges are: (a) ≤ 29 = extremely low (very little disruption); (b) 30-39 = very low; (c) 40-44 = low average; (d) 45-55 = average; (e) 56-59 = high average; (f) 60-69 = very high; and (g) ≥ 70 = extremely high (substantial disruption; Pearlman, 2003). Our study examined the total score in addition to the 10 subscale scores (Pearlman, 2003).

Studies using the TABS reveal that the majority of clinicians have low to average levels of VT (Dunkley & Whelan, 2006; Furlonger & Taylor, 2013; Kushmider, 2012), although samples of students and novice therapists consistently show above average cognitive disruptions (Knight, 2010; Adams & Riggs, 2008).

The TABS has evolved from four previous incarnations of the instrument: the McPearl Belief Scale (1988), the Traumatic Stress Institute Belief Scale (1991), the Traumatic Stress Institute Belief Scale Revision L (1996), and the Traumatic Stress Institute Belief Scale Revision N (2001). The TABS has good internal consistency (Cronbach's alpha = .96) and test-retest reliability (.75), and adequate face validity, construct validity, and criterion validity.

Secondary traumatic stress. One of the most commonly used measures of secondary traumatic stress (STS), or PTSD symptoms that result from trauma work, is the Impact of Event Scale – Revised (IES-R; Weiss & Marmar, 1997). Developed to parallel the DSM-IV criteria for PTSD (American Psychiatric Association, 2000), the IES-R contains 22 questions that are measured on a 5-point Likert Scale (0 = not at all to 4 = extremely) in the areas of intrusion, avoidance, and hyperarousal. Participants were prompted to complete the IES-R only if they indicated having provided trauma treatment within the last year. Although the IES-R was

designed to assess for PTSD symptoms caused by a traumatic event, studies on VT modify the wording of instructions to indicate that the clinician should respond to the questions "*only in reference to the stressful material related by trauma clients"* (Dunkley & Whelan, 2006b). The IES-R yields a total score (range = 0-88) and subscale scores for the Intrusion, Avoidance, and Hyperarousal subscales (for the subscales, the authors recommend using the item mean rather than the raw sum; thus, scores for each subscale range from 0 through 4; Weiss & Marmar, 1997). The three subscales have sufficient internal consistency (Cronbach's alpha = 0.79 to 0.92) and good validity in measuring distress from PTSD symptoms. Our study used the summed total IES-R score. Since the measure was designed to assess "symptomatic status" from exposure to a traumatic event, the authors do not provide established cut-off points; however, several studies have used a total IES-R score of 33 or above to signify the likely presence of PTSD (Creamer, Bell, & Failla, 2003).

Burnout. The Maslach Burnout Inventory (MBI; (Maslach & Jackson, 1981) is a 22-item self-report inventory used to assess for level of clinician burnout. The measure yields three subscales: 1) Emotional Exhaustion, or being mentally and emotionally over-extended and exhausted by one's work; 2) Depersonalization, or a detached and impersonal response toward one's clients; and 3) Personal Accomplishment, or the sense of enjoyment, competence, and success in a job working with people. On a 7-point Likert scale, the participant is asked to indicate the frequency with which various feelings occur during their work year (0 = never to 6 = every day). There is no total score; scores are yielded for each of the three subscales by summing the selected responses (scoring is reversed for Personal Accomplishment). Given that emotional exhaustion is considered the hallmark symptom of burnout and has been shown to have strong predictive power, many authors use the Emotional Exhaustion subscale as their indicator of

burnout (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002). As such, we used the Emotional Exhaustion subscale score as our dependent variable in burnout analyses. Example items include "I feel emotionally drained from my work," "Working with people all day is really a strain for me," and "I feel like I'm at the end of my rope."

Reliability of the measure is good for the total scale (alpha = .83 to .91; Maslach & Jackson, 1981; Baird & Jenkins, 2003) and for the subscales (.91 for Emotional Exhaustion, .81 for Depersonalization, and .92 for Personal Accomplishment). The MBI also has adequate test-retest reliability and convergent and discriminant validity (Maslach & Jackson, 1981).

Therapist factors.

Personal trauma history. The Trauma History Questionnaire (THQ; Green, 1996) is a widely used 24-item self-report measure that examines lifetime exposure to a range of potentially traumatic events and was used in this study to assess for clinicians' personal history of trauma. The THQ consists of 23 yes/no questions addressing a range of traumatic events across three areas: crime-related events (e.g., robbery, mugging), general disaster and trauma (e.g., disaster, injury, witnessing death), and unwanted physical and sexual experiences. The 24th item asks the respondent to indicate whether they have experienced any other unusually frightening or stressful experience(s) and if so, to specify.

For each event listed, respondents reported whether they ever experienced it, and if so, the number of times and how long ago the most recent experience occurred (within the last six months, within the last year, within the last five years, within the last 10 years, more than 10 years ago; Green, 1996). A total score is generated representing the number of events endorsed (maximum score = 23), and this total score was used in analyses. The 24th item is usually not

scored (Hooper, Stockton, Krupnick, & Green, 2011). We also created a binary yes/no variable to indicate whether the participant endorsed at least one of the 23 traumatic event items.

Test-retest correlations of the THQ are adequate (ranging from .51 to .91), and the measure has excellent validity (Hooper et al., 2011). Also, although the THQ cannot be used to establish a diagnosis of PTSD, several studies have confirmed its predictive power in predicting PTSD symptomatology (Golier et al., 2003).

Empathy. To measure empathy style, the 28-item Interpersonal Reactivity Index (IRI; Davis, 1983) was administered. Respondents answered 28 items on a 5-point Likert scale ranging from 0 ("Does not describe me well") to 4 ("Describes me very well"). Given Davis's (1983) findings that empathy consists of a set of separate but related constructs, the instrument contains four subscales with seven items each: 1) perspective-taking, or the tendency to adopt the psychological point of view of another person ("I sometimes try to understand my friends better by imagining how things look from their perspective"); 2) fantasy, or the predisposition to identify with characters in movies, plays, and other fictitious situations ("When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me"); 3) empathic concern, the tendency to experience feelings of warmth, compassion, and concern for others ("I often have tender, concerned feelings for people less fortunate than me"); and 4) personal distress, or the tendency to experience anxiety and discomfort as a result of hearing about another person's negative experiences ("Being in a tense emotional situation scares me"). Scores for each subscale range from 0 to 28 and each subscale was examined separately in the proposed study. Cronbach's alpha for each subscale is good (ranging from .70 to .78), as is test-re-test reliability (ranging from .61 to .81) (Davis, 1983).

Coping style. The Brief COPE (Carver, 1997) is a 28-item measure used to assess the varying coping strategies used by individuals in response to stress. An abbreviated version of the widely used COPE Inventory (Carver, Scheier, & Weintraub, 1989), the participant responds to items on a 4-point Likert frequency scale ranging from 1 ("I usually don't do this at all") to 4 ("I usually do this a lot"). The measure contains two items per scale, with a total of 14 scales. However, to reduce participant burden and based on the literature outlining the two major coping styles summarized above, we included only the eight scales (16 items) that are routinely categorized into either problem-focused or emotion-focused coping styles (Cooper, Katona, & Livingston, 2008). Problem-focused coping includes the scales of active coping, use of instrumental support, and planning, whereas emotion-focused coping includes the scales of acceptance, use of emotional support, humor, positive reframing, and religion. Psychometric properties are good, with internal reliabilities ranging from 0.57 to 0.90 (Carver, 1997). The problem-focused coping style and emotion-focused coping style were used as predictor variables in analyses, with individual problem-focused coping style scores ranging from 6 to 24 and individual emotion-focused coping style scores ranging from 10 to 40. Higher scores indicate greater use of that particular coping style.

Organizational factors.

Experience level. To determine clinician level of experience, respondents indicated their highest degree received and years of experience providing therapeutic services to clients. Participants currently in school were asked to specify the type of degree sought (e.g., Ph.D., Psy.D., M.S.W.) and year in training. All respondents reported whether they have ever received formal didactic training in trauma work (none, minimal, substantial) and to what extent they feel

prepared to work with survivors of trauma (scale of 1 being not at all prepared to 10 being extremely prepared).

Clientele served. Participants indicated the average number of hours per week spent delivering direct counseling services to clients over the past year, as well as the total number of clients seen each week on average over the past year. Of this number (total number of clients seen/week), they were asked to report on the number of those clients for whom they provided trauma treatment; that is, cases in which the therapeutic work provided was in direct reference to the client's experience of a traumatic stressor (or stressors). Respondents who endorsed providing trauma treatment for at least one client were asked to check off all types of trauma therapy provided within the past year (for adult clients: Prolonged Exposure, Cognitive Processing Therapy, Eye Movement Desensitization and Reprocessing (EMDR), Imagery Rehearsal Therapy (IRT), Skills Training in Affect and Interpersonal Regulation (STAIR), Brief Psychodynamic therapy, Family therapy, Supportive counseling, Other; for child clients: Trauma-Focused Cognitive Behavioral Therapy, Play Therapy, Family therapy, Art therapy, Psychodrama, Supportive Counseling, Other). To assess for self-selection in to the trauma field, participants were asked whether or not they purposefully sought out a position in which they could provide trauma treatment.

Respondents received an item asking them to indicate whether the majority of their clinical work has been with children or adults (or equally child/adult). Also, participants were indicated the types of sexual trauma clients with whom they have worked in the past year: adult survivors of sexual assault, adult survivors of childhood sexual abuse, and/or child survivors of sexual abuse. Participants also reported whether they have worked with sexual offender clients in the past year, and if so, the number of clients.

Supervision and support. All participants received the question, "What type of supervision do you currently receive?" with the option to select any of the following: "individual supervision," "group supervision," "peer supervision/consultation," or "none." Scores were summed to create a composite Organizational Support variable. Those who selected "individual supervision" were asked to report the number of hours per week of supervision, and they also received a follow-up questionnaire on supervisory working alliance: the Supervisee Form from the Supervisory Working Alliance Inventory (SWAI; Efstation, Patton, & Kardash, 1990). The Supervisee Form assesses the supervisee's perceived working alliance with their supervisor and contains 19 items that are rated on a 7-point Likert Scale (1 = almost never to 7 = almost always). Individual scores are summed to create an overall alliance score (range = 19-133), with higher scores indicating a stronger perceived alliance, and this total score was included in analyses. The instrument also has two subscales, Rapport (a measure of supervisor's efforts to build a relationship with the supervisee) and Client Focus (a measure of the extent to which supervisees believe their supervisors encourage focused efforts toward specific goals expected to benefit clients). Both subscale scores are reported as means of the total scores on each factor; therefore, subscale scores range from 1 to 7. Both subscales have good reliability (Cronbach's alpha = .90 and .77, respectively) and adequate convergent and divergent validity.

Effort measure. The Directed Questions Scale (Maniaci & Rogge, 2014) contains 7 items, which were embedded throughout the survey to determine how carefully participants read items. As per the guidelines proposed by Maniaci and Rogge (2014), respondents who answered incorrectly on 3 or more of these items were removed from the dataset.

Data Analytic Strategy

Overview

This study implemented a cross-sectional design, and recruitment occurred until the target sample size was reached. A priori power analyses determined that, with a sample size of 200, this study had 94% power to detect a significant difference in VT between the two provider groups.

All analyses were performed using SPSS v.24. An alpha level of .05 was used for all analyses, except when otherwise stated. Descriptive analyses were conducted on the dependent variables of interest (i.e., vicarious trauma, secondary traumatic stress, burnout) to determine how clinicians in our sample compared to those in previous research. Means and standard deviations were calculated for each dependent variable to quantify the prevalence and severity of these conditions in both provider groups. To examine if there were any differences in the occupational stress constructs based on provider characteristics (e.g., gender, age) we explored associations via correlation, Chi-square, and ANOVAs, as appropriate.

Correlation matrices of all study variables were computed to examine potential covariates that should be included in models. For hypotheses examining predictors of occupational stress constructs, hierarchical regression was selected as our choice of analysis because it allows us to first enter in variables already known be predictors (i.e., based on previous research and our correlation matrices) and to determine whether entering additional variables contributes a statistically significant amount of variance in the dependent variable (Field, 2009). Hierarchical regression also allows us to identify interaction effects (e.g., the combined effect of two or more predictor variables on an outcome variable), in order to explore whether provider group moderates the relationship between a given predictor and dependent variable. When interaction

effects were found, they were graphed using the plot function from the general linear model in SPSS.

Preliminary Data Screening

Table 1 below displays the number of participants initially recruited and the criteria by which participants were eliminated from analyses. 294 individuals initiated the survey (e.g., opened the link), and of these, 71 participants decided not to complete it. 223 participants completed the entire study. Of the sample of 223, one participant was eliminated from analyses for making too many errors on distraction questions (see Directed Questions Scale, Appendix A) and one participant was eliminated from analyses for failing to provide a response to the "percentage of trauma cases" question (and thus could not be defined as either a Generalist or Trauma Provider). Therefore, the final sample included 221 participants and the vast majority of these participants provided valid responses to distraction questions.

All variables were examined for missing data using Little's MCAR test. The percentage of missing data was small (under 5%) for all variables except for the TABS-Total variable (which was missing 10.5% of data). As missing data on the TABS-Total variable were found to be missing completely at random, we replaced missing data using the expectation maximization technique prior to running analyses (Graham, 2009).

All variables were assessed for univariate normality and multivariate outliers. None of the continuous predictor variables revealed skewness or kurtosis values above +/- 1.5. When all continuous variables were examined, the MBI-Depersonalization variable had two standard values above +/- 3.29 and the IES-Total variable had four standard values above +/- 3.29. All of these outliers were winsorized (Tabachnick & Fidell, 2013). Collinearity diagnostics showed no

evidence of multicollinearity. Prior to running regression analyses, multi-level categorical variables were dummy coded.

Table 1

Data Cleaning Results

Total number of participants who initiated survey	294
Number of incomplete/not submitted survey responses in REDCap	71
Number of remaining participants making 3 or more errors on distraction questions	1
Number of remaining participants missing response on "percentage of trauma cases" question	1
Total number of participants included in final analyses	221
Percentage of final analysis participants making 0 errors on distraction questions	88.3%

Results

Sample Characteristics

Demographic characteristics for the overall sample, generalist provider group, and trauma provider group are presented in Table 2. The overall sample had a mean age of 37.89 years, was 78.3% women and 87.8% White. Participants represented four different countries (96.7% United States) and 35 U.S. states. The only significant difference on demographic variables between the generalist and trauma provider samples was for age. Trauma provider participants were older than generalist provider participants [$t(171.97) = -5.79$, $p < .001$], a difference that is most likely

explained by limited opportunity or desire for clinical specialization among early career therapists.

Table 2

Demographic Characteristics

	Overall sample (n = 221)	Generalist provider group (n = 114)	Trauma provider group (n = 107)
Mean Age (*SD*)*	37.89 (*12.62*)	33.36 (*8.62*)	42.66 (*14.33*)
(Range)	(23-74)	(24-67)	(23-74)
Gender			
Female	78.3%	75.4%	81.3%
Male	20.4%	24.6%	15.9%
Transgender	0.0%	0.0%	0.0%
No response	1.3%	0.0%	2.8%
Race			
White/Caucasian	87.8%	88.6%	86.9%
Black/African American	3.2%	1.8%	4.7%
Asian	5.0%	5.3%	4.7%
American Indian	0.0%	0.0%	0.0%
More than one race	3.6%	4.4%	2.8%
No response	0.4%	0.0%	0.9%
Ethnicity			
Hispanic or Latino	4.1%	5.3%	2.8%
Not Hispanic or Latino	95.5%	93.9%	97.2%
No response	0.4%	0.8%	0.0%
Country			
United States	96.7%	95.6%	98.1%
Canada	2.3%	3.5%	0.9%
United Kingdom	0.5%	0.0%	0.9%
Cyprus	0.5%	0.9%	0.0%
Marital Status			
Married	51.6%	48.2%	55.1%
Never married	34.4%	42.1%	26.2%
Divorced	7.7%	4.4%	11.3%
Separated	0.5%	0.0%	0.9%
Widowed	1.8%	1.8%	1.9%
Domestic partnership	3.5%	3.5%	3.7%
No response	0.5%	0.0%	0.9%

Table 3 displays occupational characteristics for the overall sample, generalist provider group, and trauma provider group. The overall sample was 76.0% psychologists, had an average

of 11 years of clinical experience, and worked with "mostly adult" clients (74.5%). Students comprised 38.8% of the overall sample. In regards to adult trauma therapy provided, the most frequently provided therapy was supportive counseling (45.7%), followed by Cognitive Processing Therapy (42.1%) and Prolonged Exposure (23.5%). In terms of child trauma therapy provided, the most frequently provided therapy was Trauma-Focused CBT (18.6%), followed by Family Therapy (11.3%) and supportive counseling (11.3%). The majority of clinicians endorsed a Cognitive-Behavioral theoretical orientation (63.8%).

A series of independent samples t-tests and chi-square analyses were conducted to determine significant differences in occupational characteristics between the generalist and trauma provider samples. Significant findings are discussed here, as well as noted in Table 3. Students were more likely to be generalist providers compared to trauma providers [$X^2(1) = 16.77$, $p < .001$], which is consistent with our aforementioned findings on age and makes sense given that graduate programs are typically expected to provide broad-based, generalized clinical training. The trauma provider sample also had more years of clinical experience compared to the generalist provider sample [$t(164.15) = -5.83$, $p < .001$].

In terms of practice setting, generalist providers (44.7%) were more likely than trauma providers (24.3%) to work at a non-Veterans Affairs hospital or medical center [$X^2(1) = 10.16$, $p < .001$]. Trauma therapists were more frequently based out of Veterans Affairs affiliated medical centers or clinics compared to general hospitals (34.6% versus 28.1%), although this difference was not significant difference.

Regarding time spent providing direct counseling services to clients, within the past year trauma providers delivered significantly more hours of therapy per week ($M = 19.59$, $SD =$

10.47) compared to generalist providers (M = 13.82, SD = 8.52). Similarly, there was a trend toward trauma therapists seeing more clients per week than generalist therapists (p = .059).

Psychologists were more likely to be generalist providers, while social workers and licensed professional counselors were more likely to be trauma providers [$X^2(4) = 18.10$, $p < .001$]. Also, as expected, each week on average over the past year the trauma provider group delivered trauma treatment for significantly more clients (M = 12.46, SD = 8.77) than did the generalist provider group (M = 2.66, SD = 2.96) [$t(128.36) = -10.99$, $p < .001$]. Similarly, trauma providers had a significantly higher percentage of trauma clients on their caseload (M = 75.31%, SD = 18.01) compared to generalist providers (M = 17.40%, SD = 13.81); [$t(198.57) = -26.71$, $p < .001$].

Within the overall sample, we examined the distribution of the "percentage of trauma clients on caseload" variable. The mean was 45.44 percent of trauma clients on caseload, and the median was 41.67 percent of trauma clients on caseload. The most commonly observed numbers were 0 percent (the mode, reported by 13.6% of the sample) and 100 percent (reported by 10.4% of the sample). See Table 3 for a frequency breakdown of this variable.

In comparison to the generalist provider group, the trauma provider group was more likely to have provided trauma treatment in the past year to both adult [$X^2(1) = 22.51$, $p < .001$] and child clients [$X^2(1) = 9.53$, $p < .001$]. Regarding types of adult trauma treatment, trauma providers were more likely than generalist providers to have used Cognitive Processing Therapy (CPT) [$X^2(1) = 7.39$, $p < .05$], Eye Movement Desensitization and Reprocessing (EMDR) [$X^2(1) = 11.82$, $p = .001$], Skills Training in Affect and Interpersonal Regulation (STAIR) [$X^2(1) = 5.78$, $p < .05$], brief psychodynamic therapy [$X^2(1) = 5.11$, $p < .05$], family therapy [$X^2(1) = 15.23$, $p < .001$], supportive counseling [$X^2(1) = 5.27$, $p < .05$], and "other" trauma therapy [$X^2(1) = 5.27$, p

< .05]. In terms of types of child trauma treatment, trauma providers were more likely than generalist providers to have used Trauma Focused Cognitive Behavioral Therapy (TF-CBT) [$X^2(1) = 7.96$, $p < .05$], play therapy [$X^2(1) = 8.78$, $p < .05$], family therapy [$X^2(1) = 11.26$, $p = .001$], and "other" trauma therapy [$X^2(1) = 6.15$, $p < .05$]. As expected, clinicians in the trauma provider group were more likely than clinicians in the generalist provider group to endorse purposefully seeking a position in which they could provide treatment for clients exposed to trauma [$X^2(1) = 17.55$, $p < .001$].

The relation between provider group and primary theoretical orientation was found to be significant [$X^2(4) = 21.81$, $p < .001$]. Generalist providers were more likely to endorse a cognitive-behavioral orientation, while trauma providers were more likely to endorse a systems orientation and humanistic/existential orientation. Also, a relationship was demonstrated between provider group and amount of formal didactic training received in trauma work (none, minimal, or substantial) [$X^2(4) = 21.81$, $p < .001$], such that there were more trauma providers than generalist providers reporting minimal and substantial training. On a scale of 1 to 10, trauma providers endorsed feeling more prepared ($M = 7.64$, $SD = 2.04$) than generalist providers ($M = 6.08$, $SD = 2.33$) in providing therapy for clients that are victims of trauma [$t(219) = -5.30$, $p < .001$].

There were more trauma providers than generalist providers who provided therapy in the past year for clients presenting with sexual trauma as a primary problem [$X^2(1) = 12.93$, $p < .001$]. Compared to generalist providers, trauma providers were more likely to work with adult survivors of sexual assault [$X^2(1) = 11.71$, $p = .001$] and adult survivors of childhood sexual abuse [$X^2(1) = 14.73$, $p < .001$], however no provider group differences were found for working

with child survivors of sexual abuse. Trauma providers were also more likely than generalist providers to have provided therapy for sexual offender clients [$X^2(1) = 4.44$, $p < .05$].

