

Relationships among Resilience, Trauma Scientific Knowledge,  
Perceived Competence to Treat and Emotional Competence toward  
Complex Trauma Cases among Mental Health Trainees

By

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RELATIONSHIPS AMONG RESILIENCE, TRAUMA SCIENTIFIC KNOWLEDGE,  
PERCEIVED COMPETENCE TO TREAT AND  
EMOTIONAL COMPETENCE TOWARD COMPLEX TRAUMA CASES AMONG MENTAL  
HEALTH TRAINEES

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### **Abstract**

Most individuals seeking mental health services have experienced trauma. The experience of trauma is complex and mental health trainees are often unprepared for this complexity putting them at risk for burnout and secondary trauma. The American Psychological Association recently approved the Guidelines for Trauma Competence in Education and Training. The current study findings are important for the development of training programs to enhance trauma related competency. This study used a correlational design to explore resilience, trauma scientific knowledge with trauma specific self-efficacy and emotional competence to cope with secondary trauma experiences toward a case scenario of complex trauma. Participants were 162 graduate level, enrolled, counseling and clinical psychology trainees. Resilience, trauma scientific knowledge with trauma specific self-efficacy and emotional competence were measured by the 10 Item Connor-Davidson Resilience Scale (CD-RISC 10) (Campbell-Sills & Stein, 2007), Trauma Scientific Knowledge scale (TSK) (developed based on APA guidelines, 2015), Task Specific Self-Efficacy Scale (TSSE) (adapted from the TEM; Hoyt et al., 2010), and the Secondary Trauma Self-Efficacy Scale (Cieslak et al., 2013), respectively. Hierarchical regression analyses were conducted controlling for demographic variable age and reports of trauma related training. T-tests were conducted to determine differences in trauma specific self-efficacy and emotional competence based on reports of trauma training. Findings of this study indicate that, when controlling for age and trauma training, resilience and trauma scientific knowledge explain a significant amount of variance in trauma specific self-efficacy and emotional competence, trauma related training makes a difference in trauma specific self-efficacy and emotional competence, and there is a significant relationship among resilience, trauma scientific knowledge, trauma specific self-efficacy and emotional competence.

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## **Chapter I**

### **Introduction**

The experience of trauma is prevalent and often complex (Courtois, 2002; Subica et al., 2012). In fact, well over half of the general population will experience some form of trauma throughout their lifespan (Courtois, 2002). Trauma can be a result of physical, emotional, social, or sexual abuse, neglect, witnessing or experiencing life threatening events related to violence, natural disasters, manmade disasters, among others (De Bellis & Van Dillen, 2005, & Courtois & Gold, 2009). One's experience of trauma may be limited to a single event, but some people may experience multiple incidents of trauma over the lifespan that can result in complex trauma (Courtois, 2002; Subica et al., 2012). Individuals having trauma experiences and subsequent traumatic stress are at risk of multiple adverse outcomes (Courtois, 2002; Chinitz et al 2011; De Bellis & Van Dillen, 2005, Pratchett & Yehuda, 2011). The negative effects of trauma can be life long and can effect one's cognitive, emotional, interpersonal, physiological, and spiritual development (Courtois, 2002; Chinitz et al 2011; De Bellis & Van Dillen, 2005, & Pratchett & Yehuda, 2011). Helping professionals are often positioned to help individuals decrease the negative impact of trauma and help them reach their ultimate developmental and experiential potential. However, not all helping professionals in this position can assist. Specific competencies and preparations related to trauma work are required of those who work with clients with trauma, and without them they could inadvertently re-traumatize, or exacerbate clients' symptomology and experiences of trauma (Courtois, 2002).

One of the uniquely challenging aspects of working with clients with extensive trauma is the emotional toll it may have on the helping professional. It is natural for helping professionals to experience emotions when working with clients and these emotions may, in fact, elevate

helping skills to increase professional engagement with clients. However, some reactive emotions, if unregulated, could potentially affect the professional's objectivity in understanding the client. Thus it is crucial for professionals to regulate their mental state (Chouliara, Hutchinson, & Karatzias, 2009; Cohen & Collens, 2013). Further, when working with clients who are experiencing the symptomology and multifaceted effects of trauma, professionals have an increased risk of stress responses (Bell, 2003). Research shows that there is a likelihood that helping professionals experience frustration toward their client, job, or career as a result of working with complex trauma cases (Courtois, 2002; Chouliara, Hutchinson, & Karatzias, 2009). Similarly, when exposed to their clients' traumatic stories, professionals may relate their own thoughts and emotions to those stories. As such, they may experience their own mental, physical, and interpersonal health issues and experience burnout, even vicarious or secondary traumatization (Deighton, Gurriss, & Traue, 2007; Cohen & Collens, 2013). Due to such challenges, professionals who work with trauma cases would need competencies not only in helping clients deal with trauma, but also in managing their own emotional experiences. Specifically, competent professionals for trauma work would need to acquire knowledge and skills in working with trauma cases and develop trauma specific self-efficacy. Moreover, they need to develop emotional competence to cope with any secondary trauma experiences.

The present study will examine several possible contributors to the development of these competencies. In the literature of trauma work, resilience is often discussed as an important personal quality of helping professionals that contributes to their effectiveness in working with trauma cases. Research has shown that workers in high stress environments fair better due to their resilience (Gillespie et al., 2007). Resilient individuals have efficacy to approach tasks with the belief in their ability to succeed, adapt to difficulties, and persist in the face of challenges

(Bandura, 1993; Lambert & Lawson, 2013). Those with specific knowledge toward an area of work are more likely to display competence in their ability to engage in work related tasks (Epstein & Hundert, 2002). In working with complex trauma cases, resilience and trauma scientific knowledge likely would be predictive of helping professionals' trauma specific self-efficacy, and emotional competence to cope with secondary trauma experiences.

**Trauma Scientific Knowledge (TSK).** One of the most important competencies for working with trauma cases is no doubt the overall knowledge of trauma (Courtois, 2002). Professionals who have sufficient knowledge in the identification and effects of client trauma may understand clients who have traumatic stress responses accurately and provide needed care effectively. Moreover, this knowledge may also be predictive of providers' trauma specific self-efficacy and emotional competence to cope with secondary trauma experiences (Bandura, 1989).

APA Division 56 (Trauma Psychology) established a basis of trauma specific knowledge and competency recommendations (Courtois, 2002; Courtois & Gold, 2009; Cook & Newman, 2014). These competencies were approved at the 2015 American Psychological Association National Conference and published in the Guidelines on Trauma Competencies for Education and Training (APA, 2015). The competencies related to trauma scientific knowledge (TSK) are the focus of the current study.

**Resilience.** Resilience is an adaptive process that enhances coping and allows one to flexibly respond to their environment (Block & Kremen, 1996). A resilient individual is particularly able to adapt to difficult or stressful situations. Further, one's experience of resilience is developed over the lifespan and relates to the way in which one participates and engages multiple realms of their life (Greene, Galambos, and Lee, 2004). Individuals experience resilience physiologically, emotionally, as well as cognitively. A resilient individual is able to

experience the intensity of emotions related to adverse experiences and then return to a state of affective equilibrium (Block & Kremen, 1996, p. 351; Reynaud et al., 2013). They are better able to maintain appropriate emotional boundaries by engaging in empathetic concern rather than distress responses when working with their clients (Kinman & Grant, 2011). In the employment setting, resilience is related to professional/ task specific competency, as well as the ability to cope or manage affective reactions (Gillespie, Chaboyer, Wallis, & Grimbeek, 2007). Resilient mental health professionals are more likely to find satisfaction and meaning in the work they do (Matos et al., 2010). Those with increased resilience may be more likely to persevere despite the challenge (Bandura, 1989).

**Trauma Specific Self-Efficacy (TSSE).** Trauma specific self-efficacy (TSSE) involves developing a set of information, techniques, and values related to this particular area of helping. Further TSSE, is a type of self-efficacy involving one's belief in their ability to engage in trauma specific work related duties (Warrener, Postmus, & McMahon, 2013). As a helping professional develops TSSE to provide treatment and care, they experience increased motivation to engage in related therapeutic tasks, and this likely effects both therapist and client outcomes (Tompkins 2013). Professionals lacking trauma-specific techniques are likely to feel less efficacious in the work they do and this may lead to increased vulnerability to experience stress, burnout, and potential secondary trauma (Courtois, 2002).

**Emotional Competence (ECST).** The ability to cope with responses to client presentation of trauma, emotional competence to cope with secondary trauma symptoms (ECST), is of importance to the helping professional (Courtois, 2002; Kinman & Grant, 2011; Tompkins 2013). More experienced, knowledgeable professionals may have the ability to prepare in advance to regulate difficult emotional responses to the work they do (Way et al,

2004). Therefore, when exposed to client trauma they are more likely to display the ability to maintain appropriate emotional boundaries (Kinman & Grant, 2011), better manage core affect responses to their clients' histories of trauma, and recognize their own need to engage in self-care activities (Tompkins 2013). Professionals lacking in ECST may have increased vulnerability to experience stress, burnout, and potential secondary trauma (Courtois, 2002). The adverse experience of secondary trauma is not exclusive to the professional who is unaware of the prevalence, symptomology, and treatment of trauma; instead it is a possible outcome for all helpers. As such, professionals are in need of the skills to have ECST.

In sum, this study explores the relationship between resilience, trauma scientific knowledge (TSK), trauma specific self-efficacy (TSSE), and emotional competence to cope with secondary trauma experiences (ECST). Using a correlational design and a survey method, participants' resilience, TSK, TSSE, and ECST were measured while controlling for self-reports of trauma specific related training. Psychology students seeking graduate level counseling or clinical psychology degrees were recruited to participate in the study. Some of their demographics (e.g., gender, race, age, etc.) were taken into consideration in preliminary data analysis. The study results provide information for competency development of trauma work and training.

## Chapter II

### Review of Literature

#### **The Prevalence of Trauma**

The experience of trauma and subsequent traumatic stress is common. There have been numerous statements regarding the prevalence and detrimental effects to individuals' wellbeing. The National Council on Behavioral Health (NCBH, 2013) reports, "trauma is a near universal experience of individuals with behavioral health problems". Courtois (2002) summarized studies reporting the general prevalence of a trauma experience and found the percentage of lifetime exposure to trauma ranged from 69-72%. Subica et al. (2012) studied individuals with severe mental illness and found that 89% of study participants reported experiencing some form of trauma. Many of the participants in Subica et al. (2012) also had a comorbid diagnosis of PTSD.

