Vicarious Posttraumatic Growth Among Helping Professionals: Factor Analysis and an Investigation of Construct Validity

Jennifer D. Deaton

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VICARIOUS POSTTRAUMATIC GROWTH AMONG HELPING PROFESSIONALS: FACTOR ANALYSIS AND AN INVESTIGATION OF CONSTRUCT VALIDITY

by

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DEDICATION

This dissertation is dedicated to my parents, Roger and Vicki Deaton who passed away long before they could see my successes. Both in life and in death, you shaped me to become the woman I am today. I love you and I hope I have made you proud.
ACKNOWLEDGEMENTS

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ABSTRACT

The impact of trauma has varying effects on both clients and helping professionals ranging from negative responses (e.g. secondary traumatic stress [STS], compassion fatigue, and burnout) to positive responses (e.g. vicarious posttraumatic growth [VPTG], vicarious resilience, and compassion satisfaction [CS]). Vicarious posttraumatic growth is the experience of growth as a result of indirect trauma exposure. Scholars have exclusively investigated VPTG using the Posttraumatic Growth Inventory (PTGI); a measure of the extent an individual experiences growth experienced after trauma. The PTGI has not held its factor structure when used among indirect trauma exposure. The purpose of this study was to explore the factor structure of an instrument related to VPTG and establish evidence for construct validity among helping professionals. The researcher identified findings of a fair model fit with reasonable errors of approximation of a three-factor model to encompass (a) internal changes, (b) client progress impacting growth, and (c) negative responses. Further, the findings provide evidentiary support for convergent validity among VPTG and CS. The findings do not provide evidentiary support for discriminant validity among VPTG and STS.

Keywords: vicarious posttraumatic growth, helping professionals, exploratory factor analysis, confirmatory factor analysis
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<thead>
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<th>Abbreviation</th>
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<tbody>
<tr>
<td>BO</td>
<td>Burnout</td>
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<tr>
<td>CFA</td>
<td>Confirmatory Factor Analysis</td>
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<td>CS</td>
<td>Compassion Satisfaction</td>
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<tr>
<td>EFA</td>
<td>Exploratory Factor Analysis</td>
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<td>MBI</td>
<td>Maslach Burnout Inventory</td>
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<td>ProQOL</td>
<td>Professional Quality of Life Scale</td>
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<td>PTGI</td>
<td>Posttraumatic Growth Inventory</td>
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<td>PTSD</td>
<td>Posttraumatic Stress Disorder</td>
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<td>STS</td>
<td>Secondary Traumatic Stress</td>
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CHAPTER 1
INTRODUCTION

Trauma is defined as an event that presents a threat or perception of threat to safety, physical harm or sexual violence causing significant distress or disturbance (American Psychiatric Association, 2014). Individuals are likely to experience a traumatic event throughout their lifetime such as; the loss of a loved one, physical or sexual violence, or a serious injury or illness (Bonanno, 2004; Simiola, Neilson, Thompson, & Cook, 2015). When an individual experiences a traumatic event, there are various negative effects that may occur. Such responses to trauma include depressed mood, anxiety, hypervigilance, nightmares, trouble concentrating, lack of motivation, or lack of pleasure in doing things (Bonanno, 2004). These symptoms may manifest to the extent of posttraumatic stress disorder (PTSD) causing significant disruption in daily functioning to the individual (e.g. avoidance behaviors, cognitive and mood changes, or reactivity) (American Psychiatric Association, 2014; Pai, Suris & North, 2017).

There are also positive effects that result from trauma such as resilience, coping, recovery (Bonanno, 2004), or posttraumatic growth (Tedeschi & Calhoun, 1996). Tedeschi and Calhoun (1996) define posttraumatic growth from the primary trauma victim as a psychological and cognitive shift as well as an emotional adjustment after experiencing a traumatic event. The individual is able to experience emotional relief by altering basic assumptions, creating a new philosophy of life, and recognizing meaning in trauma (Tedeschi & Calhoun, 1996).
However, although the impact of the primary trauma victim is significant, trauma itself yields an effect on individuals within the ecological systems such as family, caregivers, friends, and those indirectly exposed to the narrative (Thornton & Perez, 2006). The impact of trauma also effects helping professionals serving in supporting roles after the event who encounter trauma indirectly by hearing and addressing the trauma narrative in various capacities (Manning-Jones, de Terte, & Stephens, 2016). For example, a nurse or medical professional may work with a patient days or weeks after a traumatic event addressing the physical impact of the trauma (Baxter, 2012; Beck, Eaton, & Gable, 2016; Beck, Rivera, & Gable, 2017). A counselor may hear and work extensively with a client for months or years after the traumatic event has occurred (Arnold, Calhoun, Tedeschi, & Cann, 2005; Bartoskova, 2017; Wheeler & McElvaney, 2018). Similarly, a translator may interpret the details of a trauma event in conveying the experience to these varying roles (Splevins, Cohen, Joseph, Murray, & Bowley, 2010).

Indirect effects of trauma and working with individuals who have experienced trauma can elicit both positive and negative affective responses. Negative affective responses may include vicarious trauma (McCann & Pearlman, 1990), compassion fatigue (Figley, 1995), and secondary traumatic stress (STS; Canfield, 2005). Vicarious trauma is defined as the change in the cognitive schema (McCann & Pearlman, 1990) causing a disruption in the clinicians’ views of the world, safety, self, and others as a result of the indirect trauma exposure (Pearlman & Saakitne, 1995; McLean, Wade, & Encel, 2003). Compassion fatigue includes the reduction, or lack of, empathy as a result of persistent exposure to trauma work (Berzoff & Kita, 2010; Figley, 1995) leading to emotional exhaustion or burnout (Maslach, Jackson, & Leiter, 1996). Lastly, STS may
include symptoms that manifest similarly to PTSD (e.g. hypervigilance, nightmares, anxiety, or intrusive images of the trauma) (Ludick & Figley, 2017; Stamm, 1995) yet extend to include moral distress, diminished self-efficacy, and stigmatization among helping professionals (Sprang, Ford, Kerig, & Bride, 2019). Approximately 18% of general health workers (Meldrum, King, & Spooner, 2002) and 15% of social workers (Bride, 2007) report symptoms that may meet criteria for PTSD. Brockhouse, Msetfi, Cohen, and Joseph (2011) theorize this change in worldview causes distress to the professional as a result of a shift in the helping professional’s cognitive schema.

However, despite the negative effects of the trauma work, helping professionals often report positive affective responses such as vicarious posttraumatic growth (VPTG: Arnold et al., 2005), vicarious resilience (Hernandez, Gangsei, & Engstrom, 2007), or compassion satisfaction (CS; Stamm, 2010). Vicarious resilience is identified as a parallel process of personal growth within the counselor as a result of exposure to their client’s resilience (Hernandez, et al., 2007). The counselor may experience a change in life goals and perspectives, client-inspired hope, or an increase in self-awareness, resourcefulness, and presence during their work (Herendandez-Wolfe, Killian, Engstrom, & Gangsei, 2014). Additionally, Hernandez-Wolfe and colleagues (2014) describe vicarious resilience as the counselor’s recognition of their own power and privilege relative to the client. Compassion satisfaction (CS) is the sense of achievement or enjoyment stemming from one’s ability to help and perform in the helping professional role (Stamm, 2010). Similarly to vicarious resilience, CS is a vicarious benefit from the client or patient’s improvement, personal growth, and therapeutic gains (Pooler, Wolfer,
Vicarious Posttraumatic Growth

Vicarious posttraumatic growth (VPTG) is defined as the experience of growth as a result of indirect trauma exposure (Arnold et al., 2005). Helping professionals describe growth as a change in worldview, being more expressive emotionally in personal relationships, and a newfound purpose and meaning to the trauma work (Bartoskova, 2017). More than 70% of trauma counselors describe a positive reaction such as living life more fully, treating others differently and with greater kindness and being more expressive emotionally in their personal lives (Arnold et al., 2005).

One theory attributes VPTG to social learning theory (Bartoskova, 2017). Social learning theory explains behavior is obtained from observing the surrounding environment and being directed or redirected by social cues in order to shape such behavior (Bandura, 1997). According to this theory, the counselor vicariously integrates themselves into the trauma experience causing an initial distress and a disruption in the counselor’s belief in self, others, or the world. This distress triggers the counselor to reconsider their conceptualization of the world requiring the counselor to reconstruct their worldview and search for meaning. The counselor is able to reduce vicarious trauma symptoms by engaging in meaning making (Brockhouse et al., 2011). This linear framework describes the counselor’s ability to obtain VPTG by observing the client’s journey through both the struggle and success of trauma work (Brockhouse et al., 2011; Pearlman & Saakvitne, 1995).
Similarly, Cohen and Collens (2013) outline two processes of vicarious trauma and VPTG stemming from empathic engagement between the traumatized client and helping professional leading to changes within the helping professional’s cognitive schemas. This theory was derived from a metasynthesis of qualitative studies examining the process of growth in trauma workers to include VPTG and its relation to vicarious trauma. This model describes VPTG as a product of a shocking revelation experienced by the helping professional of what the client has endured and the client’s capability of resilience. This revelation then challenges the cognitive schema of the helping professional. Uniquely, Cohen and Collens (2013) describe a coexistence of both positive and negative changes to the cognitive schema where vicarious trauma and VPTG are a separate but linked phenomenon. The model hypothesizes the two phenomena co-occur as a means of coping with emotional distress (Joseph & Linley, 2008). This framework illustrates VPTG as more than simply positive emotions, but rather a cognitive change conducive of self-actualization (Cohen & Collens, 2013).

Research regarding VPTG stems from scholars’ investigations of posttraumatic growth from the primary trauma victim. Tedeschi and Calhoun (1996) identified five areas of posttraumatic growth: (a) relating to others, (b) new possibilities, (c) personal strength, (d) spiritual change, and (e) appreciation of life. An appreciation of life develops when the trauma survivor has a changed sense of what is important to them while social relationships become more meaningful as a part of the individual’s posttraumatic growth. Likewise, personal strength is identified as an increased recognition in one’s abilities. Spirituality is a domain acknowledging an individual’s experience of positive change through an existential lens. Lastly, new
possibilities indicate the individual’s feeling of being more optimistic, extraverted and open to new experiences.

Bartoskova (2017) investigated the experiences of VPTG among trauma counselors resulting in four domains: (a) change in worldview, (b) growth in self, (c) making a difference, and (d) finding personal ways to process the trauma. While other scholars have directly aligned the experience of VPTG among helping professionals to Tedeschi and Calhoun’s domains of the primary trauma victim (Arnold et al., 2005; Hyatt-Burkhart, 2014), the two constructs are contextually different. The vicarious experience describes the professional’s attempt to find ways to process the trauma work or establishing a sense of meaning just as the client may find personal strength or new possibilities (Deaton, Wymer, & Carlson, In Review). However, helping professionals maintain a sense of invulnerability as they have not been the personally impacted by the trauma themselves (Abel, Walker, Samios, & Morozow, 2014; Janoff-Bulman, 2006; Janoff-Bulman & Yopyk, 2004). Nonetheless, the exposure to trauma remains the primary difference between posttraumatic growth and VPTG. A client or patient may receive treatment or services related to one traumatic experience while a helping professional is chronically exposed to indirect trauma across multiple clients or patients (Abel et al., 2014).

Across disciplines, various studies have been conducted to understand VPTG of counselors (Bartoskova, 2017; Linley & Joseph, 2007; Wheeler & McElvaney, 2018), rehabilitation workers (Shiri, Wexler, Alkalay, Meiner, & Kreitler, 2008), social workers (Barrington & Shakespeare-Finch, 2013; Hyatt-Burkhart, 2014), nurses (Baxter, 2012; Beck, Rivera, & Gable, 2017; Beck, Eaton, & Gable, 2016), and healthcare professionals
such as psychologists, medical doctors (Manning-Jones, de Terte, & Stephens, 2016; Sui & Padmanabhanunni, 2016), and interpreters (Splevins, Cohen, Joseph, Murray, & Bowley, 2010). When asked about the experiences of working with trauma clients or patients, participants account changes in their perspectives, relationships and learning life lessons (Arnold et al., 2005; Barrington & Shakespeare-Finch, 2012; Baxter, 2012). Further, professionals consistently report the presents of both negative and positive responses (Wheeler & McElvaney, 2018) thus supporting the theoretical perspective that an initial distress may occur in order to spark a search for meaning which results in growth (Brockhouse et al., 2011).

Scholars have also investigated the role of numerous constructs and their relationship to VPTG; social support (Brockhouse et al., 2011; Manning-Jones et al., 2016), empathy, coherence (Brockhouse et al., 2011), and STS (Manning-Jones et al., 2017; Zerach & Shalev, 2015). Social support, including peer support, has shown a positive relationship with VPTG indicating an increase in social support correlates with an increase VPTG (Brockhouse et al., 2011; Manning-Jones et al., 2016). Similarly, empathy and coherence have a positive relationship with VPTG. Empathy, however, has been identified as a predictor to VPTG serving as a moderator to reduce the psychological distance between the helping professional and client within the empathic engagement. This engagement enriches the vicarious experience and increases the need to adjust one’s psychological schema allowing for the positive experience of growth (Brockhouse et al., 2011). Moreover, Brockhouse and colleagues (2011) remark such psychological adjustment and empathic engagement can lead to both positive or negative accommodations such as vicarious trauma or VPTG.
The complexity of VPTG is further illustrated among studies investigating the relationship between STS and VPTG across helping professions. Manning-Jones, de Terte, & Stephens (2015) conceptualized VPTG existing on the end of a continuum opposite of STS. However, when examining the relationship between STS and VPTG, STS did not predict VPTG among nurses, social workers, and counselors, only among psychologists (Manning-Jones et al., 2017). Zerach & Itzchak Shalev (2015) further investigated STS among nurses finding a discrepancy between two types of nurses; a positive relationship among community nurses but a negative relationship among psychiatric nurses. Other scholars have articulated a curvilinear model of STS and VPTG indicating increases of STS beyond a particular point were associated with a decrease (Manning-Jones et al., 2017) or a leveling off effect in VPTG (Shiri et al., 2008). All of which have been studied using the Posttraumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996).

**Posttraumatic Growth Inventory (PTGI)**

The Posttraumatic Growth Inventory (Tedeschi & Calhoun, 1996) has been the predominantly used instrument to measure VPTG across disciplines (Beck, Rivera, & Gable, 2017; Beck, Eaton, & Gable, 2016; Brockhouse et al., 2011; Linley & Joseph, 2007; Manning-Jones, de Terte, & Stephens, 2016; Zerach & Itzchak Shalev, 2015). Tedeschi and Calhoun (1996) created the Posttraumatic Growth Inventory (PTGI) to measure “the extent to which survivors of traumatic events perceive personal benefits, including changes in perceptions of self, relationships with others, and philosophy of life, accruing from their attempts to cope with trauma and its aftermath.” The PTGI was developed using several hundred undergraduate psychology students who met criteria by
reporting they had experienced a difficult situation within the last year (Tedeschi & Calhoun, 1996). The 21-item measure consists of five subscales including (a) personal strength, (b) appreciation of life, (c) relating to others, (d) spiritual change, and (e) new possibilities. Since its creation, the PTGI has been used to explore relationships of various factors among trauma victims (Calhoun & Tedeschi, 2006) and helping professionals (Linley & Joseph, 2007; Beck, Rivera, & Gable, 2017; Beck, Eaton, & Gable, 2016; Brockhouse et al., 2011; Manning-Jones, de Terte, & Stephens, 2016).

However, scholars using the PTGI play a significant role in two primary problems within VPTG literature. The first problem is scholars’ use of the PTGI to measure VPTG among helping professionals (Abel, et al., 2014; Cohen & Collens, 2013). Researchers present the PTGI to helping professionals and instruct them to answer questions in the context of their work with patients or clients (Beck, Rivera, Gable, 2017; Beck, Eaton, Gable, 2016; Linley & Joseph, 2007; Manning-Jones, de Terte, & Stephens, 2016). This method does not differentiate the impact of the indirect trauma or an unidentified trauma experienced by the individual that has contributed to growth. Moreover, the validity of the results is mitigated by using a measure that has not been constructed or validated to measure VPTG. Therefore, the contributing factors and predictors of VPTG presented in these studies are not valid.

The second problem presented in VPTG literature is the lack of distinction between enabling factors of posttraumatic growth of the primary trauma victim and VPTG of helping professionals as a result of the use of the PTGI. The universal use of the PTGI allows scholars to make implications of the results of one construct to be valid for another. For example, Linley and Joseph (2011) identified meaning presence as a
significant contributor to posttraumatic growth and meaning search as having a negative relationship with growth among the primary trauma victim. However, scholars have cited meaning presence as a contributing factor of VPTG (Bartoskova, 2017; Brockhouse, et al., 2011) when meaning presence had not been measured for a relationship with the vicarious growth experience. The literature is diluted with relational data that is misused repeatedly by not distinguishing the origin of the data contributing the misrepresentation of VPTG across the literature.

**Problem Statement**

Scholars across disciplines have investigated growth among helping professionals using the PTGI (Calhoun & Tedeschi, 2006; Linley & Joseph, 2007; Beck, et al., 2017; Beck, et al., 2016; Manning-Jones, et al., 2016). The PTGI was developed using undergraduate psychology students who had experienced a difficult situation (Tedeschi & Calhoun, 1996). At the time of the study, trauma was defined through a broader lens that included stressful events and psychosocial stressors (APA, 1994). This definition has since been redefined to exclude events that are not a threat to death, serious injury, or sexual violence (APA, 2013; Pai, Suris, & North, 2017). This change from the DSM-IV (American Psychiatric Association, 1994) has changed the definition of the trauma that defines the construct of posttraumatic growth measured by the PTGI.

The first problem this study aims to address is the methodical use of the PTGI to measure VPTG among helping professionals. When researchers are using the PTGI to measure VPTG with helping professionals, they are simply instructing the participants to answer the questions based on their work with clients (Linley & Joseph, 2007; Shiri et al., 2008; Beck, et al., 2017; Beck, et al, 2016; Manning-Jones, de Terte, & Stephens, 2016).
This method does not differentiate the impact of personal trauma history, direct trauma, and indirect trauma exposure that could result in growth experiences. Additionally, this methodology is using an instrument to measure a construct that it was not created or validated to measure, therefore diminishing the validity of the results. Abel and colleagues (2014) attempted to address this issue by administering the PTGI to participants who had experienced indirect trauma to assess the validity of the instrument in measuring VPTG and its factor structure. The five-factor model of the PTGI did not emerge from the data. Instead, the exploratory factor analysis yielded a two-factor solution by collapsing the five factors into personal growth and changes in worldview. The authors note, while the two-factor solution was the cleanest solution that could be interpreted, the results were unstable and revealed a need for a VPTG measure (Abel et al., 2014). Another example highlighting this issue is scholars using the PTGI to measure VPTG among helping professionals among other cultures. Scholars attest to the instability of the factor structure when the professionals are not experiencing direct trauma exposure (Ho, Chan, & Ho, 2004) but rather, the five factor model is only confirmed among professionals serving in war-like conditions and experiencing direct trauma experiences (Veronese & Pepe, 2019).