Table 3

Occupational Characteristics

	Overall sample (n = 221)	Generalist provider group (n = 114)	Trauma provider group (n = 107)
Profession (if student, aspired profession)*			
Psychologist*	76.0%	86.8%	64.5%
Social worker*	13.6%	7.9%	19.6%
Licensed professional counselor*	6.3%	1.8%	11.2%
Nurse practitioner	0.5%	0.0%	0.9%
Other[1]	3.6%	3.5%	3.7%
Years of Clinical Experience, Mean (*SD*)*	11.17 (*9.93*)	7.65 (*6.58*)	15.02 (*11.40*)
(Range)	(1-50)	(1-38)	(1-50)
Current student*	38.8% (n=85)	51.8% (n=59)	24.8% (n=26)
Ph.D. student	88.2% (n=75)	88.1% (n=52)	88.5% (n=23)
Psy.D. student	9.4% (n=8)	8.5% (n=5)	11.5% (n=3)
Other student[2]	2.4% (n=2)	3.4% (n=2)	0.0% (n=0)
If student, year in training			
2	16.5% (n=14)	16.9% (n=10)	15.4% (n=4)
3	11.8% (n=10)	11.9% (n=7)	11.5% (n=3)
4	21.2% (n=18)	23.7% (n=14)	15.4% (n=4)
5	28.2% (n=24)	28.8% (n=17)	26.9% (n=7)
6	14.1% (n=12)	15.3% (n=9)	11.5% (n=3)
7	5.9% (n=5)	3.4% (n=2)	11.5% (n=3)
8	2.3% (n=2)	0.0% (n=0)	7.7% (n=2)

Practice Setting			
Community mental health clinic	21.7%	24.6%	18.7%
Mean Hours/week (*SD*)	18.48 (*14.69*)	18.48 (*14.28*)	18.47 (*15.60*)
Hospital/medical center (non-VA)*	34.8%	44.7%	24.3%
Mean Hours/week (*SD*)	25.13 (*17.45*)	25.36 (*17.17*)	24.71 (*18.36*)
VA Medical Center or clinic	31.2%	28.1%	34.6%
Mean Hours/week (*SD*)	32.97 (*13.21*)	30.03 (*14.10*)	35.90 (*11.77*)
Private practice	26.2%	21.1%	31.8%
Mean Hours/week (*SD*)	25.27 (*15.32*)	20.76 (*15.63*)	28.43 (*14.53*)
School system	4.1%	4.4%	3.7%
Mean Hours/week (*SD*)	19.61 (*17.26*)	24.40 (*16.01*)	13.63 (*19.15*)
Prison	1.4%	0.9%	1.9%
Mean Hours/week (*SD*)	5 (*4.24*)		5.00 (*4.24*)
Counseling center	7.2%	8.8%	5.6%
Mean Hours/week (*SD*)	19.93 (*14.74*)	20.50 (*15.21*)	19.17 (*15.48*)
Other[3]	6.8%	5.3%	8.4%
Mean Hours/week (*SD*)	20.36 (*15.72*)	16.50 (*14.54*)	23.25 (*16.90*)
Mean Hours/Week Counseling (*SD*)*	16.61 (*9.92*)	13.82 (*8.52*)	19.59 (*10.47*)
(Range)	(1-45)	(1-35)	(2-45)
Mean Number of Clients Seen/Week (*SD*)	15.27 (*10.50*)	13.97 (*10.22*)	16.64 (*10.67*)
(Range)	(1-More than 40)	(1-More than 40)	(1-More than 40)
Mean Number of Trauma Treatment Clients Seen/Week (*SD*)*	7.40 (*8.10*)	2.66 (*2.96*)	12.46 (*8.77*)
Mean Percentage of Trauma Clients on Caseload (*SD*)*	45.44 (*33.10*)	17.40 (*13.81*)	75.31 (*18.01*)
(Range)	(0-100)	(0-44)	(45-100)
0-10 Percentage Trauma Clients	17.6%		
11-20 Percentage Trauma Clients	14.9%		
21-30 Percentage Trauma Clients	7.9%		
31-40 Percentage Trauma Clients	9.6%		
41-50 Percentage Trauma Clients	12.0%		
51-60 Percentage Trauma Clients	3.8%		
61-70 Percentage Trauma Clients	6.0%		
71-80 Percentage Trauma Clients	12.5%		
81-90 Percentage Trauma Clients	6.1%		
91-100 Percentage Trauma Clients	13.3%		
Provide Trauma Therapy to Adults*	75.6%	62.3%	89.7%
Provide Trauma Therapy to Children*	24.4%	15.8%	33.6%
Adult Trauma Therapies Provided			
Prolonged Exposure	23.5%	21.1%	26.2%
Cognitive Processing Therapy*	42.1%	33.3%	51.4%

EMDR*	6.3%	0.9%	12.1%
Imagery Rehearsal Therapy	4.5%	2.6%	6.5%
STAIR*[4]	10.0%	5.3%	15.0%
Brief psychodynamic therapy*	11.8%	7.0%	16.8%
Family therapy*	9.0%	1.8%	16.8%
Supportive counseling*	45.7%	35.1%	57.0%
Other*[5]	24.9%	18.4%	31.8%
Child Trauma Therapies Provided			
Trauma-Focused CBT*	18.6%	11.4%	26.2%
Play therapy*	9.0%	3.5%	15.0%
Family therapy*	11.3%	4.4%	18.7%
Art therapy	7.2%	4.4%	10.3%
Psychodrama	0.5%	0.0%	0.9%
Supportive counseling	11.3%	7.9%	15.0%
Other*[6]	4.1%	0.9%	7.5%
Purposefully Sought Trauma Work Position*			
Yes	54.5%	37.3%	67.9%
No	45.5%	62.7%	32.1%
Clientele Age			
Mostly adult	74.5%	75.4%	72.9%
Mostly child	18.6%	17.5%	19.6%
Equally adult/child	6.8%	6.2%	7.5%
No response		0.9%	
Primary Theoretical Orientation*			
Cognitive-behavioral*	63.8%	77.2%	49.5%
Psychodynamic/psychoanalytic	6.8%	4.4%	9.3%
Systems*	7.2%	2.6%	12.1%
Humanistic-existential*	5.0%	1.8%	8.4%
Eclectic/other	17.2%	14.0%	20.6%
Ever Received Supervised Practicum/Internship Trauma Training	62.9%	59.6%	66.4%
Amount of Formal Didactic Trauma Training Received*			
None	4.5%	6.1%	2.8%
Minimal*	42.7%	50.0%	34.9%
Substantial*	52.7%	43.9%	62.3%
Mean Preparedness to Provide Trauma Treatment; 1 Not Prepared - 10 Extremely Prepared (*SD*)*	6.84 (*2.33*)	6.08 (*2.33*)	7.64 (*2.04*)
Provide Sexual Trauma Treatment*	63.0%	51.8%	75.2%
Adult Clients-Sexual Assault*	48.9%	37.7%	60.7%
Adult Clients-Childhood Sexual Abuse*	50.2%	37.7%	63.6%
Child Clients Sexual Abuse	17.2%	13.2%	21.5%

Provide Therapy for Sexual Offenders*	14.5%	9.6%	19.6%
Mean # Sexual Offender Clients Treated in Past Year (*SD*)	3.81 (*5.94*)	5.09 (*8.70*)	3.14 (*3.93*)

Note. *Designates a statistically significant difference ($p < .05$) between the generalist and trauma provider samples.

[1] Three participants identified themselves as licensed marriage and family therapists, one identified as a neuropsychologist, one identified as an advanced practice nurse, one identified as a psychoeducational instructor, one identified as a school counselor, and one identified as a "researcher but licensed psychologist who sees patients."

[2] One participant reported seeking a "clinical respecialization" degree and one reported seeking a Master's of Science in Nursing (MScN) degree.

[3] These included departmental clinic (n=3), child advocacy Center (n=2), psychiatric facility (n=2), court (n=1), police (n=1), health department (n=1), nursing/rehabilitation facility (n=1), managed health care company (n=1), telehealth clinic (n=1), university experimental clinic (n=1), "outpatient clinic" = (n=1), and "workplaces" (n=1).

[4] STAIR = Skills Training in Affect and Interpersonal Regulation

[5] These included acceptance and commitment-based or mindfulness therapies (n=7), cognitive-behavioral therapy (n=7), dialectical-behavioral therapy (n=6), art therapy (n=2), attachment therapy (n=2), emotion-focused therapy (n=2), family systems (n=2), long-term psychodynamic therapy (n=2), interpersonal process (n=1), hypnosis (n=1), Seeking Safety (n=1), moral injury group (n=1), and Thought Field therapy (n=1).

[6] These included cognitive-behavioral therapy (n=1), attachment therapy (n=1), Eye Movement Desensitization and Reprocessing (EMDR) (n=1), brief consults/referrals (n=1), drama therapy techniques (n=2), Managing and Adapting Practice Trauma (n=1), and Thought Field therapy (n=1).

Prevalence and Severity of Occupational Stress Constructs

Mean scores and standard deviations for the three dependent variables (vicarious trauma, secondary traumatic stress, and burnout) are displayed in Table 4. Scores were consistent with levels of VT observed in previous studies of trauma therapists (Pearlman, 2003), counselors-in-training (Toren, 2008) and students and their field instructors (Knight, 2010). Though the TABS developers do not suggest a specific "clinical cut off score" for presence versus absence of VT, in general, scores were low; only 8.0% of our overall sample had total TABS scores in the "Very High" to "Extremely High" range.

An independent samples t-test demonstrated that there was *not* a significant difference in total TABS scores between the generalist and trauma provider groups [$t(219) = 1.66$, $p = .10$]. Opposite to our hypothesis, generalist providers reported higher (although not significantly higher) overall TABS scores ($M = 47.50$, $SD = 7.95$) than trauma providers ($M = 45.71$, $SD = 8.12$). In addition, the majority of TABS subscales scores did not significantly differ by provider group, with two exceptions. There were significantly higher disruptions in TABS Self-Trust in the generalist provider group ($M = 49.58$, $SD = 9.87$) compared to the trauma provider group ($M = 45.42$, $SD = 10.10$); [$t(219) = 3.10$, $p < .01$]. Also, TABS Self-Esteem disruptions were significantly higher in the generalist provider group ($M = 49.28$, $SD = 8.27$) compared to the trauma provider group ($M = 47.08$, $SD = 7.70$); [$t(219) = 2.05$, $p < .05$].

In terms of secondary traumatic stress, total scores on the IES-R were very low ($M = 6.51$ for the overall sample) given the possible range of 0 to 88. This is consistent with rates seen in other studies of mental health providers (Dunkley & Whelan, 2006). Zero participants reached the proposed PTSD cut-off score of 33, and 2.5% of the overall sample (n=4) had a score of 30 (the maximum in our sample). On the three IES-R subscales of Intrusion, Avoidance, and Hyperarousal, all item means (for all groups) were below 1. This indicates that on average, participants rated their distress as a result of exposure to clients' trauma material between "not at all" and "a little bit." In our study, significant differences on the IES-R emerged by provider group. As expected, on the Total score the trauma provider group ($M = 8.09$, $SD = 8.20$) scored significantly higher than the generalist provider group ($M = 4.49$, $SD = 4.92$); [$t(150.91) = -3.46$, $p = .001$], suggesting greater secondary traumatic stress in trauma providers versus generalist providers. The trauma provider group also scored significantly higher than the generalist

provider group on all three IES-R specific symptoms clusters of Intrusion [$t(160.31) = -3.58$, $p < .001$], Avoidance [$t(158.07) = -2.70$, $p < .01$], and Hyperarousal [$t(173.87) = -2.74$, $p < .01$].

On the Maslach Burnout Inventory (MBI), on average clinicians across all groups scored on the low end of the Moderate range for Emotional Exhaustion, in the Low range for Depersonalization, and in the High range for Personal Accomplishment (Maslach & Jackson, 1981). This pattern is consistent with previous studies of burnout in mental health providers (e.g., Kadambi & Truscott, 2004; Baird & Jenkins, 2003). A series of independent samples t-tests did not reveal significant group differences for MBI-Emotional Exhaustion [$t(215) = -1.13$, $p = .26$], MBI-Depersonalization [$t(218) = -.75$, $p = .46$], or MBI-Personal Accomplishment [$t(214) = -1.05$, $p = .30$], indicating similar levels of burnout across the generalist and trauma providers.

Table 4

Mean Scores and Standard Deviations on Dependent Measures

	Overall sample (n = 221)	Generalist provider group (n = 114)	Trauma provider group (n = 107)
TABS Total Mean *(SD)*	46.64 *(8.06)*	47.50 *(7.95)*	45.71 *(8.12)*
(Range)[a]	(26.75-72)	(31.05-72)	(26.75-65)
TABS Self-Safety Mean *(SD)*	41.18 *(10.86)*	41.89 *(10.44)*	40.43 *(11.28)*
TABS Other-Safety Mean *(SD)*	44.11 *(10.25)*	44.50 *(9.49)*	43.69 *(11.04)*
TABS Self-Trust Mean *(SD)**	47.57 *(10.18)*	49.58 *(9.87)*	45.42 *(10.10)*
TABS Other-Trust Mean *(SD)*	38.88 *(9.48)*	39.20 *(9.25)*	38.54 *(9.75)*
TABS Self-Esteem Mean *(SD)**	48.22 *(8.06)*	49.28 *(8.27)*	47.08 *(7.70)*
TABS Other-Esteem Mean *(SD)*	46.42 *(9.87)*	47.20 *(9.85)*	45.59 *(9.86)*
TABS Self-Intimacy Mean *(SD)*	51.64 *(6.99)*	52.43 *(7.03)*	50.79 *(6.87)*
TABS Other-Intimacy Mean *(SD)*	47.68 *(11.52)*	48.21 *(11.89)*	47.12 *(11.15)*
TABS Self-Control Mean *(SD)*	48.88 *(10.25)*	49.88 *(10.27)*	47.81 *(10.16)*
TABS Other-Control Mean *(SD)*	44.22 *(8.34)*	43.95 *(7.46)*	44.50 *(9.21)*
IES-R Total Mean *(SD)**	6.51 *(7.16)*	4.49 *(4.92)*	8.09 *(8.20)*
(Range)[b]	(0-30)	(0-19)	(0-30)
IES-R Intrusion Item Mean *(SD)**	.37 *(.40)*	.26 *(.27)*	.46 *(.46)*
IES-R Avoidance Item Mean *(SD)**	.28 *(.43)*	.19 *(.29)*	.35 *(.50)*
IES-R Hyperarousal Item Mean *(SD)**	.24 *(.34)*	.16 *(.29)*	.30 *(.37)*
MBI – Emotional Exhaustion Mean *(SD)*	18.98 *(9.94)*	18.24 *(9.28)*	19.77 *(10.59)*

(Range)[c]	(0-47)	(2-45)	(0-47)
MBI – Depersonalization Mean *(SD)*	4.30 *(3.92)*	4.11 *(3.88)*	4.51 *(3.98)*
(Range)[d]	(0-18)	(0-18)	(0-18)
MBI - Personal Accomplishment Mean *(SD)*	39.40 *(5.52)*	39.03 *(5.70)*	39.82 *(5.31)*
(Range)[e]	(22-48)	(23-48)	(22-48)

Note. *Designates a statistically significant difference ($p < .05$) between the generalist and trauma provider samples.
TABS = Trauma and Attachment Belief Scale; measures vicarious trauma
IES-R = Impact of Event Scale–Revised; measures secondary traumatic stress
MBI = Maslach Burnout Inventory; measures burnout
[a]TABS possible range: $\leq$29 - $\geq$70
[b]IES-R-Total possible range: 0-88
[c]MBI–Emotional Exhaustion possible range: 0-54
[d]MBI–Depersonalization possible range: 0-30
[e]MBI–Personal Accomplishment possible range: 0-48

Descriptives for Therapist Variables

Mean scores and standard deviations for the therapist-level variables (personal trauma history, empathy style, coping style) for the overall sample, generalist provider group, and trauma provider group are presented in Table 5. Ninety-one percent of the overall sample reported a past trauma history; that is, they endorsed experiencing at least one of the traumatic life events listed on the Trauma History Questionnaire (THQ). On average, participants reported experiencing between three and four traumatic events in their lifetimes. Therapists with more years of experience in the field experienced significantly more traumatic life events ($r = .33$, $p < .01$).

As measurement of clinician trauma history varies so widely across studies, it is difficult to draw comparisons; still, previous research has shown similarly high rates of traumatic life events in mental health providers, particularly trauma workers. For example, Rudolph and colleagues (1997) found that in health personnel working with trauma victims, 100% of the participants reported that they had experienced previous personally traumatic events. In Pearlman and Mac Ian's (1995) hallmark study of trauma therapists, the majority (60%)

endorsed having a trauma history. This is consistent with research showing that mental health providers have more extensive trauma histories than other types of professionals (Elliott & Guy, 1993).

In our study, while no provider group differences existed for having a personal trauma history (binary yes/no), trauma providers (M = 4.10 events, SD = 3.01) reported significantly more lifetime traumatic events than generalist providers (M = 2.93 events, SD = 2.29); $t(186.13) = -3.16$, $p < .01$]. Specifically, this pattern was observed for General Disaster and Trauma events [$t(190.62) = -2.83$, $p < .01$] and Physical and Sexual Experiences events [$t(217) = -2.61$, $p = .01$], but not Crime-Related events ($p = .08$). See Table 6 for the frequency with which each specific THQ category was endorsed in the overall sample, generalist provider group, and trauma provider group.

With regards to empathy styles, scores were consistent with other studies of therapists that used the Interpersonal Reactivity Index (Marmaras, 2000). Of the four empathy styles (Perspective Taking, Fantasy, Empathic Concern, and Personal Distress), Personal Distress was the only style that significantly differed by provider group. Trauma providers were less likely than generalist providers to endorse a personal distress empathy style, or the propensity for anxiety and unease in tense interpersonal situations [$t(217) = -2.61$, $p = .01$].

For our measure of coping, we included eight scales from the Brief COPE that fall into problem-focused and emotion-focused coping styles. In the overall sample, mean scores for both problem-focused and emotion-focused coping were in the mid-to-high range. However, trauma providers were more likely than generalist providers to report an emotion-focused coping style [$t(212) = -2.72$, $p < .01$]. No group differences were seen for problem-focused coping ($p = .12$).

Table 5

Therapist-Level Variables

	Overall sample (n = 221)	Generalist provider group (n = 114)	Trauma provider group (n = 107)
Trauma History	91.0%	89.9%	92.1%
THQ Total Mean *(SD)** (Range)[a]	3.49 *(2.72)* (0-12)	2.93 *(2.29)* (0-11)	4.10 *(3.01)* (0-12)
IRI-Perspective Taking Mean *(SD)* (Range)[b]	20.50 *(3.91)* (7-28)	20.52 *(3.72)* (7-28)	20.48 *(4.11)* (8-28)
IRI-Fantasy Mean *(SD)* (Range)[c]	15.93 *(5.55)* (3-28)	16.41 *(5.38)* (4-28)	15.41 *(5.70)* (3-27)
IRI-Empathic Concern Mean *(SD)* (Range)[c]	21.85 *(3.93)* (9-28)	21.38 *(4.11)* (9-28)	22.34 *(3.70)* (12-28)
IRI-Personal Distress Mean *(SD)** (Range)[e]	7.91 *(4.44)* (0-26)	8.86 *(4.73)* (0-26)	6.89 *(3.88)* (0-20)
BC-Problem Focused Mean *(SD)* (Range)[f]	20.65 *(2.54)* (13-24)	20.38 *(2.72)* (13-24)	20.92 *(2.32)* (13-24)
BC-Emotion Focused Mean *(SD)** (Range)[g]	28.49 (4.77) (15-40)	27.62 *(4.83)* (15-40)	29.37 *(4.58)* (20-40)

Note. *Designates a statistically significant difference ($p < .05$) between the generalist and trauma provider samples.
THQ = Trauma History questionnaire; measures personal history of trauma
IRI = Interpersonal Reactivity Index; measures empathy styles
BC = Brief COPE; measures coping styles
[a]THQ-Total possible range: 0-23
[b]IRI-Perspective Taking possible range: 0-28
[c]IRI-Fantasy possible range: 0-28
[d]IRI-Empathic Concern possible range: 0-28
[e]IRI-Personal Distress possible range: 0-28
[f]BC-Problem Focused possible range: 6-24
[g]BC-Emotion Focused possible range: 10-40

Table 6

Trauma History Questionnaire – Number of Events Endorsed by Category

	Overall sample (n = 221)	Generalist provider group (n = 114)	Trauma provider group (n = 107)
Crime-Related Events Mean *(SD)* (Range)[a]	.70 *(.95)* (0-4)	.59 *(.89)* (0-3)	.82 *(1.00)* (0-4)
General Disaster & Trauma Mean *(SD)** (Range)[b]	2.07 *(1.70)* (0-8)	1.76 *(1.46)* (0-6)	2.41 *(1.87)* (0-8)
Physical & Sexual Experiences Mean *(SD)** (Range)[c]	.74 *(.95)* (0-5)	.57 *(.85)* (0-4)	.91 *(1.02)* (0-5)

Note. *Designates a statistically significant difference ($p < .05$) between the generalist and trauma provider samples.
[a]Crime-Related Events possible range: 0-4
[b]General Disaster & Trauma possible range: 0-13
[c]Physical & Sexual Experiences possible range: 0-6

Supervision Experiences

Mean scores and standard deviations for supervision variables for the overall sample, generalist provider group, and trauma provider group are presented in Table 7. In the overall sample, approximately half of clinicians (51.1%) reported currently receiving individual supervision, for an average of 2.17 hours per week. Differences between the generalist provider group and trauma provider group are noted here as well as within Table 7.

Compared to trauma providers, generalist providers were more likely to receive individual supervision [$X^2(1) = 11.71$, $p = .001$] but less likely to receive peer supervision/consultation [$X^2(1) = 5.44$, $p < .05$]. Generalist therapists received more hours of supervision per week ($M = 2.36$, $SD = 1.30$) compared to trauma therapists ($M = 1.85$, $SD = 1.11$) [$t(109) = 2.08$, $p < .05$], which is likely because the generalist sample was younger, less experienced, and more likely to be students.

Most participants reported a strong alliance on the Supervisee Form of the Supervisory Working Alliance Inventory (SWAI), with high mean scores on both the overall score and two subscales (Rapport and Client Focus). This is consistent with other research of perceived supervision quality among therapist supervisees (Dunkley & Whelan, 2006b; Williams et al., 2012). No group differences were found on the SWAI, indicating a similar level of perceived supervision quality between generalist and trauma providers.

Table 7

Supervision Variables

	Overall sample (n = 221)	Generalist provider group (n = 114)	Trauma provider group (n = 107)
Clinical supervision			
Individual*	51.1%	62.3%	39.3%
Group	39.8%	45.6%	33.6%
Peer consultation*	47.1%	39.5%	55.1%
Organizational support			
No supervision	19.0%	17.5%	20.6%
One type of supervision	40.7%	35.1%	46.7%
Two types of supervision	23.5%	29.8%	16.8%
Three types of supervision	16.7%	17.5%	15.9%
# Hours Individual Supervision/Week Mean *(SD)* (Range)*	2.17 *(1.25)* (1-7)	2.36 *(1.30)* (1-7)	1.85 *(1.11)* (1-5)
SWAI-Total Mean *(SD)* (Range)[a]	103.63 *(20.50)* (40-133)	104.24 *(20.08)* (40-133)	102.55 *(21.45)* (56-131)
SWAI-Rapport Mean *(SD)* (Range)[b]	5.62 *(1.17)* (1.58-7)	5.64 (1.13) (1.58-7)	5.58 *(1.26)* (2.5-7)
SWAI-Client Focus Mean *(SD)* (Range)[c]	5.18 *(1.13)* (2.14-7)	5.22 *(1.15)* (2.14-7)	5.13 *(1.11)* (2.71-7)
Serve as clinical supervisor to others	34.5%	30.7%	38.3%

Note. *Designates a statistically significant difference ($p < .05$) between the generalist and trauma provider samples.
SWAI = Supervisee Form of the Supervisory Working Alliance Inventory
[a]SWAI-Total possible range: 19-133
[b]SWAI-Rapport possible range: 1-7
[c]SWAI-Client Focus possible range: 1-7

Summary of Provider Group Differences

Overall, there were several important demographic and occupational differences between the generalist and provider groups that guided our choice of analyses. Trauma providers were significantly older and had more years of experience than generalist providers. Students were more likely to be generalist providers than trauma providers. Taken together, these results are likely due to less opportunity or desire for clinical specialization among students or early career therapists. Also, though trauma providers saw more clients each week compared to generalist providers, this difference was not statistically significant. Trauma providers delivered significantly more hours of therapy per week compared to generalist providers.

Hypotheses

Hypothesis 1: Comparison of level of VT among Trauma Providers and Generalist Providers. In keeping with McCann and Pearlman's (1990) original conceptualization of VT, we hypothesized that trauma providers would endorse higher levels of VT than generalist providers. A set of one-way analyses of covariance (ANCOVA) was performed to test the hypothesis that the trauma provider group would report significantly higher scores on the Trauma and Attachment Belief Scale (TABS) than the generalist provider group. ANCOVA was selected as our choice of analysis because we wanted to include a covariate. Because amount of therapy provided could theoretically be another explanation (besides provider group) for any differences in TABS scores, and because trauma providers delivered more therapy than generalist providers, we aimed to control for the effects of amount of therapy provided. Our goal in including this covariate was to improve our ability to attribute any significant differences in TABS scores to the effect of provider group.