**The complexity of trauma.** Trauma and trauma responses are complex. Trauma can be related to several types of events such as physical, sexual, and/or institutional abuse, neglect, natural disasters, war, oppression, as well as grief and loss (De Bellis & Van Dillen, 2005, & Courtois & Gold, 2009). The experience of trauma can impact many facets of one's life: damaging one's relationship with self and others, evoking a multitude of emotions such as shame, rage, isolation, and guilt, altering spiritual perspectives, and ultimately dehumanizing the individual (National Child Traumatic Stress Network). Additionally, the experience of trauma may involve one event or multiple compounding events over time, may involve the actions of a trusted individual or system, and may lead to a decreased sense of safety and well-being (Courtois 2002, National Child Traumatic Stress Network). Symptoms of trauma are multifaceted and may include cognitive, emotional, social, behavioral, and biological responses (Courtois, 2002; Chinitz et al 2011; De Bellis & Van Dillen, 2005, & Pratchett & Yehuda, 2011).

## **Trauma Care Professional Competencies**

Professional competence is used as a guideline for the accreditation of educational institutions that train future professionals (Rubin et al, 2007). As such, components of professional competencies function to formulate standards for program curriculum and training goals. Knowledge is a vital element in this process of defining training programs, credentialing requirements, and professional expectations related to a field. Students and trainees seeking to become licensed in a profession are expected to have exposure to coursework that enhances the knowledge base related to professional competencies. (Rubin et al., 2007).

Specific knowledge builds the underlying core of a competency (Kaslow, 2004). This component assists in setting the boundaries of what is expected, is defined by experts, is usable in multiple professional settings, and outlines practical expectations of individuals' behaviors in the field. Knowledge components allow for ongoing evaluation and the assessment of a professional's abilities to perform as expected in the field (Stratford, 1994; Kaslow, 2004; Rubin et al., 2007). Further, the knowledge related to a specific competency provides a tangible feature of competence and leads to observable, measurable behaviors for assessment of one's skills. A competent individual has knowledge, gained through their educational and training experiences, that informs behaviors related to the profession (Tzeng, 2004). Helping professionals in many cases are not afforded the educational training necessary to develop knowledge to provide care to cases involving complex trauma (Courtois, 2002; Courtois & Gold, 2009). Additionally, in the helping professions, workers are often faced with cases involving complex trauma and they may not always be aware that this underlying cause is related to the presenting problem (Courtois, 2002).

## **Resilience and the Helping Professional**

Greene, Galambos, and Lee (2004) conducted an extensive review of the literature surrounding the construct of resilience. Their review resulted in a comprehensive list of the theoretical assumptions of resilience. Resilience is a quality that is related to and engages the biological, psychological, social, and spiritual self, affects the way one engages in their environment throughout one's lifespan, enhances relationships, and is influenced by cultural factors (Greene et al., 2004; Bonanno, 2005). Further, resilience is related to the way one copes and adapts to stressful, antagonistic, or unfavorable aspects of their experiences and involves the ability to complete the activities one engages (Greene et al., 2004). It is the capacity for "adaptive flexibility" that distinguishes those who are resilient in the face of adversity (Bonanno, 2005, p.136).

Multiple researchers have sought to capture and measure resilience (Wagnild & Young, 1988; Connor-Davidson, 2003; Campbell-Sills and Stein; 2007; Burns and Anstey; 2010; Hardy et al., 2010). Developers of the Connor-Davidson Resilience Scale (CD-RISC) defined resilience as having the ability to adapt, cope, and thrive when experiencing adversity or stress (Campbell-Sills and Stein; 2007; Burns and Anstey; 2010). Campbell-Sills established the validity of a shorter, 10-item version of this scale (2007).

Resilient helping professionals may better navigate the stressors related to the work they do. The helping professional is exposed to the worries and life hardships of their clients (Courtois, 2002). Additionally, they are managing the day-to-day stressors in their own life. Resilience is a characteristic that may buffer the impact of the work they do and help them better manage difficult emotions and challenges naturally related to their professional role. The ability to quantify the characteristic of resilience affords researchers the opportunity to understand the

predictive relationship of resilience to the activities that the professional engages and that decrease risk for burnout and/or attrition.

### **Trauma Scientific Knowledge (TSK) and the Helping Professional**

Competent professionals have engaged in training activities to enhance the knowledge related to their professions (Epstein & Hundert, 2002). Knowledge can impact the professional's engagement in challenging situations (Tzeng, 2004; Rubin et al, 2007). Knowledge development helps enhance the ability to identify client trauma and, in turn, provide appropriate care (Courtois, 2002). A professional lacking in TSK is at risk to experience adverse responses in their interactions with clients. These professionals may experience burnout, and in turn, inadvertently provide care that does not benefit or is harmful to their client (Courtois, 2002; Courtois and Gold, 2009). The amount of training and subsequent TSK of helping professionals impacts their potential for experiences of secondary trauma and vicarious traumatization (Adams & Riggs, 2008).

Kinman and Grant (2011) posited that there is value in incorporating interventions and curriculum that will enhance the knowledge, and in turn specific efficacy, needed to develop emotional and social competencies to manage secondary trauma in helping professional trainees. It is important for supervisors, as they provide training, to develop trainees' knowledge and to monitor students for ineffective regulation of distress. Professionals in the field are supportive of the enhancement of training programs in the area of trauma and believe it may decrease the negative emotional impact of this work (Greene et al., 2011). Further, professionals, without the necessary TSK experience frustration as well as guilt, helplessness, anger, and fatigue which then impacts those in their care (Courtois, 2002; Greene et al., 2011).

Resilience is enhanced by professional knowledge; therefore, knowledge, when paired with resilience, is likely to have an impact on task specific-self efficacy (Bandura, 1989; Gillespie et al, 2007) such as efficacy to provide care to cases of complex trauma. Professionals and trainees, having learned the knowledge and skills used to build a specific competence, are likely to have an enhanced sense of self-efficacy to engage in related activities (Bandura, 1977; Bandura, 1989; Bandura, 1993). As a result, ones' feelings, thoughts, and level of motivation to act in ways utilizing the knowledge and skills are affected (Bandura, 1993).

Development of specific knowledge enhances specific efficacy (such as that related to trauma and emotional competence) (Warrener et al., 2013). Those with increased levels of self-efficacy use TSK to elevate their engagement in task specific self-efficacy (Bandura, 1989; Gardener et al., 2007; Tompkins, 2013). Individuals with increased self-efficacy that also have TSK are likely to have increased belief in their ability to regulate emotion, have TSSE, and to engage in activities related to ECST.

TSK increases belief in capability (Davis & Hase, 1999). In their study of nurse practitioners, Gardener et al. (2007) found that professionals described capability as the knowledge of how to learn, be creative, and to apply information in new as well as familiar settings. Capable professionals were motivated to expand the basic knowledge acquired through training and are motivated to use and expand upon this information in the field. Further, because these individuals have a high level of self-efficacy they tend to believe in their ability to engage in behaviors based in their knowledge and to be effective in specific tasks (Gardener et al., (2007). Therefore, those who believe they have mastered the knowledge related to a task are likely to endorse higher levels of self-efficacy.

Providing training designed to increase knowledge will likely increase a trainee's sense of efficacy in the completion of a task (Bandura, 1997; Walser, et al, 2013). Further, one develops a sense of specific efficacy through the attainment of knowledge through several sources including observation and successful performance of tasks (Bandura, 1977). The goal of training programs is to provide the knowledge necessary to be a competent professional. Further, professionals must have efficacy to capably implement their knowledge in a manner that demonstrates a competent understanding (Gardener et al., 2007).

**Adverse impact of trauma care on service providers.** Helping professionals are often working in situations where they are exposed to potentially difficult and adverse situations, such as client trauma. Professionals may not be aware they are providing care to individuals who have experienced trauma as often the traumatic event(s) is not the identified concern (Courtois, 2002; Gold, 2008; Subica et al, 2012). Further, they may be aware of the trauma but lacking in skill to provide care or manage their own reactions.

Counselors described working with cases involving family violence as stressful, frustrating, and overwhelming (Courtois, 2002; Bell, 2003; Cohen and Collens, 2013). This work can have both a positive and negative impact on those in the helping professions. Through their exposure to client trauma, helping professionals gain a unique perspective of the world. This perspective may be skewed negatively if they are unable to understand the nature of traumatic experiences, reflect on the positives in their own lives, or to see the strengths of their clients despite the client's past or current traumatic life happenings (Bell, 2003).

Helping professionals are at risk of adverse experiences that can lead to the development of burnout (Chow, 2013). Zander et al. (2010) found that pediatric oncology nurses, with increased ability to regulate responses to stress related to their work, had decreased experiences

of burnout. They posited, “with experience brings time and reflective practice, which both contribute to nurse’s ability to develop strategies to deal with workplace stressors” (Zander et al., 2010, p. 98). Retention of psychiatric nurses, like in many other helping professions, is of concern due to high stress and experiences of burnout.

Exposure to clients’ stories of trauma can alter the way those in the helping professions view the world, and in turn increase their risk for vicarious, or secondary, trauma (Branson, Weigand, & Keller, 2013). The affective experience of death anxiety by social workers providing service in the field of death, dying, and bereavement is an example of the potentiality of secondary trauma experiences. Social workers in these practice settings “face excessive emotional challenges brought about by the vast number of deaths and the intense emotions” of those they serve (p. 374). Choliara, Hutchison, and Karatzias (2009) found, in their systematic review of the literature, multiple studies report high rates of adverse emotional responses linked to secondary trauma after working with childhood sexual abuse. As a result of exposure to client trauma, professionals are at risk for secondary traumatization (Chow, 2013) that can impact their professional and personal lives (Branson, Weigand, & Keller, 2013).