Additionally, the lived experiences of helping professionals differ from those used to inform the PTGI. Helping professionals consistently describe the presence and occurrence of both negative and positive responses when describing their experiences of working with victims of trauma (Arnold, Calhoun, & Tedeschi, 2005; Barrington & Shakespeare-Finch, 2012; Baxter, 2012; Sui & Padmanabhanuui, 2016; Wheeler & McElvaney, 2018). For example, helping professionals describe questioning their abilities
to be able to help their patients (Baxter, 2012), changes in interpersonal relationships (Bartoskova, 2017), and gaining hope and perspective from their work with clients (Sui & Padmanabhanuui, 2016). Scholars who have set out to explicitly inquire about the positive impact of working with trauma find participants have difficulty describing their positive experiences without initially including the negative responses (Hyatt-Burkhart, 2014; Wheeler & McElvaney, 2018). Overall, helping professionals with indirect trauma exposure describe a different experience and process of growth than primary trauma victims. Helping professionals are chronically exposed to indirect trauma revealing a more complex picture of VPTG. The empathic engagement requires the professional to adjust their psychological distance between themselves and the client or patient. This accommodation can lead to negative or positive adjustment, or both (Brockhouse et al., 2011). This further mitigates the results of scholars who have used the PTGI to measure VPTG by using an instrument that does not encompass informed items.

The methodology of using the PTGI contributes to the second problem this study aims to address; the lack of a strong theory of VPTG formed by psychometric evidence. The use of the PTGI has led to multiple theories within the literature (Bartoskova, 2017; Manning-Jones et al., 2016) shaped by evidenced constructed without validity. Cohen and Collens’ (2013) attempted to address this issue by using qualitative studies but the framework included both vicarious trauma and VPTG. Moreover, Cohen and Collens’ (2013) model neglects the impact of transference, counter-transference, and any fluctuation of positive and negative affective responses (Long, 2019).

The lack of a strong theory directly implicates how scholars may begin to develop interventions that facilitate VPTG and reduce STS. Across disciplines, over 48% of
victims’ advocates (Benuto, Newlands, Ruork, Hofft, & Ahrendt, 2018), 20% of nurses
(Quinal, Harford, & Rutledge, 2009; Morden, Go, Yangson-Serondo, 2017), and 34% of
child protective workers (Bride, Jones & MacMaster, 2007) report STS as a result of
working with clients or patients who have experienced trauma. Scholars have repeatedly
measured the prevalence of STS across helping professions however, preventive STS
intervention research and supervision intervention research warrants a measure that
provides evidentiary support for mitigating STS (Sprang et al., 2019) and facilitating
VPTG. Moreover, without a measure, implications for client outcomes, vocational
efficacy and ability are unable to be addressed. Therefore, the aim of this study is to
generate theory regarding the factor structure of VPTG informed by the lived experiences
of helping professionals to support the development of the initial VPTG Inventory
(VPTGI). Further, this study aims to investigate construct validity using the ProQOL
scale (Stamm, 2010) to further understand the differentiation of VPTG and STS, CS, and
burnout.

Significance of the Study

The significance of this study is outlined in three areas: (1) knowledge generation,
(2) professional significance, and (3) social significance.

Knowledge Generation

Knowledge generated from this study include (a) the factor structure of VPTG,
(b) evidence for construct validity, and (c) evidentiary support for the development of an
initial inventory. Factor analysis is a statistical analysis used to explore hypothesized
factor structure, generate theory regarding a construct, and verify dimensions (Bandalos,
2018). The researcher will explore the factor structure and construct validity of VPTG in
order to develop an initial inventory for VPTG. Scholars establishing relational inferences between VPTG and related constructs such as social support (Brockhouse et al., 2011; Manning-Jones et al., 2016), empathy, coherence (Brockhouse et al., 2011), and STS (Manning-Jones et al., 2017; Zerach & Shalev, 2015) are unreliable due to the use of the PTGI measuring VPTG. Therefore, VPTG will be further investigated by gathering evidentiary support for convergent and discriminant validity using the Professional Quality of Life Scale (Stamm, 2010), outlined in Chapter Three. This study aims to generate understanding of the relationship between VPTG and CS, STS, and burnout.

**Professional Significance**

Lastly, social significance of this study includes gaining an understanding of how helping professionals experience VPTG that may inform mental health care at the individual and organizational level. The prevalence of STS across professions renders the need for intervention research to address STS and its effects on client outcomes (Sprang, et al., 2019). This study aims to support helping professionals engage in their experiences and support reframing their adverse experiences as a result of working with clients or patients who have experienced trauma. By understanding and addressing the growth experienced as a result of indirect trauma exposure, helping professions can inform professional development, supervision, and support strategies at the individual and organizational level.

Additionally, the latent and observed variables emerging from this study can inform trauma-informed practice and trauma-informed care that support both the client and professional to experience growth. Organizational support for professionals’ care
conveys a message of importance, investment, and responsibility towards clinician wellbeing (Hensel, Ruiz, Finney, & Dewa, 2015). The emerging theory of VPTG can support organizations to develop and embed informed practices that facilitate VPTG at the organizational level. Examples of this include supervision strategies, engaging in meaning making (Deaton, Wymer, & Carlson, In Review), and fostering efficacy and professional development.

Social Significance

The demands required for providing a mental health service effect an individual physically, psychologically, and emotionally (Lenz, Oliver, & Sannganjanavanich, 2014). More than 70% of social workers are likely to experience at least one symptom of STS per week with intrusive thoughts as the most common symptom reported (Bride, 2007). Nonetheless, helping professionals attempt to make meaning and find purpose in their work with clients or patients who have experienced trauma (Bartoskova, 2017; Brockhouse et al., 2011). Scholars have identified three theories regarding VPTG to which each theory outlines a relationship to distress (Brockhouse et al., 2011; Cohen & Collens, 2013; Manning-Jones, de Terte, & Stephens, 2015). Such distress has the potential to impact client outcomes and vocational efficacy among helping professionals.

One example of this professional significance is within the counseling profession. The foundation of the counseling profession is built upon a therapeutic relationship and core conditions based in empathy (Rogers, 1957). The therapeutic relationship, however, is significantly hindered when the counselor is unable to maintain optimum wellness (Lawson, 2007; Smith, Robinson III, & Young, 2007). The researcher can infer that a similar outcome spans across helping professions as the perception of understanding,
empathy (Elliot, Bohart, Watson, & Murphy, 2018), and the therapeutic relationship have a greater ability to predict client outcomes than adherence to a treatment model or theory (Norcross, 2011, p. 4). Therefore, the ability to recognize and facilitate VPTG among helping professionals has potential implications to improve client outcomes, improve efficacy, reduce STS, and reframe adverse experiences of working with clients or patients who have experienced trauma. Moreover, by understanding of the observed and latent variables that make up VPTG, scholars can begin to construct supervision strategies and interventions that facilitate VPTG and support helping professionals in optimizing vocational efficacy.

**Theoretical Foundation**

The existing theories of VPTG within the literature have several limitations; informed from studies using the PTGI (Manning-Jones, de Terte, & Stephens, 2016) or assumptions of origin were made that VPTG is a product of experiencing vicarious trauma (Cohen & Collens, 2013) or STS (Brockhouse et al., 2011). Bartoskova (2017) connects VPTG to social learning theory (Bandura, 1977) to which the professional observes and learns the behavior of growth by witnessing the growth and resilience of the client or patient. Cohen and Collens (2013) explain a shocking revelation, also called an initial distress (Brockhouse et al., 2011), regarding the trauma and the capabilities of humanity lead to changes in one’s cognitive schemas. The professional then engages in a search for meaning as a resource to mitigate the negative affective responses to their work (Brockhouse et al., 2011). However, because of the lack of validity in the previous studies and the lack of a strong theory grounded in psychometric evidence, the aim of this study is to explore and generate theory of the dimensions of VPTG. The theoretical
The thematic synthesis developed six themes from literature investigating the lived experiences of growth across helping professions; counselors, psychologists, mental health administrators, social workers, nurses, and interpreters. The six themes emerging from the synthesis included; (a) negative responses, (b) changes in world view, (c) creating meaning to change self, (d) changes in interpersonal relationships, (e) engaging in efforts of support and self-care, and (f) client progress impacting growth. When lived experiences of working with trauma clients or patients are analyzed across disciplines, participants consistently report both positive and negative experiences (Arnold, et al., 2005; Barrington & Shankespeare-Finch, 2012; Baxter, 2012; Sui & Padmanabhanuui, 2016; Wheeler & McElvaney, 2018). Participants report negative affective responses as a result of their work and often experience difficulty identifying the positive affects from indirect trauma (Wheeler & McElvaney, 2018). The thematic synthesis emerged the theme of negative responses which aligns with the theories found in the literature (Brockhouse et al., 2011; Cohen & Collens, 2013) suggesting the individual will experience an intrusion from the indirect trauma that causes the individual to engage in meaning making, self-care, and personal relationships.

The negative responses include emotional (i.e. irritability, sadness, anger, or frustration) and physical reactions (i.e. headaches, sleep disturbance, nausea, increased heart rate, or hypervigilance), questioning self-efficacy, intrusive thoughts and vicarious
memories, and shock. The second theme emerging from the thematic synthesis includes *changes in worldview* which described the professionals shift in perspective of others and the world as a result of hearing the trauma. *Creating meaning to change self* consists of a learning experience that then creates a change in meaning, purpose, and self-awareness. Other experiences depicted in the synthesis were *changes in interpersonal relationships* to show greater appreciation, kindness, and becoming protective over others to prevent future trauma. Helping professionals also described *engaging in self-care and support* to mitigate stressors and seek understanding of their work among colleagues or resources. Lastly, the *client’s progress impacting the growth* describes the helping professional becoming inspired by witnessing the client’s the strength and resilience.

**Purpose of the Study**

The purpose of this study is to explore the factor structure of VPTG, generate theory regarding VPTG in helping professionals, investigate construct validity, and develop an initial inventory to measure VPTG. The study will contribute significantly to the literature by exploring the observed and latent variables contributing to the dimensions of VPTG. Previous scholars have significantly contributed to understanding the experiences of individuals indirectly affected by trauma (Arnold et al., 2005; Barrington & Shakespeare-Finch, 2013; Bartoskova, 2017; Baxter, 2012; Hyatt-Burkhart, 2014; Splevins et al., 2010; Sui & Padmanabhanunni, 2016), however scholars lack an understanding of the factor structure and dimensions of VPTG grounded in psychometric evidence. Additionally, this study will provide evidence of construct validity of VPTG by examining convergent and discriminant validity among STS, CS, and burnout. Participants of the study will include individuals across helping professions such as
counseling, social work, psychology, nursing, medical physicians, and medical professionals reflected in the thematic synthesis.

**Research Questions and Hypothesis**

This study aimed to answer the following research questions:

**Research Question One**

What is the factor structure of the VPTG inventory with a sample of helping professionals and helping professionals-in-training exposed to indirect trauma?

**Hypothesis one.** Factors will emerge that align with six proposed domains established from a thematic synthesis: (a) *negative responses*, (b) *changes in world view*, (c) *creating meaning to change self*, (d) *changes in interpersonal relationships*, (e) *engaging in efforts of support and self-care* and (f) *client progress impacting growth*.

**Research Question Two**

What is the relationship between initial VPTG inventory scores and scores of the Professional Quality of Life Scale (ProQOL; Stamm, 2010) with a sample of helping professionals and helping professionals-in-training (examining discriminant and convergent validity of the VPTG)?

**Hypotheses two.** There will be a negative relationship between STS and VPTG ($r < 0$) and a positive relationship between VPTG and compassion satisfaction ($r > 0$).

**Operational Definitions**

For the purposes of this study, the following terms are defined as:

**Vicarious Posttraumatic Growth**

Vicarious posttraumatic growth is defined as the positive change an individual develops as a result of indirect trauma exposure within their work (Arnold et al., 2005).
Previous scholars have identified positive changes such as a change in view of self, interpersonal relationships (Bartoskova, 2017; Barrington & Shakespeare-Finch, 2012), spirituality (Arnold et al., 2005), making meaning of the trauma work (Brockhouse et al., 2011), and finding ways to process the trauma work (Bartoskova, 2017). In order to inform the items of the VPTGI for the factor analysis, a thematic synthesis was conducted to isolate and understand the experience of VPTG among helping professionals and create operational definitions of the constructs within the VPTGI (Shaffer et al., 2015): (a) negative responses, (b) changes in world view, (c) creating meaning to change self, (d) changes in interpersonal relationships, (e) engaging in efforts of support and self-care, and (f) client progress impacting growth.

Negative responses. An initial distress experienced by the helping professional as a result of indirect exposure to trauma to include, but not limited to, physical, emotional, and psychological responses.

Changes in world view. A change in world view is defined as a shift in perspective of others and the world as a result of hearing the trauma that clients or patients have endured leading to an increase in awareness of world issues and understanding.

Creating meaning to change self. Creating meaning is defined as the helping professional’s reflection of their work, skill set, and overall purpose that leads to internalized changes to the self of the helping professional as a result of indirect trauma exposure.
Changes in interpersonal relationships. Changes in interpersonal relationships are defined as an adjustment or shift in engagement within interpersonal relationships as a result of their work with trauma clients or patients.

Engaging in efforts of support and self-care. Engaging in efforts of support and self-care is defined as the helping professional taking measures to identify support, self-care, and work-life balance to manage responses and continue working with trauma.

Client progress impacting growth. Client progress impacting growth is defined as the witnessing of strength, resiliency and growth from the client which inspires and supports growth among the helping professional.

Helping Professionals

The operational definition for helping professionals in this study is based on the variety of professions whom have studied the lived experiences and impact of trauma work (Arnold et al., 2005; Bartoskova, 2017; Barrington & Shakespeare-Finch, 2012; Baxter, 2012; Brockhouse et al., 2011; Splevins et al., 2010; Stamm, 2010) and previous studies utilizing the helping professionals as their overall population (Manning-Jones, de Terte, & Stephens, 2016; 2017). Stamm (2010) specifically identifies individuals whom work as “helpers” as professions responding to individual, community, national and international crises. Maslach and Jackson (1981) identified helping professionals as human service professionals working with the client’s psychological, social, and physical problems with significant and intensive involvement.

Helping professionals, for this study, are defined as individuals providing a service in response to the impact of trauma. Services related to the impact of the trauma include physical, psychological, emotional, and systemic support. Examples of these
professionals are counselors (Arnold et al., 2005; Bartoskova, 2017; Wheeler & McElvaney, 2018), social workers (Hyatt-Burkhart, 2014), nurses (Baxter, 2012), interpreters (Splevins et al., 2010), psychologists (Barrington & Shakespeare-Finch, 2012; Sui & Padmanabhanunni, 2016), and medical professionals (Barrington & Shakespeare-Finch, 2012; Hyatt-Burkhart, 2014) that have indirect exposure to trauma. Helping professionals-in-training included in the study are defined as students who have had direct service experience. Helping professionals-in-training within their field placements are exposed to indirect trauma and also experience affective responses related to their field experiences just as professionals in the field (Butler, Carello, & Maguin, 2017; Knight, 2010).

Indirect Trauma Exposure

Indirect trauma exposure has previously been defined as a traumatic event that has happened to someone close to an individual (i.e. friend, family member, or partner) or that an individual has been exposed to indirectly (Abel et al., 2014). For the purpose of this study, indirect trauma exposure is defined as exposure to the trauma narrative as a result of providing a helping service to the primary trauma victim.

Compassion Satisfaction

Compassion satisfaction (CS) is an element of professional quality of life of which the individual experiences pleasure as a result of their ability to do their work well, collaborate with others, and contribute to the greater good of society based on their professional ability (Stamm, 2010). For the purpose of this study, compassion satisfaction is defined as the individual’s satisfaction with the role and their ability to work in their role with trauma.
Secondary Traumatic Stress

Secondary traumatic stress (STS) is defined as the manifestation of PTSD-like symptoms due to indirect exposure to trauma (Figley, 1995); hypervigilance, nightmares, anxiety, or intrusive images (Ludick & Figley, 2017; Stamm, 1995). Both models of VPTG from Brockhouse and colleagues (2011) and Cohen and Collens (2012), include an initial distress within a linear model. Stamm (2010) identified STS as an element of compassion fatigue impacting the professional quality of life. For the purpose of this study, STS is defined as the manifestation of PTSD-like symptoms and initial distress experienced by the helping professional.

Burnout

Burnout is the second element of compassion fatigue characterized by three dimensions: emotional exhaustion, de-personalization, and personal accomplishment (Maslach et al., 1996). Burnout is characterized as insensitivity to the work environment, feelings of disconnection and unhappiness (Stamm, 2010). For the purpose of this study, burnout is defined as the experience of emotional depletion and de-personalization towards the client or patient as a result of indirect trauma exposure.

Limitations

The self-report and retrospective nature of the study requires participants to recall memories of former clients or patients. This presents the limitation of recall and reconstructive bias (Park & Lechner, 2006) as participants may remember past experiences differently. Further, when participants recall positive changes, participants may report these changes based on what is considered socially acceptable or desirable (DiMaio, 1984; Ones, Viswesvaran, & Reiss, 1996). Helping professionals are
characterized by their empathic engagement and the perception of understanding which has direct effects on patient or client outcomes (Norcross, 2011, p.4). Therefore, the participant may feel the pressure to answer questions of growth positively based on what is expected of the profession. Moreover, exposure to the items regarding positive changes may result in retrospective reattribution (Westphal & Bonnano, 2007). Exposure to the items themselves may benefit the participant prior to the actual experience of growth. This was displayed in the field test of the VPTGI (see Chapter Three) when a counseling student noted the survey “makes you really reflect”.

Other potential limitations include the sampling of participants and exclusion criteria. If the professions are not adequately represented in the sample, the homogeneity of the sample would limit generalizability across professions. Further, if the sample maintains relative homogeneity in terms of ethnicity, gender, and culture, the study would have limited generalizability to the helping professions in regard to diversity. The study will attempt to isolate the experience of growth as a result of indirect trauma by excluding participants currently receiving mental health services and emergency responders. These instances are considered a direct trauma experience due to the proximity of the trauma to the helping professional (Abel et al., 2014; Thornton & Perez, 2006; Veronese & Pepe, 2019). However, unreported growth that has occurred from past personal trauma or trauma related to a family or friend are considered a limitation of the study.