In our study, two different variables tapped into the "amount of therapy provided" construct of interest: "number of hours per week counseling clients" and "number of clients seen each week." Though both of these variables could have been included as covariates, they were highly correlated with each other ($r = .73$, $p < .01$), suggesting potential problems with multicollinearity. Multicollinearity arises when predictor variables are highly correlated (i.e., $r > .70$), which causes statistical instability and makes determination of the contribution of individual predictors impossible (Field, 2009).

Therefore, in order to reduce multicollinearity (and increase power by reducing our number of predictors), we generated an "overall amount of therapy provided" variable using principal component analysis (PCA; Field, 2009). The goal of PCA is to explain the maximum amount of variance with the fewest number of uncorrelated variables. In our PCA, the two variables of "number of hours per week counseling clients" and "number of clients seen each week" were reduced into one factor. This "overall amount of therapy provided" factor was used as the covariate in all ANCOVA analyses. The assumption of homogeneity of regression slopes was met.

In the first ANCOVA, the total TABS score was entered as the dependent variable, provider group was entered as the independent variable, and overall amount of therapy provided was entered as the covariate. Controlling for the effect of overall amount of therapy provided, there was not a significant effect of provider group on TABS total scores, $F(1, 218) = 2.36$, $p = .13$. In fact, a comparison of the estimated marginal means (controlling for amount of therapy provided) showed that generalist providers ($M = 47.46$) actually endorsed higher levels of overall VT compared to trauma providers ($M = 45.76$). Therefore, results of this analysis did not support our hypothesis. All covariate-adjusted means for each provider group can be found in Table 12.

For the following set of ANCOVAs, we examined the effect of provider group (after controlling for amount of therapy provided) on the ten specific TABS subscale scores of Self-Safety, Other-Safety, Self-Trust, Other-Trust, Self-Esteem, Other-Esteem, Self-Intimacy, Other-Intimacy, Self-Control, Other-Control. However, because performing ten separate ANCOVAs increases the cumulative Type I error rate, a Bonferroni correction was performed. This entails dividing the *p* value for significance ($p = .05$) by the number of tests conducted (10), and then using this value ($p < .005$) as our new criterion for significance (Field, 2009).

Refer to Tables 8 to 18 in Appendix B for a full summary of ANCOVA results. After controlling for amount of therapy provided, none of the ANCOVA analyses showed that trauma providers had more VT. In fact, virtually all means were opposite of the direction of our hypothesis; trauma providers generally had lower TABS scores than generalist providers. As such, Hypothesis 1 was completely unsupported.

Hypothesis 2a: Aspects of the therapist are related to severity of VT. A moderation analysis was performed to test the hypothesis that therapist variables of personal trauma history, empathy style, and coping style would interact with therapist group (trauma providers versus

Table 12

Covariate-Adjusted Means for Hypothesis 1

	Generalist Provider	Trauma Provider	*F*	*p*
TABS Total	47.46	45.76	2.36	.13
TABS Self-Safety	41.88	40.44	.92	.34
TABS Other-Safety	44.51	43.68	.34	.56
TABS Self-Trust	49.29	45.73	6.75	.01
TABS Other-Trust	39.30	38.44	.43	.51
TABS Self-Esteem	49.25	47.11	3.74	.06
TABS Other-Esteem	47.23	45.56	1.48	.23
TABS Self-Intimacy	52.24	50.99	1.68	.20
TABS Other-Intimacy	48.21	47.12	.47	.49
TABS Self-Control	49.77	47.93	1.69	.20
TABS Other-Control	44.04	44.40	.10	.76

Note. No significant differences in means were found at the 0.005 level (Bonferroni corrected).

generalist providers) to significantly predict TABS scores. Prior to performing the moderation analysis, continuous variables (personal trauma history, empathy styles, problem-focused and emotion-focused coping styles) were mean-centered. Variables from the correlation matrix (see Table 20) that were significantly correlated with TABS-Total were: age, student status, years of experience as a therapist, and subjective preparedness for trauma work.

However, in order to address multicollinearity among these four variables, we first performed a stepwise regression analysis with TABS-total as the dependent variable. This showed that only "years of experience" entered the model, explaining 4.9% of the variance in total TABS scores, $F(1, 213) = 11.02$, $p = .001$. Therefore, only "years of experience" was included as a covariate in the moderation analysis. The second block included the predictors (personal trauma history, empathy subscales, and coping styles), and the third block included the moderator variable (provider group). The interaction terms (e.g., personal trauma history x therapist group) were entered into the final block.

The overall model was significant, $R^2 = .355$, $F(16, 165) = 5.68$, $p < .001$. In the first step, years of experience was included as a covariate. This contributed a significant amount of variance in total TABS scores, $R^2 = .05$, $F(1, 180) = 8.75$, $B = -.215$, $t(180) = -2.96$, $p = .004$, such that greater experience as a therapist was associated with lower TABS total scores.

In the second step, the following predictors were entered: trauma history (THQ-Total), empathy styles (IRI-Personal Distress, IRI-Fantasy, IRI-Perspective Taking, IRI-Empathic Concern), and coping styles (BC–Problem Focused Coping, BC-Emotion Focused Coping). The addition of these variables significantly added to the amount of variance in total TABS scores accounted for, $\Delta R^2 = .28$, $\Delta F(7, 173) = 10.07$, $p < .001$. Variables in each category were significantly related to vicarious traumatization. Having a greater personal trauma history was

associated with higher total TABS scores, $B = .29$, $t(173) = 4.32$, $p < .001$. Of the four empathy styles, the only one to significantly predict TABS total scores was personal distress empathy style, $B = .27$, $t(173) = 3.92$, $p < .001$; that is, clinicians endorsing a personal distress style of empathy had higher total TABS scores. Both problem-focused coping and emotion-focused coping were found to be significantly predictive of total TABS scores. Providers with higher problem-focused coping scores ($B = -.26$, $t(173) = -3.31$, $p = .001$) and higher emotion-focused coping scores ($B = -.17$, $t(173) = -2.22$, $p = .028$) had lower total TABS scores.

Next, the moderator variable of provider group was entered into the third step of the regression. This did not account for a significant amount of additional variance in TABS total scores, $\Delta R^2 = .00$, $\Delta F(1, 172) = .02$, $t(172) = -.14$, $p = .891$.

In the final step of the regression analysis, the following interaction terms were created: THQ-Total x Provider Group, IRI-Personal Distress x Provider Group, IRI-Fantasy x Provider Group, IRI-Perspective Taking x Provider Group, IRI-Empathic Concern x Provider Group, BC–Problem Focused Coping x Provider Group, and BC-Emotion Focused Coping x Provider Group. As a model, the addition of these interaction terms did not account for a significant proportion of the variance in TABS-total scores, $\Delta R^2 = .03$, $\Delta F(7, 165) = 1.20$, $p = .304$. However, IRI-Perspective Taking x Provider group was independently significant, $B = -.25$, $t(165) = -2.09$, $p = .038$. This indicates that the relation between IRI-Perspective Taking and TABS-Total scores was stronger in a negative direction for trauma providers. Figure 1 displays a graphical representation of this interaction effect.

In conclusion, our hypothesis was only partially supported, because provider group did not moderate the relationship between most of the therapist characteristic variables and total TABS scores. However, the relation between the perspective taking empathy style and TABS

total scores was stronger among trauma providers than generalist providers, indicating that perspective taking is more protective against VT for trauma therapists than generalists. We also found several therapist characteristics that affect vicarious traumatization across both provider groups. Clinicians with a greater personal history of trauma and a personal distress empathy style had higher TABS total scores. Clinicians with both a problem-focused and emotion-focused coping style had lower TABS total scores. See Table 21 for full regression results from Hypothesis 2a.

Given that having a greater personal history of trauma was associated with greater VT, a follow-up exploratory regression analysis was performed to determine whether specific type of personal trauma history was related to TABS-Total scores. Results showed that, with years of experience as a covariate, the three mean-centered THQ categories (Crime-Related Events, General Disaster & Trauma, Physical & Sexual Experiences) as predictors, and TABS-total as the DV, Crime-Related Events was a significant independent predictor of TABS-Total scores, $B = .19$, $t(205) = 2.53$, $p = .012$. This indicates that among the three categories of traumatic events from the THQ, being the victim of a crime (e.g., robbery, mugging) was uniquely associated with higher VT.

Table 20

Correlation Matrix for Demographic and Occupational Variables with TABS-Total

	Variable	1	2	3	4	5	6	7	8	9	10
1.	TABS-Total	---	.11	-.21**	.19**	-.24**	-.09	.00	-.07	.05	-.20**
2.	Gender		---	.14*	-.07	.17*	-.03	.02	-.03	-.03	.09
3.	Age			---	-.54**	.89**	.34**	.27**	.39**	.03	.39**
4.	Student Status				---	-.57**	-.46**	-.32**	-.30**	.00	-.45**
5.	Years Experience					---	.34**	.28**	.39**	.01	.43**
6.	Hours Counseling/Week						---	.73**	.33**	.15*	.36**
7.	# Clients/Week							---	.14*	.14*	.33**
8.	Percent Trauma Cases								---	.34**	.36**
9.	Purposefully Select Trauma Position									---	.36**
10.	Subjective Preparedness for Trauma Work										---

Note. *. Correlation is significant at the 0.05 level.

**. Correlation is significant at the 0.01 level.

TABS-Total = total score of the Trauma and Attachment Belief Scale

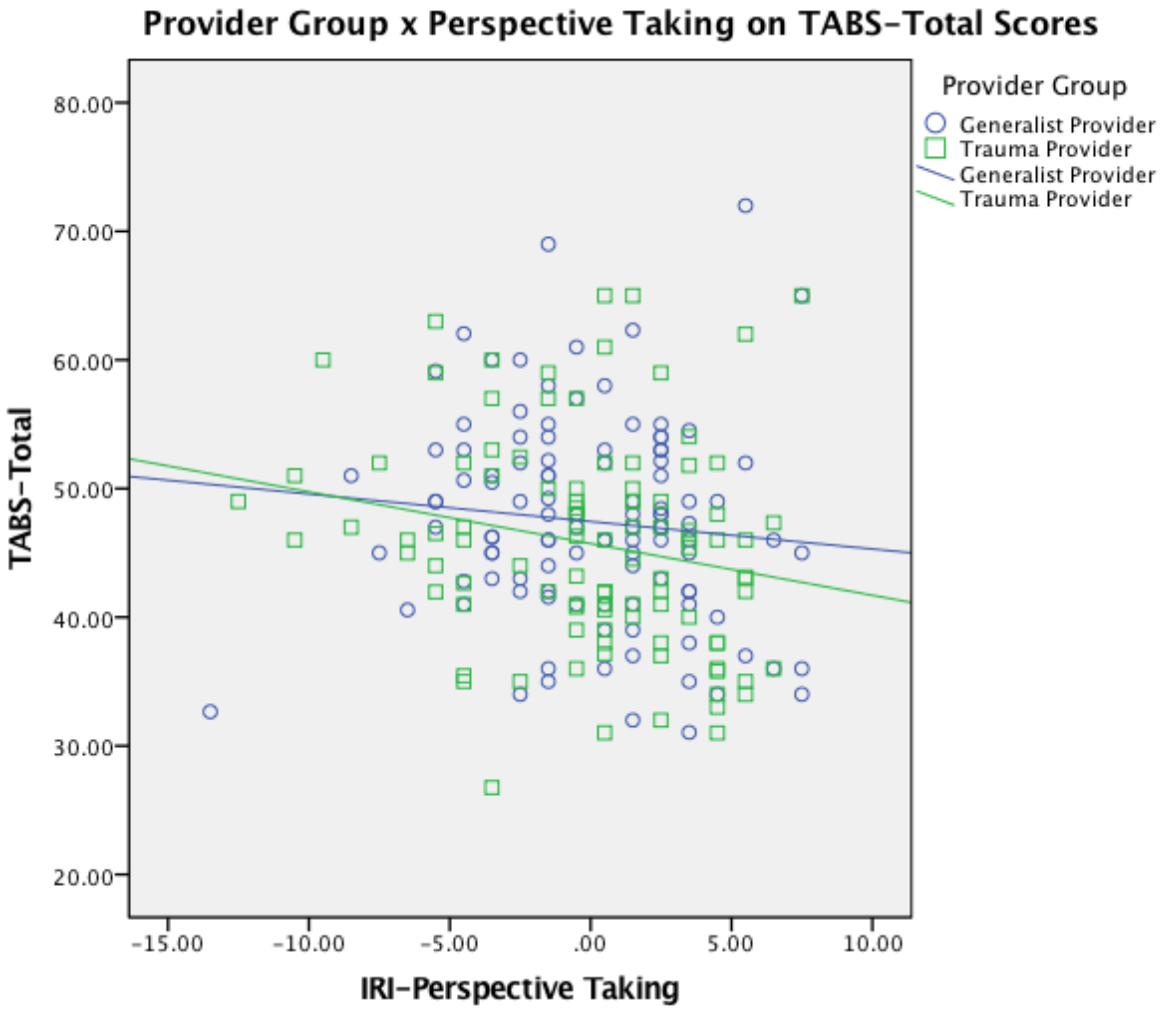

Figure 1. Interaction of Provider Group x Perspective Taking on TABS-Total Scores.

Hypothesis 2b: Aspects of the therapist are related to severity of secondary traumatic stress. A moderation analysis was performed to test the hypothesis that therapist variables of personal trauma history, empathy style, and coping style would interact with therapist group (trauma providers versus generalist providers) to significantly predict IES-R total scores. Prior to performing the moderation analysis, continuous variables (personal trauma history, empathy styles, problem-focused and emotion-focused coping styles) were mean-centered. Variables identified from the correlation matrix (Table 22 below) as significantly related to IES-R Total were: years of experience, overall amount of therapy provided (i.e., hours counseling/week + number of clients seen/week), percentage of trauma clients on caseload, and self-selection into the trauma field. However, in order to reduce multicollinearity among these four variables, we first performed a stepwise regression analysis with IES-R-Total as the dependent variable. This showed that "overall amount of therapy provided" and "percentage of trauma clients on caseload" entered the model, and explained a total of 13.6% of the variance in total IES-R scores, $F(2, 153) = 12.08$, $p < .001$. Therefore, both of these variables were included as covariates in the moderation analysis. Covariates were entered into the first block. These were followed by the predictors (personal trauma history, empathy subscales, and coping styles), and then the moderator variable (provider group). The final block included the interaction terms (e.g., personal trauma history x therapist group).

The overall model was significant, $R^2 = .29$, $F(17, 118) = 2.78$, $p = .001$. In the first step, two covariates were included: overall amount of therapy provided and percentage of trauma clients on caseload. These variables accounted for a significant amount of variance in total IES-R-Total scores, $R^2 = .12$, $F(2, 133) = 9.17$, $p < .001$. Clinicians providing more therapy per week had higher IES-R-Total scores, $b = 1.62$, $B = .22$, $t(133) = 2.64$, $p = .009$. Also, providers with a

greater percentage of trauma cases on their caseloads had higher IES-R-Total scores, $b = 6.07$, $B = .26$, $t(133) = 3.16$, $p = .002$.

In the second step, we entered the following predictors: trauma history (THQ-Total), empathy styles (IRI-Personal Distress, IRI-Fantasy, IRI-Perspective Taking, IRI-Empathic Concern), and coping styles (BC–Problem Focused Coping, BC-Emotion Focused Coping). The addition of these variables was marginally significant in contributing to the amount of variance in total IES-R scores accounted for, $\Delta R^2 = .09$, $\Delta F(7, 126) = 2.07$, $p = 051$. Beyond the effects of the covariates, personal trauma history was the only significant independent predictor, with clinicians with a greater personal history of trauma endorsing higher scores on the IES-R-Total, $b = .48$, $B = .18$, $t(126) = 2.18$, $p = .031$.

We entered the moderator variable of provider group into the third step of the regression. This did not account for a significant amount of additional variance in IES-R total scores, $\Delta R^2 = .00$, $\Delta F(1, 125) = .30$, $b = -1.23$, $t(125) = -.55$, $p = .585$.

In the final step of the regression analysis, the following interaction terms were entered: THQ-Total x Provider Group, IRI-Personal Distress x Provider Group, IRI-Fantasy x Provider Group, IRI-Perspective Taking x Provider Group, IRI-Empathic Concern x Provider Group, BC–Problem Focused Coping x Provider Group, and BC-Emotion Focused Coping x Provider Group. The addition of these interaction terms did not account for a significant proportion of the variance in IES-R-total scores, $\Delta R^2 = .07$, $\Delta F(7, 118) = 1.70$, $p = .117$.

In conclusion, our hypothesis was only partially supported. Provider group did not moderate the relationship between any of the therapist characteristic variables and total IES-R scores. However, we found overall influences on secondary traumatization across both provider groups. Clinicians who were providing more therapy (as measured by hours counseling per week

and number of clients seen per week), had a greater percentage of trauma cases on their caseload, and reported a greater personal history of trauma had higher total secondary trauma scores. Refer to Table 23 for a summary of Hypothesis 2b regression results.

Table 22

Correlation Matrix for Demographic and Occupational Variables with IES-R-Total

	Variable	1	2	3	4	5	6	7	8	9	10
1.	IES-R-Total	---	-.06	.14	-.15	.16*	.26**	.17*	.31**	.17*	.01
2.	Gender		---	.14*	-.07	.17*	-.03	.02	-.03	-.03	.09
3.	Age			---	-.54**	.89**	.34**	.27**	.39**	.03	.38**
4.	Student Status				---	-.57**	-.46**	-.32**	-.30**	.00	-.45**
5.	Years Experience					---	.34**	.28**	.39**	.01	.43**
6.	Hours Counseling/Week						---	.73**	.33**	.15*	.36**
7.	# Clients/Week							---	.14*	.14*	.33**
8.	Percent Trauma Cases								---	.34**	.36**
9.	Purposefully Select Trauma Position									---	.36**
10.	Subjective Preparedness for Trauma Work										---

Note. *. Correlation is significant at the 0.05 level.
**. Correlation is significant at the 0.01 level.
IES-R-Total = total score of the Impact of Event Scale-Revised

Hypothesis 2c: Aspects of the therapist are related to severity of burnout. A moderation analysis was performed to test the hypothesis that therapist variables of personal trauma history, empathy style, and coping style would interact with therapist group (trauma providers versus generalist providers) to significantly predict MBI-EE scores. Prior to performing the moderation analysis, continuous variables (personal trauma history, empathy styles, problem-focused and emotion-focused coping styles) were mean-centered. Both gender and age were identified in the correlation matrix (see Table 24) as being significantly correlated with MBI-EE; however, in order to reduce multicollinearity and maximize degrees of freedom, we first performed a stepwise regression analysis with MBI-EE as the dependent variable. This showed that only age entered the model, explaining 3.7% of the variance in MBI-EE scores, $F(1, 211) = 8.05$, $p = .005$. Therefore, only age was included as a covariate in the moderation analysis. This was followed by the predictors (personal trauma history, empathy subscales, and coping styles), and then the moderator variable (provider group). The final block included the interaction terms (e.g., personal trauma history x therapist group).

The overall model was not significant, $R^2 = .13$, $F(16, 164) = 1.49$, $p = .109$. In the first step, age was entered as a covariate. The covariate model accounted for a significant amount of variance in total MBI-EE scores, $R^2 = .03$, $F(1, 179) = 5.49$, $p = .02$. Younger clinicians reported higher MBI-EE scores, $b = -.14$, $B = -.17$, $t(179) = -2.34$, $p = .02$.

In the second step, we entered the predictor variables: trauma history (THQ-Total), empathy styles (IRI-Personal Distress, IRI-Fantasy, IRI-Perspective Taking, IRI-Empathic Concern), and coping styles (BC–Problem Focused Coping, BC-Emotion Focused Coping). The addition of these variables did not significantly contribute to the amount of variance in total MBI-EE scores accounted for, $\Delta R^2 = .04$, $\Delta F(7, 172) = 1.01$, $p = .43$.

The moderator variable of provider group was entered into the third step of the regression. This accounted for a significant amount of additional variance in MBI-EE total scores, $\Delta R^2 = .03$, $\Delta F(1, 171) = 5.60$, $p = .019$. Being a trauma provider was independently predictive of higher scores on MBI-EE, $b = 3.70$, $B = .19$, $t(171) = 2.37$, $p = .019$.

In the final step of the regression analysis, the following interaction terms were entered: THQ-Total x Provider Group, IRI-Personal Distress x Provider Group, IRI-Fantasy x Provider Group, IRI-Perspective Taking x Provider Group, IRI-Empathic Concern x Provider Group, BC–Problem Focused Coping x Provider Group, and BC-Emotion Focused Coping x Provider Group. The addition of these interaction terms did not account for a significant proportion of the variance in MBI-EE total scores, $\Delta R^2 = .03$, $\Delta F(7, 164) = .79$, $p = .595$.

In conclusion, our hypothesis was mostly unsupported. Provider group did not moderate the relationship between any of the therapist characteristic variables and total MBI-EE scores. However, being a trauma provider was significantly associated with higher MBI-EE. Also, across provider groups, we found that younger clinicians had significantly higher MBI-EE scores. See Table 25 for a summary of Hypothesis 2c regression results.

Table 24

Correlation Matrix for Demographic and Occupational Variables with MBI-EE

	Variable	1	2	3	4	5	6	7	8	9	10
1.	MBI-EE	---	-.15*	-.18**	.04	-.13	.07	.10	.03	-.01	-.00
2.	Gender		---	.14*	-.07	.17*	-.03	.02	-.03	-.03	.09
3.	Age			---	-.54**	.89**	.34**	.27**	.39**	.03	.39**
4.	Student Status				---	-.57**	-.46**	-.32**	-.30**	.00	-.45**
5.	Years Experience					---	.34**	.28**	.39**	.01	.43**
6.	Hours Counseling/Week						---	.73**	.33**	.15*	.36**
7.	# Clients/Week							---	.14*	.14*	.33*
8.	Percent Trauma Cases								---	.34**	.36**
9.	Purposefully Select Trauma Position									---	.36**
10.	Subjective Preparedness for Trauma Work										---

Note. *. Correlation is significant at the 0.05 level.
**. Correlation is significant at the 0.01 level.
MBI-EE = total score for the Emotional Exhaustion subscale from the Maslach Burnout Inventory

Hypothesis 3a: Aspects of the occupation are related to severity of VT. A moderation analysis was performed to test our hypothesis that organizational factors of experience level, percentage of trauma clients on caseload, overall amount of therapy provided, organizational support, and supervision will interact with therapist group to significantly predict TABS scores. Before performing the moderation analysis, continuous variables (percentage of trauma clients on caseload, overall amount of therapy provided, supervision quantity as measured by number of hours of individual supervision per week, supervision quality as measured by SWAI-total, and organizational support) were mean-centered.

"Years of experience" was included as a covariate as it had previously been identified through stepwise regression as entering into the model with TABS-Total as the dependent variable. This was followed by the predictors (percentage of trauma clients on caseload, overall amount of therapy provided, organizational support, supervision quantity, and supervision quality) and then the moderator variable (provider group). The final block included the interaction terms (e.g., percentage of trauma clients x therapist group).

The overall model was significant, $R^2 = .21$, $F(12, 95) = 2.15$, $p = .020$. In the first step, years of experience was entered as a covariate. This did not account for a significant amount of variance in TABS-Total scores, $R^2 = .01$, $F(1, 106) = 1.51$, $b = -.17$, $B = -.12$, $t(106) = -1.23$, $p = .222$.