**Trauma specific competencies.** Competent professionals utilize knowledge, skills, and values related to their professions (Epstein & Hundert, 2002). In the helping professions, self-efficacy to provide trauma specific care (TSSE) and emotional competence (ESCT) represent two trauma specific professional competencies (Courtois, 2002; Courtois & Gold, 2009). Possessing the qualities that underlie the knowledge, skills, and values necessary to demonstrate these competencies may increase protective factors and, in turn, increasing the wellbeing of professionals providing care to those with trauma histories (Kinman & Grant, 2011). APA

(2015) recently approved trauma specific competency guidelines for the education and training of psychology professionals.

### **Self-Efficacy**

*Trauma specific self-efficacy (TSSE)*. Self-efficacy is the belief one has in their ability to complete the actions required of specific tasks (Bandura, 1977; Bandura, 1986; Bandura 1989; Bandura, 1997). “The stronger the belief in [one’s] capabilities, the greater and more persistent are their efforts” (Bandura, 1989, p. 730). Self-efficacy is developed via multiple sources including, mastery experiences, vicarious learning, verbal persuasion, and through one’s physiological and affective states (Bandura, 1997). Mastery experiences are the strongest source of self-efficacy development. This learning occurs as one performs the actions necessary to successfully navigate the challenges of a task. The key elements of this process include, approaching, appraising one’s ability to engage, and performing the actions related to the task. Failure to successfully complete the task can lead to a lessor experience of self-efficacy. The appraisal process involves an evaluation of the knowledge one has previously been exposed and the skillsets one has in their personal repertoire (Bandura, 1997).

The second method of developing self-efficacy is through vicarious learning. An individual’s vicarious learning experiences provide information that is used to form appraisals of situations (Bandura, 1997). Vicarious learning occurs when one is exposed to modeled behavior as well as to the actions and successes of others. The individuals use this information to gauge their own ability to approach and successfully perform the same task. In most cases, individuals compare their own ability to others of like status (e.g. students to their peers, professional to equivalent professional). However, other times, the individual may compare themselves to others with more advanced abilities (e.g. student to teacher). This can be affective as long as the

individual is cognizant of the difference and more so the likelihood that their performance will involve a series of successive approximations to complete the challenges related to the task. Self-efficacy can be continually enhanced through this method of observed learning (Bandura, 1997).

The third way individuals develop self-efficacy is through verbal persuasion. Verbal persuasion occurs when one individual expresses their belief in another's ability to complete a task (Bandura, 1997). In many cases, this process energizes an individual to attempt and put forth a greater effort to persevere the challenges related to the task. Others' verbal persuasions provide the confidence that the individual may be lacking and it can develop an internal voice of support to overcome self-doubt. As a tool to energize action, verbal persuasion encourages task engagement, determination, and can result in a mastery experience. In turn, the individual will have an additional source of self-efficacy enhancement (Bandura, 1997).

A final way to enhance self-efficacy is through physiological and affective experiences. People receive a multitude of feedback from their physiological and affective experiences (Bandura, 1997). Activation of the autonomic nervous system due to highly stressful occurrences may dissuade an individual from engaging in a task. Further, if an individual perceives a task as overly taxing or beyond their physical limitations they may be deterred from action. Physiological and affective experiences can also cue an individual in to efficacy to engage and complete a task. A state of arousal may sharpen one's senses and, as such, the individual may feel efficacious to engage a task that may have seemed daunting at a lower level of arousal (e.g. engage in a physical fight) (Bandura, 1997).

The helping professional benefits from an overall sense of self-efficacy and this quality is likely to affect not only the work they do but also their approach to skill development, motivation to attempt challenge, and willingness to build success toward a more advanced skill

(Bandura, 1977; 1989; 1993). Efficacious professionals are likely to read their affective and physiological experiences and use that information to recognize limits and/or to enhance their engagement in an activity. They will be able to generalize mastery experiences to the work they do and as such have increased efficacy in the skills needed to provide care to others.

Bandura (1993, p. 119) stated “there is a marked difference between possessing knowledge and skills and being able to use them well under taxing conditions”. When faced with cases of trauma, one’s sense of efficacy to provide care is vulnerable and over time the insecurity related to this work may lead to lower levels of professional motivation to provide related services (Bandura, 2000). The concept of professional efficacy is a specific type of self-efficacy. “It [professional efficacy] is a measure of confidence specific to one’s professional work and the ability to complete work related activities” (Warrener, Postmus, & McMahon, 2013, p. 195). One’s perception of professional efficacy can vary between the professional activities one performs or may perform based on the definition of their field (Warrener et al, 2013). For the purposes of this study, I will be exploring trauma specific self-efficacy (TSSE) in the helping professions.

Miklosi et al. (2013) explored the interaction of parental self-efficacy, a type of specific efficacy, in parental anxiety responses to the adverse experience of a child’s surgery. Of concern is the parents’ ability to engage in the parental behaviors that are appropriate for the situation while experiencing adverse emotional reactions such as anxiety, fear, and stress. Their findings suggest that specific parental self-efficacy “was significantly associated with lower anxiety” (Miklosi et al, 2013, p.467). This is similar to TSSE on the part of the helping professional. It is imperative that professionals engage in appropriate helping skills and techniques despite the

adverse emotions they are experiencing. Understanding the predictors of this type of efficacy is of importance to the helping professions (Knox, Pelletier, & Viet, 2014).

Warrener et al. (2013) conducted a study to determine the relationship between trauma specific self-efficacy and the ability to screen for clients' experiences of domestic violence. They sought to determine the effect of specific education, training, and task specific (professional) efficacy. Findings suggested that those with increased task specific efficacy were more likely to screen clients for domestic violence. Further, the variable that appeared to have the greatest impact on participants' level of trauma specific self-efficacy (TSSE) was exposure to knowledge related to domestic violence through formal education, training, and professional experiences. Warrener et al. (2013) suggested that it is not ideal to expect students to attain their only training into domestic violence issues (an area of trauma) after entering the professional field. Instead, there is value in requiring related coursework during the student's formal educational training. They stated that this "finding furthers the argument that education and training specific to the area of violence against women" is important in the preparation of students (Warrener et al., 2013, p. 202).

The enhanced abilities "to more effectively prevent, identify, and respond to child maltreatment" led to increases in participants' TSSE to recognize and report child maltreatment (Knox, Pelletier, & Viet, 2014; p. 132). Mental health workers without adequate training are prone to error. They may misdiagnose trauma as a different psychological disorder and inadequately treat symptoms of trauma (Courtois, 2002; Courtois & Gold, 2009). They may conceptualize the experience of trauma using information that does not "reflect the planning, structure, comprehensiveness, and supervised practice that are the hallmarks of an organized professional training program" (Courtois & Gold, 2009 p. 4) or they may not realize they are

providing services to individuals having a trauma reaction (Cook et al., 2011). This lack of awareness can negatively impact professionals, ultimately, putting them at risk for burnout or other adverse outcomes such as secondary trauma.

*Resilience as a predictor of trauma specific self-efficacy.* Resilient individuals engage the challenges related to knowledge development (Peng et al., 2014). They actively reflect on experiences, may be more hopeful, and able to adjust to difficulties in the work they do (Greene et al., 2004; Bonanno, 2005; Gillespie et al., 2007). Increased resilience may lead to an increase in one's belief in their ability to provide care to clients who have experienced trauma (TSSE) (Lambert & Lawson, 2013). Peng et al. (2014) posited that enhanced resilience is predictive of increased beliefs in specific work related self-efficacy, such as TSSE.

*Knowledge and self-efficacy.* In supervision, trainees who are experiencing lower task specific self-efficacy may be less likely to express their doubts about their abilities to engage in treatment processes and may be reluctant to seek additional knowledge (Tompkins, 2013). Further, when learning to provide treatment to clients who have trauma experiences, providers may be unwilling to reach out to supervisors and trainers to develop new knowledge of TSSE. Therefore, it is less likely the individual will develop TSSE. They may avoid learning and using new interventions or modifying known interventions in creative ways (Tompkins, 2013).

*Emotional competence (ECST).* The term emotional competence is used to represent the efficacy to cope with secondary trauma experiences. The ability to plan and consciously use skills, or to demonstrate emotional competence, and to manage the impact of secondary trauma is of value in the helping professions (ECST) (Greene et al., 2011). ECST involves belief in the ability to manage emotional responses, find meaning, and to control distressing thoughts related to client trauma. Further, it involves the ability to support clients, manage thoughts about

inability to continue working with client trauma, and to reach out for personal help when necessary (Cieslak et al., 2013).

Helping professionals who demonstrate ECST are likely to have greater levels of work satisfaction, potential for posttraumatic growth, and may better serve their clients (Lambert & Lawson, 2013). “To be effective with clients, counselors must be aware of their own reactions and work to maintain an optimal wellness level” (p. 266). A helping professional’s ECST may decrease mental health workers risk of secondary trauma (Bell, 2003; Cohen & Collens, 2013). When faced with cases of trauma, one may feel vulnerable and insecure, which may lead to decreased belief in one’s ability to address secondary trauma reactions. Uncertain and stressful situations, such as providing care to those with trauma histories, can affect an individual’s confidence in their ability to use information and skills to influence their affective and emotional response (Bandura, 1977; Bandura and Adams, 1977; Bandura, 1989; Miklosi et al., 2013). The ability to recognize a client’s experience of trauma and to feel competent to manage one’s personal responses decreases risk for burnout and distress (Deighton, Gurriss, & Traue, 2007). Chow (2013) implemented an intervention designed with the intent of increasing social workers ECST in end of life care. Her findings suggest that engagement in emotional competency training increased a sense of life meaning and realistic versus detrimental experiences of death anxiety and subsequent secondary trauma.