Further, the sampling frame of helping professionals across disciplines is considered a potential limitation of this study. Scholars across disciplines have depicted the lived experiences of helping professionals of VPTG similarly, however, the amount
of exposure to indirect trauma is different. Experts in STS describe this as a difference in “dose” of indirect trauma exposure and identify the volume of trauma cases on a professional’s caseload as a risk factor for STS (Sprang et al., 2019). This study does not include the amount of indirect trauma as a variable and therefore considered a limitation in this study.

Finally, limitations regarding the construction of the VPTGI must be considered. The operational definitions were constructed through a thematic synthesis conducted by the primary researcher and a team of 3 doctoral-level counselor education students. Synthetization of qualitative literature risks decontextualization of the findings and misinterpretations (Sandelowski & Barroso, 2007). The primary researcher attempted to mitigate this limitation by utilizing expert reviewers to support content validity developed by content-oriented evidence (Lambie, Blount, & Mullen, 2017). The reviewers provided feedback (see Chapter Three) regarding the operational definitions, item appropriateness, content representation, and multicultural sensitivity. While the appropriate mitigation steps were taken, this is considered a limitation in the study.

**Conclusion**

Helping professionals are indirectly exposed to trauma across various disciplines such as counseling (Arnold et al., 2005; Bartoskova, 2017; Brockhouse et al., 2011; Linley & Joseph, 2007; Wheeler et al., 2018), social work (Hyatt-Burkhart, 2014), nursing (Baxter, 2012; Beck, Rivera, & Gable, 2017; Beck, Eaton, & Gable, 2016), medical professionals (Barrington & Shakespeare-Finch, 2013; Hyatt-Burkhart, 2014). The impact of trauma work among helping professionals includes a variety of negative and positive experiences (Arnold et al., 2005). Positive responses include changes in
relationships, changes in worldview, and making meaning of the trauma work (Bartoskova, 2017; Brockhouse et al., 2011; Linley & Joseph, 2007). Such positive affects have been consistently measured using the PTGI which was initially created for posttraumatic growth among the primary trauma victim (Beck, Rivera, & Gable, 2017; Beck, Eaton, & Gable, 2016; Linley & Joseph, 2007; Shiri et al., 2008). The incorrect use of the PTGI has therefore yielded data of VPTG without validity and a lack of a developed theory based in psychometric evidence.

The purpose of this study is to conduct factor analysis to explore the factor structure and dimensions of VPTG in order to generate theory. This study will provide evidence of the latent and observed variables contributing to the dimensions of VPTG to then utilize confirmatory factor analysis to confirm the fit of the model presented in the exploratory factor analysis. Chapter Two will begin with a discussion of related literature conducted across disciplines. Chapter Three will outline the development of initial VPTG inventory and the proposed methodology and analysis of the study. Chapter Four will delineate the findings of the study and Chapter Five will conclude with implications and future research considerations.
CHAPTER 2
LITERATURE REVIEW

As stated in Chapter One, the purpose of the study is to explore the factor structure and dimensions of VPTG (Arnold et al., 2005) among helping professionals indirectly exposed to trauma. Further, this study aims to investigate construct validity of VPTG to provide evidence for convergent and discriminant validity of VPTG and other constructs; STS, CS, and burnout. This chapter attempts to provide the background and rationale for the study and review the thematic synthesis of the lived experiences of helping professionals conducted to inform the theoretical foundation of VPTG for the study.

Purpose and Organization

This chapter will begin with the affective responses for working with trauma, their similarities and differences. Following, the chapter will discuss the current models of VPTG within the literature and related literature of VPTG across disciplines of helping professionals. Lastly, the chapter will review the thematic synthesis conducted of VPTG across disciplines used to inform the theoretical foundation of the proposed study.

Relevant Research Search Strategy

Articles were selected after an extensive search across multiple helping professions. The search included the following databases: PsycINFO, PsychARTICLES, Psychology and Behavioral Sciences, PsycTests, Health and Psychosocial Instruments, Health Source: Consumer, Health Source: Nursing, and Social Work Abstracts. The
search criteria included English and peer-reviewed literature. This search strategy utilized the terms “Vicarious Posttraumatic Growth”, “Vicarious Post-Traumatic Growth”, “Posttraumatic Growth”, “Counselors”, “Nurses”, “Physicians”, “Social Work”, and “Psychologists”. Variations of the spelling for VPTG were also included as the literature presents multiple of the term. “Posttraumatic growth” was also included within the search because of the nature of the terminology in research. This literature was reviewed with particular attention to related literature within the articles.

**Affective Responses of Trauma Work**

The affective responses of trauma work among helping professionals extend to both positive and negative responses; secondary traumatic stress (STS; Canfield, 2005), vicarious trauma (McCann & Pearlman, 1990), compassion fatigue (Figley, 1995), burnout (Maslach et al., 1996), vicarious resilience (Hernandez, Gangsei, Engstrom, 2007), compassion satisfaction (Stamm, 2010), and vicarious posttraumatic growth (VPTG: Arnold et al., 2005). Each of these experiences range in manifestation and presentation as a result of indirect trauma. However, distinction is difficult due to the lack of clear demarcation between the constructs (Baird & Karcen, 2006).

**Vicarious Trauma**

Vicarious trauma is defined as the change in cognitive schemas in helping professionals as a result of cumulative indirect trauma exposure. Changes in cognitive schemas include changes in the helping professionals view of safety, intimacy, trust and spirituality (McCann & Pearlman, 1990). Vicarious trauma presents after a cumulation of trauma exposure that can result in the professional’s inability to care for themselves or others by depleting their psychological resources (Pearlman & Saakvitne, 1995).
Vicarious trauma differs from other negative affective responses, such as STS and compassion fatigue, because of the lengthy and gradual onset. Helping professionals that are chronically exposed to indirect trauma are more likely to develop vicarious trauma while helping professionals that are exposed to indirect trauma for short durations are more likely to develop STS (Baird & Kracen, 2006). Other differences between vicarious trauma and other negative affective responses are the permanent and pervasive nature of vicarious trauma as a result of changes in the cognitive schemas (McCann & Pearlman, 1990).

Presentation of vicarious trauma falls into four categories: intrusive imagery, arousal, avoidance behaviors, and negative changes to cognitions (Aparicio, Michalopoulos, & Unick, 2013; Mishori, Mujawar, & Ravi, 2014). Professionals experiencing vicarious trauma may experience unwelcome thoughts of the client’s trauma, nightmares, isolation and avoidance of traumatic disclosures and professional responsibilities and stress induced medical conditions (Aparicio et al., 2013; Barrington & Shakespeare-Finch, 2013; Branson, Weigand, & Keller, 2014; Bride, 2007; Mairean & Turliuč, 2013; McCann & Pearlman, 1990; Mishori et al., 2014; Osofsky, Putman & Lederman, 2008; Possick, Waisbrod, & Buchbinder, 2015; Pryce, Shackelford, & Pryce, 2007; Sansbury, Graves, & Scott, 2015; Wies & Coy, 2013). Vicarious trauma has been studied across helping professions including helping professionals in training and their field instructors (Knight, 2010).

Wies and Coy 2013 conducted an exploratory study to investigate the prevalence of vicarious trauma among sexual assault nurse examiners. The investigators surveyed 42 nurse examiners using the Secondary Traumatic Stress Scale and scored the results based
on recommendations from Bride and colleagues (2004) that a minimum of one symptom of the intrusion category, two items of the arousal category and three items of the avoidance category meets criteria for vicarious trauma. Based on this criterion, over 38% of the nurse examiners met criteria for vicarious trauma. However, when considering a summation minimum of five symptoms endorsed overall, 59.52% of the respondents have experienced vicarious trauma. Raunik and colleagues (2015) also examined the prevalence of vicarious trauma among sexual assault nurse examiners as compared to routine women’s healthcare nurses. These researchers identified the examiners reported higher levels of vicarious trauma than routine women’s health nurses indicating the persistent exposure to indirect trauma had a greater effect in the development of vicarious trauma.

Carolyn Knight (2010) sought to explore the prevalence of vicarious trauma among social work students in their practicum studies and their field instructors. Of the participants, all students and field instructors reported some negative reactions associated with their work with their clients. However, the student participants exhibited more signs of indirect trauma and were more likely to manifest symptoms of vicarious trauma than the field instructors, indicating the level and years of experience as significant factor of vicarious trauma. This was also shown among younger field instructors having displayed more signs of vicarious trauma than more experienced instructors.

Other factors such as personal trauma history and social support and their relationship to vicarious trauma have been explored. Michalopoulos and Aparicio (2012) surveyed 160 social workers using the Vicarious Trauma Scale, a question regarding personal trauma history, and the Multidimensional Scale of Perceived Social Support.
The researchers hypothesized a personal trauma history would predict vicarious trauma symptoms; however, this was not supported by the study results. The study also did not show a significant relationship between personal trauma treatment and vicarious trauma. Years of experience was reported as a significant predictor to vicarious trauma with participants with more social work experience predicted a decrease in reported vicarious trauma symptoms. Lastly, social support findings indicated that an increase in social support predicted a decrease in vicarious trauma.

When studying vicarious trauma among language interpreters, researchers have found a prevalence of affective responses among the profession. Botempo and Malcohm (2012) suggest interpreters convey the narrative through a first-person voice which increases risks of vicarious trauma. The authors further argue in order for interpreters to be effective, it is necessary to have an empathic reaction to “co-experiencing” the narrative with the client. However, limited research remains on affective responses of language interpreters. The few studies presented in the literature will be reviewed further in the chapter.

**Secondary Traumatic Stress and Compassion Fatigue**

Professional Quality of Life outlines the quality helping professionals experience regarding their work as helpers to include two aspects, compassion fatigue and compassion satisfaction (Stamm, 2010). Compassion satisfaction depicts the positive aspect of professional quality of life, to be described later in this section, while compassion fatigue depicts the negative aspects. Stamm (2010) frames compassion fatigue in two parts; secondary traumatic stress and burnout.
Compassion fatigue (Figley, 1995) is a term that is used interchangeably throughout the literature with STS to depict the manifestation of PTSD-like symptoms (Ludick & Figley, 2017); hypervigilance, nightmares, anxiety, or intrusive images as a result of indirect trauma exposure (STS; Figley, 1995; Ludick & Figley, 2017; Stamm, 1995). The construct of STS has been studied across helping professions (Baugerud, Vangbaek, & Melinder, 2018; Bride, 2007; Mehus & Becher, 2016; Mairean, 2016). However, STS is not specific to trauma-work but rather, a construct relative to varying types of indirect trauma exposure (Elwood, Mott, Lohr, & Galovski, 2011). The literature regarding STS provides significant confusion due to the lack of distinction between STS and other constructs. Such confusion in the literature led experts to come together to call for a moratorium of varying definitions and for scholars to move forward by defining STS as being directly parallel to the DSM-5 symptoms of posttraumatic stress disorder as a result of indirect trauma with the exception that exposure to indirect trauma may not be repeated or reoccurring (American Psychiatric Association, 2013; Sprang, Ford, Kerig, & Bride, 2019).

Recently Ludick and Figley (2016) positioned STS into a larger context model called Compassion Fatigue Resilience which specifies complexities of STS, compassion fatigue, and their relation to resilience. The Compassion Fatigue Resilience model identifies three sectors: the empathic stance/response, STS, and compassion fatigue. The empathic stance/response describes the cost of caring for the helping professional when the helping professional engages in empathic communication necessary to support the therapeutic work (Ludick & Figley, 2016). The client’s distress is internalized by the helping professional leading to an increase in negative affective responses – even among
mental health workers in administrative roles (Ludick, 2013). This cumulation of STS, the second sector of the model, presents PTSD-like symptoms, remembrance of personal trauma memories, and potentially disrupts functioning temporarily. The authors note STS is prevalent when an individual is exposed to a particular “dosage” of indirect trauma, however the dosage may vary person to person. The final sector of the model includes compassion fatigue resilience where the individuals’ own resilience supports in coping with the STS experience through self-care, detachment, social support, and compassion satisfaction (Ludick & Figley, 2017).

Secondary traumatic stress is widespread across helping professionals. The prevalence of STS was investigated among 282 social workers (Bride, 2007) using the Secondary Traumatic Stress Scale (Bride, et al., 2004). The aim of the study was to investigate the prevalence of STS through examining the frequency of individual symptoms, the level of severity of those symptoms and the frequency with which the participants met criteria for posttraumatic stress disorder as a result of their work with trauma. Participants were asked to respond to the scale which utilizes a 5-point Likert scale of frequency regarding items of frequency in intrusion, avoidance, and arousal symptoms associated with STS. When asked about individual symptoms of STS, 70% of the participants reported experiencing at least one presenting symptom within the last week. The most common symptom reported was intrusive thoughts related to the client’s trauma (40%) and the second most frequent symptom reported was experiencing psychological distress (19%). Respectively, 55% of social workers met criteria within one core cluster area of diagnosis for posttraumatic stress disorder however, 15% met the full diagnostic criteria (Bride, 2007).
Mehus and Becher (2016) examined STS among interpreters through a cross-sectional survey study using the Professional Quality of Life scale (ProQOL; Stamm, 2010). Previous scholar have inferred interpreters with similar culture as the clients they are working with are at higher risk for STS (Tribe & Morrissey, 2003) due to the use of the first-person pronoun during interpretation which provides a unique personalization when conveying the narrative (Bontempo & Malcolm, 2012). The authors note that while other helping professions have systems of supervision, peer consultation, and are provided education in self-care, interpreters do not include this in their training and are only provided strict education in confidentiality. Nonetheless, the results of the study indicated the work is particularly stressful and high levels of STS.

Manning-Jones, de Terte, and Stephens (2016) investigated the relationship between secondary traumatic stress and VPTG among healthcare professionals. The 365 participants included social workers, psychologists, counselors, nurses, and medical doctors. Social workers in the study reported higher levels of STS than doctors and psychologists at which the authors inferred the social workers have higher levels of exposure to indirect trauma. Further, the authors reported the higher levels of exposure increases their risk of STS while also promoting higher levels of VPTG. However, the relational outcome of STS and VPTG does not contribute to the factor structure or dimensions of VPTG due to the researchers use of the PTGI to investigate VPTG among the sample.

**Burnout**

Within the Professional Quality of Life model, burnout is the second negative aspect of compassion fatigue with STS (Stamm, 2010). Burnout is a negative affective
response specific to occupational stressors (Center for Disease Control and Prevention, 2018) such as poor working environment, lack of support, insufficient compensation, and high turnover (Dombo & Gray, 2013; Sansbury, et al., 2015); unlike the previously mentioned stressors that are specific to trauma. In 2018, the Center for Disease Control and Prevention established burnout as an official diagnosis describing burnout as (1) “feelings of energy depletion or exhaustion,” (2) “increased mental distance from one’s job, or feelings of negativism or cynicism related to one’s job,” and (3) “reduced professional efficacy.” Maslach et al. (2001) described these multidimensions as (1) emotional exhaustion, (2) depersonalization, and (3) reduced personal accomplishment.

Burnout is a cumulation of work-related stressors which begins gradually and builds overtime (Figley, 1995) leading to low levels of performance and productivity across helping professions (Maslach, 2001). Contributing factors to burnout occur on the systemic, individual, and client level (Newell, Nelson-Gardell, & MacNeil, 2016); high caseloads, lack of input in agency policy and procedure, low supervisory support and poor training (Barak, Nissly, & Levin, 2001). The strongest predictor and risk factor of burnout across helping professions is consistent inadequate funding and resources with high needs clients and families. Furthermore, the routine use of empathy and suppression of emotions is associated with professional burnout (Maslach, 2001). Symptoms of burnout manifest through frequent absenteeism, chronic fatigue, poor client care, and poor job performance.

Butler, Carello, and Maguin (2017) surveyed 195 social work students in field experiences to inquire about burnout, decline health status, STS, and compassion satisfaction using the STS Scale (Bride et al., 2004) and the ProQOL Scale (Stamm,
Several key predictors of burnout emerged from the regression analysis. The first of the positive associations to burnout was re-traumatization. When students were impacted by the exposure of indirect trauma to a level of potential re-traumatization, the student was more likely to experience burnout. Field stress was significantly more predictive of burnout than any other factor, such as trauma symptoms and coursework stress, and increased the risk of a decline in health status by 50%. Students within the field are not immune to the effects of indirect trauma exposure regardless of the limited experience in the field (Butler, et al., 2017). This study contributes to the proposed study as it validates the inclusion of students in field experiences in the population as their exposure to indirect trauma produces affective responses such as burnout, STS, and compassion satisfaction.

Mehus and Becher (2016) aimed to investigate burnout among 119 interpreters using the Professional Quality of Life scale (Stamm, 2010). The participants reported high levels of STS and compassion satisfaction with a significant correlation between STS and burnout and compassion satisfaction and burnout. The authors interpreted these results to indicate a complex phenomenon of compassion satisfaction serving as a protective factor for burnout. As interpreters may consider their work to be stressful, it is also considered to be a rewarding profession.

Burnout is prominent across helping professions but is potentially mitigated by compassion satisfaction. Conrad and Kellar-Guenther (2006) investigated burnout among child protection workers with a sample spanning a variety of roles such as investigators, case workers, and supervisors. The burnout rate of the study was considerably low with only 7.7% of the sample at high risk of burnout and over 70% of the sample reporting at
least good potential for compassion satisfaction. Depanfillis (2006) commentates this study potentially provides implications for occupational support to foster compassion satisfaction as a strategy to reduce burnout. This study contributes to the rationale of the proposed study as understanding the dimensions of VPTG would provide additional factors to conduct relational studies of burnout and VPTG.

**Compassion Satisfaction**

The positive aspects of the Professional Quality of Life model include compassion satisfaction (CS) to which the individual feels positively about their ability to help others and contribute to the workplace or greater good (Stamm, 2010). The experience of CS allows for the helping professional to vicariously benefit from the improvement and feelings of empowerment (Pooler, Wolfer, & Freeman, 2014). Other elements of CS to consider are positive interactions with clients, colleagues, and human service professionals (Stamm, 2005). Compassion satisfaction utilizes empathy as the catalyst for professional satisfaction through observing the client overcoming adversity and hardship. Empathic communication and attunement require the helping professional to use personal resources in order to effectively work with trauma unlike other professions. This daily use of empathy supports the development of fulfillment and satisfaction (Newell, Nelson-Gardell, & MacNeil, 2016).