In the second block, the predictor variables were entered: percentage of trauma clients on caseload, overall amount of therapy provided, organizational support, number of individual supervision hours per week, and SWAI-Total. The addition of these variables significantly contributed to the amount of variance in TABS-Total scores accounted for, $\Delta R^2 = .16$, $\Delta F(5, 101) = 3.78$, $p = .008$. Specifically, clinicians receiving more individual supervision hours per

week had higher TABS-Total scores, which was opposite to predicted, $b = 1.71$, $B = .26$, $t(101) = 2.67$, $p = .009$. Also, clinicians with a higher perceived supervision quality (as measured by a strong working alliance with their individual supervisor) had significantly lower TABS-Total scores, $b = -.10$, $B = -.26$, $t(101) = -2.74$, $p = .007$.

In the third block of the regression, the moderator variable of provider group was entered. This did not account for a significant amount of additional variance in TABS-Total scores, $\Delta R^2 = .01$, $\Delta F(1, 100) = .60$, $b = -2.62$, $t(100) = -.77$, $p = .442$.

In the final block, the following interaction terms were entered: Percentage Trauma Cases x Provider Group, Overall Amount of Therapy Provided x Provider Group, Organizational Support x Provider Group, Individual Supervision Hours x Provider Group, and SWAI-Total x Provider Group. The addition of these interaction terms did not account for a significant proportion of the variance in TABS-Total scores, $\Delta R^2 = .04$, $\Delta F(5, 95) = .95$, $p = .451$.

In conclusion, our hypothesis was largely unsupported. See Table 26 for a summary of Hypothesis 3a analysis results. The relationship between occupational characteristics and TABS-Total was not moderated by provider group. However, two main effects were found across all participants. First, clinicians who reported higher supervision quality with their individual supervisor had lower scores on the TABS-Total. Second, clinicians receiving more individual supervision hours per week had higher TABS-Total scores, a result that was contrary to our hypothesis.

We suspected that this last finding (that clinicians receiving more supervision had higher VT) was due to the fact that students in our sample received more supervision than non-students and also had higher VT. In order to examine this hypothesis, we analyzed correlations between supervision hours/week and TABS-Total separately for students versus non-students. No

significant correlation was found between supervision hours/week and TABS-Total among non-students (r = .13, p = .45). Among students, however, the correlation between supervision/hours week and TABS-Total was highly significant (r = .35, p = .003); that is, those students receiving more supervision had higher VT.

We then wanted to look at the effect of number of supervision hours on VT after removing the variance due to student status. The same Hypothesis 3a regression analysis was performed with non-students only (n=134). As suspected, results showed that number of individual supervision hours per week was unrelated to TABS-Total scores, b = -.60, B = -.05, $t(28)$ = -.29, p = .78. This lends support for our speculation: our finding that clinicians receiving more supervision had higher VT is likely explained by the fact that students received more supervision compared to non-students and also endorsed higher VT.

Hypothesis 3b: Aspects of the occupation are related to severity of secondary traumatic stress. A moderation analysis was performed to test our hypothesis that organizational factors of experience level, percentage of trauma clients on caseload, overall amount of therapy provided, organizational support, and supervision will interact with therapist group to significantly predict IES-R-Total scores. Before performing the moderation analysis, all continuous variables were mean-centered.

"Overall amount of therapy provided" and "percentage of trauma clients on caseload" were included as covariates as they had previously been identified through stepwise regression as entering into the model with IES-R-Total as the dependent variable. These were followed by our predictors of years of experience, organizational support, supervision quantity, and supervision quality) and then the moderator variable (provider group). The final block included the interaction terms (e.g., years of experience x therapist group).

The overall model was significant, $R^2 = .47$, $F(11, 66) = 5.21$, $p < .001$. In the first step, the covariates were entered: overall amount of therapy provided and percentage of trauma clients on caseload. These variables accounted for a significant amount of variance in IES-R-Total scores, $R^2 = .26$, $F(2, 75) = 13.41$, $p < .001$. Clinicians with a greater percentage of trauma cases on their caseloads endorsed higher IES-R-Total scores, $B = .48$, $t(75) = 4.84$, $p < .001$.

In the second step of the regression, the predictor variables were entered, which did not contribute a significant amount of variance in IES-R-Total scores, $\Delta R^2 = .08$, $\Delta F(4, 71) = 2.25$, $p = .072$. However, an examination of the independent predictors showed that clinicians reporting higher perceived individual supervision quality had lower scores on IES-R-Total, $B = -.23$, $t(71) = -2.25$, $p = .028$.

In the third block of the regression, the moderator variable of provider group was entered. This did not contribute a significant amount of additional variance in IES-R-Total scores, $\Delta R^2 = .01$, $\Delta F(1, 70) = .58$, B = -.17, $t(70) = -.76$, $p = .450$. This is probably because the variable "percentage of trauma clients on caseload" already accounted for the variance due to provider group (that is, clinicians were categorized as trauma providers if greater than 45% of their caseload was trauma cases).

In the final step of the regression analysis, the following interaction terms were entered: Years of Experience x Provider Group, Organizational Support x Provider Group, Individual Supervision Hours x Provider Group, and SWAI-Total x Provider Group. The addition of these interaction terms accounted for a significant proportion of the variance in IES-R-Total scores, $\Delta R^2 = .11$, $\Delta F(4, 66) = 3.49$, $p = .012$. Years of Experience x Provider Group was significant, $B = .38$, $t(66) = 2.29$, $p = .025$. This indicates that the relation between years of experience and IES-R-Total scores was stronger in a positive direction for trauma providers. See Figure 2 for a

graphical representation of this interaction effect. Also, SWAI-Total (supervision quality) x Provider Group was significant, $B = -.30$, $t(66) = -2.13$, $p = .037$, indicating that the relation between supervision quality and IES-R-Total scores was stronger in a negative direction for trauma providers. Refer to Figure 3 for a graphical representation of this interaction effect.

Hypothesis 3b was somewhat supported. Two organizational characteristics significantly interacted with provider group to predict IES-R-Total scores. First, the positive relationship between experience level and IES-R-Total was stronger in the trauma provider group compared to the generalist provider group. This indicates that compared to generalist providers, trauma providers with more years of experience had greater secondary trauma.

Also, the negative relationship between SWAI-Total (supervision quality) and IES-R-Total scores was stronger in the trauma provider group than generalist provider group. Figure 3 shows that, while both provider groups have similarly low IES-R-Total scores with good supervision, poor supervision quality was especially detrimental for trauma providers.

Across both groups, clinicians with a greater percentage of trauma clients on their caseload had significantly worse secondary trauma. Also, those reporting higher perceived supervision quality with their individual supervisor had lower secondary trauma scores. Hypothesis 3b results are displayed in Table 27.

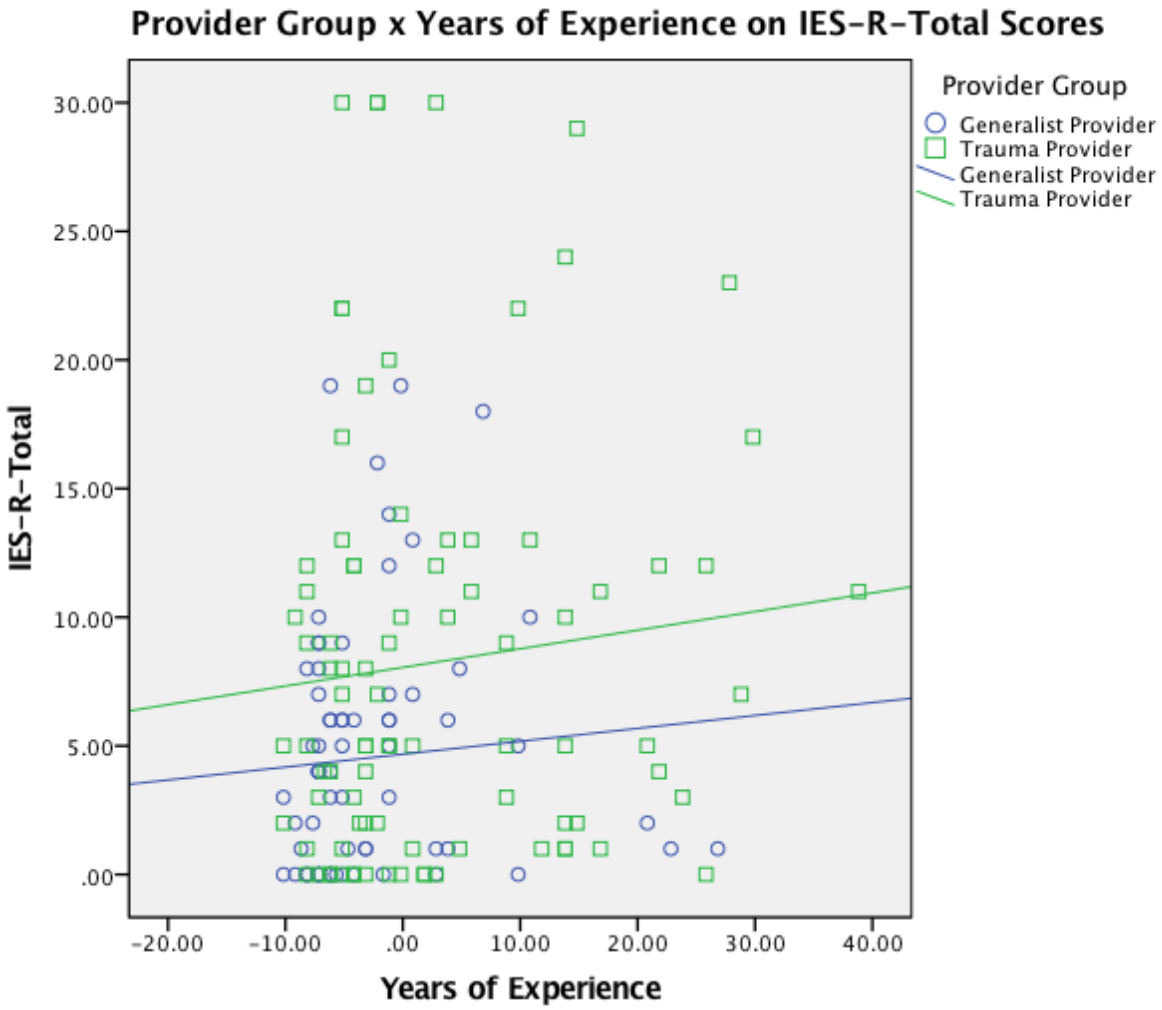

Figure 2. Interaction of Provider Group x Years of Experience on IES-R-Total Scores.

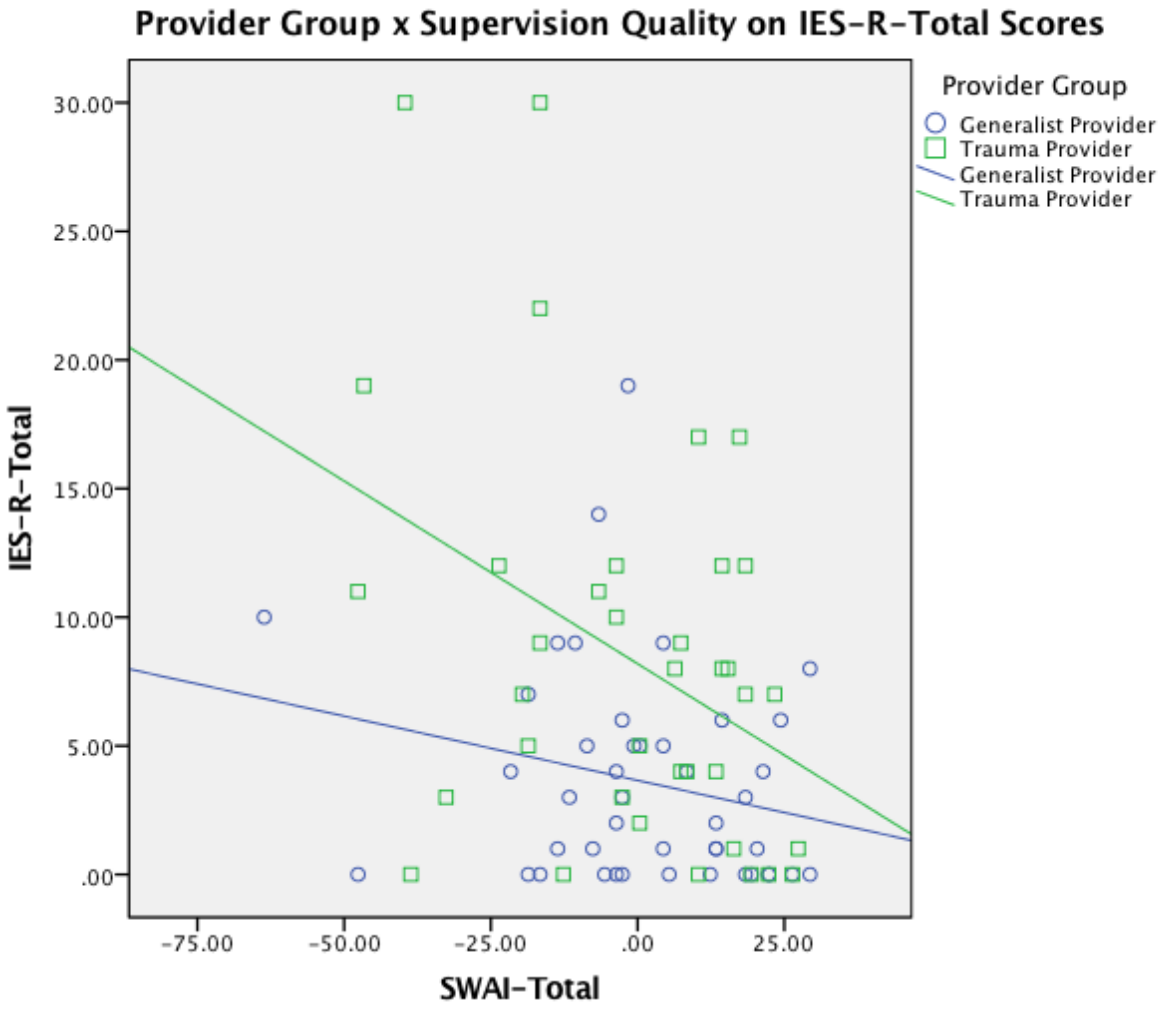

Figure 3. Interaction of Provider Group x Supervision Quality on IES-R-Total Scores.

Hypothesis 3c: Aspects of the occupation are related to severity of burnout. A moderation analysis was performed to test our hypothesis that organizational factors of experience level, percentage of trauma clients on caseload, overall amount of therapy provided, organizational support, and supervision will interact with therapist group to significantly predict MBI-EE scores. Before performing the moderation analysis, all continuous variables were mean-centered. Also, although "age" was previously identified through stepwise regression as entering into the model with MBI-EE as the dependent variable, we did not include it as a covariate in this model due to significant multicollinearity with years of experience ($r = .89$, $p < .001$).

The overall model was significant, $R^2 = .29$, $F(13, 94) = 2.90$, $p = .001$. In the first step, we entered the predictor variables of years of experience, overall amount of therapy provided, percentage of trauma clients on caseload, organizational support, number of individual supervision hours per week, and SWAI-Total. These variables accounted for a significant amount of variance in MBI-EE scores, $R^2 = .20$, $F(6, 101) = 4.28$, $p = .001$. Specifically, clinicians with a greater percentage of trauma cases on their caseloads had higher scores on the MBI-EE, $B = .26$, $t(101) = 2.78$, $p = .006$. Also, therapists with more organizational support, $B = .22$, $t(101) = 2.36$, $p = .020$, and those receiving more hours of individual supervision per week, $B = .20$, $t(101) = 2.14$, $p = .035$, had higher scores on the MBI-EE. Quality of supervision did not significantly predict MBI-EE scores, although the relationship was in the expected direction (i.e., higher quality supervision was associated with lower MBI-EE); $B = -.14$, $t(101) = -1.51$, $p = .134$.

In the second block of the regression, the moderator variable of provider group was entered. This did not contribute a significant amount of additional variance in MBI-EE scores, $\Delta R^2 = .01$, $\Delta F(1, 100) = .90$, $b = 3.56$, $B = .18$, $t(100) = .95$, $p = .346$.

In the third block of the regression, we entered the following interaction terms: Years of Experience x Provider Group, Overall Amount of Therapy Provided x Provider Group, Percentage Trauma Cases x Provider Group, Organizational Support x Provider Group, Individual Supervision Hours x Provider Group, and SWAI-Total x Provider Group. The addition of these interaction terms did not account for a significant proportion of the variance in MBI-EE scores, $\Delta R^2 = .08$, $\Delta F(6, 94) = 1.67$, $p = .136$. However, the interaction of Organizational Support x Provider Group was independently significant, $B = .35$, $t(94) = 2.18$, $p = .032$. This indicates that the relation between amount of organizational support received and MBI-EE scores was significantly stronger, in a positive direction, for trauma providers compared to generalist providers. See Figure 4 for a graphical representation of this interaction effect. This stronger positive relationship among trauma providers, however, is likely because there was less variance ($SD = 9.28$, variance = 86.15) in burnout among the generalist provider group compared to the trauma provider group ($SD = 10.59$, variance = 112.10).

Results of Hypothesis 3c are found in Table 28. In conclusion, our hypothesis was largely unsupported. Most of the occupational predictors did not significantly interact with provider group. However, the relationship between organizational support and burnout was significantly stronger among the trauma provider group than generalist provider group, indicating that trauma therapists with more organizational support had higher burnout. (As mentioned above, however, this interaction is likely due to there being less variance in the generalist provider group compared to trauma provider group.) Across both provider groups, three main effects were found. Clinicians with a higher percentage of trauma cases on their caseloads had higher burnout. Also, participants receiving more organizational support and more hours of individual supervision per week had higher burnout, both findings that contradicted our hypotheses.

We suspected that these last two unexpected findings (that clinicians receiving more supervision and more organizational support had higher burnout) might be due to students in our sample having higher burnout and also receiving more professional support than non-students. To explore this hypothesis, we first analyzed correlations between supervision hours/week and MBI-EE separately for students versus non-students. No significant correlation was found between supervision hours/week and MBI-EE among non-students (r = .21, p = .22). Among students, the correlation between supervision hours/week and MBI-EE was trending towards significance (r = .23, p = .05). We then analyzed correlations between amount of organizational support and MBI-EE separately for students versus non-students. Contrary to our hypothesis, among non-students, a significant correlation was found between organizational support received and MBI-EE (r = .24, p = .006). Among students, no significant correlation was found (r = .08, p = .46). These correlations suggest that student status is not likely to be an explanation for our unexpected finding of clinicians with more supervision/organizational support endorsing higher burnout.

Though student status could not explain our results, we then thought there might be a role for experience level, which is highly correlated with student status. To categorize the continuous "years of experience" variable into low and high experience, a median split was performed (median = 7 years), such that 47.5% of the sample fell into the low category and 52.5% fell into the high category. First, we performed correlations between supervision hours/week and MBI-EE separately for less experienced clinicians versus more experienced clinicians. Among those with less experience, a significant correlation (r = .23, p = .04) was found. No significant correlation was found among those with more experience (r = -.02, p = .93). Second, we performed correlations between organizational support received and MBI-EE separately for less

experienced clinicians versus more experienced clinicians. Among those with less experience, there was a significant correlation (r = .25, p =.01). No significant correlation was found among those with more experience (r = .14, p = .13). This indicates that less experienced clinicians receiving more individual supervision and organizational support had higher burnout scores.

Given this result, we then wanted to look at the effect of number of supervision hours and amount of organizational support received on burnout after removing the variance due to experience level. The same Hypothesis 3c regression analysis was performed with less experienced clinicians only (n=105). As suspected, results showed that number of individual supervision hours per week had no effect (although was trending towards significance) on MBI-EE scores, B = .22, t(79) = 1.97, p = .052. Similarly, amount of organizational support received had no effect (although was also trending towards significance) on MBI-EE, B = .21, t(79) = 1.92, p = .059. This suggests that experience level likely explains our original finding that clinicians receiving more professional support had higher burnout; in other words, this is because less experienced clinicians received more support compared to more experienced clinicians and also endorsed higher burnout.

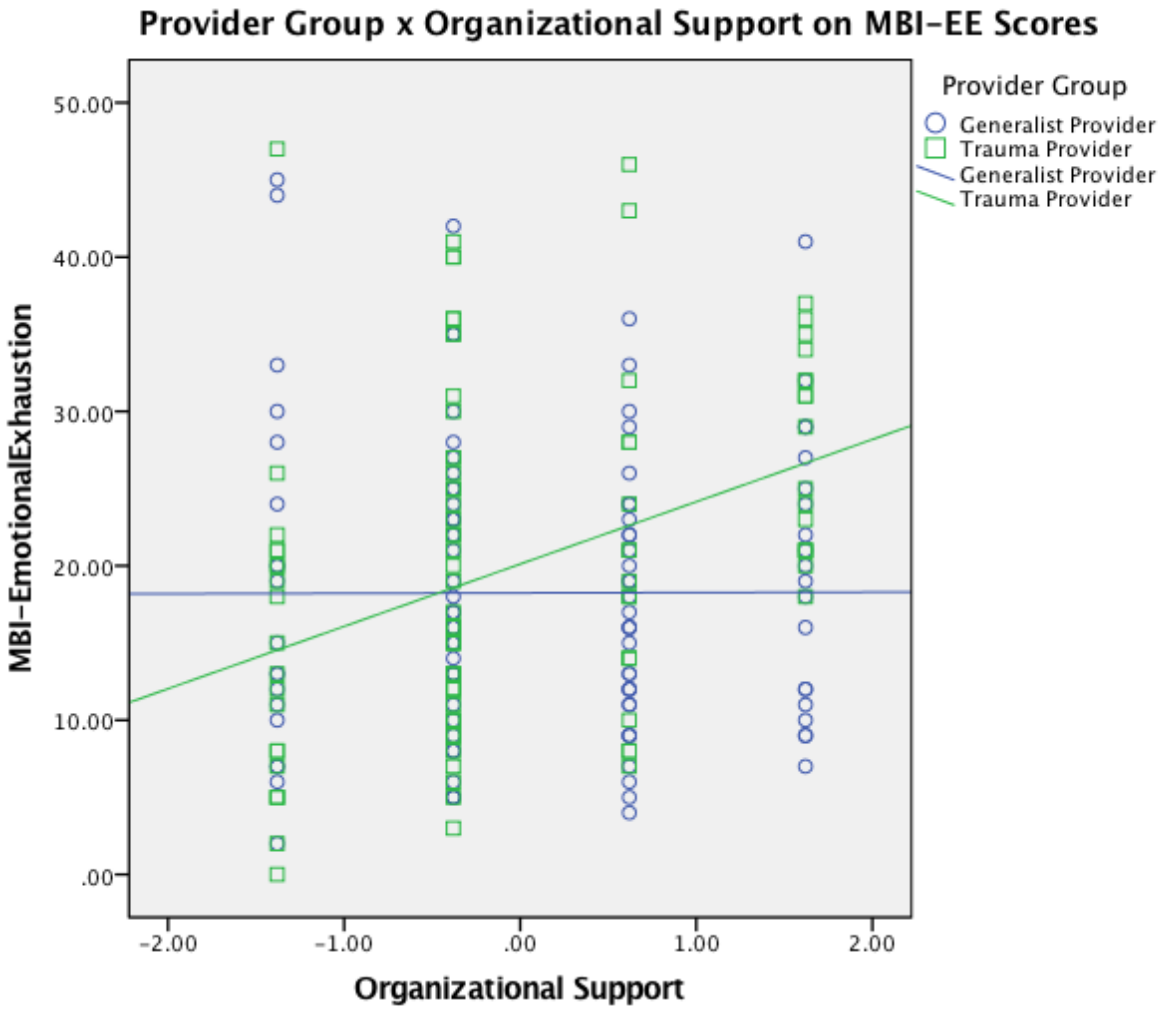

Figure 4. Interaction of Provider Group x Organizational Support on MBI-EE Scores.

Hypothesis 3d: Clinicians that work with sexual trauma survivors (particularly child survivors of sexual abuse) will have the highest levels of VT.