*Resilience as a predictor of emotional competence (ECST).* Those with resilience are more likely to have more developed skillsets to engage in the emotional competencies needed to manage the secondary trauma responses (Kinman & Grant; 2011). For example, a resilient professional is aware of and able to manage stress and frustration to the treatment of individuals with traumatic stress (Garrosa & Moreno-Jimenez, 2013). They may be able to explore and find

personal meaning in their clients' experiences of trauma, engage in adaptive behavioral actions (Gross & Thompson, 2007; Tugade & Fredrickson, 2007), and are better able to access positive memories when experiencing difficult situations (Gross & Thompson, 2007; Philippe et al., 2009). They actively reflect on their self-care practices that increase their potential experiences of posttraumatic growth rather than burnout and attrition related to unresolved secondary trauma (Lambert and Lawson, 2013). Resilient trainees, in the helping professions, may better reflect on their cognitive and emotional experiences to the work they do and, as such, have better psychological health (Zander, Hutton, & King, 2010; Kinman & Grant, 2011). As resilience is enhanced, one expects to see an increase in ECST (Peng et al., 2014). Peng et al. (2014) implemented the Pennsylvania resilience-training program with Chinese medical students. Their findings provided evidence that the enhancement of resilience predicts students' ability to engage in behaviors such as optimistic thinking, problem solving, cognitive reappraisal, and self-care (Peng et al., 2014), which are indicative of ECST.

### **Areas of Development for the Field**

**Understanding how to best train helping professionals.** There is a need to better understand the factors that improve helping professionals' skills to work with clients' trauma without experiencing burnout, unresolved secondary trauma, or risk for attrition. Courtois (2002) provides an in-depth review of the complexity of trauma and the lack of preparedness of the developing helping professional. Understanding the factors related to a competence in trauma is necessary not only for the client but for those who provide care (Courtois, 2002; Gold, 2008; Courtois & Gold, 2009, & Baker, 2012). Unfortunately, attention has not been directed toward the prevalence of trauma, therefore the attention of training programs has not been focused on the enhancement of knowledge and competency in this area. It is important to understand the

impact trauma training and knowledge has on those providing care to clients with trauma. This information may provide further understanding of how to decrease experiences of vicarious and secondary traumatization in helping professionals (Courtois, 2002; Courtois & Gold, 2009; Greene et al. 2011).

Understanding the relationships between resilience, TSK, TSSE, and ECST will benefit the helping professions (Ashby et al., 2013). Helping professionals who are resilient are likely to experience increased job satisfaction (Matos et al, 2010; Lambert and Lawson, 2013; Peng et al., 2014). Matos et al (2010) stated meaning of life and self-esteem, as two aspects of resilience, were valuable in understanding work satisfaction. Matos et al. (2010) measured participant psychiatric nurses' resilience and work satisfaction to understand the relationship. They found a positive correlation between the two variables with a medium effect size of 0.3. This relationship is informational and future research is warranted as it may assist in the development of training programs. Professionals' posttraumatic growth is demonstrative of a resilient response to the stress of providing care to clients with trauma histories (Lambert and Lawson, 2013). Better understanding of the individual characteristics that predict this relationship is of value to the helping fields.

Chouliara et al. (2009) posited that level of experience may impact ones' risk of developing vicarious trauma or emotional exhaustion. TSSE is developed and enhanced through task accomplishment, vicarious learning, through the influence of others knowledge, and through interpretation of one's physiological responses such as anxiety (Bandura, 1977; Bandura & Adams, 1977; Bandura, 1989; Bandura, 1997; Tompkins, 2013). Graduate education programs provide a multitude of experiences that offer opportunities to enhance self-efficacy in their ability to perform actions related to the knowledge of their field (Fouad et al, 2009; Rubin et al,

2007; Kaslow et al, 2009). Students with lower levels of task specific self-efficacy tend to have difficulty demonstrating the understanding of the knowledge related to their academic program, and, as such, may be prone to the experience of achievement anxiety (Bandura, 1993). Further research into these topics, as related to trauma care and mental health trainees is important in the development of a trauma competency.

### **Statement of the Problem**

It is clear that trainees of mental health fields are not adequately prepared for working with trauma related concerns effectively. Some areas of concern regarding these inadequacies include a need to understand relationships among resilience, trauma scientific knowledge (TSK), trauma specific self-efficacy (TSSE) and emotional competence to cope with secondary traumatic experiences (ECST). A good understanding of these relationships is needed to inform training efforts in this area as programs move toward increased trauma related competencies.

### **Research Questions**

The following research questions guided this study.

**Research Question 1.** How are resilience and trauma scientific knowledge (TSK) related to trauma specific self-efficacy (TSSE) to provide complex trauma treatment?

**Research Question 2.** How are resilience and trauma scientific knowledge (TSK) related to emotional competence to cope with secondary trauma experiences (ECST) to complex trauma?

**Research Question 3.** Do individuals differ in trauma specific self-efficacy (TSSE) with or without trauma specific training (training status)?

**Research Question 4.** Do individuals differ in emotional competence to cope with secondary trauma experiences (ECST) with or without trauma specific training (training status)?

**Research Question 5.** Does trauma specific training (training status) moderate the relationship between resilience and trauma scientific knowledge (TSK) and the dependent variable trauma specific self-efficacy (TSSE) to provide complex trauma treatment?

**Research Question 5.** Does trauma specific training (training status) moderate the relationship between resilience and trauma scientific knowledge (TSK) and the dependent variable emotional competence to cope with secondary trauma experiences (ECST) to complex trauma?

**Research Question 6.** Does trauma specific training (training status) moderate the relationship between resilience and trauma scientific knowledge (TSK) and the dependent variable emotional competence to cope with secondary trauma experiences (ECST) to complex trauma?

## Chapter III

### Methods

#### Design

A correlational design was used to explore the relationship among mental health trainees' resilience, trauma scientific knowledge, trauma specific self-efficacy, and emotional competence to cope with secondary trauma experiences when facing a client with complex trauma.

Additionally, role or self-reported training was explored. Participants' resilience, trauma scientific knowledge, task specific self-efficacy, and emotional competence to cope with secondary trauma experiences, is measured by using paper-pencil instruments.

#### Participants

Participants for this study were currently enrolled graduate students in counseling or clinical psychology. An a priori power analysis was conducted to determine adequate sample size. No demographic variables were used to exclude participants.

#### Materials

##### *Measures*

**The Demographic Questionnaire.** Participants were asked to report information such as their gender, race, age, and training. A dropdown menu was provided for participants to select answers from for each of the variables. If "other" was selected in any of these menus, a text box was provided for clarification. See Appendix A.

**10 Item Connor-Davidson Resilience Scale (CD-RISC 10),** (Campbell-Sills & Stein, 2007). The 10 item Connor-Davidson Resilience Scale (CD-RISC) developed by Campbell-Sills and Stein (2007) from the original CD-RISC (Connor-Davidson, 2003) which defines resilience as a characteristic that enables individuals to thrive when experiencing adversity. Using both

confirmatory (CFA) and exploratory factor analyses (EFA), a single factor model was established,  $\chi^2(35)=93.77$ ,  $p < .001$ ; RMSEA = .056, 90% CI = .042-.069 with all 10-items loaded on resilience (items 1, 4, 6, 7, 8, 11, 14, 16, 17, and 19 were retained from the original 25). The scale uses a 5-Point Likert scale, 1) not true at all, 2) rarely true, 3) sometimes true, 4) often true, and 5) true nearly all of the time. The score from all items are summed for a total score (ranges from 5-50), with higher scores reflecting greater resilience.

The CD-RISC 10 was validated using a sample of 1743 participants who were undergraduates, both males and females. This version of the CD-RISC was comparable to the original CD-RISC (Connor-Davidson, 2003; Campbell-Sills & Stein, 2007) with acceptable levels of validity and reliability. The CD-RISC 10 was found to have high internal consistency, Cronbach's  $\alpha = 0.85$  (Campbell-Sills & Stein, 2007). Convergent validity was established using the Kobasa Hardiness Measure (Pearson  $r = 0.83$ ,  $p = .0001$ ) and the Sheehan Social Support Scale (Spearman  $r = .036$ ,  $p = .0001$ ). Further, when compared to the Sheehan Stress Vulnerability Scale and the Sheehan Disability Scale, negative correlations were found, Spearman  $r = .032$ ,  $p = .0001$  and Spearman  $r = 0.36$ ,  $p = .0001$ , respectively (Connor-Davidson, 2003). See Appendix B.

**Trauma Scientific Knowledge Survey (TSK).** A scale of Trauma Scientific Knowledge Survey (TSK) was developed by the author based on the approved Guidelines Trauma Competencies for Education and Training (APA, 2015), developed by APA Division 56 (Trauma Psychology) (Cook & Newman, 2014). Only the scientific knowledge competencies were included in the survey, resulting in 23 items (See Appendix C). Items were presented as statements and participants were asked to rate how true the statement is for their personal experience using a 7-point Likert type scale, 1) Never True, 2) Rarely True, 3) Sometimes but Infrequently True, 4) Neutral, 5) Sometimes True, 6) Usually True, and 7) Always True). The

score from all items are summed for a total score (ranging from 23-161), with higher scores representing higher levels of self-reported trauma scientific knowledge. Consultation regarding the development of the tool occurred with the president elect of APA Division 56 (Trauma Psychology) (August-September, 2015). Survey items were reviewed by this researcher's committee chair and a process of revision occurred. Face validity and reliability were addressed. Three currently enrolled practicum students were asked to complete the survey and respond anonymously to a series of questions involving this portion of the survey. See Appendix C.

**Case Scenarios.** One case scenario was prepared by the researcher and edited by a six active members of the American Psychological Association (APA). The case was written to describe an individual who has experienced complex trauma due to events, such as childhood abuse and adult domestic violence, across the lifespan. Reviewers included a licensed psychologist employed as the Training Director of a community mental health center, a psychology intern at a community mental health center, a psychology postdoctoral intern at a community mental health center, three currently doctoral students (these students were asked to review the entire survey and were asked questions regarding each section of the survey including the case scenario). Reviewers were asked to report their thoughts of the case. Some questions asked of the reviewers were: "Is the case believable", "Is this a case a graduate level psychology trainee may be assigned as a practicum level or intern level student", and "what is your emotional response to the case and is it manageable?" Reviewers also provided feedback related to basic editing of the document. See Appendix D.