Scholars across disciplines have supported compassion satisfaction as a means to mitigate compassion fatigue (Conrad & Kellar-Guenther, 2006; Ludick, 2013; Mehus & Bechner, 2016; Samios, Abel, & Rodzik, 2013). Conrad and Keller-Guenther (2006) studied the potential for CS among child protection workers using a self-report instrument during an STS seminar. Among the sample, the participants whom reported
higher levels of CS also reported lower levels burnout and compassion fatigue. As many as 75% of participants reported “good potential” or higher for compassion satisfaction. Similar results were reported when Mehus and Bechner (2016) investigated compassion satisfaction and its relation to STS and burnout among interpreters. The interpreters indicated high levels of both STS and CS of which the researchers inferred that while the work of interpreting trauma was particularly stressful, the participants also found their work to be rewarding.

Samios, Abel, and Rodzik (2013) aimed to investigate the protective role of CS among therapists working with sexual violence survivors. Uniquely, the researchers aimed to explore positive emotionality and its relation to CS. The researchers hypothesized positive emotionality through positive reframing, such as joy, interest, and contentment, would highly correlate with CS to mediate the relationship between positive emotionality and CS. The hypothesis was supported as positive emotionality was highly correlated with CS with a direct pathway among positive reframing and CS. The scholars theorize positive emotions broaden the individual’s thinking both personally and interpersonally. The results of the study also agreed with previous literature as the therapists with higher levels of CS reported lower levels of anxiety related to STS. However, higher levels of CS did not correlate with greater depression related to STS indicating no relationship between CS and depression.

In the same study, Samios and colleagues (2013) explored the relationship between CS and VPTG concluding through preliminary evidence that CS and VPTG are different constructs. The researchers identified VPTG to have a buffering effect on both anxiety and depression related to STS for trauma therapists unlike CS. Therefore, VPTG
is necessary in order to buffer the negative effects of STS related depression while CS simply identifies ways in which the trauma work is satisfying to the helping professional. This study is significant to the proposed research question regarding the relationship between the scores of CS within the ProQOL Scale and the initial VPTG inventory. This study was utilized to inform the hypothesis of VPTG as a distinct construct from CS when investigating the concurrent and discriminant validity of VPTG. Further, the study calls for further research regarding the distinction of these two constructs and their interactive effects.

**Vicarious Resilience**

Vicarious resilience provides a balance to the negative effects of trauma work (Killian et al., 2017) as the positive impact on therapists developing from the clients’ resilience when working with political trauma (Hernandez, Engstrom, & Gangsei, 2007). Vicarious resilience is made up of seven factors; (a) *changes in life goals and perspectives*, (b) *client-inspired hope*, (c) *increased self-awareness and self-care practices*, (d) *increased capacity for resourcefulness*, (e) *increased recognition of clients’ spirituality as a therapeutic resource*, (d) *consciousness about power and privilege relative to clients’ social location*, and (f) *increased capacity for remaining present while listening to trauma narratives* (Killian et al., 2017).

Hernandez, Engstrom, and Gangsei (2007) sought to understand the effects of psychotherapists working with clients who had experienced political violence or kidnappings. The researchers conducted a grounded theory study through semi-structured interviews with 12 psychotherapists. The participants described being affected through reflecting on the human experience and the ability to heal after immense trauma. Other
experiences that emerged from the data were of gaining a different perspective of the role of the psychotherapist leading to recommitment to working with the population of political trauma. During the study the researchers noted the natural emergence of themes and experiences related to vicarious trauma such as anger, hopelessness, fear, and frustration with the limitations of therapy. This initial study describes the experience of vicarious resilience emerging from an empathic engagement with the client’s trauma narrative.

Engstrom and colleagues (2008) continued Hernandez et al.’s work (2007) through a second grounded theory study to further their understanding of vicarious resilience by examining the experiences of mental health workers specifically working with clients of torture. Similar experiences reemerged in the study such as the recognition of the individuals’ ability to endure trauma. Additional experiences emerging from the study were the therapists’ alteration of their own personal perspectives, valuing their work, and a positive affect stemming from the client’s resilience. These studies echo one another in their emerging data among psychologists and helping professionals working with political trauma.

Edelkott, Engstrom, and Hernandez-Wolf (2016) continued their investigation of vicarious resilience to further the understanding of the themes from an initial study conducted in 2007 by Herendez, Gangsei, and Engstrom. The researchers conducted a grounded theory study among 12 mental health workers working with survivors of torture with the aim to connect vicarious trauma and vicarious resilience. The participants again reported experiences of intrusive thoughts, irritability, tiredness, avoidance, and depression. The participants further explained the broadening of understanding to human
rights and a change in perspective of their own adversities. These scholars pose the ability for helping professionals to have both experiences of vicarious trauma and vicarious resilience.

These three studies are the qualitative data that later informed the Vicarious Resilience Scale (Killian et al., 2017). However, these studies do not answer the research question because the goal of this study is to understand the factor structure of VPTG. While similar, vicarious resilience focuses exclusively on the experience of counselors working with torture which presents a differing experience and socio-political context that is not presented in any VPTG literature. Further, the researchers, in their development of vicarious resilience, did not compare the relevant literature of VPTG due to the simultaneous development of these two constructs in the literature. It is still unclear as to how or if vicarious resilience fits into a model of VPTG.

The affective responses reviewed above (i.e. vicarious trauma, compassion fatigue, secondary traumatic stress, burnout, compassion satisfaction, and vicarious resilience) are frequently studied in correlation together because of the complexity of their co-existence. Compassion satisfaction serves as a mitigator to burnout (Conrad & Keller-Guenther, 2006) and STS (Conrad & Keller-Guenther, 2006; Samios, Abel, & Rodzik, 2013), STS and burnout are a component of compassion fatigue (Stamm, 2010) and vicarious trauma exceeds STS as a permanent outcome resulting from a cumulation of indirect trauma exposure (McCann & Pearlman, 1990). These constructs are able to be investigated together because of the established measured used in their investigations; STS Scale (Bride et al., 2004), the ProQOL Scale (Stamm, 2010), and the Burnout Inventory (Maslach et al., 1996). The Vicarious Resilience Scale is a newer established
measure and has not yet been utilized in published literature. These scales are described in further detail later in the chapter. The final affective response to review is the construct of interest for the proposed study, VPTG.

**Vicarious Posttraumatic Growth**

The work of Arnold, Calhoun, Tedeschi, and Cann (2005) is the foundation of VPTG that began to outline the positive affect of trauma work. Arnold and colleagues (2005) initially coined the term “vicarious posttraumatic growth” in their qualitative study of 21 trauma psychotherapists. The researchers used naturalistic interviews to examine the possible positive effects of working with trauma survivors. In the inaugural study of VPTG, researchers addressed the fundamental tenets of vicarious trauma and the perceived psychological growth. Eleven themes emerged from the data depicting the overall experience of working with trauma survivors to include areas of impact on self, outlook of the world, spirituality, philosophy of life, self-care, personal trauma history, client’s posttraumatic growth, and the impact of clients on therapist’s growth and development. More importantly, the findings depict the difficulty differentiating the impact of trauma work on their lives from the other factors due to the profound influence it had had on their lives. The remainder of this chapter will focus exclusively on VPTG across disciplines and conclude with a thematic synthesis of VPTG across helping professions.

**Models of Vicarious Posttraumatic Growth**

Since Arnold and colleagues’ study that identified the construct of VPTG, there were no working models of VPTG until Brockhouse, Msetfi, Cohen & Joseph (2011) investigated variables that moderate VPTG; sense of coherence, organizational support,
and empathy. From the study, Brockhouse et al. (2011) identified cumulative exposure to traumatized clients, empathy and sense of coherence predicted levels of growth among therapists. Particularly, empathy played a moderating role in these relationships to which the researchers concluded that highly empathic counselors are more likely to accommodate their schemas in order to promote VPTG. Further, empathy and sense of coherence were identified as direct predictors to growth to which a model of VPTG began to be constructed. The authors began to shape a framework describing an initial distress, such as vicarious trauma, leads the counselor to engage in meaning making resulting in VPTG.

Manning-Jones, de Terte, & Stephens, (2015) conceptualized a similar model through a systematic review of VPTG literature. Building from Brockhouse et al. (2011), Manning-Jones, de Terte, and Stephens inferred that VPTG existed on a continuum to which secondary traumatic stress (STS) resided on one end and VPTG on the other. The systematic review described this continuum as an experience in which the individual may experience an initial shock, devastation, or shattering of assumptions regarding themselves or their worldview. Manning-Jones et al. (2015) theorized this experience to be the foundation of VPTG. Furthermore, the scholars theorize STS may develop simultaneously with VPTG in a curvilinear relationship but note this is not consistent with the literature; VPTG and STS in other studies is depicted as a linear relationship (Brockhouse et al., 2011; Shiri et al., 2008).

Cohen and Collens (2013) also constructed a model of VPTG by synthesizing literature of vicarious trauma and VPTG. The search criteria for the metasynthesis consisted of qualitative or mixed methods literature of the impact of working and coping
with trauma work across counselors, social workers, psychologists, and interpreters. The derived model illustrates a linear model stemming from empathic engagement with traumatized clients. Cohen and Collen theorize the empathic engagement sparks two reactions; (1) distress, negative emotions, or somatic responses or (2) shock. Within this model, shock is the catalyst for meaning making which then leads to VPTG while distress leads to engaging in coping, self-care, and support to decrease distress. Other factors included are time, witnessing clients’ growth, and the nature of trauma work. Time in the model is explained as having a relationship to coping over time and decreased distress. Witnessing of client growth is related to both shock and VPTG while the nature of trauma work is related to VPTG.

These studies attempt to construct a model by reviewing the relevant VPTG literature, however there are significant limitations. Both models presented by Brockhouse et al. (2011) and Manning-Jones et al. (2015) rely on data extracted from the PTGI. Brockhouse et al. (2011) used the PTGI to develop relational data among the variables empathy, sense of coherence, and organizational support with VPTG. Further, Manning-Jones et al. (2015) constructed their model from a systematic review that included studies presenting results from the PTGI. Cohen and Collens (2013) used qualitative literature to support their model, however constructed the model based on the assumption that vicarious trauma was the source of the framework. Further, Cohen and Collens (2013) model, while the most developed, lacks the consideration of transference, counter-transference, and any fluctuation of positive and negative affective responses over time (Long, 2019). The proposed models contribute to the understanding of VPTG however, it furthers the rationale of exploring the factor structure and dimensions of
VPTG in the proposed study. These models lack psychometric evidence to support their model and the relationship of VPTG among other constructs.

**Vicarious Posttraumatic Growth Across Helping Professions**

In order to begin the development of an initial inventory applicable across professions, the researcher first reviewed the VPTG literature across disciplines. The following is a review of literature across disciplines; counseling and psychotherapy, mental health and social workers, nurses, and interpreters.

**Counseling/Psychotherapy**

Bartoskova (2017) sought to explore the therapists understanding of their trauma work and explore other key factors experienced by trauma therapists that enabled vicarious post-traumatic growth. Bartoskova sampled 10 self-identified trauma therapists whose work consisted of at least 40% trauma cases using gatekeeper organizations to present the opportunity to participate. Four superordinate themes emerged from semi-structure interviews and interpretive phenomenological analysis: (a) responding to a client, (b) noticing growth in self, (c) making a difference, and (d) finding their own ways to process the trauma work. The participants defined responding to their client with three subthemes that depicted a change in worldview, self-doubt and helplessness, and psychological symptoms. Noticing growth in self was identified by the participants as a greater appreciation of their past experiences or what they have, a greater understanding of self, and a sense of hope that is gained from their work. Lastly, the therapists were finding their own ways to process trauma through boundaries, broadening knowledge, and engaging in self-care. This study contributes to the research question by informing
the instrument of meaning making, growth in self, and finding personal ways to process trauma as components contributing to vicarious posttraumatic growth.

Wheeler and McElvaney (2018) identified a need for furthering the understanding of what helps therapists in their work. The aim of their study was to contribute to the understanding of specifically the positive impact of therapists working with child victims of sexual abuse in Ireland. The researchers used unstructured interviews and inductive thematic analysis to support the development of this understanding. Four themes emerged from the data: (a) struggle to talk about the positive impact, (b) professional satisfaction from helping children, (c) learning life lessons from children, and (d) the magical connection that happens in therapy. The first theme highlights the participants having difficulty to talk about the positive impact of the work and their tendency to describe the therapeutic process or focus on the negative aspects of the work in response to questions directed towards the positive. Professional satisfaction is the second theme that emerged that described the sense of value gained from the work and a sense of importance in working and helping children who had experienced sexual trauma. The third theme to emerge was that of learning from the client. Lastly, the fourth theme to emerge describes the “magical connection” conveying the therapeutic relationship with the child as close and intimate relationships allowing the therapist to connect with their child-like self. This study contributes to the theoretical foundation of the study that an initial distress, or negative responses, holds a relationship to vicarious posttraumatic growth as the therapist felt the need to describe the negative impact of the work that occurred prior to describing the positive aspects of the work. The participants found it difficult to stay on task or
needed additional probing when answering questions of the positive aspects of the work because of negative responses that needed to occur in order for the positive to happen.

Long (2019) addressed Cohen and Colleen’s (2013) theoretical model of VPTG through the perception of the supervisor. The supervisors were asked to explore the model of vicarious trauma and expand on what they had done to manage vicarious trauma and promote vicarious post-traumatic growth among supervisees. However, the supervisors reported that they were uncertain they were able to recognize and observe the steps the counselor took to managing the impact of trauma work and was a significant limitation to the study. Supervisors agreed with the negative physical and emotional impact of trauma work and encouraging coping strategies among the supervisees. The supervisors also reported that while coping strategies were important, the process of engaging in meaning making to change their sense of worldview was the most utilized strategy in supervision. Further, the supervisors depicted the witnessing of growth among clients was significant to the facilitation of VPTG. The supervisors did not agree with aspects of the model pertaining to a period of counselors’ “shock” towards the client’s growth and towards the trauma narrative. The supervisors described that the term “shocked” seemed too strong and the experience of shock only seemed to occur with inexperienced counselors or counselors with a personal trauma history. The supervisors also noted a need to extend the model to portray a fluctuation of positive and negative changes over time and not a linear model as well as the lack of systemic analysis of factors impacting trauma recovery. The supervisors described the influence of transference and countertransference in vicarious trauma that is not noted in Cohen and Colleen’s model.
Overall, the counseling literature depicts the experience of VPTG as both an internal and external process. Internal processes across these studies describe a change in life philosophy, self, spirituality and engaging in meaning making. The external processes describe changes in personal relationships, finding ways to process the trauma, establishing boundaries, engaging social support, and learning from the client. Interestingly, the literature unanimously does not neglect the negative affective responses when asking about lived experiences or even asking specifically about growth. This supports linear conceptualizations of an initial distress or shock leading to the growth experience (Brockhouse et al., 2011; Cohen & Collens, 2013).

**Mental Health and Social Workers**

Pack (2014) approached the lived experiences of social workers through the lens of adjusting to vicarious trauma in order to investigate the linear model of VPTG stemming from vicarious trauma. The authors intent was to gain accounts of both resilience and traumatization using thematic analysis. The first theme to emerge from the data were the bodily and emotional manifestations of vicarious traumatization. These bodily feelings led the social workers to create meaning of the experience. The second theme to emerge from the data is the reforming of personal and professional identities. The social workers described their own personal struggles and the generating of hope and respect from their client’s journey. Pack further explores the experience of the male participants who presented additional experiences of feeling as though all women are vulnerable to abuse after working with survivors of sexual trauma. The male participants further described the restructuring of views on women, oppression, and the effects on their personal relationships. Pack’s analysis of the male participants separate from the
female participants offers unique insight into the differing of experiences based on gender which may further inform the instrument. However, there are limitations in the study due to the methodology utilized in the study. Pack is a solo author in the qualitative study which leaves room for biased interpretation of the data. Further, Pack uses feminist theory and other “self-constructivist” development theories to align the data which offers significant limitations in the interpretation of the merging data. This study was not included in the thematic synthesis as the authors aligned her results to vicarious resilience and therefore not included to attempt to isolate the experience of VPTG.

Barrington and Shakespeare-Finch (2013) examined the experiences of mental health workers working in a trauma and torture specific agency. Uniquely, the sample included both clinicians and administrative or managerial staff focusing on the impact of working with torture and trauma and the role, if any, on meaning making within that experience. Findings from the study report the experience of vicarious trauma, meaning making, and vicarious posttraumatic growth. The mental health workers reported an initial difficulty adjusting to the trauma work and engaging in meaning making to reduce psychological distress. This study has significant implications as it furthers the understanding of meaning making as a significant part of the experience towards growth for the helping professional.

Hyatt-Burkhart (2014) explored the lived experiences of mental health workers working with refugee-related trauma using interpretative phenomenological analysis. The participants in the study described experiencing positive changes as a result of the client’s growth of which Hyatt-Burkhart aligned with the categories of changes derived from Calhoun & Tedeschi’s (1999) research of posttraumatic growth among the primary
trauma victim; changes in self-perception, interpersonal relationships, and philosophy of life. The study notes the participants only acknowledged the positive experiences of their work when directly asked from the interviewer; similarly, to Wheeler and McElvaney (2018) who noted the participants had trouble talking about the positive and needed to initially address the negative. The participants reported changes in self-perception to include becoming more tolerant and open-minded towards others bringing new awareness. Participants also described a change in their relationships to include greater appreciation. Lastly, the participants described learning the capabilities of human resilience and change. This article contributes to the study as it informs the items of the proposed exploratory factor analysis and helps generate theory regarding the experience of VPTG. Further, this study supports the theory of an initial distress is necessary in order for growth to occur as the participants were redirected to talk about the positive experiences of their work.

Psychologists

Michalchuk and Martin (2018) investigated the experiences of vicarious growth and resilience among psychologists working with trauma survivors using a mixed methods study. Among the six participants interviewed, the emerging themes illuminated the experience of a shared journey, developing a purpose and personal growth. The psychologists described a change in perspective and gaining perspective and purpose. Further, the psychologists derived positive meaning, optimism, passion for people and a sense of serving humanity and creating meaningful work. The study uniquely adds an element of a sense of duty and responsibility the psychologists described that has not been depicted in previous literature broadening the understanding of VPTG. The study
was not included in the thematic synthesis as the authors aligned their results with vicarious resilience rather than VPTG. However, the study offers further insight into theoretical connection of the two constructs.

Sui and Padmanabhanunni (2016) sought to gain understanding of the psychological impact of working with trauma survivors among South African psychologists with the focus of vicarious trauma. However, while themes of vicarious trauma were the majority of the emerging data, the psychologists also presented aspects of growth from working with trauma. The authors align this theme with Tedeschi and Calhoun’s (1996) domains of posttraumatic growth from the client as the psychologists reported changes in life philosophy, self-perception, and interpersonal relationships. This study contributes to the establishing theory that vicarious trauma and VPTG are related constructs aligning to Brockhouse and colleagues (2011) theory that the initial distress of vicarious trauma leads to VPTG.