A one-way ANOVA was conducted with TABS-Total as the dependent variable and overall amount of therapy provided as the covariate. Controlling for the effect of overall amount of therapy provided, there was not a significant effect of working with sexual trauma on TABS total scores, $F(1, 216) = 1.52$, $p = .219$. Also, there were no differences in total TABS scores by type of sexual trauma clientele: adult survivors of sexual assault, $F(1, 213) = .17$, $p = .68$., adult survivors of childhood sexual abuse, $F(1, 213) = .03$, $p = .86$., or child survivors of sexual abuse, $F(1, 213) = 3.09$, $p = .080$. Therefore, Hypothesis 3d was not supported.

Hypothesis 3e: Higher quality supervision will be more protective against vicarious traumatization for student therapists compared to more experienced (non-student) therapists. This protective relationship will be strongest for trauma providers.

Moderation analyses were conducted to determine whether SWAI scores interact with student status (yes/no) to significantly predict TABS-Total scores. Before performing the moderation analysis, continuous variables (overall amount of therapy provided, supervision quality as measured by SWAI-Total) were mean-centered. The first set of moderation analyses were performed on the overall sample. The second and third moderation analyses were performed separately on the generalist provider group and trauma provider group, respectively.

Overall Sample. The overall model was significant, $R^2 = .106$, $F(4, 105) = 3.11$, $p = .018$. Overall amount of therapy provided was entered as a covariate in the first block. This did not account for a significant amount of variance in TABS-Total scores, $R^2 = .001$, $F(1, 108) = .06$, $p = .814$.

In the second block, we entered the SWAI-Total predictor variable. The addition of this variable significantly contributed to the amount of variance in TABS-Total scores accounted for, $\Delta R^2 = .083$, $\Delta F(1, 107) = 9.65$, $b = -.116$, $B = -.288$, $t(107) = -3.11$, $p = 002$.

The moderator variable, student status (yes/no), was entered in the third block. The addition of this variable did not significantly contribute to the amount of variance in TABS-Total scores accounted for, $\Delta R^2 = .017$, $\Delta F(1, 106) = 2.01$ $p = .160$.

In the fourth block of the regression analysis, we entered the SWAI-Total x Student Status interaction term. The addition of this interaction term did not account for a significant proportion of the variance in TABS-Total scores, $\Delta R^2 = .006$, $\Delta F(1, 105) = .66$, $p = .417$. This indicates that the relation between supervision quality and TABS-total scores did not significantly differ based on whether clinicians were students or not.

***Generalist Provider Group*.** The following moderation analysis was conducted on the generalist provider sample only. The overall model was not significant, $R^2 = .100$, $F(4, 66) = 1.83$, $p = .133$. We entered overall amount of therapy provided as a covariate in the first block. This did not account for a significant amount of variance in TABS-Total scores, $R^2 = .003$, $F(1, 69) = .194$, $p = .661$.

In the second block, we entered the SWAI-Total predictor. This did not significantly add to the amount of variance in TABS-Total scores accounted for, although was trending towards significance, $\Delta R^2 = .054$, $\Delta F(1, 68) = 3.88$, $p = .053$.

We entered the moderator variable of student status (yes/no) into the third block. The addition of this variable did not significantly contribute to the amount of variance in TABS-Total scores accounted for, $\Delta R^2 = .040$, $\Delta F(1, 67) = 2.97$, $p = .089$.

In the fourth block of the regression analysis, we entered the SWAI-Total x Student Status interaction term. The addition of this interaction term did not account for a significant proportion of the variance in TABS-Total scores, $\Delta R^2 = .003$, $\Delta F(1, 66) = .24$, $p = .626$, indicating that the relation between supervision quality and TABS-total scores did not significantly differ based on student status.

Trauma Provider Group. The following moderation analysis was conducted on the trauma provider sample only. The overall model was not significant, $R^2 = .170$, $F(4, 34) = 1.74$, $p = .164$. Overall amount of therapy provided was entered as a covariate in the first block. This did not account for a significant amount of variance in TABS-Total scores, $R^2 = .002$, $F(1, 37) = .062$, $p = .805$.

In the second block, the predictor variable of SWAI-Total was entered. This significantly added to the amount of variance in TABS-Total scores accounted for, $\Delta R^2 = .146$, $\Delta F(1, 36) = 6.19$, $b = -.144$, $B = -.393$, $t(36) = -2.49$, $p = 018$.

We entered the moderator variable of student status (yes/no) into the third block. The addition of this variable did not significantly contribute to the amount of variance in TABS-Total scores accounted for, $\Delta R^2 = .001$, $\Delta F(1, 35) = .053$, $p = .819$.

The SWAI-Total x Student Status interaction term was entered into the fourth block of the regression. The addition of this interaction term did not contribute a significant proportion of the variance in TABS-Total scores, $\Delta R^2 = .021$, $\Delta F(1, 34) = .84$, $p = .365$. This indicates that the relation between supervision quality and TABS-total scores was not significantly different based on student status.

In summary, our findings did not support Hypothesis 3e. Higher quality supervision was

similarly protective against VT for students and non-students. No interaction effects were found; in other words, students and non-students similarly benefited from high-quality supervision.

Hypothesis 4. Vicarious traumatization as a distinct construct. To assess for degree of overlap between indirect trauma constructs, we analyzed correlations between the measures of indirect trauma (TABS, IES-R) within the trauma provider group and generalist provider group separately. As both the TABS and IES-R purport to assess responses to exposure to traumatic material (and in fact the model of VT includes a re-experiencing component), we expected these measures to be highly correlated. We also expected both measures to be correlated with the MBI-Emotional Exhaustion scale, but because burnout is not considered unique to trauma work, we hypothesized that these correlations will be the weakest, particularly within the trauma provider group. If correlations reveal a high degree of overlap between the TABS and the MBI-Emotional Exhaustion scale, then this suggests that VT may not represent a condition unique to working with survivors of trauma.

Bivariate correlations were performed on the three occupational stress constructs (TABS-Total, IES-R-Total, and MBI-EE), within the generalist provider and trauma provider group separately. All correlations reached statistical significance. In examining the magnitude of the relationships, .10 was considered a small effect size, .30 a medium effect size, and .50 a large effect size (Cohen, 1992).

In the generalist sample, correlations between the indirect trauma constructs (vicarious trauma, secondary traumatic stress) and burnout showed medium sized effects (r = .39 and r = .36, respectively). The effect of the correlation between vicarious trauma and secondary trauma was small-to-medium (r = .27). Fisher's z-transformation was applied to the correlations and then used to test for significance of the correlation differences (Lee & Preacher, 2013). Results

showed that the correlation between vicarious trauma and burnout (r = .39) was not significantly larger than the correlation between vicarious trauma and secondary trauma (r = .27, p = .34; z = -.95). The correlation between secondary trauma and burnout (r = .36) was not significantly different than the correlation between secondary trauma and vicarious trauma (r = .27, p = .18, z = 1.36).

In the trauma provider sample, as expected, the strongest correlation was between vicarious trauma and secondary trauma (r = .53), reaching a large-sized effect. The correlation between vicarious trauma and burnout (r = .42) reached a medium to large effect. The relationship between secondary trauma and burnout was smaller (r = .36). Fisher's z-transformation was applied to the correlations and then used to test for significance of the correlation differences (Lee & Preacher, 2013). Results showed that the correlation between vicarious trauma and secondary trauma (r = .53) was not significantly larger than the correlation between vicarious trauma and burnout (r = .42, p = .37, z = .90). The correlation between secondary trauma and vicarious trauma (r = .53) was not significantly larger than the correlation between secondary trauma and burnout (r = .36, p = .18, z = 1.36).

Discussion

Summary of Results

The purpose of this study was to assess the prevalence and severity of vicarious trauma (VT) among two groups of mental health providers: one group treating primarily traumatized populations and one group treating clients with a wider variety of presenting issues, with an overarching goal of determining whether trauma providers are at increased risk. We also aimed to identify risk and protective factors for VT and assess whether these factors differently affect

similar occupational stress constructs of secondary traumatic stress (STS) and burnout. Results of our study found no difference in VT severity based on type of provider group; trauma providers were not at elevated risk compared to generalists. Therapists who were less affected by VT were characterized by a perspective-taking empathy style, problem-focused and emotion-focused coping styles, and fewer traumatic experiences in their personal history; they also had more years of clinical experience and better quality supervision. However, VT was highly correlated with secondary traumatic stress (STS) and burnout, suggesting that VT may not be a unique construct for clinicians.

Differences Between Provider Groups

Evaluating VT in the generalist and trauma provider groups was complicated by several noteworthy demographic and occupational differences between the two groups. Compared to the generalist group, the trauma provider group was comprised of older clinicians with more experience. Trauma providers also delivered more hours of therapy each week than generalists. Students were more likely to be generalist therapists than trauma therapists.

Very few studies have outlined, to this extent, the demographic and occupational differences between clinicians treating trauma clients and those who work with clients with a wider variety of presenting issues. While this is largely due to the lack of studies using comparison groups, those studies that do present group differences often fail to state whether differences are statistically significant. Of the few studies where differences are presented, our results are very comparable. Therapists treating traumatized populations generally tend to be older and more experienced (Kadambi & Truscott, 2004; Cunningham, 2003) than general practice mental health providers. This difference is likely due to a move towards specialization as therapists advance through their training and careers. Our results are also similar to Jones'

(2008) dissertation study, which found that trauma counselors (versus generalist counselors) delivered more hours of therapy per week. While this may be a result of increasing work responsibilities as one advances, work setting might also play a role. In agencies predominantly serving survivors of trauma (e.g., community refugee centers), particularly those in which financial and organizational resources are lacking, clinicians may be called upon to provide more hours of therapy per week.

Our results are also consistent with those found by Jones (2008), which showed that trauma counselors had greater personal histories of trauma. Though this may simply be due of trauma providers being older than generalist providers, it also seems plausible that clinicians with trauma histories are drawn toward a profession that allows them to help other people affected by trauma. Such an explanation makes sense in light of findings that psychotherapists have more extensive trauma histories than the general population and professionals in other fields (Rudolph et al., 1997; Pearlman & Mac Ian, 1995; Elliott & Guy, 1993).

These provider group differences also guided our statistical analyses and interpretation of results in several ways. First, it was necessary for us to control for the effects of amount of therapy provided given that trauma therapists delivered more therapy than generalists. Without controlling for this variable, any differences found in VT between groups may have simply been due to different amounts of therapy provided. For our regression analyses, when deciding which variables to include as covariates, we recognized that many variables (i.e., age, student status, years of experience) were highly correlated with each other. Reducing multicollinearity necessitated the use of stepwise regression, in which all variables significantly correlated with VT were included, and the one or two variables that significantly entered the model were used as covariates for hypothesis analyses.

This information about multicollinearity informed our ability to explain unexpected relationships, or results that initially seemed not to make intuitive sense. For instance, we found that clinicians receiving more supervision per week had *higher* VT scores, but follow-up analyses in which we removed the variance due to student status showed that the relationship was likely explained by the fact that students received more supervision compared to non-students and had higher overall VT.

Therapist Factors Affecting Vicarious Traumatization

Providing Trauma Treatment. In this cross-sectional study of 221 mental health providers of varying educational and occupational backgrounds, levels of vicarious trauma (VT) were in the low to average range (Pearlman, 2003). Only a small percentage of clinicians in our sample (8.0%) reported high VT severity based on the TABS validation study of non-clinical adult research participants. Our findings are consistent with several studies of mental health providers, including trauma providers, which have concluded that the majority of therapists do not experience significant cognitive disruptions from their work (Makadia, Sabin-Farrell, & Turpin, 2017; Toren, 2008; McCann & Pearlman, 1990; Pearlman, 2003; Kadambi & Truscott, 2004; Brady et al., 1999).

At the center of the Constructivist Self-Development Theory (CSDT) framework is the notion that therapists who work with victims of trauma are more distressed than therapists who treat clients with a wider variety of presenting issues (McCann & Pearlman, 1990). As such, one of the major aims of our study was to determine whether levels of VT differed based on type of provider group. In contrast to the CSDT and our hypothesis, we found that after controlling for overall amount of therapy provided, trauma providers (n = 107) were *not* at significantly higher risk for VT than generalist providers (n = 114); in fact, virtually all TABS subscale means (i.e.,

in the disruption areas of Safety, Trust, Esteem, Intimacy, and Control) were non-significantly higher among generalist clinicians, suggesting that there must be other characteristics contributing to VT aside from exposure to traumatic material.

These findings are consistent with two studies that revealed similar levels of VT among generalist and trauma therapists (Kadambi & Truscott, 2004; Brady et al, 1999), but inconsistent with three studies showing that trauma providers experienced higher VT than generalist clinicians (Jones, 2008; Cunningham, 2003; Johnson & Hunter, 1997). An evaluation of study quality revealed significant issues among the three studies that found a difference in VT based on provider group (Jones, 2008; Cunningham, 2003; Johnson & Hunter, 1997). Given the nature of Jones (2008) study as a dissertation, it was not subjected to the peer review process. Further, the effect size for the differences between provider groups was quite small and unimpressive, and likely does not reflect clinical significance (effect size = .05). Though Cunningham's (2003) study of social work clinicians was published in a peer-reviewed journal, the two provider groups were sexual abuse clinicians (n = 32) or cancer clinicians (n = 89). Thus, while the authors can conclude that clinicians working with the human-induced trauma of sexual abuse had more VT than the naturally caused trauma of cancer, these results are not generalizable to clinicians working with a wider variety of presenting issues. In addition, Cunningham's (2003) results were likely confounded by experience level: therapists who were younger and less experienced had worse VT, but experience level was not controlled for in ANOVA analyses.

The third study to find a difference between provider groups was Johnson and Hunter's (1997) study of 41 sexual assault counselors and 32 counselors from a range of other therapy areas, which showed that sexual assault counselors reported greater disruptions in several schema areas. In addition to small sample size, a major methodological limitation to this study

relates to measurement of VT. As the measure of VT used was a researcher-created Beliefs and Values Questionnaire that has not been psychometrically validated, the authors themselves suggest that results should be interpreted with caution (Johnson & Hunter, 1997).

Our study's results run parallel to findings from two high quality, methodologically sound studies showing no difference in VT severity based on provider group (Kadambi & Truscott, 2004; Brady et al, 1999). Kadambi and Truscott (2004) used a psychometrically-validated and commonly used measure of VT (the TSI Belief Scale) and found similar levels of VT among three large sample size clinician groups of sexual violence (n = 86), psycho-oncology (n = 64), and general practice (n = 71). Because length of time in the field was found to be related to VT, the authors appropriately included experience level as a covariate in ANCOVA analyses (Kadambi & Truscott, 2004).

Brady and colleagues (1999) conducted one of the largest-scale studies on this topic, including 505 female therapists from the American Professional Society on the Abuse of Children and 495 female generalist therapists from the American Psychological Association. In addition, measurement of VT (the TSI Belief Scale) was methodologically rigorous. A unique strength of this study was that secondary traumatic stress (STS) was measured alongside VT, which was important given that the trauma group was found to have greater STS than the generalist group. Overall, the research literature does not support the hypothesis that trauma therapists are at increased risk for VT compared to therapists treating a wider variety of presenting issues. Particularly given that exposure to clients' trauma material was not an "active ingredient" for prediction of VT among clinicians in our study, an exploration of several therapist- and occupational-level characteristics was warranted.

Personal Trauma History. Therapists with a greater personal history of trauma (i.e., reported experiencing more lifetime traumatic events) had higher VT compared to therapists with less of a personal trauma history. As proposed by the CSDT framework (Pearlman & Saakvitne, 1995a), clinicians with unresolved trauma histories may be more susceptible to VT because their self-schemas are already disrupted. Also, some literature suggests that therapists with trauma histories have disrupted schemas related to beliefs that they can rely on social support, thereby making it more difficult to develop healthy, protective relationships (Michalopoulos & Aparicio, 2012).

While our findings were consistent with the theoretical VT formulation, empirical research has yielded varied findings on the relationship between trauma history and VT. This is likely due to significant variability in measurement of the personal trauma history construct. A strength of the present study is that the measure used, the Trauma History Questionnaire (THQ), is a well-validated instrument that captures a wide range of traumatic exposures for which one may be exposed in a lifetime. It should be noted that trauma providers were more likely than generalist providers to have experienced "general disaster and trauma" and "physical and sexual experiences" events. This may be due to self-selection of traumatized individuals into the trauma field. Alternatively, people who have been exposed to primary trauma themselves may be more likely to conceptualize their clients' experiences as "traumatic" (Devilly et al., 2009). It is also possible that in our study, the trauma provider group simply had greater potential exposures due to older age. The relationship between trauma history and VT was not significantly different between the two groups; contrary to our hypothesis, trauma providers were not at increased risk.

Some studies have explained disparate results for the relationship between personal trauma history and VT by distinguishing between types of traumatic events experienced.

VanDeusen and Way (2006) and Way, VanDeusen, and Cottrell (2007), for example, found that although a history of childhood sexual abuse was not associated with higher VT, childhood emotional neglect *was* predictive of greater VT. In our study, exploratory regression analyses showed that of three categories of traumatic events (Crime-Related, General Disaster and Trauma, and Physical and Sexual Experiences) on the Trauma History Questionnaire, clinicians who reported being victims of a crime such as robbery or mugging had worse VT. It may be that intentional, seemingly random acts perpetrated by humans are more likely than other types of trauma to disrupt fundamental need areas and views about the predictability of the world. Future research may investigate other potential moderating variables, such as involvement in personal therapy (Bober & Regehr, 2006) or defense mechanisms (Adams & Riggs, 2008), to better clarify the relationship between clinician trauma history and VT.

Empathy Style. Having a personal distress empathy style, or the tendency to experience feelings of distress in response to clients' negative experiences, was the only empathy style uniquely associated with higher levels of VT. This relationship was found across both provider groups; that is, trauma providers with this empathy style were not at higher risk than generalist providers. Other empathy styles examined, including Fantasy, Perspective Taking, and Empathic Concern, were not significant VT predictors. These results lend support to the preliminary research on the empathy construct, which has demonstrated that not all types of empathy contribute equally to the development of VT (Marmaras, 2000). Notably, our findings continue to challenge McCann and Pearlman's (1990) conceptualization of VT as an inevitable outcome of greater empathic engagement with trauma clients.

The association between a personal distress empathy style and VT may best be elucidated by loss of boundaries. Davis (1983) postulates that when a therapist responds with personal

distress, he has lost the boundary between himself and the client and enters into an unhealthy, symbiotic relationship. This explanation is consistent with research showing that emotional over-identification is distinct from empathy and determines whether clinicians are vulnerable or resilient to VT. Electris (2000), for example, found that for providers with a capacity for appropriate emotional boundaries, empathy was protective. However, in the context of over-identification, empathy put clinicians at greater risk for VT. Training curricula and supervision focused on maintaining appropriate and consistent boundaries is likely to be beneficial for students and early career therapists in particular, who in our study were more likely than experienced providers to endorse a personal distress empathy style. Such training seems essential in light of the fact that compromised therapeutic boundaries may present practical and ethical issues in treatment.

The only empathy style to interact with provider group in predicting VT was perspective-taking, suggesting that the tendency to adopt the psychological point of view of another person is more protective for trauma providers than generalist providers. This is consistent with the component of self-capacities outlined in the CSDT, which emphasizes that the ability to take others' perspectives enables the trauma therapist to successfully establish boundaries and recognize her own psychological needs (McCann & Pearlman, 1990). Further, McCann and Pearlman (1990) suggest that trauma therapists with intact ego resources are better able to maintain empathic engagement with clients as well as sustain a healthier work-life balance.

Coping Style. Clinicians in our sample endorsed using both problem-focused and emotion-focused coping styles at an average to high level. Trauma providers were more likely than generalist providers to report an emotion-focused coping style. This makes intuitive sense

given that when hearing about past accounts of trauma, the therapist's coping options are limited to accepting the situation and attempting to regulate her own affect and emotions.

Though we hypothesized that only problem-focused coping would be protective against VT, results showed that both problem- and emotion-focused coping were beneficial in reducing VT risk across both provider groups. Perhaps this is attributable to therapists in our sample doing *something* to cope, as opposed to not recognizing their own internal distress. These findings highlight the role of multiple coping strategies as an important buffer against VT. Given the cross-sectional nature of the study, however, it is also possible that the relationship is reversed; therapists with fewer cognitive disruptions may be more apt to use effective coping techniques.

Most research examining the role of coping style on VT has found that problem-focused strategies are more beneficial than emotion-focused strategies (Camerlengo, 2002; Schauben & Frazier, 1995; Johnson & Hunter, 1997), indicating that active attempts to solve or address a problem tend to be more effective than emotional strategies designed to regulate affect. However, it is difficult to draw comparisons with these studies given the wide variability in measurement of coping. Though in our study we used a well-validated, common measure of coping (the Brief COPE), we did not include the entire, 14-scale measure in an effort to reduce participant burden. As outlined in the Measures section, we selected the eight scales that are often categorized into either problem-focused or emotion-focused coping styles. It is possible that we did not capture some of the more blatantly "negative" emotion-focused coping strategies (e.g., substance use, denial). In addition, several coping styles were categorized in our study as "emotion-focused," but which have been found to lessen VT. Based on previous research with the Brief COPE (Cooper et al, 2008), we categorized religion as an emotion-focused coping style. However, spiritual wellbeing is considered essential in mitigating VT risk (McCann &

Pearlman, 1990). Similarly, while we defined use of emotional support as an emotion-focused strategy, some research points to social support as an important VT protective factor (Michalopoulos & Aparicio, 2012).

Though much of the current coping research using the Brief COPE does combine scales into aggregates, the questionnaire developer states that his preference is to look at each scale separately to determine its relation to other variables (Carver, 1999). Thus, future studies may examine the effect of specific coping strategies on VT.

Occupational Factors Affecting Vicarious Traumatization

Experience Level. We found that clinicians with fewer years of experience and students had significantly higher VT, a finding that supports the majority of the literature demonstrating less experience as a robust risk factor (Finklestein et al., 2015; Knight, 2010; Pearlman & Mac Ian, 1995; Michalopoulos & Aparicio, 2012; Adams & Riggs, 2008; VanDeusen & Way, 2006; Devilly et al., 2009). McCann and Pearlman's (1990) original conceptualization of VT as a condition that develops from cumulative, gradual exposure to clients' traumatic experiences suggests that longer tenure in the field would be associated with higher VT. However, our study added to the large body of literature highlighting the need for reformulation of this component of the CSDT framework.

Therapists with less experience are likely still adjusting to the myriad struggles associated with being a professional in the mental health field. It is possible that while counseling is difficult initially, clinicians may develop strategies over time that enable them to cope more effectively with the stress of their work. Though this buffering effect may occur naturally, it seems prudent from an intervention standpoint to attempt to identify why counseling work is most detrimental to new clinicians. Models of trainee development suggest that novice therapists

are more preoccupied with self-concerns and are more vulnerable to countertransference issues, and therefore close and careful supervision is recommended (Adams & Riggs, 2008). In our study, however, high-quality supervision was protective for students and non-students alike; in other words, it was no more beneficial for students compared to non-students. Some authors have pointed to self-efficacy as a mediator of the relationship between experience level and VT (Devilly et al., 2009). This seems a worthwhile area of future research, particularly in light of our finding that clinicians perceiving themselves to be less prepared endorsed significantly higher VT (although this question was focused on preparedness for trauma work specifically).

Examining the relationship between experience level and VT from a different vantage point, occupational stress researchers should consider the methodological problem of "survival bias." Survival bias implies that those clinicians who are more distressed (i.e., have worse VT) are more likely to leave the profession early, thereby leaving behind the "survivors" who are faring better psychologically (Devilly et al., 2009).