**Trauma Specific Self-Efficacy (TSSE).** The TSSE is a revised version of the Task Efficacy Measure (TEM) used by Hoyt, Johnson, Murphy, and Skinnell (2010). The working of the items was revised to make it trauma specific. For instance the TEM item "I have confidence

in my ability to do this task” was altered to “I have confidence in my ability to provide therapy for trauma experiences” and the TEM item “Most people doing this leadership task can do it better than I can” was altered to “Most people doing therapy for trauma experiences can do it better than I can”. Prior to responding to these items participants were prompted with, “As you respond to the following items imagine Jamie [the client presented in the case scenario] has been assigned to your case load and you have 10 sessions to provide care. A 7- point Likert-type scale ranging from 1 (Strongly disagree) to 7 (Strongly agree) is used to record responses. Item 2 is reversed scored. A summed total score will be used with a high score representing a high level of trauma specific self-efficacy.

The authors of the TEM have claimed that the instrument possesses acceptable reliability and validity qualities based on the research originally developed by Ellis and Taylor (1983). The original scale had 10-items and was used to measure task-specific self-esteem in the job search context. Ellis and Taylor (1983) reported test-retest alphas of .82 and .83, and reported the task specific scores correlated at .69. Murphy altered the Ellis and Taylor (1983) version, and Murphy’s version was then used by Hoyt, Murphy, Halverson, and Watson (2003) to measure participants’ specific leadership self-efficacy. Hoyt et al. (2003) reported convergent and discriminant validity of the measure was established and reliability of the measure was found to range from .75-.86. Previous adaptations of the TEM have been used to measure self-efficacy in the job search process (Ellis and Taylor, 1983) and leadership self-efficacy (Hoyt et al., 2003). Based on the reliability and validity of previous adaptations of the original scale, the TSSE adaptation was appropriate for the current study. See Appendix E.

**Secondary Trauma Self-Efficacy Scale (STSE).** (Cieslak et al., 2013). This tool was used to measure emotional competence to cope with secondary trauma (ECST). Cieslak et al.

(2013) developed the STSE to capture ones' perceived ability to cope with challenges related to providing care to clients with trauma histories. Further, it is the aim of this scale to identify one's perceived ability to cope with secondary traumatic stress symptoms (ECST). The scale unidimensionally measures secondary trauma self-efficacy. Respondents are asked to rate how capable they are to deal with thoughts or feelings that occur (or may occur) as a result of working with people experiencing extreme or traumatic events. The scale includes 7 items (e.g. Find some meaning in what had happened to these people, Deal with thoughts that similar things may happen to me) and respondents provide answers using a 7-point scale ranging from 1) Very incapable to 7) Very capable, with a midpoint of 4) Neither incapable nor capable. Responses are summed and high scores represent a high level of belief in one's capability to deal with the thoughts and feelings that may occur when working with the described population.

The scale was developed through a multi-step process that included interviews with experts, reviewing measures of perceived ability to cope with exposure to trauma, forming a pool of potential items, and selecting items. Researchers conducted correlational analyses, principal component analysis, as well as confirmatory and exploratory factor analyses, among others. Internal consistency of the scale was reported with Cronbach  $\alpha = .88-.89$ . Test-retest reliability was reported as  $r(191) = .65, p < .001$  (Cieslak et al., 2013). See Appendix F.

## **Procedure**

In the subsequent section, study procedures are outlined. Procedures were approved the University of Kansas Institutional Review Board prior to the recruitment of participants and administration of the survey tool.

### **Pilot tests:**

The TSK items were developed by the author and based on the scientific knowledge competencies developed by APA Division 56 (Cook & Newman, 2014) and approved by APA (2015). The case scenario was written by the author and presented to several psychologists and trainees to establish validity, likelihood of case assignment to a trainee, and to determine that there was no undue emotional response to the material.

The final version of the survey tool used to conduct this research was piloted using three currently enrolled counseling psychology doctoral students in counseling psychology. These students were asked to respond to questions regarding time of administration and face validity of the variables assessed: Resilience (as measured by CD-RISC 10), Trauma Scientific Knowledge (TSK), Trauma Specific Self-Efficacy (TSSE), and Emotional Competence to cope with secondary trauma (ECST as measured by STSE). Responses supported face validity of the tool.

**Data collection:** The study was conducted using Qualtrics online survey. The content of the survey was shown in the following order 1) Participant Demographics 2) CD-RISC 10, 3) TSK, 4) Case-Scenario, 5) TSSE, and 6) STSE. The order of survey content was used to gather information about participants' resilience and TSK prior to exploring the items that required participants to reflect on the presented case scenario. The author identified graduate level psychology academic programs using a list of APA identified graduate level training programs. A list of program related contacts was developed via internet search of these programs. Email contacts were identified as program Training Directors, Program Directors, or otherwise in a role related to the training of students in their identified program. Email contacts were gathered and organized in a formal database. An email, including basic information about the study, information statement, and a link to the Qualtrics survey format was forwarded via Qualtrics

panel to the distribution list (including 267 email addresses). These mail contacts were asked to forward the link to currently enrolled students in their programs.

Next, self-selecting participants were provided informed consent. Once they consented they were prompted to complete the survey tool that was developed to measure the variables of resilience (as measured by the CD-RISC 10), TSK, TSSE to provide treatment to a presented scenario of complex trauma, and ECST (as measured by the STSE) to complex trauma.

Demographic questions were used to sort participants based on exclusionary criteria of currently enrolled graduate students in clinical and counseling psychology graduate level training program.

### **Data Analysis**

**Preliminary Analyses.** Prior to main data analyses, data were checked for any data entry errors. The author ran descriptive statistics to check for outliers. Once the data was cleaned and outliers removed, relevant statistical assumptions were evaluated. A linear relationship between the variables was confirmed via residual plots and using regression techniques. Correlational statistics were used to determine potential influences of gender, race, and other demographic variables. Significant correlations were used as controls in subsequent analyses. To determine homoscedasticity, the author examined the plot of the standardized residuals by the regression standardized predicted value. Once statistical assumptions were met by the data, researchers moved on to next steps in the data analysis.

**Main Analysis.** To answer research questions 1 and 2, two hierarchical (sequential) regression analyses were conducted with TSSE and ECST criterion variables respectively. Predictors were entered in sequential blocks. Block 1 was demographic variables that were controlled, Block 2 CD-RISC 10 and TSK, Block 3 were the interactions. To answer research questions 3 and 4 two independent t-tests with TSSE and ECST, were conducted after dividing

the sample into two groups one with and one without self-reported prior trauma related training experience. To answer questions 5, 6, hierarchical (sequential) regression analyses were conducted with TSSE and ECST criterion variables respectively. Predictors were entered in sequential blocks. Block 1 was any demographic variables that need to be controlled for, Block 2 was the predictor and trauma related training (training status), and Block 3 was the interactions

## **Chapter IV**

### **Results**

A-Priori power analysis was conducted to determine an adequate sample size (Cohen et al. 2003; Field, 2013; Soper, 2016). With a medium anticipated effect size of 0.15, a desired statistical power level of 0.8, a probability level of  $p = .05$ , and number of predictors 3, the results of the power analysis indicated a minimum sample size of 152. The data collection effort aimed at recruiting as many participants as possible, with 152 as the minimum, during a 3 month time period. The data collection stopped at a point of  $N=162$ .

#### *Data Cleaning*

The following steps were taken to exclude unfit data. Demographic variables related to enrollment status, type of graduate degree program, and identified professional specialties were reviewed and exclusionary criteria were applied. Subsequently, 7 cases were removed because participants reported not currently enrolled in a graduate psychology program, 7 cases were removed due to enrollment in a degree program other than Ph.D., Psy.D., or Master's Degree related to Clinical or Counseling Psychology (remaining participants report pursuing a Master's of Arts, MA). Those excluded reported seeking degrees M.Ed. ( $N=5$ ), Master's of Ed (M.Ed.)( $N=1$ ), Ed.S School of Psychology ( $N=1$ ). Five cases were excluded due to professional specialty not specifically identified as clinical or counseling psychology. Those excluded

reported seeking specialties in School Psychology (N=2), Rehabilitation Psychology (N= 1), Social Psychology (N =1), and Developmental Psychology (N=1). Researchers decided to limit the sample due to known differences associated with educational programs.

Statistical evaluations of multiple linear regression assumptions including independence of observation, linearity, homoscedasticity of residuals, were conducted for all major variables measured by scales. The two criterion variables were treatment specific self-efficacy (TSSE) and emotional competence to cope with secondary trauma experiences (ECST). The predictor variables were resilience (CD-RISC10) and trauma scientific knowledge (TSK).

An analysis of standard residuals was conducted on the data to identify outliers. Results indicated five outliers (cases 19, 45, 50, 126, 130) (TSSE, Std. Residual Min=-2.921, Std. Residual Max = 2.463; ECST, Std. Residual Min=-3.114, Std. Residual Max = 2.140). The assumption of independence of observation was met for TSSE, (Durbin-Watson value=1.733) and ECST (Durbin-Watson value=1.042). The assumption of no collinearity was met for criterion variables TSSE and ECST (Age, VIF=1.080; Reported Trauma Specific Training, VIF=1.258; CD-RISC10, VIF=1.213; TSK, VIF=1.221). Review of the histogram of standardized residuals indicated the data is approximately normally distributed. This assumption is supported by review of the normal P-P plot of standardized residuals showing the data to fall on or near the line. Review of the scatterplot of standardized predicted values revealed that the data met the assumptions of homogeneity of variance and linearity.

#### *Description of the Sample*

Participants were female (N=107), male (N= 22) and identified as other (Transgender) (N=2), currently enrolled, clinical and counseling psychology graduate students. Mean age was 28, with an age range of 21-48. They identified as white (N=97, 71%), Hispanic/Latino (N=13,

10%), Black or African American (N=10, 7%), Asian (N=8, 6%), American Indian or Alaska Native (N=1), or Other (N=6). Further, the participants identified as seeking Doctor of Philosophy (Ph.D.) (N=102, 75%), Doctor of Psychology (Psy.D.) (N=20, 15%), and Master's of Arts (MA) (N=14, 10%); seeking specialties in Counseling Psychology (N=97, 71%) and Clinical Psychology (N=39, 79%). Table 1 presents the sample demographics overall and by training status (whether or not having had trauma specific training).