These two studies highlight a unique aspect of VPTG which is an experience of developing purpose from a sense of duty or responsibility to humanity in addition to engaging in meaning making. Sui and Padmanabhanunni (2016) chose to align their analysis to Tedeschi and Calhoun’s (1996) domains while maintaining the element of negative responses that is unique to VPTG.

**Nursing**

Beck, Rivera, & Gable (2017) investigated nurse-midwives in a convergent parallel mixed-methods study. Among the data collected consisted qualitative elements as the participants were asked to describe their experiences of positive changes in their beliefs or life as a result of attending traumatic births. The authors then aligned these
segments of qualitative data to the dimensions of Tedeschi and Calhoun’s (1996) dimensions of the PTGI: personal strength, appreciation of life, relating to others, spiritual change, and new possibilities.

Another study among the field of nursing is that of a dissertation by Jennifer Baxter in 2012. The researcher sought to explore the lived experiences of obstetric nurses through phenomenological interviews of 10 nurses. Baxter used phenomenological analysis in order to produce themes representing their experiences: (a) An internal process, (b) being faced with the unexpected, (c) going through the motions, (d) feeling helpless, (e) engaging others, (f) a visceral imprint, and (g) A damaged person. The internal process was described as an instinct of knowing something distressing was going to occur. The nurses also described an internal dialog and asking why. The nurses described an internal torment with not understanding the reasons of the outcome of the patient. Nurses uniquely described being caught off guard and a feeling of always being on their toes when it came to preparing for their work. Further, the nurses also explained feeling the need to comfort themselves and compartmentalizing their thoughts and emotions or other times glossing over details. Distinctively, the participants identified feelings of helplessness and realizing the consequences for the patient if their actions continued when collaborating with other disciplines or physicians. However, the participants described processing the trauma through talking it out with colleagues but feeling that individuals outside the profession did not understand or care of their experiences. The last two themes identify a lasting impression the experiences had left on participants and feeling they are forever changed.
The experience of nurses in vicarious trauma and VPTG is unique to other professions due to the proximity of the professional with the patient. Due to the physical nature of the profession, the personal responsibility that is described by psychologist appears to be much stronger among nurses in a responsibility to the patient’s life. Further, the internal process of compartmentalizing is described as a necessity for the treatment of the client that is not present in other disciplines. This contributes significantly to the development of the measure as it broadens the presentation of the experience adding potential dimensions to the construct.

**Interpreters**

Limited research has been conducted regarding the affective responses among interpreters despite the presents of the same traumatic stimuli as other helping professions (Mehus & Becher, 2016). The use of the first-person pronoun within the interpretation provides a unique “co-experience” for the interpreter to simultaneously have an empathic reaction to the client’s trauma while conveying the client being translated (Bontempo & Malcolm, 2012). Only one study was found exploring the experiences of growth among interpreters within the literature.

Splevins and colleagues (2010) investigated VPTG among 8 interpreters whom had previously worked with asylum seekers in a therapeutic setting. The themes emerging from the data highlighted a parallel process of feeling what they client feels as they interpret and listen the narrative for the client or patient. Further the interpreters described a feeling of shock of what the client had experienced and needing to find their own ways to process the trauma. Lastly, the interpreters explained a change in self, relationships, and spirituality. This literature contributes to the study by aligning with
Cohen and Collens (2013) description of a shock that occurs when hearing the narrative but further, the study aligns with the need to process trauma themselves through external support, establishing boundaries, debriefing, or peer supervision. There still remains a dearth in literature in regard to the lived experiences of interpreters and VPTG.

The lived experience of VPTG among helping professionals includes similarities and differences. Nurses and psychologists describe a greater sense of responsibility and questioning of efficacy (Baxter, 2012; Sui & Padmanabhanuui, 2016) as a negative response while mental health workers and counselors describe STS symptoms. In order to inform the VPTGI for the proposed study, a synthesis of these experiences was conducted to understand the broader picture of VPTG across helping professions.

**Measuring Affective Responses in Helping Professions**

**Posttraumatic Growth Inventory**

The PTGI was constructed by Tedeschi and Calhoun (1996) to measure the perceived personal benefits after directly experiencing a traumatic event, including changes in perceptions of self, relationships with others, and philosophy of life occurring from their attempts to cope with trauma and its aftermath. Based on previous literature, self-perception was identified as gaining an understanding about self-reliance, self-evaluation of competence in difficult situations, and drawing conclusions that they are stronger. A changed sense of relationships identified a deepening their relationships with others and a need to make decisions in their own best interests to create positive and intimate relationships. The recognition of one’s vulnerability can lead to more emotional expressiveness, willingness to accept help, and a utilization of social supports. Spiritual beliefs may temporarily weaken by tragedy while for others it may strengthen to an
increased sense of control, intimacy, and finding meaning. Recognizing meaning in trauma and aftermath allow individuals to experience emotional relief and lead to a new philosophy of life that alters basic assumptions people hold about life and what meaning it may have.

The 21-item Likert scale questionnaire was created using undergraduate psychology students who reported having experienced a difficult life event within the last year. The PTGI reports an internal consistency using Cronbach’s alpha of 0.94 with subscale coefficients as follows: Personal Strength (a = 0.72), Appreciation of Life (a = 0.67), Relating to Others (a = 0.85), Spiritual Change (a = 0.85), and New Possibilities (a = 0.84). The PTGI currently serves as the predominately used instrument to measure VPTG however, it was not created to measure this construct. Further, scholars have determined the use of the PTGI to measure VPTG does not explain nearly 40% of the variance in the model (Abel et al., 2012) while other scholars have determined that while similar, VPTG and the posttraumatic growth experience of the trauma survivor are not the same construct.

**Professional Quality of Life Scale**

The Professional Quality of Life Scale (ProQOL) is a 30-item self-report scale consisting of 5-point Likert scale items of frequency (Stamm, 2010). The instrument was originally developed by Figley’s (1995) Compassion Fatigue Self-Test, however it has since been adapted to include compassion satisfaction. The scale is comprised of three subscales measuring compassion satisfaction (a = 0.88), secondary traumatic stress (a = 0.81), and burnout (a = 0.75) (Stamm, 2010). The compassion satisfaction subscale measures the extent to which helping professionals experience pleasure from their ability
to do their work well. The secondary traumatic stress subscale measures the second component of compassion fatigue which consists of the extent to which the individual is experiencing symptoms of STS such as trouble sleeping, being fearful or afraid, and experiencing intrusive images. The burnout subscale measures the extent to which the individual is experiencing hopelessness and difficulty completing their job effectively.

Cut scores of the instrument have been developed in order to provide insight and recommendations regarding STS and burnout; low (0-22), moderate (23-41), and high (42-50). For example, if an individual’s score is within the high range, they are more likely experience that particular construct. A score of 23 or below within compassion satisfaction indicates the individual is potentially experiencing problems within the job or may derive satisfaction from other areas than the job. However, a score below a 23 in burnout would indicate the helping professional does not experience burnout but rather finds positive feelings in their ability to be effective in their role. A score above 42 in STS indicates a significant experience of STS which would need supervision or to seek care from personal healthcare professional such as a counselor or psychologist. The ProQOL is not a diagnostic tool but a measure to be utilized to gather information regarding the extent to which the helping professional is experiencing burnout, compassion satisfaction and STS.

Vicarious Resilience Scale

Vicarious resilience (VR) is identified as the positive impact on personal growth of therapists resulting from exposure to clients’ resilience (Hernandez, Engstrom, & Gangsei, 2007). Previous studies identified seven dimensions of VR: (a) Changes in life goals and perspectives, (b) Client-inspired hope, (c) increased self-awareness and self-
care practices, (d) increased capacity for resourcefulness, (d) increased recognition of clients’ spirituality as a therapeutic resource, (e) consciousness about power and privilege relative to clients’ social location, and (f) increased capacity for remaining present while listening to trauma narratives (Hernandez-Wolfe et al., 2014).

The Vicarious Resilience Scale (VRS) was developed to measure VR drawing from three qualitative studies exploring VR in trauma therapists working with victims of socio-political trauma. The original VRS consisted of 48 items with a 6-point range of responses. Participants (n = 190) were given a demographic questionnaire, the PTGI-SF, and the Professional Quality of Life Scale (ProQOL), the Oslo Social Support Scale (OSSS), trauma history questionnaire, and items measuring participants’ perceptions of their work environment (6-itm measure of work morale) (Killian et al., 2017).

The VRS was reduced from 48 to 27 items using exploratory factor analysis by removing items if their factor loading was below .50 or if an item loaded on more than one factor and the difference in loading was less than 0.10. The 27-item VRS had internal consistency and central tendency measures suggested a normal-like distribution of VRS scores. The VRS correlated with PTG, compassion satisfaction, and world morale, but did not correlate significantly with compassion fatigue. While the VRS correlated positively with the PTGI, it did not correlate with trauma history, suggesting that personal traumatic events and their effects may not contribute to the development of VR in professionals (Killian et al., 2017).

However, there are significant limitations to the development of the VRS. The first limitation is the scale content was developed based on three qualitative studies exclusive to therapists working with socio-political trauma. Other limitations to be
considered is the sample size used for development. The researchers obtained 190 participants for the initial factor analysis with a 48-item questionnaire. Lastly, during its development, the VRS was correlated with the short form of the PTGI which offers a summation score instead of subscale scoring. Therefore, it cannot be compared to the five factors of the PTGI. The VRS is the closest scale and the most recently developed to measure vicarious experiences and positive responses to indirect exposure to trauma. Therefore, this measure will be used in order to establish validity of the instrument in the study.

**Maslach Burnout Inventory**

The Maslach Burnout Inventory (MBI; Maslach et al., 1996) was developed to measure the experience of burnout among various professionals. Since its creation, the MBI has been adapted for those in health services, educators and a generalized form. The MBI consists of three domains; *emotional exhaustion*, *depersonalization*, and *lack of personal accomplishment*. Emotional exhaustion assesses feelings of being over extended professionally while depersonalization measures the unfeeling response to the work. Lastly, personal accomplishment assesses the feelings of competency and achievement in an individual.

The MBI is a self-report inventory consisting of 22 items constructed by a 7-point Likert scale. The MBI was developed by administering to over 600 people in order to conduct a factor analysis on the data. Internal consistency was measured by Cronbach’s coefficient alpha: Emotional Exhaustion (a = 0.90), Depersonalization (a = 0.79) and Personal Accomplishment (a = 0.71). The MBI is significant to the research question as it will serve as a validated measure to establish correlational data during the factor analysis.
The MBI will be utilized in order to establish construct validity in the development of the instrument (Maslach et al., 1996).

**Secondary Traumatic Stress Scale**

The Secondary Traumatic Stress Scale (STSS; Bride, Robinson, Yegisis, & Figley, 2004) is an instrument used to assess the frequency of which the individual is experiencing symptoms of STS. The symptoms are included within three clusters; (a) *intrusion* (*a* = 0.80), (b) *avoidance* (*a* = 0.87), and (c) *arousal* (*a* =.83) related to indirect trauma exposure aligning with the DSM-IV (American Psychiatric Association, 1994) symptoms with posttraumatic stress disorder. The 17-item measure (*a* = .93) is designed using a 5-point Likert-type responses to obtain a summation score or a summation of each subscale. The authors advise two ways to interpret the scale which include using the summation to identify the level of STS; *little to no* (0-28), *mild* (28-37), *moderate* (38-43) *high* (44-48) and *severe* (49 and above). The second interpretation of scores include the use of a cut off score of 38. If an individual’s score is above 38, this indicates intervention or support is needed to address STS.

The STS Scale is exclusive to individuals who have indirectly been exposed to trauma and cannot be used to measure experience of primary or shared trauma. In this case, the scale would not be appropriate, but a measure of posttraumatic stress disorder would be necessary (Bride, et al., 2004).

**Conclusion**

This chapter reviews the literature of lived experiences and theoretical models of VPTG across helping professions. In reviewing previous models of VPTG (Brockhouse et al., 2011; Cohen & Collen, 2013; Manning-Jones et al., 2015) there are significant
limitations to be considered. Cohen and Collen’s (2013) model is arguably the strongest model because it was developed based on a systematic review of qualitative literature. However, the model assumes the source of VPTG is vicarious trauma and does not account for transferential exchanges between the professional and the client or patient (Long, 2019). Further, the remaining models are informed by studies conducting analysis using the PTGI (Brockhouse et al., 2011; Manning-Jones et al., 2015).

The literature of VPTG across disciplines were reviewed, analyzed for quality assessment, and synthesized using a meta-aggregation approach to thematic synthesis. Finally, the chapter concluded with a review of the themes presented across disciplines. The themes consisted of negative responses, change in worldview, creating meaning to change self, changes in interpersonal relationships, engaging in efforts of support and self-care, and client progress impacting growth. By conducting a cross discipline thematic synthesis, this supports content-oriented evidence for the VPTGI of the proposed study. Chapter Three will review the development of the VPTGI and present the proposed methodology and analysis of the study. The remaining chapters will follow with the results and implications of the study.
CHAPTER 3  
METHODS

This chapter is dedicated to outlining the development of the VPTGI and the methodology used in this study. The chapter begins with the research questions guiding the study and their corresponding hypotheses followed by the design and development of the VPTGI to describe the preparation of the study. Following, the researcher specifies a description of the participants including details of the population, sampling method, participant selection and sample size. This chapter covers additional details of the measures utilized in the study. Lastly, the researcher reviews data collection procedures and the chapter conclude with details depicting the exploratory nature and rationale regarding factor analysis and tests for construct validity.

**Research Questions and Hypotheses**

This study aimed to answer the following research questions:

**Research Question One**

What is the factor structure of the VPTG inventory with a sample of helping professionals and helping professionals-in-training exposed to indirect trauma?

**Hypothesis one.** The hypothesis for research question one is factors will emerge that align with the six proposed domains established from a thematic synthesis: (a) *negative responses*, (b) *changes in world view*, (c) *creating meaning to change self*, (d) *changes in interpersonal relationships*, (e) *engaging in efforts of support and self-care*, and (f) *client progress impacting growth*.  

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Research Question Two

What is the relationship between VPTG inventory scores and scores of the Professional Quality of Life Scale (ProQOL; Stamm, 2010) with a sample of helping professionals and helping professionals-in-training (examining discriminant and convergent validity of the VPTG)?

Hypotheses two. There will be a negative relationship between STS and VPTG \( (r < 0) \) and a positive relationship between VPTG and compassion satisfaction \( (r > 0) \).

Development of the Initial Inventory

Thematic Synthesis Assembling Operational Definitions

In order to establish content validity within scale construction, clear operational definitions of the constructs must be derived from the lived experiences of the population (AERA et al., 2014). Systematic reviews are a scientific process utilized to consolidate knowledge regarding a subject that has previously been evaluated for reliability and dependability within the literature (Porrit & Pearson, 2013). Qualitative systematic reviews, specifically thematic synthesis, consist of an interpretive process to gain understanding of community cultures, explore experiences, and evaluate components of constructs or community promotion and development (Munn, Porritt, Lockwood, & Aromataris, 2011; Pearson, Roberston-Malt, & Rittenmeyer, 2011). The researcher conducted a thematic synthesis using a meta-aggregation method (Lockwood et al., 2015) to establish operational definitions of the construct and inform item development. The goal of this thematic synthesis was to gain an understanding of the lived experiences of helping professionals experiencing VPTG to provide operational definitions for the initial inventory of the proposed study.
The researcher worked with a team of three doctoral-level counselor education students to conduct the thematic synthesis. The research team comprised of three White female doctoral students and one African American female doctoral student studying at a southeastern research one university. The initial search yielded 118 articles. Articles were excluded for language, non-peer reviewed literature, literature focused on growth after shared trauma, or were focused on posttraumatic growth from the trauma survivor resulting in 43 articles. As stated in Chapter 1, using the PTGI to measure VPTG is an incorrect use of the instrument yielding unreliable data. Therefore, this review excluded any studies that have utilized the PTGI to measure VPTG. The remaining 43 articles were screened and excluded if the primary instrument utilized included the PTGI. The remaining 10 articles were further reviewed by the research team leading to an additional exclusion of two articles; one article was excluded because it was a systematic review article that did not include original data and the second was excluded because of its focus on vicarious resilience.

The research team conducted quality evaluation using the Joanna Briggs Institute Appraisal Checklist (Appendix A) based on the recommendation of Lockwood and colleagues (2015) to offer a critical appraisal of the of the qualitative studies. The primary researcher reviewed and conducted data extraction of all included studies separately which was then compared with one other member of the research team for consensus. Any disagreements were documented and discussed within the pair until consensus was reached. The meta-aggregation approach for thematic synthesis requires a three-steps: (1) extracting all findings, (2) developing categories for the findings, and (3) developing one or more synthesized finding of at least two categories (Lockwood et al.,
The research team followed the three steps of meta-aggregation with an additional step of free coding recommended by Thomas and Harden (2008) to develop the categories with a minimum of two codes per finding. Line-by-line coding allows for a translation of the concept from one study to another (Britten, Campbell, Pope, Donovan, Morgan, & Pill, 2002; Fisher, Qureshi, Hardyman, & Homewood, 2006). The free codes (see Table 3.2) were compared within pairs and organized into descriptive themes as a group. The codes were grouped into themes utilizing all of the free codes generated (Thomas & Harden, 2008). The researcher then obtained agreement of the definitions from the research team in order to ensure the definitions accurately represent the lived experiences reviewed (Lockwood et al., 2015; Thomas & Harden, 2008). The thematic synthesis derived the following operational definitions:

**Negative responses.** An initial distress experienced by the helping professional as a result of indirect exposure to trauma to include, but not limited to, physical, emotional, and psychological responses.

**Changes in world view.** A change in world view is defined as a shift in perspective of others and the world as a result of hearing the trauma that clients or patients have endured leading to an increase in awareness of world issues and understanding.

**Creating meaning to change self.** Creating meaning is defined as the helping professional’s reflection of their work, skill set, and overall purpose that leads to internalized changes to the self of the helping professional as a result of indirect trauma exposure.
Changes in interpersonal relationships. Changes in interpersonal relationships are defined as an adjustment or shift in engagement within interpersonal relationships as a result of their work with trauma clients or patients.

Engaging in efforts of support and self-care. Engaging in efforts of support and self-care is defined as the helping professional taking measures to identify support, self-care, and work life balance to manage responses and continue working with trauma.

Client progress impacting growth. Client progress impacting growth is defined as the witnessing of strength, resiliency and growth from the client which inspires and supports growth among the helping professional.

Item Construction

The researcher constructed items for the inventory based on the themes emerged from the cross-discipline thematic synthesis: (a) Negative responses, (b) Changes in world view, (c) Creating meaning to change self, (d) Changes in interpersonal relationships, (e) Engaging in efforts of support and self-care, and (f) Client progress impacting growth. Each item corresponds with each of the themes depicting the lived experiences of helping professionals across disciplines.