Supervision. Across both provider groups, clinicians who reported a higher perceived supervision quality with their individual supervisor had fewer VT symptoms. This effect was found regardless of whether participants were trauma therapists or generalists. Also, though we hypothesized that higher quality supervision would be particularly beneficial for students, results demonstrated that students and non-students alike reported less VT when receiving high-quality supervision.

Clinicians who received greater organizational support (i.e., individual supervision, group supervision, peer supervision/consultation) did not have fewer VT symptoms. These findings are consistent with previous research documenting that the supervisory working alliance may be more important than the availability of supervision itself in protecting against VT (Dunkley &

Whelan, 2006b). Given that we did not find a moderating effect for provider group, our findings contradict early theoretical assertions that a strong supervisory working alliance is especially important for trauma therapists (McCann & Pearlman, 1990). Previous studies touting the protective role of supervision for trauma therapists were inconclusive due to lack of comparison groups (e.g., Pearlman & Mac Ian, 1995). Our study was the first to examine whether supervision quality's protective effect against VT was specific to trauma providers.

As the literature consistently shows that both students and practicing clinicians often are hesitant to disclose their needs to their supervisor (Farber, 2006), a discussion of VT symptoms likely will not take place unless the supervisor explicitly encourages it (Knight, 2013). Supervisors that clearly outline roles, while creating a safe, open environment to discuss psychological distress, may help their supervisees feel more comfortable in sharing any VT-related cognitive disruptions.

One unexpected finding was that clinicians receiving more individual supervision hours per week had higher levels of VT. However, follow-up analyses demonstrated that this is likely an artifact of students in our sample receiving more supervision, and also endorsing higher VT, than non-students. This clearly reiterates the role of less experience as a robust contributor to VT severity.

Percentage of Trauma Clients on Caseload. Though we anticipated that clinicians with a greater percentage of trauma survivors on their caseload would have higher levels of VT, our findings did not support this hypothesis. Further, provider group did not moderate this relationship; trauma therapists were not at increased risk compared to generalist providers. Our findings clearly dispute McCann and Pearlman's (1990) original conceptualization of VT, which suggests that greater exposure to clients' trauma material is the primary pathway by which VT

develops. Our results run counter to much early research suggesting that trauma treatment leads to deleterious effects for the clinician (Pearlman & Mac Ian, 1995; Schauben & Frazier, 1995). These studies, however, historically have not included a control group of non-trauma therapists; as such, they have tacitly accepted that VT is a condition only observed in clinicians exposed to traumatic material (Devilly et al., 2009). Our results are consistent with more recent, methodologically sound research documenting that a greater percentage of trauma clients on one's caseload is not a risk factor for VT (Makadia, Sabin-Farrell, & Turpin, 2017; Devilly et al., 2009). Makadia and colleagues (2017), for example, found that greater exposure to traumatic material was associated with PTSD symptoms, but not VT.

In addition, we did not find support for our hypothesis that therapists working with sexual trauma clients would have the highest levels of VT. This is consistent with Brady and colleagues' (1999) nationally representative study of 1,000 female psychotherapists, which demonstrated that treatment of sexual abusive survivors (compared to general therapy clients) was not associated with elevated VT.

Overall, our results suggest that clinicians need not be overly concerned that exposure to traumatic material will fundamentally disrupt their worldviews or frames of reference. Despite bearing witness to their clients' traumas, and despite having more extensive trauma histories than the general population, the majority of providers in our sample had low to average levels of VT. Other therapist-level (e.g., empathy style) and occupational-level (e.g., supervision quality) variables likely play a larger role. It is possible that the positive aspects of treating trauma survivors outweigh the negatives, underscoring research that points to the personal reward associated with witnessing the resilience of the human spirit. Indeed, such exposure has actually been shown to enhance spiritual wellbeing and personal growth (Brady et al., 1999).

Constructs Related to Vicarious Traumatization

Secondary Traumatic Stress. In comparison to vicarious traumatization, secondary traumatic stress (STS) encompasses a wider range of symptoms that are nearly identical to PTSD (i.e., re-experiencing, hypervigilance, avoidance, numbing; Baird & Kracen, 2006). It is not thought to occur exclusively in trauma professionals, as is the case with VT. In our study, the trauma provider group had significantly higher levels of STS compared to the generalist provider group.

Overall levels of STS were low, and consistent with rates of STS seen in other studies (e.g., Makadia et al, 2017; Dunkley & Whelan, 2006). Though the Impact of Event Scale – Revised (IES-R) has a possible total score range of 0 to 88, the highest score observed in our sample was 30 (which was endorsed by 2.5% of participants). Zero clinicians reached the proposed PTSD cut-off score of 33. Also, secondary traumatic stress (total score of the IES-R) was significantly correlated with VT (total score of the TABS; $r = .40$, $p < .01$), indicating a medium to large effect.

Personal Trauma History. Among the therapist-level predictors examined, we found that clinicians with a greater personal history of trauma endorsed more STS symptoms. This relationship was found for both generalist and trauma providers (i.e., trauma providers were not at increased risk), and is consistent with research on personal trauma history and STS (Gil & Weinberg, 2015; Dunkley & Whelan, 2006). It is possible that clinicians with a trauma history are more susceptible to STS because they can relate to, and thus are more negatively affected by, the frightening experiences of their clients. Also, though participants were instructed to complete the IES-R specifically in reference to "the stressful material related by your trauma clients," it is impossible to determine whether we inadvertently captured PTSD symptoms stemming from

direct trauma. Nevertheless, it appears prudent for clinicians to address their personal trauma histories (and possible PTSD symptoms) in an effort to prevent STS in their work.

As greater personal history of trauma was also a predictor of worse VT but not burnout, it appears that this risk factor is unique to trauma-related constructs. In other words, clinicians with a greater personal trauma history are at elevated risk for both cognitive disruptions as well as PTSD-type symptoms. Though research on personal trauma history and STS have consistently demonstrated a relationship (Gil & Weinberg, 2015; Dunkley & Whelan, 2006), research on the relationship between personal trauma history and VT has yielded conflicting results. This may be due to wide variability in measurement of the VT construct, whereas there are several well-validated measures for STS that authors use consistently.

Experience Level. Compared to generalist providers**,** trauma providers with more years of experience had higher levels of STS. It may be that cumulative exposure to clients' trauma material leads to greater trauma symptoms over time. More experienced therapists inevitably had more opportunities to hear horrific stories and potentially be traumatized by them. Also, as STS is a condition that may emerge after a single traumatic exposure, therapists with longer tenure in the field would have had greater opportunity to be affected by a particular client account. As mentioned above, we cannot rule out the possibility that participants completed the IES-R in reference to their own personal trauma histories. Because more experienced therapists in our sample experienced a greater number of personally traumatic events, it is possible that we were simply capturing higher levels of PTSD with age.

Though longer tenure in the field (and thus greater cumulative exposure to traumatic material) appears to put clinicians at risk for STS, we found the opposite relationship when VT

was the outcome variable. For VT, less experienced clinicians (theoretically with fewer opportunities for trauma exposure in their work) were at greatest risk.

Percentage of Trauma Clients on Caseload. For both the generalist and trauma provider groups, clinicians with a higher percentage of trauma clients on their caseload had more severe STS. This is consistent with most of the empirical findings on STS and trauma exposure (Gil & Weinberg, 2015), and underscores research demonstrating that greater exposure to clients' traumatic material is a risk factor for the development of STS, but not VT (Makadia, Sabin-Farrell, & Turpin, 2017; Brady et al., 1999). From a theoretical perspective, it may be that the STS construct most appropriately portrays the negative effects of trauma work as opposed to the VT construct.)

Supervision. Across both provider groups, clinicians perceiving a higher supervision quality were found to have lower STS. This relationship was most protective for trauma providers compared to generalist providers. Therefore, it appears that a strong supervisory working alliance protects supervisees with high exposure to clients' trauma material from developing STS. There was no effect for amount of organizational support received on STS, suggesting that the quality of supervision is more important than the quantity.

In her discussion of STS prevention strategies, Knight (2013) describes that supervision typically focuses on the "technical" aspects of supervisees' work with clients, such as theories, research, and intervention techniques. Qualitative literature suggests, however, that there may be value to an "affective check-in," in which supervisees are asked to share their emotional reactions to their clients' trauma material (Knight, 2013). It is expected that normalization and validation of the supervisee's emotions will allow him to feel more comfortable bringing up any negative feelings when they arise, thereby mitigating against secondary trauma. Other authors

point to the need for trauma-informed supervision models, in which discussions about countertransference are welcomed and supervisees are encouraged to make meaning out of their work with traumatized clients (Canfield, 2005). However, there is a major need for quantitative research regarding the effectiveness of these supervision strategies.

Burnout. Whereas VT and STS are considered reactions to indirect trauma, burnout is an occupational stress construct that describes the progressive emotional, mental, and physical exhaustion associated with the job environment. Burnout does not occur exclusively in trauma providers, and is more widely applicable to human service work in which structural supports are insufficient (Tabor, 2011). Overall, participants reported a low to moderate degree of burnout, a level that is consistent with other studies using the Maslach Burnout Inventory (Kadambi & Truscott, 2004; Baird & Jenkins, 2003). Clinicians in our sample endorsed a high degree of Personal Accomplishment, or a sense of enjoyment, competence, and success from their work (Maslach & Jackson, 1981). Burnout (MBI-EE-Total) was significantly correlated with VT (TABS-Total; $r = .39$, $p < .01$), reaching a medium to large effect.

Age. Age (as opposed to experience level) was used in burnout analyses because the age variable was the only one to enter the preliminary stepwise regression model for burnout (that we performed in order to reduce multicollinearity among similar demographic variables). Results are consistent with a large body of research showing that younger age (confounded by experience level) is associated with higher burnout (Devilly et al., 2009; Baird & Jenkins, 2003). We observed this relationship in both provider groups. One explanation is that novice therapists are inexperienced at handling stressors and difficulties, and therefore have lower self-efficacy in coping with the myriad work demands inherent to the helping profession. This makes sense in light of findings that burnout is elevated among people with less work autonomy or decision-

making authority (Maslach et al., 2001), both characteristics that are typically associated with younger age/less experience. The relationship between age/experience level and burnout should be viewed in the context of "survival bias"; that is, those who burn out early in their careers are more likely to quit their jobs or leave the profession, thus leaving behind the "survivors" who are less distressed (Devilly et al., 2009).

These findings on age and burnout run parallel to our findings on experience level and VT. For both constructs, clinicians with shorter tenure in the field were at greater risk of distress compared to those with more experience. While preliminary studies on self-efficacy appear promising, there is virtually no research to explain the exact mechanism(s) or pathway(s) through which the relationship between age and burnout occurs. Qualitative studies focused on the subjective experience of novice clinicians are likely to be fruitful for guiding selection of variables for quantitative studies. The ultimate goal should be the development of longitudinal research designs, which follow therapists throughout their careers to explore the course of occupational distress in relation to other moderating variables such as self-efficacy and self-autonomy.

*Provider Group/Percentage of Trauma Clients on Caseload***.** Regression results showed that trauma providers had higher levels of burnout than generalist providers. It seems plausible that working predominantly with victims of trauma is more emotionally exhausting than working with clients with a wider variety of presenting issues, though research on this topic is mixed (Devilly et al., 2009; Figley, 1995). Also, it is worth noting that trauma providers in our study were older, more experienced, and less likely to be students; as a result, they were also providing more hours of therapy and seeing more clients per week than generalist therapists. In addition, trauma therapists were more likely to be social workers and licensed professional counselors

(LPCs) as compared to generalist providers, who were more likely to be psychologists. For social workers and LPCs, this may reflect greater time demands and potentially lower salary, thereby leading to higher likelihood of burnout among trauma providers.

Interestingly, though being a trauma provider/having a greater percentage of trauma clients on one's caseload was a risk factor for burnout, it was not a risk factor for VT. It may be that occupational characteristics, or stressors associated with the work environment, are inherently more taxing for trauma providers compared to therapists in other practice areas. This lends support to the notion that exposure to traumatic material is only detrimental in the context of work-related stressors (Devilly et al., 2009), and that VT is not likely a phenomenon unique to trauma therapy.

Supervision/Organizational Support. Unexpectedly, clinicians receiving more hours of supervision per week and greater organizational support had higher burnout scores, both findings that were in the opposite direction of our hypothesis. Also, the positive relationship between organizational support and burnout was stronger in trauma therapists compared to generalists. However, this is likely an artifact of experience level: novice clinicians, who are more burnt out than experienced clinicians, tend to receive more supervision and support from their organizations. Alternatively, it may be that clinicians who are more burnt out seek supervision and rely more on their institutional support. The effect may simply have been more pronounced among trauma providers due to there being less burnout variance in the generalist provider group.

Unlike for STS and VT, a strong supervisory working alliance did not significantly mitigate burnout. It should be noted, though, that the regression analysis showed that the effect was in the expected direction (i.e., better supervision quality associated with lower burnout).

Also, the zero-order correlation between burnout and supervision quality was significant, and the relationship lost significance only after the other correlated variables were covaried. Therefore, despite the lack of significant regression results, there is still ample evidence to suggest that our findings are consistent with the burnout prevention literature touting high quality supervision as an integral support mechanism for clinicians (Knight, 2013).

Overall, results of this study suggest that a strong supervisory working alliance is protective against all three occupational stress constructs. As there is limited research on the effectiveness of supervision in mitigating occupational distress, however, future studies should evaluate the extent to which different supervisory interventions affect burnout, VT, and STS. For instance, it may be that trauma-informed supervision models are more effective for prevention of VT and STS, whereas supervision focused on technical aspects of the work (such as caseload and time management) may reduce burnout.

Differentiation of Vicarious Trauma

Vicarious traumatization (VT), secondary traumatic stress (STS), and burnout were significantly related to each other. This finding is consistent with research demonstrating a high degree of overlap between the occupational stress constructs (Finklestein et al., 2015; Devilly et al., 2009). In our study, among generalist therapists, VT was more of a burnout-related construct than a trauma-related construct, and for trauma providers, VT was more strongly related to secondary trauma than to burnout. This was evident because in the generalist provider group, VT was more strongly correlated with burnout than it was with secondary traumatic stress; conversely, in the trauma provider group, VT was more strongly correlated with secondary traumatic stress than with burnout.

Our findings add to a growing body of literature refuting the notion of VT as a unique construct or experience among professionals working with trauma survivors (Makadia et al., 2017; Kadambi & Ennis, 2004; Devilly et al., 2009; Sabin-Farrell & Turpin, 2003). Kadambi and Ennis (2004) assert that because the mental health community so rapidly embraced the idea of VT as a distinct phenomenon, the publication of remediation and self-help strategies has likely preceded the performance of rigorous, empirically-based research.

It is interesting that intrapsychic factors (i.e., empathy styles, coping styles) were only predictive of VT and not the other occupational stress constructs. These internal influences are likely more directly linked to cognitive disruptions and psychological vulnerabilities unique to VT rather than to PTSD symptoms or occupational stress. Our findings serve as a unique contribution in several ways. First, because the VT literature has been criticized for its emphasis on organizational contributors to VT (Dunkley & Whelan, 2006b), it is encouraging that we identified several individual-level characteristics potentially amenable to intervention. For example, it is possible that adaptive coping styles can be taught or augmented through supervision or clinical training. In addition, though intrapsychic vulnerabilities are emphasized in the CSDT model, these components have rarely been subjected to empirical study. Our study lent support to the role of coping style, empathy style, and personal trauma history as identified in the CSDT, although this was not specifically in relation to provision of trauma therapy. Also, our findings refuted several of the CSDT's core elements. Specifically, less experience (and theoretically less cumulative exposure to clients' traumas) was related to worse VT, not the other way around, as suggested by McCann and Pearlman (1990).

Novice clinicians were more likely to experience both VT and burnout, whereas more experienced trauma providers had higher levels of STS. It may be that cumulative exposure to

traumatic material is more likely to result in PTSD symptoms than cognitive disruptions (as suggested by McCann and Pearlman; 1990). Newer clinicians are especially vulnerable to competence and self-efficacy concerns (Devilly et al., 2009) and have less control over their professional lives (Maslach et al., 2001), potentially leading to greater cognitive disruptions and emotional exhaustion associated with the work environment.

Though the perception of a positive supervisory working alliance lessened the impact of all three occupational stress constructs, it was most strongly protective against VT and STS. This indicates that high-quality supervision mitigates trauma-related distress in particular. Given the dearth of studies in this area, future research should evaluate the potential effectiveness of trauma-informed supervision models focused on the affective components of work with survivors of trauma (Canfield, 2005). Additionally, as we found that greater subjective preparedness to deliver trauma treatment reduced VT risk, future research might investigate supervision interventions designed to enhance self-mastery and self-efficacy.

Overall, results of our study do not provide support for the existence of VT as a phenomenon that is widespread among trauma providers and unique among trauma providers. While a small percentage (8.0%) of our sample did endorse clinically elevated cognitive disruptions, most therapists were coping well with the demands of their work. Contrary to our hypotheses and to the tenets of the CSDT framework, greater trauma exposure was not associated with higher risk of VT. However, greater exposure to trauma (both in terms of percentage of trauma clients on one's caseload and more years of experience as a trauma provider) predicted worse STS symptoms. These findings are consistent with one of the most recent studies on this topic, which suggests that the STS construct is a more appropriate depiction of trauma-related distress in clinicians than VT (Makadia et al., 2017).

The cognitive disruptions and shifts in worldview central to VT were most frequently experienced by novice therapists. Still, this seemed to be related to being new to the profession as opposed to struggling with trauma work. Interventions geared towards increasing preparedness for clinical work and enhancing self-efficacy and self-mastery (Gil & Weinberg, 2015) may be worthwhile areas of future research.

Limitations

The primary limitation of this study is the use of a cross-sectional research design, which limits the ability to draw temporal or causal conclusions. While we identified several promising therapist-level and occupational-level predictors of occupational distress, we are unable to establish the direction of causal relationships. For instance, though our findings on the supervisory working alliance appear encouraging, it may be that therapists who are less distressed to begin with are better able to use effective supervision and create strong bonds with their supervisors. Prospective, longitudinal studies are necessary to assess pre-morbid functioning and determine the process by which occupational stress conditions develop over time, especially given our findings that experience level differentially affects VT, STS, and burnout. It will also be important for future research to clarify the mechanisms for risk and protective factors.

In addition, as with any study of occupational distress, our study was affected by the issue of "survival bias" (Maslach et al., 2001). Consistent with other research on VT, STS, and burnout (Kadambi & Truscott, 2004), clinicians in our sample had low levels of symptomatology and in fact appeared to be coping relatively well with the demands of their work. As people who are unable to tolerate the emotional demands of their work often self-select out of the profession, well-adjusted, satisfied therapists are likely over-represented in our more experienced

participants compared to our less experienced participants. Though this is not necessarily a sampling problem (because we could be accurately sampling the clinicians currently in the profession), this inevitably confounds the effects of experience. In addition, from a methodological standpoint, providers with fewer emotional and psychological concerns or those with lesser demands on their time may have been more likely to participate (i.e., response bias).

Conclusion

One of the major criticisms of the vicarious traumatization (VT) literature is that comparison groups of non-trauma clinicians are rarely included, and thus it is tacitly accepted that VT is a phenomenon unique to professionals working with survivors of trauma (Kadambi & Truscott, 2004). This cross-sectional, nationwide survey study of 221 mental health providers found no difference in levels of VT between trauma clinicians and generalist therapists treating a wider variety of client issues. Further, there was a high degree of overlap between VT and other occupational stress constructs of secondary traumatic stress (STS) and burnout. Our results call into question the formulation of VT proposed by McCann and Pearlman (1990), and provide support for more recent empirical research suggesting that claims about the deleterious effects of trauma work are overstated (Devilly et al., 2009). Results are encouraging in that clinicians need not be overly concerned about VT as an inevitable outcome of exposure to clients' trauma material.

This study also identified several therapist-level and occupational-level predictors of VT, STS, and burnout that are worthy of further investigation. Aspects of the therapist that were significantly related to VT were personal trauma history, empathy style, and coping style, while aspects of the occupation associated with VT were experience level and supervision. Predictors of STS included personal trauma history, experience level, percentage of trauma clients on

caseload, and supervision, while predictors of burnout were age, being a trauma provider/having a greater percentage of trauma clients on one's caseload, and supervision/organizational support. Future research should examine these relationships temporally in order to determine causation.

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Appendix A: Measures

Screener Questions

1. Do you speak and read English fluently? Yes No

2. What is your age? ___

3. What is the highest degree or level of school you have completed? If currently enrolled, mark the previous grade or highest degree received.

Associate degree (for example: AA, AS)

Bachelor's degree (for example: BA, AB, BS, BSW)

Master's degree (for example: MA, MS, MEng, MEd, MSW, MBA)

Professional degree (for example: MD, DDS, DVM, LLB, JD)

Doctorate degree (for example: PhD, PsyD, EdD)

Other (please specify:____)

4. Do you consider yourself to be a mental health professional? Yes No

5. Do you have at least one year of experience providing direct professional mental health services (i.e., counseling, therapy) to clients or patients? Yes No

Demographics

1. Age: (drop-down menu)

2. Gender: Male, Female, Transgender

3. Where do you live? (state/country drop-down menu)

4. Ethnicity: Hispanic or Latino/a, Not Hispanic or Latino/a

5. Race: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, White

6. Marital Status: married, widowed, divorced, separated, never married, domestic partnership

Occupational Items. The following questions ask about your professional life.

1. Are you currently a student? Yes/No. If participant selects YES – the below questions appeared:

1a) What degree are you currently seeking? Ph.D., Psy.D., M.S.W., M.Div., M.D., L.P.C., R.N., other (please write in:__)

1b) Please select your year in training of your program: 1, 2, 3, 4, 5, 6, 7

2. Where do you live? (state/country drop-down menu)

3. Which one of the following best describes your profession (or aspired profession)?: psychologist, social worker, psychiatrist, psychiatric nurse, nurse practitioner, licensed professional counselor, other (please specify: ___)

4. Please write the number of years of professional experience you have delivering therapeutic services to clients (including years of practicum/internship clinical training)? _____

5. Which one of the following best describes the setting(s) in which you practice? Check all that apply, and indicate number of hours per week in each setting: Community mental health clinic, hospital/medical center, Veterans Affairs Medical Center or clinic, private practice, school system, prison, counseling center, other (please specify: ____)

6. Please estimate *the average number of hours per week* that you spent delivering direct counseling services to clients over the past year: drop-down 1 to more than 50

7. Please estimate the *total number of clients* you have seen each week on average over the past year: drop-down 1 to more than 40

8. Of the total number of clients you reported in question 7, for how many of them were you providing trauma treatment? "Trauma treatment" means that the therapeutic work is in direct reference to a traumatic stressor (or stressors) experienced by the client. ____

IF participant responds at least "1" to question 8, the following two questions will appear.

> 8a. What type of trauma therapy have you provided in the past year? Select all that apply:
>
> *For adults*: Prolonged Exposure (PE), Cognitive Processing Therapy (CPT), Eye Movement Desensitization and Reprocessing (EMDR), Supportive counseling, other
>
> *For children:* Trauma-Focused Cognitive-Behavioral Therapy for children (TF-CBT), Play Therapy, Supportive counseling, Other
>
> 8b. Did you purposefully seek out a position in which you could provide treatment for clients exposed to trauma? Yes/No

9. Is the majority of your counseling work with children or adult clients? Child, Adult, Equally Child/Adult

10. Does your current role involve serving as a clinical supervisor to others? Yes, No

11. Please select your primary theoretical orientation: cognitive-behavioral, psychodynamic or psychoanalytic, systems, humanistic-existential, or eclectic/other

12. Have you ever received formal didactic training in trauma work? None, Minimal, Substantial

13. Have you ever received supervised practicum training in trauma work? Yes, No

14. On a scale of 1 being not at all prepared to 10 being extremely prepared, how prepared do you feel in providing therapy for clients who have been victims of trauma?: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

15. In the past year, have you provided therapy for clients for whom a primary presenting problem was sexual trauma? Yes, No. If respondent answers YES, the following question will appear:

> 15a) Please select all types of sexual trauma clients for whom you have provided counseling in the last year: adult survivors of sexual assault, adult survivors of childhood sexual abuse, child survivors of sexual abuse

16. In the past year, have you provided therapy for sexual offender clients? Yes, No. If respondent answers YES, the following question will appear:

> 16a. In the past year, how many sexual offender clients have you treated? Drop-down 1 to more than 50.