Table 1  
*Sample Demographics by Variable (N=131)*

Variable	Total	Training Status: Yes (N=55, 42%)	Training Status No (N=76, 58%)
Age M (SD)	28 (4.711)	29 (4.302)	27 (4.924)
Gender, n (%)			
Female	107 (82)	42 (76)	65 (85)
Male	22 (17)	11 (20)	11 (15)
Other	2(2)	2 (4)	
Race/ Ethnicity, N (%)			
American Indian or Alaska Native	1 (1)	1 (2)	0 (0)
Asian	8 (6)	4 (7)	4 (5)
Black or African American	9 (7)	5 (9)	4 (5)
Hispanic or Latino	13 (10)	5 (9)	8 (11)
White	95 (73)	38 (69)	57 (75)
Other	4 (3)	1 (2)	3 (4)
Missing	1 (1)	1 (2)	0 (0)
Degree Seeking N (%)			
Master's of Arts (MA)	13 (10)	5 (9)	8 (11)
Doctor of Philosophy (Ph.D.)	98 (75)	40 (76)	58 (76)
Doctor of Psychology (Psy.D.)	20 (15)	10 (13)	10 (13)

Although the sample appears imbalanced in its representation of diversity in terms of race, sex, and training programs, it actually somewhat corresponds to the demographic trends in the graduate programs and work force in professional psychology (APA, 2015). For instance, as of 2013 the active psychology workforce was reported as 83.6% white, 5.3% Black/African American, 5% Hispanic (Latino was not listed), 4.3% Asian, and 1.7 % other. See Tables 2 and 3 for a comparison of these numbers in relation to the current study sample. Descriptive analyses were conducted for the major variables CD-RISC10 (M=37.33, SD= 4.01), TSK (M= 115.44, SD= 20.55), TSSE (M= 13.15, SD= 3.17), and ECST (M= 41.63, SD=4.29), of the study.

Table 2

*Comparison of Demographics of the Sample and Current Workforce in Professional Psychology*

Variable	Study %	APA reported Profession %
Gender		
Female	82	63
Male	17	31
Other	2	Not reported
Race/ Ethnicity, n(%)		
American Indian or Alaska Native	1	Not reported
Asian	6	4
Black or African American	7	5
Hispanic or Latino	10	5
White	73	83
Other	3	2

Note: APA Center for Workforce Studies (2015) reported percentages of currently employed psychology professionals. The percentage of males actively working in the workforce was not reported directly; however it was reported that the ratio of males to females =2:1; therefore the above percentage in this category is based on a 2:1 ratio using 63% females.

### **Preliminary analysis**

A correlational analysis was conducted to examine the correlations among all variables. As shown in Table 3, significant positive correlations were found between age and the major

variables, namely, CD-RISC10, TSK, TSSE, and ECST. As age increases, CD-RISC10, TSK, TSSE, and ECST increases too.

Significant positive correlations were found among self-report of trauma related training (training status) and the four major variables (CD-RISC10, TSK, TSSE, and ECST). Those who reported having received some form of training status tend to score higher in TSK, CD-RISC10, TSSE, and ECST. Additionally, significant correlations were found among the four major variables (CD-RISC10, TSK, TSSE, and ECST). These correlations were positive and moderate. As the result of this correlational analysis, a statistical decision was made that age and training status would be controlled for in the main analyses addressing the predictive roles of CD-RISC10 and TSK in TSSE and ECST.

Table 3

*Correlational Matrix of Demographic Variables, Major Variables, and Training Status (N=131)*

Variable	1	2	3	4	5	6	7	8
1 Gender								
2 Age	0.29 **							
3 Race/Eth.	0.03	0.07						
4 Degree	0.06	0.01	0.05					
5 Training Status	0.16	0.15	0.11	0.05				
6 CD-RISC10	0.07	0.21 *	0.04	0.05	0.36 **			
7 TKS	0.04	0.22 *	0.08	0.06	0.37 **	0.39 **		
8 TSSE	0.01	0.24 **	0.01	0.06	0.4 **	0.31 **	0.6 **	
9 STSE	0.08	0.18 *	0.01	0.11	0.42 **	0.57 **	0.37 **	0.39 **

Note: \*\* Correlation is significant ( $p < 0.01$ ) (2-tailed), \* Correlation is significant ( $p < 0.05$ ) (2-tailed). Variable 5, Training Status, represents participants' self-report of having had some form of trauma related training status. Variables 6, 7, 8, and 9 use the names of scales used to measure resilience, trauma scientific knowledge (TSK), trauma specific self-efficacy (TSSE), and emotional competence to cope with secondary trauma (ECST).

To ensure the measure used yielded credible results, the reliability was estimated by internal consistency for each scale using Cronbach Alpha coefficients. It was found that the  $\alpha$  coefficient for CD-RISC 10 was 0.749, TSK was 0.953, TSSE was 0.730, and STSE was 0.769.

### **Main Analysis**

1) How are resilience (CD-RISC 10) and trauma scientific knowledge (TSK) related to trauma specific self-efficacy (TSSE) to provide complex trauma treatment?

To answer research question 1, a hierarchical multiple regression analysis was conducted with TSSE as the criterion variable. Age and training status were entered into equation at the Step 1, CD-RISC10 and TSK Step 2, and the interaction between CD-RISC10 and TSK Step 3 as the predictors. All predictors shared a moderate relationship with the criterion variable.

Results showed that age and reported trauma specific training both positively related TSSE, explaining 18% of the variance in TSSE,  $F(2, 128) = 15.210, p < .001$ . When entered the equation at the step 2, CD-RISC10 and TSK significantly predicted TSSE, accounting for an additional 21% of the variance in TSSE,  $F(4, 126) = 23.549, p < .001$ . It appears CD-RISC10 and TSK explained a statistically significant amount of variance in TSSE above and beyond the contribution of age and training status. The interaction terms did not show statistical significance. Partial regression coefficients are reported in Table 4.

Table 4

*Coefficients: CD-RISC10 and TSK as Predictors of TSSE when Controlling for Age and Trauma Status (N = 131).*

		<i>b</i>	SE B	$\beta$	
Step 1					
	Constant	6.259	1.615		
	Age	0.123	0.055	0.177	**
	Training Status	2.377	0.522	-0.363	*
Step 2					
	Constant	-1.131	3.184		
	Age	0.064	0.055	0.157	
	Training Status	1.224	0.504	0.187	*
	CDRISC10	0.58	0.061	0.071	
	TSK	0.074	0.012	0.462	**
Step 3					
	Constant	-1.38	2.28		
	Age	0.06	0.05	0.09	
	Trauma Status	1.09	0.49	0.17	*
	CD-RISC10	0.06	0.06	0.08	
	TSK	0.08	0.01	0.51	**
	CD-RISC10 X TSK	0	0	0.09	

Note:  $R^2 = .192$  for Step 1;  $\Delta R^2 = .220$  for Step 2;  $\Delta R^2 = .008$  for Step 3. \* $p < .05$ , \*\* $p < .001$

2) How are resilience (CD-RISC 10) and trauma scientific knowledge (TSK) related to emotional competence to cope with secondary trauma experiences (ECST) to complex trauma?

To answer research question 2, hierarchical multiple regression analysis was conducted with ECST as the criterion variable. Age and training status were entered into equation at the Step 1, CD-RISC10 and TSK Step 2, and the interaction between CD-RISC10 and TSK Step 3 as the predictors. All predictors showed a moderate relationship with the criterion variable.

Results showed that age and training status both positively predicted ECST, explaining 18% of the variance in ECST,  $F(2, 128) = 15.232$ ,  $p < .001$ . When entered into the equation at step 2, CD-RISC10 and TSK significantly predicted ECST, accounting for an additional 21% of the

variance in ECST,  $F(4, 126) = 22.366, p < .001$ . It appears CD-RISC10 and TSK explained a statistically significant amount of variance in ECST above and beyond the contribution of age and training status. The interaction terms did not show statistical significance. Partial regression coefficients are reported in Table 5.

Table 5  
*Coefficients: CD-RISC10 and TSK as Predictors of ECST when Controlling for Age and Trauma Status (N = 131).*

		<i>b</i>	SE B	$\beta$	
Step 1	Constant	33.62	2.15		
	Age	0.01	0.07	0.12	
	Training Status	3.49	0.7	0.4	**
Step 2	Constant	16.85	3.12		
	Age	0.02	0.06	0.02	
	Training Status	1.71	0.67	0.2	*
	CD-RISC10	0.48	0.08	0.45	**
	TSK	0.04	0.02	0.17	*
Step 3	Constant	16.83	3.13		
	Age	0.02	0.07	0.02	
	Training Status	1.7	0.67	.020	*
	CD-RISC10	0.47	0.08	0.44	**
	TSK	0.04	0.02	0.18	*
	CD-RISC10 X TSK	0	0	0.05	

Note:  $R^2 = .192$  for Step 1;  $\Delta R^2 = .212$  for Step 2,  $\Delta R^2 = .002$  for Step 3. \* $p < .05$ , \*\* $p < .001$

3) Do individuals differ in trauma specific self-efficacy (TSSE) with or without trauma specific training (training status)?

The preliminary analysis showed a significant correlation between training status and TSSE. Thus the researcher divided the sample into two groups, one with and one without prior training experience, and a t-test was performed. The results showed that those who received training (N=55) expressed higher level of TSSE (M=14.62, SE= .37), than those reporting having

no training (N=76, M=12.08, SE. = .35),  $t(129)=4.9$ ,  $p<.001$ , representing a medium effect size,  $r=.40$ .

4) Do individuals differ in emotional competence to cope with secondary trauma experiences (ECST) with or without trauma specific training (training status)?

The preliminary analysis showed a significant correlation between training status and ECST. Thus the researcher divided the sample into two groups, one with and one without prior training experience, and a t-test was performed. The results showed that those who received training (N=55) expressed higher level of ECST (M=43.75, SE= .48), than those reporting having no training (N=76, M=40.09, SE= .48),  $t(129)=5.29$ ,  $p<.001$ , representing a medium effect size,  $r=0.43$ .

5) Does trauma specific training (training status) moderate the relationship between resilience (CD-RISC 10) and trauma scientific knowledge (TSK) and the dependent variable trauma specific self-efficacy (TSSE) to provide complex trauma treatment?