Further, the researcher constructed the items of the VPTGI based on recommendations from Johnson and Morgan (2016) and T. J. B. Kine’s (2005) nine rules of item development to ensure the items were precise, brief, relevant, and uses positive language. Additionally, the researcher reviewed the items to ensure each item conveyed one central thought per item and written in an appropriate reading level (Haladyna & Rodriguez, 2013). Lastly, the researcher reviewed the VPTGI for representativeness of VPTG in order to explore the factor structure of VPTG.
Response Construction

The initial inventory, Vicarious Posttraumatic Growth Inventory (VPTGI) (Appendix H), is comprised of non-cognitive, 6-point Likert (1932) scale items. Likert scale items allow the researcher to differentiate among participants based on their self-report of affective responses based on the degree which the individual feels towards both positive and negative attitudes. Further, Likert scale items allow the researcher to differentiate between positive and negative agreement and the strength of agreement among “slightly agree,” “agree” and “strongly agree”. Neutral points on a Likert scale, however, do not support the distribution of responses and are not traditionally used among Likert scales (Bandalos, 2018). The number of points of the Likert scale support the reliability of the instrument, however, reliability levels off after 5-7 points (Enders & Bandalos, 1999) with poor data configuration in item response scales less than four or greater than six (Johnson & Morgan, 2016). Therefore, the researcher used recommended 6-point Likert scale with no neutral response options in the inventory (Johnson & Morgan, 2016) which requires the respondent to answer each item on the inventory.

Theory of Item Responding. Sudman and colleagues (1996) identify a four-step response process: (1) interpreting the item, (2) generating a response, (3) formatting and reporting the response, and (4) editing the response. The respondent must first interpret and understand the item before generating a response. The respondent then formulates and edits their response before submitting their final answers. The researcher took these steps into consideration when constructing the initial VPTG inventory. First, when an individual interprets an item, the item must be clear, concise, and within terminology easily understood by the respondent. Further, the researcher constructed and positioned
the items to limit contextual effects that may affect the interpretation of the other items (Bandalos, 2018).

A respondent often falls into one of two categories when generating a response: an optimizer and the satisfier. A respondent is an optimizer if the individual makes a sincere effort to engage in the response or a satisfier if the individual generates their response after skipping necessary processes or putting forth minimal effort (Krosnick, 1991). The researcher considered both potential respondents when constructing the items to obtain cognitively accessible information. Further, considering both types of respondents supports consistency of responses when self-report items are easily accessible and based on personal experience, characteristics, or who may have strong opinions about the topic (Bandalos, 2018). Therefore, the VPTGI consists of items that are retrospective in nature and attribute to the respondent’s experiences based on their work to optimize consistent and easily accessible information.

Further considerations addressed respondents’ process of formatting and editing a response. The VPTGI used a 6-point Likert scale with no neutral response scales in order to require a direct answer to each item. When a respondent formats their response, psychophysics suggests that individuals use the extreme values (e.g. 1 and 6) as the anchor of their response (Bandalos, 2018). This is mitigated by increasing reliability through labeling the meaning of each level of responses on the scale; “Strongly Disagree”, “Disagree”, “Slightly Disagree”, “Slightly Agree,” “Agree”, and “Strongly Agree” (Krosnick & Bernet, 1993). Lastly, respondents often edit responses to meet social desirability (Bandalos, 2018; Ones et al., 1996). This is particularly important as respondents may fear consequence for reporting negative affective responses or feel as
though they should report positive affective responses based on views of societal norms (DiMaio, 1984). This is a limitation within the study, however, Studman and colleagues (1996) acclaim self-report surveys reduce respondents’ efforts for social desirability than other methods such as face-to-face interviews.

The researcher included both helping professionals’ positive and negative experiences of working with clients or patients who have experienced trauma as it pertains to the theory outlined in Chapters One and Two. The theory informing the instrument highlights the linear model of VPTG to which an initial distress leads to VPTG. Previous scholars have addressed this dichotomy in similar constructs. Baker and colleagues (2008) assessed depreciation among participants reporting both posttraumatic growth (direct trauma exposure) and stress responses. The researchers identified no correlation between posttraumatic growth and depreciation scores demonstrating the participants were not influenced or hesitant to express both experiences of two independent constructs. Other psychometric experts have noted that having both positive and negative oriented items will cancel out respondents reporting anchors on either end of the extreme values (Bandalos, 2018).

Expert Reviewers

Content validity, or content-oriented evidence, establishes the extent to which items reflect the content domain (DeVellis, 2017, p.84). Content validity is established through a series of steps before and after assessment construction; constructing operational definitions based on lived experiences (AERA et al., 2014) and utilizing expert reviewers, (AERA et al., 2014; Dimitrov, 2012; Lambie, Blount, & Mullen, 2017). Therefore, the researcher used expert reviewers to gain feedback regarding the
appropriateness of the content, alignment of items with the content, and overall content being measured to strengthen content validity of the measure (Lambie et al., 2017; Wolfe & Smith, 2007).

The researcher invited six reviewers to the expert review panel based on their background, experience, and expertise in trauma, instrument development and related fields. The expert reviewers’ background and expertise included counseling, nursing, educational research, instrument development, posttraumatic growth, and wellness. Five of the six reviewers had direct experience in instrument development measuring a range of constructs with one specializing in instrument development for minority populations and nursing. Two of the reviewers are experts in wellness to support the differentiation of VPTG among other positive affective responses and provide feedback regarding items pertaining to physical, emotional, and psychological responses. Lastly, one expert reviewer was a licensed counselor currently working with clients who have experienced trauma. This reviewer also participated in the thematic synthesis to develop the operational definitions of the initial inventory.

The researcher provided each reviewer with an Assessment Response Form Rubric (University of North Carolina Charlotte, 2019), Appendix D, where they were provided the overarching construct based on the emerging themes from the thematic synthesis, operational definitions, and their corresponding items. Additionally, the reviewers were asked to rate each item’s representativeness of the item measuring the overarching construct, importance of the item in measuring the overarching construct, and clarity of the item on a 4-point Likert scale. Further, the reviewers provided specific comments and recommendations of the items. Lastly, the content validity index was
calculated for each item as shown in the Table of Specification, Table 3.3. Items with an index greater than 0.8 were included in the VPTGI while items with an index below 0.8 were edited based on the feedback provided or removed (Rubio et al., 2003). Moreover, each reviewer evaluated the items for biases and sensitivity to race, ethnicity, gender and language. The researcher documented the feedback from each reviewer and revised the VPTGI accordingly (Lambie et al., 2017).

**Field Test of Items**

The last step of the scale constructed was a field test of the items. The researcher presented the VPTGI to a group of master’s level counseling students to evaluate clarity of instructions, functionality of the survey software, and determine the length of time needed to complete the full inventory and additional measures (Bandalos, 2018; Lambie et al., 2017). It is important to utilize a sample of participants in a field test who represent the intended population to obtain useful feedback (Bandalos, 2018). The researcher chose counseling students based on their developing knowledge and background of trauma and brief experiences working with clients. The field test consisted of 17 Master’s-level counseling students who pretested the items and provided feedback of the overall inventory. Eleven participants completed the survey from a mobile device, such as a cell phone or a laptop, and seven participants completed the survey from a computer. The participants reported the survey was easy to understand, an appropriate length, and confirmed functionality of the survey software. Several participants commented on the use of “cisgender” within the demographics stating they were unsure of the meaning of the term. Finally, one student commented that if she were in a school counseling position,
it may be unclear of how to answer the work setting question within the demographics.

The researcher incorporated this feedback in the final revisions of the VPTGI.

**Final Revisions**

Lastly, the researcher conducted final edits to the inventory based on recommendations from the reviewers and the feedback provided in the pilot administration. Table 3.3 shows the content validity index (CVI; Rubio et al., 2003) calculated using the Assessment Response Form Rubric (University of North Carolina Charlotte, 2019) along with the items, domains and their corresponding operational definitions. Four items resulted in content validity index scores below .8. The researcher edited those items based on the feedback provided by the expert panel. However, any feedback that did not align with the literature informing a specific item were not changed. For example, the reviewers scored item 33 with low content validity index (CVI > .8). The researcher replaced this item with an item that directly implicated the operational definition to prevent further reducing the number of items in the inventory. Another example of this includes item 6 (CVI = .6). The researcher did not remove item 6 as it pertains specifically to the nursing literature describing an experience of questioning one’s ability to provide helping services supporting the patient (Baxter, 2012). The researcher edited several items to soften language, reflect pretense, and to improve item clarity. Lastly, the researcher addressed clarification on the operational definitions for negative responses and creating meaning to change self. The negative responses theme was edited to accurately include negative responses outside of physical, emotional, and psychological symptoms such as questioning self-efficacy and an initial shock reaction. *Creating meaning to change self* was edited to reflect the internalized changes to the self
as a result of indirect trauma exposure. The researcher removed the term “cisgender” from the demographics and added a response option to include school counselors based on the feedback from the field test.

Participants

Participants for this study included individuals within helping professions across disciplines; psychology, counseling, social work, nursing, and medical professionals working with patients or clients impacted by trauma. Further, the researcher sought professionals with diverse backgrounds, education levels, and varying experiences of indirect trauma across a range of therapeutic settings.

Population

When Maslach and Jackson initially created the MBI in 1981, the authors identified helping professionals as professional staff in human services who spend a significant amount of time and intense involvement with the client centered in the client’s psychological, social or physical problems. Other scales developed for helping professionals have included samples of counselors, social workers, psychologists, and counselors-in-training (Blunt & Lambie, 2018) at the individual, community, national, and international level (Stamm, 2010). Stamm (2010) further identified health care professionals, social service workers, teachers, attorneys, emergency responders, airline and transformational staff as helping professionals. However, for the purpose of this study the researcher did not include these disciplines and are potential professions for future study. For the purpose of this study, Maslach and Jackson’s (1981) definition of helping professionals working with client’s psychological, social, or physical problems for a significant and intense amount of time was utilized to inform and define the sample
of helping populations. Additionally, the researcher included interpreters and medical doctors based on the qualitative literature used to inform the initial inventory (Barrington & Shakespeare-Finch, 2013; Hyatt-Burkhart, 2014; Splevins et al., 2010) as these professions align with Maslach and Jackson’s definition of helping professionals. For example, interpreters are indirectly exposed to trauma through the narration of the client or patient experience offering a unique “co-experience” for the interpreter (Bontempo & Malcolm, 2012). Moreover, school counselors were categorized as a part of the counseling discipline in the school setting.

Helping professionals across disciplines have varying experiences of indirect trauma exposure. For example, a nurse may see a patient in the emergency room one time, while a counselor may work with the same client over several months. Cognitive self-development theory articulates a professional alters their cognitive schemas and worldview due to the cumulative impact of working with client trauma (Pearlman & Saakvitne, 1995). Helping professionals, regardless of discipline, experience cumulative exposure to indirect trauma because of the nature of their work. Therefore, while there are differences between the disciplines, the chronic, cumulative trauma exposure yields change in affective responses and positive life changes (Shakespeare-Finch et al., 2003).

Exclusion criteria. Helping professionals experience a spectrum of indirect trauma exposure depending on the nature of their work, including professionals-in-training (Butler, Carello, & Maguin, 2017; Knight, 2010). Vicarious posttraumatic growth has been studied among a variety of professionals that produce similar themes across disciplines; counselors (Bartoskova, 2017; Wheeler & McElvaney, 2018), nurses (Baxter, 2012) interpreters (Splevins et al., 2010), psychologists (Sui &
Padmanabhanunni, 2016) and mental health and social work professionals (Barrington & Shakespeare-Finch, 2012; Hyatt-Burkhart, 2014). Each of these disciplines experience indirect exposure to the trauma narrative in order to provide a service that directly treats the impact of the trauma, whether physical, emotional, or psychological. These professionals are chronically exposed to a variety of trauma that is not distinct to one particular trauma type. To date, only one study has suggested the type of vicarious trauma has an effect on VPTG stating that VPTG is more likely to occur if individuals are exposed to indirect trauma from someone who shares the same values, beliefs, and worldview (Linley et al., 2003). However, the results of this study are not reliable due to the measure of VPTG was conducted using the PTGI. This study will not focus on the type of trauma the helping professionals are indirectly exposed to due to the spectrum of patients and cases across disciplines however vicarious trauma data will be collected to provide further description of the sample.

The spectrum of chronic exposure to indirect trauma (Arnold et al., 2005; Engstrom et al., 2008; Shakespeare-Finch, et al., 2003) differs from individuals who may have heard of a traumatic event from a friend or family member as this may not be continuous exposure but acute or limited exposure (Abel et al., 2014; Thornton & Perez, 2006). Arguably, indirect trauma exposure from the source of a friend or family member could be considered direct trauma exposure depending on the proximity and closeness of the relationship. For example, individuals of indirect trauma exposure resulting from a friend or family member diagnosed with an illness or treatment process (Manne et al., 2004; Thornton & Perez, 2006; Weiss, 2002) will also be excluded as those individuals would meet criteria for direct trauma exposure previously defined (Pai, Suris, & North,
2017) by the DSM-IV (APA, 1994) and the PTGI (Tedeschi & Calhoun, 1996). These examples would qualify as direct trauma exposure due to the homogenous nature of the sample as well as the professionals’ proximity and personal experience related to the trauma (Abel et al., 2014). The demographics form (Appendix F) includes a final item inquiring if the participant is receiving services related to a personal trauma experience, grief or loss of a loved one, or a trauma experience of a loved one in order to exclude these participants. Lastly, to support homogeneity of the sample to include professionals providing client-centered services addressing client’s psychological, social, and physical needs, the researcher excluded teachers in the study but should be an area considered for future research.

**Sampling Method**

Sampling theory constitutes extracting a subset of observations, or scores, that potentially represent the observations of the population known as sampling. While the population size is unknown to the researcher, setting a sampling frame supports the generalization of the outcomes to the population (Heppner, Wampold, & Kivlighan, 2008). The sampling frame for this study consisted of adults who agree to participate in research regarding helping professionals’ experiences of growth as a result to indirect trauma exposure. Using criterion-based, convenience sampling, the researcher recruited participants without regard to the specific type of trauma experienced by the patient or client in order to explore the factor structure of VPTG as a construct across disciplines. However, the participants documented the type of vicarious trauma exposure as a part of the background and demographics data collection to support internal validity of the study.
Prior to recruiting participants, the researcher obtained approval by the institutional review board at the residing university. The researcher conducted recruitment through convenience sampling of a variety of disciplines and experience levels with the goal of reaching 640 participants (Clark & Watson, 1995). The researcher facilitated a national recruitment strategy in order to reach an adequate sample and distribution of professions. First, the researcher recruited helping professionals-in-training by contacting counseling, social work, and nursing field placement coordinators at universities and training facilities across the United States. The researcher requested field placement coordinators to share the invitation to participate to students who were currently in field experience coursework. Next, the researcher recruited participants through available professional organizations (e.g. South Carolina Counseling Association) and national provider registries willing to share membership contact information with no cost. Registries included certified language providers, state provider registries, and a national registry for trauma-focused cognitive behavioral therapists that included counselors, social workers, and psychologists. Finally, the researcher recruited participants at two local counseling agencies.

The Association of Assessment and Research in Counseling (AARC) funded $2,500 for participant incentives. At the conclusion of all survey materials, each participant could voluntarily submit their email address to enter a drawing of a $50 gift card. Additionally, participants could agree to be contacted to complete the survey materials a second time for test-retest reliability for a second entry into the drawing. Entry into the drawing required full completion of the survey materials. A total of 50 participant emails will be drawn to award the $50 gift cards based on the available
funding. The researcher extracted the drawing entries into an excel spreadsheet. The researcher constructed a random number generator which identified the participants receiving incentives. The researcher emailed the participants to notify the participants of their award and request permission to send incentive via PayPal. The use of a drawing allowed for an equal opportunity for all participants to be eligible for the reward; however, most participants did not receive a reward. Further, the drawing reduced the risk of undue influence of participation in the study (University of Toronto, 2011) through clear informed consent of the risks and benefits to the study (Brown, Schonfeld, & Gordon, 2006). There are no known or anticipated risks associated with participating in the study, as outlined in the informed consent.

**Sample Size**

There are various recommendations among psychometric literature pertaining to sample size of factor analyses but no one clear rule exists. Some scholars recommend a sample size that is twice the number of items with a minimum of 200 (Nunally & Bernstein, 1994). Other scholars recommend 300 participants (Clark & Watson, 1995) but may be fewer if the items are less than 20 (DeVellis, 2003). Variable to participate ratios of 5-10 participants per item is another strategy utilized by scholars to obtain an adequate sample size to yield clear and interpretable factors (Costello & Osborne, 2005; Reio & Shuck, 2015; Widaman, 2012). This has recently been challenged by psychometricians who have shown more accurate factor loading estimates were obtained when the number of variables per factor is increased and the sample size remained the same (Hogarty et al., 2005; MacCallum et al., 1999, 2001). Dimitrov (2012) further notes utilizing an item-participant ratio approach does not account for estimation method,
factor rotation, and the magnitude of structure coefficients. Nonetheless, scale development experts agree the strength and accuracy of the factor coefficients is dependent upon multiple elements: the level of communality of variables, the number of variables per factor, and the interaction between factors and variables (Bandalos, 2018; Dimitrov, 2012). If the communality is high (averaging 0.7), researchers can use sample sizes as small as 100 participants and the number of variables per factor yields little effect on the accuracy of the estimation. But if communalities were lower (below 0.5), the sample size would need to be at least 300 participants (Bandalos, 2018).

For the purposes of this study, the researcher sought a sample size of 10 participants per item and calculated communalities throughout the analysis to support the strength and accuracy of factor loading estimates and the appropriateness of the sample size. The researcher utilized this method to accommodate the differing literature while incorporating the importance of communalities. Additionally, the researcher evaluated sampling adequacy using the Kaiser-Meyer-Olkin (KMO) test for each dataset (Tabachnick & Fidell, 2013). Using the same data set for both an EFA and a CFA is not appropriate as the same influences and idiosyncrasies influencing the EFA would in turn influence the CFA. The researcher gathered a large sample and split the participants in half to conduct an EFA on one half of the sample and a CFA conducted on the other. However, splitting the sample in half does not provide information about how the results would be replicated in other samples (Bandalos, 2018). Therefore, this is a limitation in the methodology.