Impact of Event Scale – Revised

In the past year, have you provided trauma treatment for any clients? "Trauma treatment" means that the therapeutic work is in reference to a traumatic stressor (or stressors) experienced by the client. Yes, No. *If participant responds Yes, then the IES-R will appear below. The IES-R will not appear if the participant responds No.*

Below is a list of difficulties people sometimes have after stressful life events. Please read each item, and then indicate how distressing each difficulty has been for you DURING THE PAST SEVEN DAYS ONLY **in respect to the stressful material related by your trauma clients**. How much were you distressed or bothered by these difficulties?

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 of 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.

Trauma and Attachment Belief Scale (sample items)

6. I never think anyone is safe from danger.

9. When my feelings are hurt, I can make myself feel better.

26. Trusting people is not smart.

53. I hate to be alone.

56. I have problems with self-control.

Interpersonal Reactivity Index

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate letter on the scale at the top of the page: A, B, C, D, or E. When you have decided on your answer, fill in the letter on the answer sheet next to the item number. Read each item carefully before responding. Answer as honestly as you can.

ANSWER SCALE:

A	B	C	D	E
DOES NOT DESCRIBE ME WELL				DESCRIBES ME VERY WELL

1. I daydream and fantasize, with some regularity, about things that might happen to me.
2. I often have tender, concerned feelings for people less fortunate than me.
3. I sometimes find it difficult to see things from the "other guy's" point of view.
4. Sometimes I don't feel very sorry for other people when they are having problems.
5. I really get involved with the feelings of the characters in a novel.
6. In emergency situations, I feel apprehensive and ill-at-ease.
7. I am usually objective when I watch a movie or play, and I don't often get completely caught up in it.
8. I try to look at everybody's side of a disagreement before I make a decision.
9. When I see someone being taken advantage of, I feel kind of protective towards them.
10. I sometimes feel helpless when I am in the middle of a very emotional situation.
11. I sometimes try to understand my friends better by imagining how things look from their perspective.
12. Becoming extremely involved in a good book or movie is somewhat rare for me.
13. When I see someone get hurt, I tend to remain calm.
14. Other people's misfortunes do not usually disturb me a great deal.
15. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.

16. After seeing a play or movie, I have felt as though I were one of the characters.

17. Being in a tense emotional situation scares me.

18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.

19. I am usually pretty effective in dealing with emergencies.

20. I am often quite touched by things that I see happen.

21. I believe that there are two sides to every question and try to look at them both.

22. I would describe myself as a pretty soft-hearted person.

23. When I watch a good movie, I can very easily put myself in the place of a leading character.

24. I tend to lose control during emergencies.

25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.

26. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.

27. When I see someone who badly needs help in an emergency, I go to pieces.

28. Before criticizing somebody, I try to imagine how I would feel if I were in their place.

Brief COPE

We are interested in how people respond when they confront difficult or stressful events in their lives. There are lots of ways to try to deal with stress. This questionnaire asks you to indicate what you generally do and feel, when you experience stressful events. Obviously, different events bring out somewhat different responses, but think about what you usually do when you are under a lot of stress.

Then respond to each of the following items by selecting one number for each, using the response choices listed just below. Please try to respond to each item separately in your mind from each other item. Choose your answers thoughtfully, and make your answers as true FOR YOU as you can. There are no "right" or "wrong" answers, so choose the most accurate answer for YOU -- not what you think "most people" would say or do. Indicate what YOU usually do when YOU experience a stressful event.

1 = I usually don't do this at all; 2 = I usually do this a little bit; 3 = I usually do this a medium amount; 4 = I usually do this a lot

1. I've been concentrating my efforts on doing something about the situation I'm in.
2. I've been getting emotional support from others.
3. I've been taking action to try to make the situation better.
4. I've been getting help and advice from other people.
5. I've been trying to see it in a different light, to make it seem more positive.
6. I've been trying to come up with a strategy about what to do.
7. I've been getting comfort and understanding from someone.
8. I've been looking for something good in what is happening.
9. I've been making jokes about it.
10. I've been accepting the reality of the fact that it has happened.
11. I've been trying to find comfort in my religion or spiritual beliefs.
12. I've been trying to get advice or help from other people about what to do.
13. I've been learning to live with it.
14. I've been thinking hard about what steps to take.
15. I've been praying or meditating.
16. I've been making fun of the situation.

Supervision Items

1. What type of clinical supervision do you currently receive? Select all that apply: individual supervision, group supervision, peer supervision/consultation, none

Respondents who select "individual supervision" will receive the following question:

1a) How many hours per week do you receive individual supervision? 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more

Supervisee Form of the Supervisory Working Alliance Inventory (this will appear for respondents who endorsed receiving individual supervision)

Please think about your current experiences with the individual supervisor you interact with most often. Rate the statements below using the following scale: Almost Never (1); Rarely (2); Occasionally (3); Sometimes (4); Often (5); Very Often (6); Almost Always (7)

1. I feel comfortable working with my supervisor.
2. My supervisor welcomes my explanations about the client's behavior.
3. My supervisor makes the effort to understand me.
4. My supervisor encourages me to talk about my work with clients in ways that are comfortable for me.
5. My supervisor is tactful when commenting about my performance.
6. My supervisor encourages me to formulate my own interventions with the client.
7. My supervisor helps me talk freely in our sessions.
8. My supervisor stays in tune with me during supervision.
9. I understand client behavior and treatment technique similar to the way my supervisor does.
10.1 feel free to mention to my supervisor any troublesome feelings I might have about him/her.
11. My supervisor treats me like a colleague in our supervisory sessions.
12. In supervision, I am more curious than anxious when discussing my difficulties with clients.
13. In supervision, my supervisor places a high priority on our understanding the client's perspective.
14. My supervisor encourages me to take time to understand what the client is saying and doing.
15. My supervisor's style is to carefully and systematically consider the material I bring to supervision.
16. When correcting my errors with a client, my supervisor offers alternative ways of intervening with that client.
17. My supervisor helps me work within a specific treatment plan with my clients.
18. My supervisor helps me stay on track during our meetings.
19.1 work with my supervisor on specific goals in the supervisory session.

Trauma History Questionnaire (THQ)

The following is a series of questions about serious or traumatic life events. These types of events actually occur with some regularity, although we would like to believe they are rare, and they affect how people feel about, react to, and/or think about things subsequently. Knowing about the occurrence of such events, and reactions to them, will help us to develop programs for prevention, education, and other services. For each event, please indicate whether it happened, and if it did, the number of times and approximately how long ago that it happened. If an event has happened to you more than once, please indicate the most RECENT occurrence. Give your best guess if you are not sure.

Crime-Related Events	**Select One**		**If you selected "yes," please indicate:**	
			Number of times (drop-down menu from 1 to more than 10)	**How long ago for most recent occurrence?** **(drop-down menu: within the last 6 months, within the last year, within the last five years, within the last 10 years, more than 10 years ago)**
1. Has anyone ever tried to take something directly from you by using force or the threat of force, such as a stick-up or mugging?	No	Yes		
2. Has anyone ever attempted to rob you or actually robbed you (i.e., stolen your personal belongings)?	No	Yes		
3. Has anyone ever attempted to or succeeded in breaking into your home when you were not there?	No	Yes		
4. Has anyone ever attempted to or succeeded in breaking into your home	No	Yes		

while you were there?				
General Disaster & Trauma	**Select One**		**If you selected "yes," please indicate:**	
			Number of times (drop-down menu from 1 to more than 10)	**How long ago for most recent occurrence?** **(drop-down menu: within the last 6 months, within the last year, within the last five years, within the last 10 years, more than 10 years ago)**
5. Have you ever had a serious accident at work, in a car, or somewhere else? (If yes, please specify: _____)	No	Yes		
6. Have you ever experienced a natural disaster such as a tornado, hurricane, flood or major earthquake, etc., where you felt you or your loved ones were in danger of death or injury? (If yes, please specify: _____)	No	Yes		
7. Have you ever experienced a "man-made" disaster such as a train crash, building collapse, bank robbery, fire, etc., where you felt you or your loved ones were in danger of death or injury? (If yes, please specify: _____)	No	Yes		
8. Have you ever been exposed to dangerous chemicals or radioactivity that might threaten your health?	No	Yes		
9. Have you ever been in any other situation in which you were seriously	No	Yes		

injured? (If yes, please specify:_____)				
10. Have you ever been in any other situation in which you feared you might be killed or seriously injured? (If yes, please specify: _____)	No	Yes		
11. Have you ever seen someone seriously injured or killed? (If yes, please specify who: _____)	No	Yes		
12. Have you ever seen dead bodies (other than at a funeral) or had to handle dead bodies for any reason? (If yes, please specify: _____)	No	Yes		
13. Have you ever had a close friend or family member murdered, or killed by a drunk driver? (If yes, please specify relationship: [e.g., mother, grandson, etc.]_____)	No	Yes		
14. Have you ever had a spouse, romantic partner, or child die? (If yes, please specify relationship:_____)	No	Yes		
15. Have you ever had a serious or life-threatening illness? (If yes, please specify:_____)	No	Yes		
16. Have you ever received news of a serious injury, life-threatening illness, or unexpected death of someone close to you? (If yes, please describe:_____)	No	Yes		
17. Have you ever had to engage in combat while in military service in an official or unofficial war zone? (If yes, please indicate where:_____)	No	Yes		
Physical & Sexual Experiences	**Select One**		**If you selected "yes," please indicate:**	
			Number of times (drop-down menu from 1 to more than	**How long ago for most recent occurrence?**

			10)	**(drop-down menu: within the last 6 months, within the last year, within the last five years, within the last 10 years, more than 10 years ago)**
18. Has anyone ever made you have intercourse or oral or anal sex against your will? (If yes, please indicate nature of relationship with person [e.g., stranger, friend, relative, parent, sibling]: _____)	No	Yes		
19. Has anyone ever touched private parts of your body, or made you touch theirs, under force or threat? (If yes, please indicate nature of relationship with person [e.g., stranger, friend, relative, parent, sibling]:_____)	No	Yes		
20. Other than incidents mentioned in Questions 18 and 19, have there been any other situations in which another person tried to force you to have an unwanted sexual contact?	No	Yes		
21. Has anyone, including family members or friends, ever attacked you with a gun, knife, or some other weapon?	No	Yes		
22. Has anyone, including family members or friends, ever attacked you without a weapon and seriously injured you?	No	Yes		
23. Has anyone in your family ever beaten, spanked, or pushed you hard enough to cause injury?	No	Yes		

24. Have you experienced any other extraordinarily stressful situation or event that is not covered above? (If yes, please specify:_____)	No	Yes		

Directed Questions Scale

Seven questions are embedded within substantive scales in the survey to assess how carefully participants are reading the items. This scale is scored by summing the number of errors each participant makes on these items, to create total scores ranging from 0 to 7.

"Please skip this question." [presented twice]

"This is a control question. Leave this question blank."

"I read instructions carefully. To show that you are reading these instructions, please leave this question blank."

"This is an extra line. Leave this question blank."

"This is a control question. Mark 'Mostly True' and move on."

"This is a control question. Mark 'Rarely' and move on."

Appendix B: Supplementary Tables

Table 8

Hypothesis 1 Analysis of Covariance for Effect of Provider Group on TABS-Total

Source	Sum of Squares	df	Mean Square	*F*	Partial Eta Squared	*p*
Therapy	6.82	1	6.82	.11	.00	.75
Provider Group	152.78	1	152.78	2.36	.01	.13
Error	14111.10	218	64.73			

Note. Therapy = overall amount of therapy provided. R^2 = .01, Adjusted R^2 = .00

Table 9

Hypothesis 1 ANCOVA for Effect of Provider Group on Self-Safety

Source	Sum of Squares	df	Mean Square	*F*	Partial Eta Squared	*p*
Therapy	.35	1	.35	.00	.00	.75
Provider Group	108.80	1	108.80	.92	.00	.34
Error	25818.99	218	118.44			

Note. Therapy = overall amount of therapy provided. R^2 = .01, Adjusted R^2 = -.01

Table 10

Hypothesis 1 ANCOVA for Effect of Provider Group on Other-Safety

Source	Sum of Squares	df	Mean Square	*F*	Partial Eta Squared	*p*
Therapy	.24	1	.24	.00	.00	.96
Provider Group	36.33	1	36.33	.34	.00	.56
Error	23083.63	218	105.89			

Note. Therapy = overall amount of therapy provided. R^2 = .00, Adjusted R^2 = -.01

Table 11

Hypothesis 1 ANCOVA for Effect of Provider Group on Self-Trust

Source	Sum of Squares	df	Mean Square	*F*	Partial Eta Squared	*p*
Therapy	373.95	1	373.95	3.80	.02	.05
Provider Group	663.84	1	663.84	6.75	.03	.01
Error	21454.73	218	98.42			

Note. Therapy = overall amount of therapy provided. R^2 = .06, Adjusted R^2 = .05

Table 13

Hypothesis 1 ANCOVA for Effect of Provider Group on Other-Trust

Source	Sum of Squares	df	Mean Square	*F*	Partial Eta Squared	*p*
Therapy	44.64	1	44.64	.49	.00	.48
Provider Group	39.18	1	39.18	.43	.00	.51
Error	19685.32	218	90.30			

Note. Therapy = overall amount of therapy provided. R^2 = .00, Adjusted R^2 = -.01

Table 14

Hypothesis 1 ANCOVA for Effect of Provider Group on Self-Esteem

Source	Sum of Squares	df	Mean Square	*F*	Partial Eta Squared	*p*
Therapy	3.79	1	3.79	.06	.00	.81
Provider Group	240.01	1	240.01	3.74	.02	.06
Error	14003.11	218	64.23			

Note. Therapy = overall amount of therapy provided. R^2 = .02, Adjusted R^2 = .01

Table 15

Hypothesis 1 ANCOVA for Effect of Provider Group on Other-Esteem

Source	Sum of Squares	df	Mean Square	*F*	Partial Eta Squared	*p*
Therapy	2.02	1	2.02	.02	.00	.89
Provider Group	144.75	1	144.75	1.48	.01	.23
Error	21271.63	218	97.58			

Note. Therapy = overall amount of therapy provided. R^2 = .01, Adjusted R^2 = -.00

Table 16

Hypothesis 1 ANCOVA for Effect of Provider Group on Self-Intimacy

Source	Sum of Squares	df	Mean Square	*F*	Partial Eta Squared	*p*
Therapy	165.83	1	165.83	3.47	.02	.06
Provider Group	80.39	1	80.39	1.68	.01	.20
Error	10425.51	218	47.82			

Note. Therapy = overall amount of therapy provided. R^2 = .03, Adjusted R^2 = .02

Table 17

Hypothesis 1 ANCOVA for Effect of Provider Group on Other-Intimacy

Source	Sum of Squares	df	Mean Square	*F*	Partial Eta Squared	*p*
Therapy	.02	1	.02	.00	.00	.99
Provider Group	62.88	1	62.88	.47	.00	.49
Error	29146.47	218	133.70			

Note. Therapy = overall amount of therapy provided. R^2 = .00, Adjusted R^2 = -.01

Table 18

Hypothesis 1 ANCOVA for Effect of Provider Group on Self-Control

Source	Sum of Squares	df	Mean Square	*F*	Partial Eta Squared	*p*
Therapy	55.43	1	55.43	.53	.00	.47
Provider Group	176.82	1	176.82	1.69	.01	.20
Error	22802.53	218	104.60			

Note. Therapy = overall amount of therapy provided. R^2 = .01, Adjusted R^2 = .00

Table 19

Hypothesis 1 ANCOVA for Effect of Provider Group on Other-Control

Source	Sum of Squares	df	Mean Square	*F*	Partial Eta Squared	*p*
Therapy	35.50	1	35.50	.51	.00	.48
Provider Group	6.76	1	6.76	.10	.00	.76
Error	15253.12	218	69.97			

Note. Therapy = overall amount of therapy provided. R^2 = .00, Adjusted R^2 = -.01

Table 21

Summary of Moderation Analysis for Therapist Variables Predicting TABS-Total (Hypothesis 2a)

Variable	*b*	β	*t*	R^2	ΔR^2
Step 1				.05	.05
Years of Experience	-.18	-.22	-2.96**		
Step 2				.32	.28

THQ-Total	.91	.29	4.32***		
IRI-Personal Distress	.48	.27	3.92***		
IRI-Fantasy	.14	.10	1.41		
IRI-Perspective Taking	.14	.07	.90		
IRI-Empathic Concern	-.20	-.10	-1.30		
BC-Problem Focused Coping	-.82	-.26	-3.31**		
BC-Emotion Focused Coping	-.28	-.17	-2.22*		
Step 3				.32	.00
Provider Group	-.15	-.01	-.14		
Step 4				.36	.03
(Constant)	47.95		51.84**		
Years of Experience	-.11	-.13	-1.73		
THQ-Total	.04	.30	2.81**		
IRI-Personal Distress	.52	.29	3.13**		
IRI-Fantasy	.08	.06	.55		
IRI-Perspective Taking	.55	.27	2.12*		
IRI-Empathic Concern	-.12	-.06	-.54		
BC-Problem Focused Coping	-.94	-.29	-2.70**		
BC-Emotion Focused Coping	-.32	-.19	-1.85		

Provider Group	-.07	-.00	-.06		
THQ-Total x Provider Group	.01	.00	.01		
IRI-Personal Distress x Provider Group	.02	.01	.08		
IRI-Fantasy x Provider Group	.11	.05	.53		
IRI-Perspective Taking x Provider Group	-.69	-.25	-2.09*		
IRI-Empathic Concern x Provider Group	-.23	-.07	-.74		
BC-Problem Focused Coping x Provider Group	.03	.01	.06		
BC-Emotion Focused Coping x Provider Group	.13	.05	.51		

Note. *p < .05, **p < .01, ***p < .001

Table 23

Summary of Moderation Analysis for Therapist Variables Predicting IES-R-Total (Hypothesis 2b)

Variable	*b*	β	*t*	R^2	ΔR^2
Step 1				.12	.12
Amount of Therapy Provided	1.62	.22	2.64**		
Percentage of Trauma Clients	6.07	.26	3.16**		
Step 2				.21	.09
THQ-Total	.48	.18	2.18*		

IRI-Personal Distress	.06	.03	.40		
IRI-Fantasy	.14	.10	1.20		
IRI-Perspective Taking	.01	.01	.04		
IRI-Empathic Concern	-.16	-.09	-.91		
BC-Problem Focused Coping	-.18	-.06	-.64		
BC-Emotion Focused Coping	-.24	-.17	-1.65		
Step 3				.21	.00
Provider Group	-1.23	-.09	-.55		
Step 4				.29	.07
(Constant)	3.12		2.40*		
Amount of Therapy Provided	1.57	.21	2.47*		
Percentage of Trauma Clients	7.85	.33	2.17*		
THQ-Total	.32	.12	.79		
IRI-Personal Distress	.29	.16	1.24		
IRI-Fantasy	-.05	-.04	-.25		
IRI-Perspective Taking	-.04	-.02	-.10		
IRI-Empathic Concern	-.11	-.06	-.34		
BC-Problem Focused Coping	.04	.02	.09		
BC-Emotion Focused Coping	.09	.06	.35		

Provider Group	-1.46	-.10	-.65		
THQ-Total x Provider Group	.29	.09	.62		
IRI-Personal Distress x Provider Group	-.48	-.19	-1.52		
IRI-Fantasy x Provider Group	.33	.19	1.30		
IRI-Perspective Taking x Provider Group	.05	.02	.12		
IRI-Empathic Concern x Provider Group	-.07	-.03	-.17		
BC-Problem Focused Coping x Provider Group	-.31	-.08	-.51		
BC-Emotion Focused Coping x Provider Group	-.60	-.32	-1.92		

Note. *p < .05, **p < .01, ***p < .001

Table 25

Summary of Moderation Analysis for Therapist Variables Predicting MBI-EE (Hypothesis 2c)

Variable	*b*	β	*t*	R^2	ΔR^2
Step 1				.03	.03
Age	-.14	-.17	-2.34*		
Step 2				.07	.04
THQ-Total	.58	.15	1.81		
IRI-Personal Distress	.10	.05	.59		
IRI-Fantasy	.08	.04	.53		

IRI-Perspective Taking	-.10	-.04	-.46		
IRI-Empathic Concern	.23	.09	1.03		
BC-Problem Focused Coping	-.22	-.06	-.63		
BC-Emotion Focused Coping	-.15	-.07	-.81		
Step 3				.10	.03
Provider Group	3.7	.19	2.37*		
Step 4				.13	.03
(Constant)	25.25		9.33**		
Age	-.21	-.26	-2.88**		
THQ-Total	.76	.20	1.56		
IRI-Personal Distress	.15	.07	.65		
IRI-Fantasy	-.12	-.07	-.58		
IRI-Perspective Taking	-.15	-.06	-.39		
IRI-Empathic Concern	.33	.13	1.03		
BC-Problem Focused Coping	.44	.11	.87		
BC-Emotion Focused Coping	-.37	-.18	-1.49		
Provider Group	3.62	.19	2.26*		
THQ-Total x Provider Group	-.23	-.05	-.37		
IRI-Personal Distress x Provider Group	.13	.04	.35		

IRI-Fantasy x Provider Group	.29	.12	1.00		
IRI-Perspective Taking x Provider Group	.08	.02	.16		
IRI-Empathic Concern x Provider Group	-.28	-.07	-.62		
BC-Problem Focused Coping x Provider Group	-1.36	-.23	-1.90		
BC-Emotion Focused Coping x Provider Group	.42	.14	1.14		

Note. *p < .05, **p < .01, ***p < .001

Table 26

Summary of Moderation Analysis for Occupational Variables Predicting TABS-Total (Hypothesis 3a)

Variable	*b*	β	*t*	R^2	ΔR^2
Step 1				.01	.01
Years of Experience	-.17	-.12	-1.23		
Step 2				.17	.16
Percentage Trauma Cases	2.65	.10	1.06		
Amount of Therapy Provided	-.25	-.02	-.23		
Organizational Support	1.06	.10	1.04		
Supervision Hours	1.71	.26	2.67**		
SWAI-Total	-.104	-.26	-2.74**		

Step 3				.17	.01
Provider Group	-2.62	-.15	-.77		
Step 4				.21	.04
(Constant)	48.49		17.99**		
Years of Experience	-.10	-.07	-.61		
Percentage Trauma Cases	3.49	.13	.51		
Amount of Therapy Provided	-.12	-.01	-.10		
Organizational Support	.43	.04	.33		
Supervision Hours	2.37	.36	3.15**		
SWAI-Total	-.07	-.17	-1.36		
Provider Group	-5.14	-.30	-1.26		
Percentage Trauma Cases x Provider Group	6.15	.12	.56		
Amount of Therapy Provided x Provider Group	-.15	-.01	-.07		
Organizational Support x Provider Group	2.60	.19	1.17		
Supervision Hours x Provider Group	-2.22	-.18	-1.49		
SWAI-Total x Provider Group	-.03	-.05	-.39		

Note. *p < .05, **p < .01, ***p < .001

Table 27

Summary of Moderation Analysis for Occupational Variables Predicting IES-R-Total (Hypothesis 3b)

Variable	*b*	β	*t*	R^2	ΔR^2
Step 1				.26	.26
Amount of Therapy Provided	1.5	.19	1.91		
Percentage Trauma Cases	10.57	.48	4.84***		
Step 2				.35	.08
Years of Experience	.21	.22	1.92		
Organizational Support	.04	.01	.05		
Supervision Hours	.77	.15	1.49		
SWAI-Total	-.08	-.23	-2.25*		
Step 3				.35	.01
Provider Group	-2.16	-.17	-.76		
Step 4				.47	.11
(Constant)	1.39		.86		
Amount of Therapy Provided	.82	.10	.90		
Percentage Trauma Cases	13.39	.61	2.93**		
Years of Experience	-.09	-.09	-.58		
Organizational Support	-1.69	-.20	-1.45		
Supervision Hours	1.08	.21	1.82		

SWAI-Total	.00	.01	.08		
Provider Group	-2.07	-.16	-.66		
Years of Experience x Provider Group	.44	.38	2.29*		
Organizational Support x Provider Group	2.61	.27	1.58		
Supervision Hours x Provider Group	-.49	-.06	-.46		
SWAI-Total x Provider Group	-.14	-.30	-2.13*		

Note. *p < .05, **p < .01, ***p < .001

Table 28

Summary of Moderation Analysis for Occupational Variables Predicting MBI-EE (Hypothesis 3c)

Variable	*b*	β	*t*	R^2	ΔR^2
Step 1				.203	.203
Years of Experience	.03	.02	.16		
Percentage Trauma Cases	7.75	.26	2.78**		
Amount of Therapy Provided	.35	.03	.29		
Organizational Support	2.67	.22	2.36*		
Supervision Hours	1.53	.20	2.14*		
SWAI-Total	-.06	-.14	-1.51		
Step 2				.21	.01

Provider Group	3.56	.18	.95		
Step 3				.29	.08
(Constant)	16.58		6.14**		
Years of Experience	-.32	-.20	-1.30		
Percentage Trauma Cases	3.22	.11	.43		
Amount of Therapy Provided	.61	.05	.45		
Organizational Support	.54	.04	.38		
Supervision Hours	1.99	.26	2.40*		
SWAI-Total	-.10	-.22	-1.88		
Provider Group	-.28	-.01	-.06		
Years of Experience x Provider Group	.53	.28	1.53		
Percentage Trauma Cases x Provider Group	6.35	.11	.54		
Amount of Therapy Provided x Provider Group	-1.64	-.09	-.58		
Organizational Support x Provider Group	5.29	.35	2.18*		
Supervision Hours x Provider Group	-2.46	-.18	-1.45		
SWAI-Total x Provider Group	.12	.16	1.26		

Note. *p < .05, **p < .01, ***p < .001

Appendix C: Supplementary Analyses

Relationships Between Occupational Stress Variables

Bivariate correlations were calculated to assess various relationships between study variables. Correlations reaching statistical significance were examined to determine the direction and magnitude of the relationship, with .10 considered a small effect size, .30 a medium effect size, and .50 a large effect size (Cohen, 1992).