To answer research question 5, a hierarchical multiple regression analysis was conducted with TSSE as the criterion variable. At Step 1 age and training status were entered, Step 2 TSK and CD-RISC10, and step 3 the interactions terms of training status X TSK, training X CD-RISC10. Previous analyses indicated positive contributions of each predictor to TSSE. Neither of the interaction terms showed statistical significance. In fact the result of the interaction terms was not interpretable due to high VIF values (TSK X training status, 48.853; CD-RISC10 X training status, 112.501), indicative of a violation of the assumption of no multicollinearity.

6) Does trauma specific training (training status) moderate the relationship between resilience and trauma scientific knowledge (TSK) and the dependent variable emotional competence to cope with secondary trauma experiences (ECST) to complex trauma?

To answer research question 6, a hierarchical multiple regression analysis was conducted with ECST as the criterion variable. At Step 1, age and training status were entered, Step 2 TSK and CD-RISC10, and step 3 the interactions terms of training status X TSK and training status X CD-RISC10. Previous analyses indicated positive contributions of each predictor to ECST. Neither of the interaction terms showed statistical significance. In fact the result on the interaction terms was not interpretable due to high VIF values (TSK X training status, 48.853; CD-RISC10 X training status, 112.501), indicative of a violation of the assumption of no multicollinearity.

## **Chapter V**

### **Discussion**

The aim of the present study was to explore the relationships among resilience, trauma scientific knowledge, and trauma specific self-efficacy and emotional competence to cope with secondary trauma when working with clients with complex trauma among graduate students enrolled in counseling or clinical psychology. The findings of the study provided evidence for the predictive role of participants' resilience and trauma scientific knowledge in their trauma specific self-efficacy and emotional competence to cope with secondary trauma. Further, whether or not trainees have received trauma specific training seems to make a difference in their trauma specific self-efficacy and emotional competence to cope with secondary trauma. Additionally, a positive correlation among resilience, trauma scientific knowledge, trauma specific self-efficacy, and emotional competence to cope with secondary trauma was identified. Finally, it appears that participant age relates to their reports of resilience, trauma scientific knowledge, trauma specific self-efficacy, and emotional competence to cope with secondary trauma.

#### **Predictive Roles of Resilience and Trauma Scientific Knowledge**

Understanding the factors that are predictive of increased trauma specific self-efficacy is of importance to the helping profession (Knox, Pelletier, & Viet, 2014). The findings of this study certainly identified two of those factors. When the contribution of age and training was controlled for, resilience and trauma scientific knowledge explain approximately 21% of the variance in trauma specific self-efficacy and 21% of variance in participants' emotional competence to cope with secondary trauma. Individuals who were more resilient and reported increased trauma scientific knowledge tended to show higher levels of trauma specific self-

efficacy and higher levels of emotional competence to cope with secondary trauma when presented with cases of complex trauma. These findings are not surprising as previous research supports a relationship among self-efficacy, emotional competence, knowledge, and resilience (Bandura, 1989; Bandura, 1997; Greene et al., 2004; Bonanno, 2005; Gillespie et al., 2007; Kinman & Grant; 2011; Tompkins, 2013; Ashby et al., 2013; Warrener et al., 2013; Lambert & Lawson, 2013; Peng et al., 2014; Knox et al., 2014).

**Knowledge.** This study focused on a specific type of professional trauma knowledge, and hopes to raise awareness of the importance of trauma scientific knowledge in working with clients experiencing complex trauma responses. Courtois (2002), a leader in the field of psychology of trauma, believes that increased overall knowledge of trauma is likely to improve mental health professionals efficacy to use trauma related treatment techniques and trauma specific self-efficacy. Empirical evidence is also available showing that having trauma specific awareness and related scientific knowledge may allow those in the mental health field to better recognize a client's experience of trauma as well as strengthening their own emotional competence to cope with distress and potential secondary trauma reactions (Deighton et al.; 2007). Further, Courtois (2002, p.42) states, "Given the large number of victims of the many different types of traumatic events and experiences, the high personal and societal cost of traumatization, and the high probability that many ...will require professional services ... it is imperative that professionals receive adequate training in traumatic stress and its aftermath so they can offer effective and non-harmful services." The result of the current study strengthened and extended the argument that trauma specific scientific knowledge, when paired with resilience, plays an important role in trainees' trauma specific self-efficacy as well as their emotional competence to cope when faced with a case of complex trauma.

**Resilience.** Resilience is a characteristic that serves as a buffer when clinicians are faced with work related challenges (Connor & Davidson, 2003; Edward, 2005; McCann, Beddoe, McCormick, Huggard, Kedge, Adamson, & Huggard, 2013), and it is particularly crucial in difficult situations where clinicians' personal strength in cognitive and emotional capability is needed above and beyond their skills and techniques. It is recognized that the treatment of traumatic stress is challenging and can be difficult for mental health workers and trainees (Courtois, 2002; Courtois & Gold, 2009; Greene et al., 2011). Research has shown that when faced with cases of complex trauma, professionals and mental health trainees may experience increased frustration and burnout (Courtois, 2002; Chouliara et al., 2009). However, the good news is, higher levels of resilience may contribute to clinicians' increased skills and confidence to treat patients with complex trauma (Edward, 2005; Rees, Breen, Cusack, & Hegney, 2015) as well as to cope with personal secondary trauma responses (Kinman & Grant, 2011), an example of emotional competence. The current study findings provide further evidence to support this argument, specifically in the case of mental health trainees.

It was not surprising that participants' resilience and trauma scientific knowledge as well as their trauma specific self-efficacy and emotional competence to cope with secondary trauma in working with clients who suffer from complex trauma were positively correlated with their trauma specific training. Those who report having some form of trauma specific training report higher levels of resilience, trauma scientific knowledge, trauma specific self-efficacy, and emotional competence. Previous research supports a positive correlation among training and enhanced self-efficacy, specifically trauma specific self-efficacy to provide care to cases of complex trauma (Warrener, Postmus, & McMahon, 2013). Further, the current study provides support that trauma specific training on the part of the developing mental health trainee is likely

to increase their efficacy to engage in trauma specific treatment tasks and trauma specific self-efficacy. Additionally, previous research indicates training can enhance emotional competence and ultimately improve work satisfaction and decrease rates of burnout (Courtois, 2002; Green et al., 2011; Cieslak et al., 2013; Lambert & Lawson, 2013). Therefore, it is important that trauma specific training be a part of graduate trainees' educational programs. Based on the current findings and previous research, it is likely that if provided opportunities to engage in such training mental health trainees will have increased trauma specific self-efficacy, and emotional competence to cope with secondary trauma. Training opportunities may involve purposeful discussion during supervision, course specific training, or inclusion in practicum group supervision.

The study findings failed to reveal any moderating effect of training on the relationship between resilience and trauma scientific knowledge and trainee's trauma specific self-efficacy and emotional competence to cope with secondary trauma. Notably using the yes or no answer to the question whether or not trauma specific training was received probably failed to capture either the type of potential trauma trainings (classes, conference attendance, workshops, and so on) or the amount of training (semester long, year long, on-going, or isolated exposures). Given that previous research has indicated that training does interact with resilience and trauma scientific knowledge in the subsequent prediction of trauma specific self-efficacy and emotional competence (Greene et al., 2004; Warrener et al., 2013; Lambert & Lawson, 2013; Peng et al., 2014; Knox et al., 2014), future research may benefit from operationalizing the training variable in a way that is reflective of different aspects of the training experience.

### **Trauma Specific Competence**

Professional competence guides the accreditation of educational institutions and subsequently the training received by future professionals (Kaslow, 2004; Rubin et al, 2007). In recent years, APA Division 56 (Trauma Psychology) has been working to outline, propose, and ultimately received approval of Guidelines for Trauma Competence in Education and Training (Courtois, 2002; Courtois & Gold, 2009; Cook & Newman, 2014; APA, 2015) for the field of psychology. The trauma scientific knowledge subscale used in this study was from the Guidelines on Trauma Competencies for Education and Training (APA, 2015). Although, the measure has not been empirically validated, it reflects trauma scientific competence areas. Benchmarks for training levels are not currently available (Cook & Newman, 2014; APA, 2015); therefore, although considered of value to the researchers, specific scores based on training level are not included. However, the current subscale represents a productive direction to take for any future efforts in developing an assessment tool of trauma specific knowledge.

The current study provides further evidence that general trauma training is of value in the enhancement of trauma specific professional competence of the mental health trainee. Also, the study findings support the idea that efforts to enhance trauma scientific knowledge and encourage resilience may be worthwhile in the development of trauma specific professional competence. In other words, it is important not only to provide training to increase trauma scientific knowledge but also to take into account and nurture the resilience of trainees.

### **Potential Role of Age**

Age seems to be an important factor to consider in understanding trainees' trauma specific self-efficacy and emotional competence. It accounts for 6% and 5.6% of the total variance for trauma specific self-efficacy and emotional competence respectively. Although age is not related to whether or not participants received training, it is with their resilience, trauma

scientific knowledge, trauma specific self-efficacy and emotional competence. Perhaps it reflects that older students may have more experience with trauma either through personal or professional involvement so they feel more knowledgeable, self-confident and emotionally ready to work with experiences. This reasoning is consistent with the common assumption that with age comes additional opportunity to be exposed to vicarious and mastery learning (Bandura, 1977) and enhancement of overall resilience (Bonanno, 2005). This study did not assess the likely role of increased experiences with trauma treatment or coping as it relates to age.

### **Limitations**

Due to various limitations that are inherent in this study, caution is needed in understanding the findings. First, the sample size is small considering that multiple analyses were performed. The sample size may be one of the reasons that the analysis failed to show significant interaction between resilience and trauma scientific knowledge on trauma specific self-efficacy and emotional competence respectively. Further, due to the limited sample size, some of the demographic variables that are theoretically important to consider were left out of analyses. For instance, differences associated with an important aspect of “training level” (e.g., Master’s versus Doctoral level) could not be examined. Moreover, the small sample size limits generalizability for the findings. Second, trauma training measurement used could have been problematic both in capturing accurate meaning of training and in causing statistical complications in data analysis. Finally, the limitation posted by using the newly developed trauma scientific knowledge measure should be noted. An instrument with good psychometric qualities will be needed to accurately capture trauma scientific knowledge.