With 32 items proposed on the VPTGI, the researcher aimed for a sampling frame of 640 participants to obtain a sample size conducive for both exploratory and
confirmatory factor analysis. The researcher divided the full sample of participants in half at random (Sample A and Sample B) prior to conducting data analysis. The researcher conducted an exploratory factor analysis on Sample A and a confirmatory factor analysis on Sample B. For the remainder of this dissertation, each sample will be referred to respectively. The researcher evaluated group equivalence by conducting an ANOVA and effect size per item to ensure there were no differences of scores between Sample A and Sample B. This process is further detailed in Chapter Four.

**Participant Selection**

Participants eligible for this study were (a) at least 18 years old, (b) had worked with client(s) or patient(s) who have experienced trauma within the last year in a helping profession and, and (c) consented to participate in the research study. No participant limitations were set based on gender, ethnicity, education level, or type of vicarious trauma exposure. The type of vicarious trauma has shown limited evidence regarding its effects on VPTG (Abel, et al., 2014; Linley et al., 2003), nor the level of education regarding the exposure to indirect trauma (Butler, Carello, & Maguin, 2017; Knight, 2010). However, the researcher excluded participants if they were currently receiving services related to a personal trauma in order to eliminate any growth that had been acquired through personal trauma or services.

**Measures**

Participants were given four questionnaires as a part of the online survey materials; (a) the initial inventory (VPTGI), (b) the Professional Quality of Life scale (ProQOL: Stamm, 2010), (c) a vicarious trauma item, and (d) a demographics form. The researcher used the ProQOL scale to investigate convergent and discriminant validity
between VPTG, STS, and CS. The researcher used the vicarious trauma item and
demographics to gather additional descriptive information of each sample.

**Initial VPTG Inventory**

The VPTGI is the instrument of interest in this study to investigate the factor
structure of VPTG for this study, Appendix H. The initial inventory contained 32 Likert
scale items among six domain areas formed of experiences of growth among helping
professionals working with clients or patients who have experienced trauma; (a) *Negative
responses*, (b) *Changes in world view*, (c) *Creating meaning to change self*, (d) *Changes
in interpersonal relationships*, (e) *Engaging in efforts of support and self-care*, and (f)
*Client progress impacting growth*. Prior to the study, the initial inventory the researcher
went through a series of steps for scale construction as outlined previously in this chapter.
Participants reported their level of agreement of statements regarding experiences
identified as elements of VPTG on a 6-point Likert scale.

**Demographic Information**

Participants completed demographic information, Appendix F, to include the
following: age, gender, ethnicity, education level, and years of experience. Further,
demographic information included specific information regarding the participant’s
profession, discipline, and work setting. Further, participants were asked if they are
receiving therapeutic services for a personal trauma unrelated to their work. These
participants were excluded from the study and did not complete survey materials to
eliminate any potential growth acquired from current services. Demographic information
was used to support understanding the range of disciplines, experience, and an overall
understanding of the sample.
**Vicarious Trauma Item**

The Vicarious Trauma Item, Appendix G, is an inventory that directly inquires the type of traumatic event defined by the DSV-5 the participants had vicariously been exposed to within the last year. For the purposes of this study, this inventory supported the participants in recalling vicarious trauma exposure and support internal validity of the study.

**Professional Quality of Life Scale**

The Professional Quality of Life Scale (ProQOL), Appendix I, is a 30-item self-report scale consisting of 5-point Likert scale items of frequency (Stamm, 2010). The ProQOL scale was created to support professionals who may be experiencing STS or burnout. While the scale is not a diagnostic tool, it is comprised of cut scores to determine the level of STS and burnout from low to high. Participants scoring a 42 or above in burnout or STS are more likely to experience these constructs and are in need of supervision or supportive intervention. Alternatively, participants scoring below 23 in compassion satisfaction would also need supervision support as they are less likely to be experiencing satisfaction with their role as helping professionals. The scale contains three subscales measuring compassion satisfaction ($a = 0.88$), secondary traumatic stress ($a = 0.81$), and burnout ($a = 0.75$) (Stamm, 2010). The *compassion satisfaction* subscale measures the extent to which helping professionals experience pleasure from their ability to do their work well. The *secondary traumatic stress* subscale measures the extent to which the individual is experiencing symptoms of STS. The *burnout* subscale measures the extent to which the individual is experiencing hopelessness and difficulty completing their job effectively.
For the purpose of this study, the researcher used the ProQOL scale to answer research question two and support establishing validity of VPTG as compared to the subscale constructs within the ProQOL; STS, burnout and compassion satisfaction. The scale will be used to establish convergent validity with compassion satisfaction and discriminant validity among STS.

**Procedures**

**Data Collection**

 Upon approval from the institutional review board, the researcher recruited participants through a national recruitment strategy to include 455 universities and training facilities working with helping professionals-in-trainings; 246 counseling programs, 103 nursing programs, and 101 social work programs. Helping professionals-in-training may have been offered to participate in the study as extra credit but no educators reported this requirement to the researcher. The research administered the recruitment materials to one counseling professional organizations, and six provider registries (four interpretive registries and two trauma counseling registries). Finally, the researcher recruited participants at two local counseling agencies.

The researcher recruited participants via an email invitation and administered the survey materials using an online survey software, Qualtrics (www.qualtrics.com). The email invitation included the informed consent (Appendix J), the purpose, and potential risks and benefits of the study. There were no anticipated risks associated with the study however, participants were informed their eligibility of the drawing was contingent upon completion of the survey materials and providing an email address. Further, the informed consent ensured participants’ confidentiality and the measures taken to ensure
confidentiality. Participant confidentiality is the upmost importance. Participant emails and identifying information were not sold, distributed, or given to any other group or organization. Should the participants’ organization request outcome data in exchange for access to the potential participants, any and all potentially identifying information were removed.

The professionals who agreed to participate were directed to complete the instruments as described previously in the chapter. The researcher emailed potential participants an invitation to participate in the study that included an explanation of the study and a direct link to the survey materials within Qualtrics. The researcher sent a second email request to potential participants after 30 days to include an explanation of the study and a direct link to the survey materials (Dillman, Smyth, & Christian, 2014).

**Participants’ Rights and Protections**

The researcher did not collect participants’ names during the study to ensure the participants remain anonymous. Additionally, the researcher collected data regarding the participants occupation, experience level, educational background, current work setting, and may identify the agency they are currently working, but the researcher collected no other identifying information to protect participant identity. The participants had the opportunity to submit their email address for a drawing incentive however, these emails were not shared. The participants were asked if they would be willing to complete the survey materials a second time at the conclusion of data collection for a second entry into the drawing. The researcher sent those participants an additional request and were given 14 days to complete the survey materials.
The informed consent outlined information regarding the purpose of the study, the information of interest, and their rights to discontinue the study at any point in time. Moreover, the researcher clarified voluntary participation and participants may discontinue at any time. However, the researcher outlined the use any partial information for the study should participants choose to discontinue the study. Further, the informed consent included benefits that may occur as a result of participation which include the reframing of the adversity and meaning making in trauma work. The study asked participants to reflect on the effects of their work with client(s) or patient(s) who have experienced trauma within the past year. There were no anticipated risks associated with participants’ reflection on changes or experiences as a result of their work. Finally, the researcher collected data solely through an online portal with password protected access and saved datasets on a password protected device.

**Data Analysis**

Scholars use factor analytic studies to understand the latent and observed variables presented in a broader factor structure. Exploratory factor analysis (EFA) is a statistical methodology utilized across social sciences and helping professions in order to generate theory and understand the dimensions of a construct. Confirmatory factor analysis (CFA) is a structural equation modeling method used to investigate the theorized factor structure when prior research provides strong evidence of a hypothesized factor model. Moreover, CFA contributes to evidence of the measurement validity by providing support for the internal structure of the scale (Bandalos, 2018; Brown, 2015). Specifically, CFA provides evidence of the extent to which the relationship between test items and components meet to the construct or model (AERA et al., 2014). For the
purpose of this study, the researcher used EFA to generate theory regarding the factor structure and CFA to test this theoretical factor structure (Brown, 2015). CFA requires the researcher to specify the factor model (Bandalos, 2018) therefore, the EFA served as the initial analysis conducted to generate the model tested in the CFA. Following, the researcher will expand upon the steps and considerations taken for both EFA and CFA in this section. The researcher conducted all analyses in R Studio. Packages used for the study include: “Psych”, “Tidyverse”, “Vcirs”, “Dplyr”, “CTT”, “Effsize”, “GPARotation”, “nFactors”, and “Lavaan” (R Studio Team, 2019).

**Analysis for Research Question One**

When conducting an EFA, the researcher is required to make a number of decisions and steps concerning the data in order to improve the accuracy of the factor structure: (i) confirm the adequacy of the sample size needed to conduct the analysis (Gaskin & Happell, 2014) and evaluate the factorability of the intercorrelation matrix (Watson, 2017), (ii) choose the type of factor analysis necessary for the data, (iii) investigate and determine the factor solution, (iv) elect the method of data extraction, (v) determine the appropriate factor rotation method (Gaskins & Happell, 2014) and (vi) interpret the emerging factor structure (Watson, 2017).

**Data Preparation and Factorability**

Prior to data analysis of this study, the researcher randomly split the dataset into samples to conduct each factor analysis on different samples (Sample A and Sample B). Further, the researcher evaluated group equivalence between the two samples using an ANOVA for each item to determine any group differences in scores and Cohen’s d for each item to evaluate any effect size between the two samples. An insignificant p-value
(\(p > .05\)) indicates no significant differences between the groups and therefore, the groups are equivalent for the analysis. A Coden’s \(d\) value indicating little to no effect size (\(d < .2\)) also indicates group equivalence.

The researcher then conducted a preliminary analysis of the data to check assumptions such as normality, linearity, and a check for missing data for each dataset. The researcher evaluated the assumptions for the datasets separately to ensure assumptions were met for each part of the analyses. Results of this analysis are presented in Chapter Four. A check of linearity consisted of inspecting the scatterplots of each variable to determine any patterns of nonlinear relationships between variables (Swank & Mullen, 2017). The researcher evaluated normality by examining the skewness and kurtosis of the data. The skewness of an item is representative of the item’s distribution and its deviation from symmetry. Instrument development experts identify skewness values greater than \(|2.0|\) are representative of high levels of skewness and an indicator of nonnormality. Kurtosis is the measure of the “peakedness” and the “tailedness” of the item’s distribution curves to which scholars identify kurtosis values greater than \(|7.0|\) are an indicator of nonnormality. A normal variable distribution is not required for EFA, however, the likelihood of retaining artificial factors, also known as difficulty factors, decreases with normal variable distribution (Bandalos, 2018). Finally, the researcher removed incomplete responses from the dataset.

Next, the researcher constructed the data into an intercorrelation matrix to assess the relationships between the variables and the factorability of the data. This was determined based on the correlation values (\(r\)) producing a necessary range between .20 and .80. If the correlation matrix had a significant number of items to which \(r\) is below
.20, the data is not factorable. Further, if there were a significant number of items with $r$
values above .80, indicating multicollinearity, individual items were evaluated for
removal (Field, 2013; Watson, 2017). The researcher evaluated sampling adequacy using
the Kaiser-Meyer-Olkin (KMO) test. KMO values greater than .60 confirm sampling
adequacy to proceed with the EFA (Tabachnick & Fidell, 2013). The researcher moved
forward with the EFA once these assumptions affirmed the data set was factorable and
the sample size adequate for the first research question.

**Exploratory Factor Analysis**

Exploratory factor analysis (EFA) is a method used to understand of the number
of factors, the factor structure, and the nature of those factors that are both latent and
observed based on their values from item responses (Bandalos, 2018). It is important to
note that while the steps of the analysis are identified based on the theoretical nature of
the construct, Bandalos (2018) recommends the exploration of analysis with each step to
honor the exploratory nature of the analysis. This exploratory nature of EFA is outlined
in the following steps for Sample A.

**Factor extraction.** As previously mentioned, the type of factor extraction is a part
of the various steps and decisions necessary when conducting an EFA. Factor extraction
is a process which variable correlations are parsed into shared variance from its unique
and error variance (Bandalos, 2018; Watson, 2017). This can be completed through a
number of extraction methods. For the purpose of this study, the researcher extracted
factors using principal axis factoring (PAF) to consider both latent and observed variables
and identify constructs measured by the instrument. Principal axis factoring is an
extraction method based on *eigen analysis* to reduce the correlation matrix into
eigendecomposition; sets of eigenvalues and eigenvectors (Bandalos, 2018). The PAF solution yields eigenvalues that have high correlations with each other and therefore representative of factors. More importantly, the PAF solution produces the most explained covariance as the factors produced are developed based on the maximum amount of covariation from the reduce correlation matrix (Bandalos, 2018). Watson (2017) further notes PAF can be used if multivariate normality is presented in the data and produces reliable solutions regardless of communalities being high or low (Kahn, 2006).

**Factor retention.** The researcher determined the number of factors to retain by using a scree plot (Cattell, 1966), the K1 criterion (Kaiser, 1960), and parallel analysis (Horn, 1965). Scholars across disciplines recommend the use of multiple criteria for determining the number of factors in order to researchers to explore factors solutions (Bandalos, 2018; Watson, 2017). The scree plot constructs a plot of eigenvalues and factors to support the number of factors identified, determine factor loadings, and inform interpretability of the factor structure (Cattell, 1966). The number of factors plotted before the “elbow” of the plot determine the number of factors to retain in the analysis (Bandalos, 2018). The researcher analyzed factor retention using the K1 criterion in the intercorrelation matrix. The K1 criterion specifies eigenvalues greater than one are reliable to determine the number of factors (Kaiser, 1960). Lastly, the researcher conducted a parallel analysis to compare the eigenvalues to the average eigenvalues obtained from a random dataset. By comparing the eigenvalues to a random dataset, the eigenvalues established within the actual dataset are more meaningful factors and reduce the potential for over factoring (Dimitrov, 2012; Horn, 1965).
**Factor rotation.** After the researcher extracted and retained the factors, factor rotation created a simple factor structure. A simple factor structure is a structure of factors which maximizes the high loadings and minimizes the low loadings for interpretability of the factors (Dimitrov, 2012). Factor rotation allows for the factor solution to be theoretically meaningful to the construct (Watson, 2017) while positioning the variables to clearly align with a factor (Bandalos, 2018). There are two types of factor rotations: orthogonal and oblique. An orthogonal rotation, categorized by varimax, quartimax, and equamax algorithms, is used when the factors are hypothesized to be uncorrelated and statistically independent. An oblique rotation, categorized by oblimin or promax algorithms, is used when the factors are hypothesized to be at least mildly correlated to one another (Bandalos, 2018; Watson, 2017). For the purpose of this study, the researcher used an oblique rotation due to the theoretical foundation that the factors may be correlated. As mentioned in Chapter One, the theoretical foundation of VPTG is a linear model to which the initial distress leads to VPTG (Brockhouse et al., 2011). Therefore, the hypothesis stated the factors will have some correlation to one another in constructing the dimensions of VPTG. Moreover, in an oblique rotation, the factors are allowed to be correlated but not forced. If the factors are not correlated, the oblique rotation will default back to an orthogonal rotation (Bandalos, 2018). By rotating the factors using an oblique rotation, the pattern coefficients and structure coefficients are ready for evaluation and interpretation to create a meaningful factor solution.

**Factor interpretation.** The researcher interpreted the factors by analyzing several elements and their overall theoretical context: communality values, primary loadings, simple structure, the number of items, and if the factors are meaningful to the theory.
Further, interpreting the factors allows for the evaluation of item performance and whether to remove items based on their statistical output (Watson, 2017). Overall, interpretation of the factors is when the researcher began to determine what the factors represent (Bandalos, 2018). There were several guidelines and considerations when analyzing these elements. Communalities of each variable identify the amount of shared, or explained, variance by each extracted factor to provide insight into the adequacy of both the sample size and the factor solution (Bandalos, 2018; Watson, 2017). Communalities values that are too high or too low often indicate the researcher has over factored the solution or the sample size is too small. These values should range from 0.4 to 1.0 indicating the shared variance is explained considerably by the extracted factor (Pett et al., 2003).

An oblique rotation produces pattern coefficients and structure coefficients however, psychometric experts disagree on which value should be used in order to interpret the factors (Bandalos, 2018). For the purpose of this study, the researcher used information from pattern coefficients and factor correlations to interpret the factor solution while both pattern and structure coefficients are reported. Adding structure coefficients is potentially redundant as they are the product of both pattern coefficients and factor correlations (Mulaik, 2010). Further, the researcher evaluated the primary loadings of the variables and investigated for any problem loadings among the variables. Items with loadings greater than 0.32 will be utilized while items with less than .32 will be removed from the factor (Tabachnick & Fidell, 2013). The researcher assigned items that were cross loading between multiple factors to the highest loading factor or removed them from the initial inventory (Watson, 2017). Evaluating communalities, coefficients,
and factor loadings are an iterative process. When an item is removed based the given criteria, the model parameters will change requiring an iteration of the new factor solution to be produced (Bandalos, 2018; Pett et al., 2003). This process highlights the exploratory nature of using EFA and each step must be taken with careful consideration.

Lastly, the researcher evaluated the number of items per factor and named the factors based on their corresponding variables. The number of items representing the factor is an essential piece of developing a factor structure of a construct. A factor cannot emerge unless there are an adequate number of items describing the factor created and included (Watson, 2017). Factors with less than 3 items should be removed from the analysis (Pett et al., 2003) and factors with 4 to 10 items will be retained (Mvududu & Sing, 2013).

**Item analysis and descriptive statistics.** The researcher conducted an item analysis to determine the performance of the items within the initial instrument including inter item correlations and item-total correlations. The researcher used inter item correlations to determine the homogeneous nature of the items within each factor to ensure they are measuring the same construct. The researcher conducted item-total correlation, biserial correlations, to determine the discrimination index of the item compared to the rest of the scale. The distribution of the items will be evaluated to analyze the spread of responses options among the sample to assess for potential outliers, evaluate kurtosis, skewness, and univariate and multivariate normality among the items. Lastly, the researcher calculated an alpha coefficient for each factor retained in the solution to evaluate reliability (Bandalos, 2018). The researcher collected descriptive data regarding the sample including gender, age, ethnicity, education level, and years of
experience. Further, the researcher calculated descriptive statistics of the disciplines represented, years of experience, and education level.

**Confirmatory Factory Analysis**

Confirmatory factor analysis requires the researcher to specify the model based on previous research or a strong theoretical foundation (Dimitrov, 2012). Therefore, the researcher specified the hypothesized factor model for the CFA based on the emerging factor structure of the EFA. Unlike EFA, CFA is not an exploratory method but a statistical test of a hypothesized model structure to determine if the structure is consistent with the observed variables and their interrelations in the sample (Bandalos, 2018). Following, the researcher describes the steps of analysis for CFA, calculating reliability estimates, and test-retest reliability.