Table 29 displays a correlation matrix of Trauma and Attachment Belief Scale (TABS) scores within the overall sample. As expected, the total TABS score had significant, large positive associations with all 10 subscale scores. Also, all subscale scores were positively, significantly correlated with each other, with the majority of associations in the medium to large range. The strongest correlation (*r* = .69) was for Other-Trust (the need to depend or rely on others) and Other-Intimacy (the need to feel connected to others).

Table 29

Correlation Matrix of TABS Scores in Overall Sample

	Self-Safety	Other-Safety	Self-Trust	Other-Trust	Self-Esteem	Other-Esteem	Self-Intimacy	Other-Intimacy	Self-Control	Other-Control
TABS-Total	.76**	.62**	.61**	.76**	.84**	.74**	.66**	.83**	.83**	.66**
Self-Safety	-	.58**	.47**	.50**	.62**	.49**	.50**	.53**	.50**	.46**
Other-Safety	-	-	.34**	.43**	.43**	.38**	.31**	.33**	.46**	.50**
Self-Trust	-	-	-	.30**	.59**	.33**	.49**	.39**	.54**	.15*
Other-Trust	-	-	-	-	.52**	.67**	.37**	.69**	.54**	.56**
Self-Esteem	-	-	-	-	-	.55**	.61**	.67**	.70**	.42**
Other-Esteem	-	-	-	-	-	-	.41**	.63**	.48**	.52**
Self-Intimacy	-	-	-	-	-	-	-	.49**	.57**	.31**
Other-Intimacy	-	-	-	-	-	-	-	-	.68**	.47**
Self-Control	-	-	-	-	-	-	-	-	-	.54**

*. Correlation is significant at the 0.05 level.

**. Correlation is significant at the 0.01 level.

A correlation matrix of Impact of Event Scale – Revised (IES-R) scores for the overall sample are displayed in Table 30. The IES Total score showed significant, positive, and very large relationships with the three subscales (Intrusion, Avoidance, and Hyperarousal). Scores for the three subscales were significantly correlated with each other, with the largest correlation (r = .72) between IES-Intrusion and IES-Avoidance.

Table 30

Correlation Matrix of IES-R Scores in Overall Sample

	IES Total	IES Intrusion	IES Avoidance	IES Hyperarousal
IES Total	-	.90**	.90**	.82**
IES Intrusion	-	-	.72**	.67**
IES Avoidance	-	-	-	.62**

**. Correlation is significant at the 0.01 level.

In Table 31, associations between the three Maslach Burnout Inventory (MBI) subscales are displayed in a correlation matrix. As expected, Emotional Exhaustion and Depersonalization showed a significant, positive correlation (r = .57) with each other. Also as expected, both Emotional Exhaustion and Depersonalization had significant, negative correlations with Personal Accomplishment (r = -.26 and -.24, respectively).

Table 31

Correlation Matrix of MBI Subscales in Overall Sample

	MBI Emotional Exhaustion	MBI Depersonalization	MBI Personal Accomplishment
MBI Emotional Exhaustion	-	.57**	-.26**
MBI Depersonalization	-	-	-.24**

**. Correlation is significant at the 0.01 level.

Bivariate correlations were performed on the dependent variables of interest: TABS-Total (vicarious trauma), IES-Total (secondary trauma), MBI-Depersonalization, MBI-Emotional Exhaustion, and MBI-Personal Accomplishment (burnout). This correlation matrix for the overall sample is found in Table 32. All dependent variables were significantly correlated, with the exception of MBI-Personal Accomplishment and IES-Total. The strongest association was between the TABS-Total and IES-Total (r = .40), a medium to large effect size. This indicates that within the overall sample, vicarious trauma and secondary trauma were the most strongly related occupational stress constructs. This was closely followed by the relationship between the TABS-Total and MBI-Emotional Exhaustion (r = .39), indicating that vicarious trauma has a medium to large relationship with being mentally and emotionally over-extended and exhausted by one's work. As expected, MBI-Personal Accomplishment showed significant negative correlations with TABS-Total (r = -.33), MBI-Emotional Exhaustion (r = -.26), and MBI-Depersonalization (r = -.24). This suggests that clinicians who obtain a sense of enjoyment, competence, and success from their therapeutic work are less susceptible to both vicarious traumatization and burnout.

Table 32

Correlation Matrix of Dependent Variables in Overall Sample

	MBI Emotional Exhaustion	MBI Depersonalization	MBI Personal Accomplishment	IES Total
TABS Total	.39**	.33**	-.33**	.40**
MBI Emotional Exhaustion	-	.57**	-.26**	.38**
MBI Depersonalization	-	-	-.24**	.28**
MBI Personal Accomplishment	-	-	-	-.15

**. Correlation is significant at the 0.01 level.

Correlations of Study Variables with Vicarious Trauma

Table 33 displays correlations of all demographic and occupational variables with the TABS-Total, our measure of vicarious trauma. Generally, all correlations were small. Significant correlations are described here as well as noted in the table. Age was significantly, negatively correlated with the TABS-Total (r = -.21), suggesting that younger clinicians had greater VT. Student status had a significant, positive correlation with TABS-Total (r = .19), which indicates that students had higher levels of VT than non-students. There was a significant, negative relationship between years of experience and TABS-Total (r = -.24), suggesting that clinicians with more experience had less VT. In addition, subjective preparedness for trauma work was significantly, negatively correlated with TABS-Total (r = -.20); this indicates that those perceiving themselves to be less prepared to deliver trauma treatment endorsed higher VT. Clinicians who provided supportive counseling as a trauma treatment for adults had lower levels of VT (r = -.14) compared to other trauma treatments.

Table 33

Correlations of Demographic and Occupational Variables with TABS-Total

	Age	Gender	Ethnicity	Student Status	Years Experience	Hours Counseling/Week	# Clients/Week	% Trauma Cases
TABS -Total	-.21**	.11	.09	.19**	-.24**	-.09	.00	-.07

*. Correlation is significant at the 0.05 level.
**. Correlation is significant at the 0.01 level.

Table 33 (continued)

Correlations of Demographic and Occupational Variables with TABS-Total

	Purposefully Select Trauma Position	Clientele Age	Serve as Clinical Supervisor	Ever Received Practicum or Internship Training in Trauma Work	Subjective Preparedness for Trauma Work	Work with Sexual Trauma Clients
TABS-Total	.05	.02	-.05	.03	-.20**	-.10

*. Correlation is significant at the 0.05 level.
**. Correlation is significant at the 0.01 level.

Table 33 (continued)

Correlations of Demographic and Occupational Variables with TABS-Total

	Setting: Community Mental Health Clinic	Setting: Non-VA Hospital or Medical Center	Setting: VA Medical Center or Clinic	Setting: Private Practice	Setting: School System	Setting: Prison	Setting: Counseling Center
TABS-Total	.05	-.06	.09	-.11	.05	-.09	.04

*. Correlation is significant at the 0.05 level.
**. Correlation is significant at the 0.01 level.

Table 33 (continued).

Correlations of Demographic and Occupational Variables with TABS-Total

	Adult Trauma Therapy: PE	Adult Trauma Therapy: CPT	Adult Trauma Therapy: EMDR	Adult Trauma Therapy: IRT	Adult Trauma Therapy: STAIR	Adult Trauma Therapy: Brief psychodynamic	Adult Trauma Therapy: Family therapy	Adult Trauma Therapy: Supportive Counseling
TABS-Total	.08	-.02	-.01	-.08	.02	-.03	.04	-.14*

*. Correlation is significant at the 0.05 level.
**. Correlation is significant at the 0.01 level.

Table 33 (continued)

Correlations of Demographic and Occupational Variables with TABS-Total

	Child Trauma Therapy: TF-CBT	Child Trauma Therapy: Play therapy	Child Trauma Therapy: Family therapy	Child Trauma Therapy: Art therapy	Child Trauma Therapy: Psychodrama	Child Trauma Therapy: Supportive Counseling
TABS-Total	-.04	.08	.03	.05	-.04	.10

*. Correlation is significant at the 0.05 level.

**. Correlation is significant at the 0.01 level.

Several one-way ANOVAs were conducted to determine potential relationships between the TABS-Total and our multi-level categorical variables. There were no statistically significant differences in total TABS scores by race, $F(4,216) = .91$, $p = .46$, marital status, $F(5, 214) = 1.42$, $p = .22$, type of profession, $F(4, 216) = 2.16$, $p = .08$, theoretical orientation, $F(4, 216) = .16$, $p = .96$, or amount of didactic trauma training received, $F(2, 217) = 2.51$, $p = .08$.

A statistically significant difference was found for total TABS scores by amount of organizational support received, $F(3, 217) = 2.91$, $p = .04$. A post hoc test revealed that clinicians receiving only one type of supervision had significantly *lower* TABS total scores ($M = 45.33$) than clinicians receiving three types of supervision ($M = 49.91$), $p < .05$, which is likely an artifact of students/younger therapists receiving more supervision and also having higher TABS scores. However, the size of the effect was small (partial $\eta^2 = .04$), suggesting weak clinical significance.

Correlations of Study Variables with Secondary Traumatic Stress

In Table 34, correlations between demographic and occupational variables with the IES-R-Total (our measure of secondary traumatic stress) are displayed. Significant correlations are flagged in the table and discussed here. The largest correlation was for IES-Total and percentage of trauma cases on caseload ($r = .31$), indicating that clinicians with a larger percentage of trauma clients on their caseloads had higher levels of secondary traumatic stress (STS). Providers who spent a greater number of hours per week providing therapy ($r = .26$) and who had more years of experience in the field ($r = .16$) had more STS. Clinicians who self-selected into the trauma field (that is, they purposefully selected a position for which they could provide trauma treatment) had greater STS ($r = .17$). Providers working at a hospital or medical center not associated with the VA endorsed lower levels of STS ($r = -.22$). In terms of adult trauma

treatments provided, clinicians that delivered brief psychodynamic therapy (*r* = .30) and family therapy (*r* = .16) had greater STS.

Table 34

Correlations of Demographic and Occupational Variables with IES-R-Total

	Age	Gender	Ethnicity	Student Status	Years Experience	Hours Counseling/Week	# Clients/Week	% Trauma Cases
IES-R-Total	.14	-.06	-.09	-.15	.16*	.26**	.17*	.31**

*. Correlation is significant at the 0.05 level.
**. Correlation is significant at the 0.01 level.

Table 34 (continued)

Correlations of Demographic and Occupational Variables with IES-R-Total

	Purposefully Select Trauma Position	Clientele Age	Serve as Clinical Supervisor	Ever Received Practicum or Internship Training in Trauma Work	Subjective Preparedness for Trauma Work	Work with Sexual Trauma Clients
IES-R-Total	.17*	.02	.05	-.01	.01	.14

*. Correlation is significant at the 0.05 level.
**. Correlation is significant at the 0.01 level.

Table 34 (continued)

Correlations of Demographic and Occupational Variables with IES-R-Total

	Setting: Community Mental Health Clinic	Setting: Non-VA Hospital or Medical Center	Setting: VA Medical Center or Clinic	Setting: Private Practice	Setting: School System	Setting: Prison	Setting: Counseling Center
IES-R-Total	-.07	-.22*	.08	-.01	.02	.02	-.14

*. Correlation is significant at the 0.05 level.
**. Correlation is significant at the 0.01 level.

Table 34 (continued)

Correlations of Demographic and Occupational Variables with IES-R-Total

	Adult Trauma Therapy: PE	Adult Trauma Therapy: CPT	Adult Trauma Therapy: EMDR	Adult Trauma Therapy: IRT	Adult Trauma Therapy: STAIR	Adult Trauma Therapy: Brief psychodynamic	Adult Trauma Therapy: Family therapy	Adult Trauma Therapy: Supportive Counseling
IES-R-Total	.12	.03	.12	-.01	.01	.30**	.16*	.14

*. Correlation is significant at the 0.05 level.
**. Correlation is significant at the 0.01 level.

Table 34 (continued)

Correlations of Demographic and Occupational Variables with IES-R-Total

	Child Trauma Therapy: TF-CBT	Child Trauma Therapy: Play therapy	Child Trauma Therapy: Family therapy	Child Trauma Therapy: Art therapy	Child Trauma Therapy: Psychodrama	Child Trauma Therapy: Supportive Counseling
IES-R-Total	-.08	.09	.01	.01	-.07	.04

*. Correlation is significant at the 0.05 level.

**. Correlation is significant at the 0.01 level.

Several one-way ANOVAs were conducted to determine potential relationships between secondary trauma scores (IES-Total) and our multi-level categorical variables. There were no statistically significant differences in total IES scores by race, $F(3, 158) = .80$, $p = .56$, marital status, $F(5, 156) = 1.13$, $p = .35$, theoretical orientation, $F(4, 157) = 1.12$, $p = .35$, or amount of didactic trauma training received, $F(2, 159) = .07$, $p = .94$.

A statistically significant difference was found for level of secondary trauma by type of profession, $F(4, 157) = 2.90$, $p < .05$. Specifically, a post hoc Scheffe's test showed that social workers ($M = 10.56$) had higher levels of secondary traumatic stress than psychologists ($M = 5.71$), $p < .01$. The effect size was small (partial $\eta^2 = .07$), however, indicating weak clinical significance.

Correlations of Study Variables with Burnout

We computed a correlation matrix of all demographic and occupational variables with the Emotional Exhaustion subscale of the Maslach Burnout Inventory, our measure of burnout (see Table 35). In general, all correlations were small. Significant correlations are noted within the table and also discussed here. Age was significantly, negatively correlated with the MBI-EE ($r = -.18$), suggesting that younger clinicians had more burnout than older clinicians. Female clinicians had higher burnout scores ($M = 19.75$, $SD = 9.86$) than male clinicians ($M = 16.07$, $SD = 9.69$), $t(212) = 2.24$, $p = .026$. Participants who provided prolonged exposure therapy as a trauma therapy for adults reported higher burnout compared to other trauma treatments, $F(1, 215) = 4.58$, $p = .03$. Participants with higher scores on the SWAI-Total (i.e., higher supervision quality) had less burnout ($r = -.20$, $p < .05$).

Table 35

Correlations of Demographic and Occupational Variables with MBI-Emotional Exhaustion

	Age	Gender	Ethnicity	Student Status	Years Experience	Hours Counseling/Week	# Clients/Week	% Trauma Cases
MBI-EE	-.18**	-.15*	-.06	.04	-.13	.07	.10	.03

*. Correlation is significant at the 0.05 level.
**. Correlation is significant at the 0.01 level.

Table 35 (continued)

Correlations of Demographic and Occupational Variables with MBI-Emotional Exhaustion

	Purposefully Select Trauma Position	Clientele Age	Serve as Clinical Supervisor	Ever Received Practicum or Internship Training in Trauma Work	Subjective Preparedness for Trauma Work	Work with Sexual Trauma Clients
MBI-EE	-.01	-.01	-.09	.07	-.01	.10

*. Correlation is significant at the 0.05 level.
**. Correlation is significant at the 0.01 level.

Table 35 (continued)

Correlations of Demographic and Occupational Variables with MBI–Emotional Exhaustion

	Setting: Community Mental Health Clinic	Setting: Non-VA Hospital or Medical Center	Setting: VA Medical Center or Clinic	Setting: Private Practice	Setting: School System	Setting: Prison	Setting: Counseling Center
MBI-EE	.05	-.07	.11	-.02	.10	-.05	-.03

*. Correlation is significant at the 0.05 level.
**. Correlation is significant at the 0.01 level.

Table 35 (continued)

Correlations of Demographic and Occupational Variables with MBI-Emotional Exhaustion

	Adult Trauma Therapy: PE	Adult Trauma Therapy: CPT	Adult Trauma Therapy: EMDR	Adult Trauma Therapy: IRT	Adult Trauma Therapy: STAIR	Adult Trauma Therapy: Brief psychodynamic	Adult Trauma Therapy: Family therapy	Adult Trauma Therapy: Supportive Counseling
MBI-EE	.14*	.07	-.05	-.08	.13	.09	.10	.00

*. Correlation is significant at the 0.05 level.
**. Correlation is significant at the 0.01 level.

Table 35 (continued)

Correlations of Demographic and Occupational Variables with MBI-Emotional Exhaustion

	Child Trauma Therapy: TF-CBT	Child Trauma Therapy: Play therapy	Child Trauma Therapy: Family therapy	Child Trauma Therapy: Art therapy	Child Trauma Therapy: Psychodrama	Child Trauma Therapy: Supportive Counseling
MBI-EE	-.02	.09	-.01	.01	-.08	.06

*. Correlation is significant at the 0.05 level.
**. Correlation is significant at the 0.01 level.

We then conducted several one-way ANOVAs to assess for differences in burnout scores (the Emotional Exhaustion subscale of the MBI) based on our multi-level categorical variables. There were no statistically significant differences in burnout scores by race, $F(4,212) = 1.87$, $p = .12$, marital status, $F(5, 210) = 1.00$, $p = .42$, type of profession, $F(4, 212) = 1.37$, $p = .24$, theoretical orientation, $F(4, 212) = .53$, $p = .72$, or amount of didactic trauma training received, $F(2, 213) = .42$, $p = .66$.

A statistically significant difference was found for burnout scores by amount of organizational support received, $F(3, 213) = 3.34$, $p < .05$. Results of a post hoc Tukey test showed that clinicians receiving no supervision had significantly *lower* burnout scores ($M = 16.60$) than clinicians receiving three types of supervision ($M = 23.32$), $p < .01$. This is probably explained by the fact that younger therapists received more supervision and also endorsed higher burnout scores. However, the size of the effect was small (partial $\eta^2 = .05$), suggesting weak clinical significance.

Appendix D: Sample of Recruitment Materials

The following e-mail was sent to potential participants:

Dear colleague:

My name is Shaina Gulin and I am a fifth year doctoral student at Virginia Commonwealth University currently collecting data for my dissertation project. I am writing to invite you to participate in my research study, which aims to investigate the effects of therapy provision on the therapist. I am particularly interested in exploring the effects of working with clients who have experienced trauma. The study consists of several questionnaires and will take between 30 and 40 minutes to complete.

You are eligible to participate if you are 18 years of age or older, work as a mental health professional, and have obtained, at a minimum, a Bachelor's degree. You must also have at least one year providing direct professional mental health services to clients or patients. Graduate students are eligible to participate.

Following completion of the survey, you will be provided with a link to enter a raffle for a chance to win a $25 Amazon.com gift card. One in every 10 participants will be randomly selected and notified by e-mail at the conclusion of the project. While you may not benefit directly, your participation will help us to identify individual- and organizational-level factors that contribute to therapist distress and may help guide effective prevention and mitigation efforts for clinicians.

If you have any questions regarding this study, please contact me at gulinsl@vcu.edu or my dissertation advisor, Dr. Scott Vrana, at srvrana@vcu.edu.

Thank you for your time and consideration.

Shaina Gulin, M.S.
Doctoral Candidate in Clinical Psychology
Virginia Commonwealth University

If you wish to participate in this study, please click the following link (or copy and paste the URL into your internet browser) https://redcap.vcu.edu/surveys/ then enter this code: 7LD4F4M8A. This access code is the same for every participant, and is required to protect the security of the questionnaires as a condition of questionnaire usage. It does not track your individual responses.

The following paragraph was posted on the Association for Behavioral and Cognitive Therapies (ABCT) Facebook page:

Hello! You are invited to participate in my doctoral dissertation study, Predictors of Vicarious Traumatization Among Trauma Clinicians and General Mental Health Providers: A Comparison, which aims to investigate the effects of therapy provision on the therapist. The IRB-approved study consists of several anonymous questionnaires and will take between 30 and 40 minutes to complete. You are eligible to participate if you are at least 18 years of age, work as a mental health professional, and have obtained a Bachelor's degree. You must also have at least one year providing direct professional mental health services. Graduate students are eligible to participate. Following completion of the survey, you may enter a raffle for a chance to win a $25 Amazon.com gift card. To access the survey, please go to this link https://redcap.vcu.edu/surveys/?s=4MM49CANF9 then enter this code: 7LD4F4M8A. This access code is the same for every participant, and is required to protect the security of the questionnaires as a condition of questionnaire usage. It does not track your individual responses. For more information, please contact me at gulinsl@vcu.edu. Thank you!

Vita

Shaina Gulin was born on January 13, 1987 in Baltimore, Maryland. She graduated *cum laude* from the University of Maryland College Park in May 2009 with a Bachelor of Arts in Psychology and Criminology and Criminal Justice. She then worked for two years as a psychology technician at the Behavioral Health Lab of the Philadelphia Veterans Affairs Medical Center. Shaina earned her Master of Science degree in Clinical Psychology in 2014 from Virginia Commonwealth University in Richmond, Virginia. She completed a clinical internship at University of North Carolina Chapel Hill School of Medicine in August 2017 and will graduate with her doctorate in clinical psychology in December 2017.