### **Implication for Training and Clinical Practice**

Study findings are important for the mental health profession, specifically, the training of graduate level trainees in the field of psychology. For instance, the findings are indicative of resilience, trauma scientific knowledge, and trauma related training as predictors of trauma specific self-efficacy. Although, interactions of resilience and training status and trauma scientific knowledge and training status were not conclusively explored, the study findings have important implications for the training and clinical practice of those in the mental health field. APA recently approved Guidelines for Trauma Education and Training (Trauma Psychology) (APA, 2015). Trauma specific self-efficacy is an outcome of competency development. Further, knowledge is a crucial component in the development of professional competency (Epstein & Hundert, 2002; Kaslow, 2004; Rubin et al., 2007). This study focused on trauma scientific knowledge related to overall trauma competency in the field of psychology. Increased efficacy to engage in the treatment of trauma is valuable to the mental health trainee. In the mental health field there is a high likelihood that professionals will provide treatment to individuals having traumatic stress responses (Courtois, 2002). Further, trauma scientific knowledge is likely to enhance professional competence (Courtois, 2002; Cook and Newman, 2014).

Individuals with increased resilience are likely to persevere when faced with the challenges of providing care to those with complex traumatic stress. Peng et al. (2014) referenced resilience as related to increased engagement in activities to build knowledge despite difficulties. Further, resilience may relate to increased hope and ability to adjust to the unique needs of clients having traumatic stress responses. Previous research into the relationship among resilience and task efficacy is supportive of this inference (Greene et al., 2004; Bonanno, 2005; Gillespie et al., 2007). Therefore, one can infer there is value in understanding the resilience of those training for or currently working in the mental health field. Subsequently, identifying

training methods to enhance trainees' overall resilience may impact the efficacy they have toward providing treatment of individuals with complex trauma.

The findings of this study are indicative of resilience, trauma scientific knowledge, and trauma related training as predictors of emotional competence. Emotional competence to cope with secondary trauma is important for the helping professional and trainee (Courtois, 2002; Green et al., 2011). It is the skill to find meaning, control distressing thoughts related to client trauma, and the ability to reach out for personal help when unable to enact these skills while working with clients (Cieslak et al., 2013). It is important for helping professionals and trainees to consciously use the skills of emotional competence to cope with the potential impact of secondary trauma (Greene et al., 2011). Increased emotional competence is likely to lead to increased work satisfaction, potential for personal growth, and build professional skills to better serve clients having traumatic stress responses (Lambert & Lawson, 2013). Trauma scientific knowledge is likely to enhance trainees' awareness of potential secondary trauma outcomes, modes of coping with secondary trauma, and ultimately enhance skills and efficacy to cope. Therefore, the findings of the current study support the position that specific training to enhance emotional competence is associated with less detrimental impact of secondary trauma.

### **Directions for Future Research**

The current study supports the notion that trauma specific self-efficacy can be predicted by trauma scientific knowledge and resilience. The recently approved APA trauma specific competencies (APA, 2015) outline the goals that training programs and professional accreditation agencies will be using to determine educational objectives. As such, the findings of this study support further exploration into the role of current trainees' resilience in terms of competency development. For instance, it is apparent from the current study that resilience is a

factor significantly related to trauma specific self-efficacy; however, it is not clear how this is occurring. Future research may explore aspects of resilience specific to the work of mental health professionals to provide treatment of traumatic stress (roles of adaptability, flexibility, belief in one's abilities).

APA Division 56 (Trauma Psychology) is currently working toward establishing benchmarks for the newly approved trauma specific competency (Cook & Newman, 2014; APA, 2015). A replication of this study, utilizing benchmarks and pairing this information with participants' current training level (first year practicum, internship, etc.) may provide further insight into the research questions. It will be valuable for future research to seek more specific information about types of specific trauma related training.

The current study sample reflects the demographics of trainees in the field in terms of gender and race/ethnicity, but it did not allow for meaningful examination of potential cultural and diversity differences, which is an important aspect for future research to take into consideration. Neither did this sample provide an opportunity to investigate other meaningful demographic variables such as degree sought and specialty area in relation to the study variables. It would be beneficial for further research to gather information from larger samples and seek more specific information about participants training level and exposure to trauma training. A better understanding of types of training that positively correlate with resilience rating, trauma scientific knowledge, trauma specific self-efficacy, and emotional competence will provide clearer directions for development of training opportunities.

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## Appendix A

## Demographic Questions

1. Are you a currently enrolled graduate level student in a psychology program?
  - a. Yes (1)
  - b. No (2)
  
2. What is your gender?
  - a. Female (1)
  - b. Male (2)
  - c. Gender Non-binary (3)
  - d. Other (Please specify) (4) \_\_\_\_\_
  
3. What is your age?
  
4. What is your race/ethnicity? (Please select which your primary identification)\*
  - a. American Indian or Alaska Native (1)
  - b. Asian (2)
  - c. Black or African American (3)
  - d. Hispanic or Latino (4)
  - e. Native Hawaiian or Other Pacific Islander (5)
  - f. White (6)
  - g. Other (Please specify) (7) \_\_\_\_\_
  
5. What graduate psychology degree are you pursuing?
  - a. Master's of Arts (MA) (1)
  - b. Master's of Science (MS) (2)
  - c. Doctor of Philosophy (Ph.D.) (3)
  - d. Doctor of Psychology (Psy.D.) (4)
  - e. Other (Please Specify) (5) \_\_\_\_\_
  
6. What professional specialty are you seeking?
  - a. Counseling Psychology (1)
  - b. Clinical Psychology (2)
  - c. School Psychology (3)
  - d. Other (Please specify) (4) \_\_\_\_\_

7. Does your program offer trauma specific training?
- a. Yes (if yes, please describe) (1) \_\_\_\_\_
  - b. No (2)
8. Have you had trauma specific training?
- a. Yes (if yes, please describe) (1) \_\_\_\_\_
  - b. No (2)

**Appendix B****CD-RISC 10**

Not True at All (1)	Rarely True (2)	Sometimes True (3)	Often True (4)	True Nearly all the Time (5)
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1. Able to adapt to change
2. Can deal with whatever comes
3. Tries to see the humorous side of things
4. I prefer to buy well-known designer labels rather than take a chance on something new
5. Coping with stress strengthens me
6. Tend to bounce back after illness or hardship
7. Can achieve goals despite obstacles
8. Can stay focused under pressure
9. Not easily discouraged by failure
10. Thinks of self as a strong person

## Appendix C

### TSK

Never True (1)	Rarely True (2)	Sometimes but Infrequently True (3)	Neutral (4)	Sometimes True (5)	Usually True (6)	Always True (7)
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1. I recognize the prevalence of traumatic exposure
2. I recognize incidences of traumatic exposure
3. I recognize risk factors for traumatic stress responses
4. I recognize protective factors against traumatic stress responses
5. I recognize trajectories of traumatic exposure
6. I recognize cultural factors involved in traumatic exposure
7. I recognize environmental factors involved in traumatic exposure
8. I have knowledge of the basic scientific findings about trauma
9. I have knowledge of the basic mechanisms associated with trauma
10. I have knowledge of the basic models used to explain trauma exposure
11. I have knowledge of the interactions among social, psychological, and neurobiological factors as related to traumatic exposure
12. I understand the social context in which trauma is experienced
13. I understand the social context in which trauma is researched
14. I understand the historical context in which trauma is experienced
15. I understand the historical context in which trauma is researched
16. I understand the cultural context in which trauma is experienced
17. I understand the cultural context in which trauma is researched
18. I have general knowledge to critically review published literature on trauma
19. I have general knowledge to critically review published literature on PTSD
20. I have trauma specific knowledge to critically review published literature on trauma
21. I have trauma specific knowledge to critically review published literature on PTSD

22. I have the knowledge necessary to effectively communicate scientific knowledge about trauma to a broad range of audiences

23. I have the knowledge necessary to effectively educate scientific knowledge about trauma to a broad range of audiences

## Appendix D

### Case Scenario

Jamie is a 30 year old white female living in a medium-sized, Midwestern city. She has a GED and works as a cashier at a local department store. Jamie states she is currently living with her 3 children, ages 6, 7, and 14, at a family shelter. She left her husband 2 months ago and reports the relationship was violent. She did not want her children “to grow up the way she did”.

She is seeking treatment because she has been increasingly irritable, isolative, and tearful. She finds herself unable to get out of bed and reports periods of difficult, active sleep, with nightmares. She is easily startled and often lies awake at night keeping watch on her children. She reports she frequently worries that someone in the shelter may harm her children. She reports taking pills to help her calm down when she is most “high strung” but admits she does not have a prescription. She purchases the pills from friends.

Jamie states throughout her childhood her mother had multiple boyfriends who were violent toward both Jamie and her mother. She states that her mother has bipolar disorder and has used drugs and alcohol for as long as Jamie can remember. Jamie reports she was placed in foster care at age 15 and lived in 4 different homes over a 1 year period. She ran away from the final placement because she “felt unsafe.” She began living with a friend and then she became pregnant with her oldest daughter. She moved back in with her mother and lived there until age 18. Jamie met and married her current husband 8 years ago and he became physically, emotionally, and sexually abusive soon after their wedding.

Jamie reports 2 previous psychiatric hospitalizations, both during the time she was in foster care. She states the hospitalizations occurred after she became physically violent toward her foster parents. She reports no previous outpatient treatment.

## Appendix E

### TSSE

Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Disagree or Agree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
<ol style="list-style-type: none"> <li>1. I have confidence in my ability to provide therapy for trauma experiences</li> <li>2. Most people doing therapy for trauma experiences can do it better than I can</li> <li>3. I have the abilities to complete therapy for trauma experiences with clients successfully</li> </ol>						

## Appendix F

### STSE

Deal with my emotions (anger, sadness, depression, anxiety) about working with these people. (1)

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1. Deal with my emotions (anger, sadness, depression, anxiety) about working with these people.
2. Find some meaning in what had happened to these people.
3. Control recurring distressing thoughts or images about these people.
4. Deal with thoughts that similar things may happen to me.
5. Be supportive to others after my experiences with these people.
6. Cope with thoughts that I can't handle working these with people anymore.
7. Get help from others to better handle working with these people.