**Data preparation.** Data preparation consisted of evaluating univariate and multivariate normality, linearity, and factorability with Sample B using item analysis, identifying potential outliers, and missing data. Item analysis, as previously outline, evaluated the skewness and kurtosis of the variables. The researcher evaluated skewness based on Bandalos’s (2018) recommendation of skewness values less than |2.0| and kurtosis values less than 3.0. Lastly, the researcher evaluated presence of outliers and missing data. The researcher examined outliers by the reviewing z-scores that may distort the factor structure and removed missing data from Sample B.

**Model specification.** The researcher specified the model specification based on the emerging data and factor structure from the EFA (Lewis, 2017). Model specification details the observed variables and latent factors to include and exclude from the CFA model and how these variables and factors relate to one another (Bandalos, 2018; Lewis
The model did not include cross-loading variables as the researcher set all cross-loading variables from the EFA to zero. Further, the researcher utilized the variances and covariances in the variable covariance matrix to estimate the factor loadings, factor correlations, and the measurement error variance when identifying the model (Bandalos, 2018).

**Model identification.** Model identification is a step in the analysis to determine if the parameters of the factor correlations, measurement error variances, and factor loadings can be obtained (Hair, Black, Babin, Anderson, & Tatham, 2006). The researcher set the factor metric by the number of free parameters estimated; factor loadings, measurement error terms, and correlations among latent factors. These parameters must be less than or equal to the number of values in the variance-covariance matrix (Schumacher & Lomax, 2010) to meet the order condition (Lewis, 2017). The unit of measure is defined by adjusting the reference variable to 1.0 (Brown & Moore, 2012) to situate the free parameters to fixed parameters (Lewis, 2017). Further, the researcher followed Bollen’s (1989) rules of identifying the CFA model: (a) each factor must consist of three or more variables, (b) each variable must load onto only one factor, and (c) measurement error variances are not correlated. The researcher conducted iterative methods to reproduce the covariance matrices so the reproduced and observed covariance matrices are sufficiently close and converged (Bandalos, 2018) using the statistical software, R Studio (R Studio Team, 2019).

**Model estimation.** Once the researcher identified the model, the researcher estimated the model to reproduce a model-implied variance-covariance matrix that best aligns with the sample (Lewis, 2017). The researcher used a full information maximum
likelihood estimation method (ML) as ML estimates and model fit indices are more accurate and consistent among normal data than other estimation methods in reproducing covariance matrices for a weight matrix estimation (Bandalos, 2018).

**Model testing.** The next step in CFA is model testing to determine if the model-implied fits the data as a whole and fits the sample covariances (Bandalos, 2018; Schumacher & Lomax, 2010). However, no one test is an accurate measure of model fit. The first assessment of model fit is a statistical test of the chi-square ($\chi^2$). Given the proposed sample size, a nonsignificant p-value ($p > .05$) for the chi-square would indicate similarity between the sample variance-covariance matrix and the model-implied variance-covariance matrix (Lewis, 2017). The statistical software, R Studio, produced additional fit indices to compare and analyze for fit of the model; comparative fit index (CFI), Tucker-Lewis index, root mean square error approximation (RMSEA), and the standardized root mean square residual (SRMR). Schumacher and Lomax (2010) recommend reporting the chi-square statistic, the RMSEA, and the SRMR. A CFI, an incremental fit index comparing the model-implied variance-covariance matrix to a restricted baseline model (Brown, 2015; Hair et al., 2006), greater than .9 would indicate a good model fit. Lastly, absolute fit indices, the RMSEA and the SRMR are a direct assessment to the differences among the two matrices. A RMSEA less than .05 and a SRMR less than .08 indicate closeness between the covariance-variance matrix and the model-implied matrix. These indicators of fit provide evidence to the internal structure of the instrument (AERA et al., 2014). Lastly, the researcher calculated reliability of the measure using the alpha coefficient for each confirmed factor in the model.
Often times, the CFA model does not fit the sample data which then requires modification and re-specification of the model (Bandalos, 2018; Lewis, 2017). Modification of the model consists of removing parameters from the model that are not significant, adding parameters to the model, and specifying paths between error terms (Lewis, 2017). However, modification must be considered carefully as changes to the model may compromise the underlying theory, introduce sampling error, and decreasing evidence of content validity (Bandalos & Finney, 2010). During this study, the researcher did not make modifications to the model as it would result in a data-driven model. The researcher would need to replicate this study to reevaluate the modifications as a separate, a priori model (Lewis, 2017).

**Test Retest Reliability**

The researcher investigated the stability of the scores across different time points using test retest reliability. A lack in score stability would imply instability of the factor structure and instability in the construct. Moreover, instability of the scores would impact the reliability of the measure and the measuring changes among participants (Bandalos, 2018). Therefore, the researcher joined the retest dataset with the overall dataset and matched participants according to their email addresses. The researcher then removed the remaining participants that did not complete the retest. The researcher calculated summation scores of each participant and conducted a Pearson’s correlation ($r$).

**Analysis for Research Question Two**

Validity is fundamental in the development of a measure as it provides evidence to support the interpretation of the scores and their reflection of the intended construct (AERA et al., 2014). Construct validity, in particular, is the “extent to which a specific
set of items reflects a content domain” (DeVellis, 2017). In the development process of the initial inventory, expert reviewers supported content-oriented evidence of the construct (Lambie, Blount, & Mullenneux, 2017) and a thematic synthesis established operational definitions based in the lived experiences of the population (AERA et al., 2014). However, further evaluation is necessary to establish construct validity. There are two types of construct validity: convergent and discriminant validity. Convergent validity is established by evaluating the test scores of the initial inventory and scores of a measure of the same, or similar, construct. Discriminant validity is established by evaluating the scores of the inventory under investigation and scores of a construct that is theoretically different (Bandalos, 2018). Establishing validity of VPTG is particularly difficult as there is currently no existing measure for VPTG for comparison. The relative novelty of the construct and the absence of an existing measure for comparison requires further justification for the comparison to other constructs (Gilliam & Voss, 2013; Shaffer, DeGeest, & Li, 2015).

As outlined in Chapter Two, VPTG is the experience of growth as a result of vicarious exposure to trauma (Arnold et al., 2005) while compassion satisfaction is the individual’s positive feeling of their ability to help others and contribute to the workplace or greater good (Stamm, 2010). One can infer the experience of growth from vicarious exposure to trauma would contribute to an individual’s positive feeling of their ability to help others. Moreover, the thematic synthesis of VPTG across helping professions emerged a theme specific to client progress impacting growth. This theme highlighting the professional’s experience of witnessing strength, resilience, and growth from the client which inspired and supported their own growth. In turn, the witnessing of the
professional’s work with the client contributing to the client’s growth supported the vicarious experience of growth within the helping professional. This theoretical relationship supported the use of compassion satisfaction within the ProQOL scale to establish convergent validity.

The ProQOL scale includes an additional construct of STS which depicts the manifestation of PTSD-like symptoms as a result of indirect trauma exposure (Figley, 1995). The opposite of compassion satisfaction, the client’s distress is internalized by the helping professional leading to negative affective responses such as PTSD-like symptoms (Ludick, 2013). The thematic synthesis presented a unique theme of negative responses due to the qualitative evidence supporting a linear model of an initial distress that then leads to VPTG. This supported the use of STS within the ProQOL scale to establish discriminant validity because in both occurrences (i.e. STS and VPTG), the helping professional is exposed to indirect trauma and internalizes the client’s narrative to produce opposite outcomes.

The researcher used bivariate correlations for analysis of the second research question. For the purpose of this study, the researcher used Pearson’s correlation (r) to calculate validity correlation coefficients between two test scores (Swank & Mullen, 2017). The researcher determined linearity of the data during data preparation of the analysis of the first research question and determined appropriate for the statistical test for the second research question. The researcher calculated a bivariate correlation to produce the statistical significance of the correlation, the direction of the relationship, and the strength of the relationship (Swank & Mullen, 2017). The researcher determined the strength of the relationship by correlation coefficient; the greater the correlation
coefficient, the greater the evidence is supporting the statistical significance of the test (Cohen, 1992). Drummond, Sheperis, and Jones (2016) note that when conducting
validity coefficients, a correlation greater than .50 indicates a very high correlation, .40 to .49 is a high correlation, and .21 to .40 is a moderate correlation which is acceptable.

Summary

This chapter outlines the construction of the initial instrument and the methods used to complete the study. The chapter began with a review of the research questions and hypothesis aligned with the rationale and background provided in the previous chapters. Next, a description of the instrument preparation and design were provided. The researcher described participants and population to include the sampling method, sample size, and selection process. Following, the chapter outlined the measures used in the study: the demographic information, the vicarious trauma item, the initial inventory, and the ProQOL scale. Finally, the chapter explained the data collection procedures and the analysis of the study. This dissertation will continue with an outline of the results of the study in Chapter Four and conclude with a discussion and implication of those results in Chapter Five
CHAPTER 4
RESULTS

Chapter Four is dedicated to reporting the results of the study by addressing each step of the analysis for each research question. The chapter will begin by reviewing the research questions and their corresponding hypotheses. Following, the analysis for research question one will be presented by outlining the steps of the exploratory factor analysis which led to the model specification for the confirmatory factor analysis. Further, the chapter will review the results of test-retest reliability of factor analysis to assess the stability of the scores. Lastly, the analysis for research question two will be presented by defining the bivariate correlation results in examining discriminant and convergent validity.

Research Questions and Hypotheses

This study aimed to answer the following research questions:

Research Question One

What is the factor structure of the VPTG inventory with a sample of helping professionals and helping professionals-in-training exposed to indirect trauma?

Hypothesis one. The hypothesis for research question one is factors will emerge that align with six proposed domains established from a thematic synthesis: (a) negative responses, (b) changes in world view, (c) creating meaning to change self, (d) changes in interpersonal relationships, (e) engaging in efforts of support and self-care and (f) client progress impacting growth.
Research Question Two

What is the relationship between initial VPTG inventory scores and scores of the Professional Quality of Life Scale (ProQOL; Stamm, 2010) with a sample of helping professionals and helping professionals-in-training (examining discriminant and convergent validity of the VPTG)?

Hypotheses two. There will be a negative relationship between STS and VPTG ($r < 0$) and a positive relationship between VPTG and compassion satisfaction ($r > 0$).

Population and Sample

The population for this study included helping professionals across disciplines serving in human services centered in the client or patient’s psychological, social, or physical issues. For the purpose of this study, participants included counselors, social workers, psychologists, interpreters, nurses, and medical professionals. Further, helping professionals-in-training who were in their field experience courses working with clients were eligible for the study. Inclusion criteria for the study included helping professionals who had worked with a client or patient who had experienced trauma within the last year. Participants currently receiving personal therapeutic services related to a personal trauma, grief and loss of a loved one, or a trauma experience of a loved one were excluded from the study.

The researcher describes the gender expression, race and ethnicity, and the represented helping professions of the sample ($N = 757$) and the subset datasets used for the study in Table 4.1. The average age of the sample was 39.8 years ($SD = 11.05$) and the average years of experience was 11.7 years ($SD = 8.29$). Recruitment of participants aimed across the helping professions however, counseling professionals ($n = 403$, 53.4%)
and social workers \((n = 232, 23.8\%)\) made up most of the sample. Additional professions represented were nursing \((n = 11, 1.5\%)\), psychology \((n = 84, 11.1\%)\), medicine \((n = 1, 0.1\%)\), and interpretive services \((n = 5, 0.7\%)\). Participants representing “Other Direct Support Staff” professions \((n = 8, 1.1\%)\) included “domestic violence advocate”, “child advocate”, and “forensic interviewer”. Helping professionals-in-training \((n = 118)\) made up 15.65% of the sample to include bachelor’s \((n = 6, 5.1\%)\), master’s \((n = 70, 59.32\%)\) and doctoral level \((n = 37, 31.36\%)\) students. The sample was randomly split in half in order to facilitate the analysis; Sample A \((n = 347)\) was utilized for the EFA and Sample B \((n = 348)\) for the CFA in research question one.

In order to support internal validity of the study, participants were asked to identify the types of trauma their clients or patients had experienced. The researcher describes the variety of client trauma experience the participants encountered within the last year as defined by the DSV-5 (American Psychiatric Association, 2013) in Table 4.2. Each type of client trauma was represented in the sample ranging from “Threat of sexual violence” being the least \((n = 510, 67.4\%)\) and “Sexual violence” \((n = 672, 88.8\%)\) representing the most. All participants \((N = 757, 100\%)\) identified at least one area of indirect trauma exposure as measured by identifying a client trauma area supporting internal validity of the results.

**Data Preparation**

Prior to beginning analysis, the researcher conducted data cleaning and preparation using R Studio statistical software version 1.2.5033 (RStudio Team, 2019) and checked manually in Microsoft Excel (2016).
Table 4.1 *Characteristics of Participants in the Sample (N = 757)*

<table>
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<th></th>
<th>Full Sample</th>
<th>Sample A</th>
<th>Sample B</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
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<tr>
<td><strong>Gender Expression</strong></td>
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<tr>
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<td>0</td>
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<td>2</td>
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</table>

*Note. N = 757. Participants were on average 39.8 years old (SD = 11.05) and an average of 11.67 (SD = 8.29) years of experience.*
Table 4.2 Description of Client Trauma Experiences (N = 757)

<table>
<thead>
<tr>
<th>Type of Client Trauma Experiences</th>
<th>n</th>
<th>%</th>
</tr>
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<td>Serious injury</td>
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<tr>
<td>Threat of serious injury</td>
<td>509</td>
<td>67.2</td>
</tr>
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<td>Sexual violence</td>
<td>672</td>
<td>88.8</td>
</tr>
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<td>Threat of sexual violence</td>
<td>510</td>
<td>67.4</td>
</tr>
<tr>
<td>Adult survivor of childhood physical abuse/neglect</td>
<td>536</td>
<td>70.8</td>
</tr>
<tr>
<td>Adult survivor of sexual abuse</td>
<td>525</td>
<td>69.4</td>
</tr>
<tr>
<td>Child survivor of physical abuse/neglect</td>
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</tr>
<tr>
<td>Child survivor of sexual abuse</td>
<td>638</td>
<td>84.3</td>
</tr>
</tbody>
</table>

Data Cleaning

Data cleaning began by checking for exclusionary criteria among the participants. For this study, participants whom reported they were currently receiving personal therapeutic services as a result of a personal trauma, grief or loss of a loved one, or a trauma experience of a loved one were removed from the dataset. The total number of responses at the close of the survey included 819 responses. A total of 38 participants reported they were currently receiving services and were removed from the study. Next, the dataset was checked for missing data at which 27 participants were removed for missing or incomplete entries. Therefore, a total of 757 responses were included in the final dataset.

Data Preparation

The researcher randomly split the dataset into two datasets to include 347 participants in Sample A to conduct exploratory factor analysis and 348 participants in a second dataset to conduct confirmatory factor analysis (Sample B). As noted, each sample will be referred to as Sample A and Sample B respectively. The two groups were then checked for group equivalence using ANOVA and Cohen’s d for each item. The
researcher identified no significant difference between the two groups as specified by nonsignificant p-values in the ANOVA analysis for each item. Further, the researcher indicated little to no effect size \((d < .2)\) using Cohen’s \(d\) for each item and thus indicating no separation in distributions between the two samples. Each of these analyses supported moving forward with the investigation of research question one using a split sample.

**Results of Research Question One**

Analysis of research question one consisted of three parts; exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and test retest reliability of the scores.

**Testing Assumptions for Factor Analysis**

Factor analysis requires a preliminary check for linearity, normality, factorability and sampling adequacy. The researcher evaluated linearity through reviewing scatterplots of the variables at which the researcher found no pattern of nonlinearity within each sample. The researcher evaluated normality using the skewness and kurtosis values of the items. Each of the datasets reported skewness values within the recommended range of \(|2.0|\) and kurtosis values within the recommended range of \(|7.0|\) (Bandalos, 2018), see Table 4.3 (Sample A) and Table 4.5 (Sample B). An intercorrelation matrix was then constructed to assess factorability of the samples. The item correlations \((r)\) in Sample A range from .19 to .66 with one item identifying low \((r < .2)\) correlation values. Sample B reported item correlations ranging from .07 to .69 with one item identifying low \((r < .20)\) correlation. While there were items indicating correlations outside of the recommended range \((r < .2)\), the number of items reporting low correlations did not suggest non-factorability (Field, 2013; Watson, 2017). Further, no items reported correlation values
above .8 confirming linearity necessary for factor analysis. Finally, sampling adequacy was evaluated using the Kaiser-Meyer-Olkin (KMO) test. Sample A reported a KMO value of .88 and Sample B reported a KMO value of .85. Both samples reported meritorious KMO sampling adequacy values (KMO > .8) confirming suitable sampling adequacy for each dataset (Tabachnick & Fidell, 2013).

Table 4.3 Psychometric Properties for the Initial Inventory of Sample A

<table>
<thead>
<tr>
<th>Item No.</th>
<th>M</th>
<th>SD</th>
<th>Skew</th>
<th>Kurtosis</th>
<th>SE</th>
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<td>-.81</td>
<td>-.12</td>
<td>.07</td>
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<td>.71</td>
<td>.05</td>
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</table>

Note. $n = 347$. $^a$ Reflects the items that were reverse coded in the analysis.
Exploratory Factor Analysis

The first step of the analysis for research question one consisted of conducting an EFA of Sample A to generate theory regarding the number of factors, the factor structure, and the nature of those factors among both latent and observed variables based on item responses (Bandalos, 2018). The researcher conducted principal axis factoring (PAF) to extract the factors by considering both latent and observed variables within the construct being measured. Specifically, PAF was conducted using an oblique (oblimin) rotation in anticipation that the factors would be correlated but allowing the factors to default to an orthogonal rotation if needed.

The researcher determined factor retention by a scree plot (Cattell, 1966), parallel analysis (Horn, 1965), and the K1 criterion (Kaiser, 1960). The researcher examined the scree plot (Figure 4.1) by evaluating the “break in the elbow” of the plot. The break in the elbow occurred at two factors, however, the eigenvalues of the plot prompted an investigation of two to four factors. The researcher conducted a parallel analysis (Figure 4.2) to compare eigenvalues to a random dataset generated in the software. The parallel analysis approved to an investigation of two to four factors. Lastly, the researcher evaluated the K1 criterion which specified nine factors with eigenvalues greater than one; a notable difference in factors compared to the scree plot. Kaiser established eigenvalues for principal component analysis although still a predominately used method for PAF (Bandalos, 2018). Scholars have criticized using K1 criterion as producing over factoring results when used with factor analysis. It can be inferred that this was the case in this study. All three factor retention methods were considered in determining the number of factors to retain. Bandalos (2018) recommends applying an exploratory approach with
each step and the consideration of multiple factor retention methods. Therefore, two to four factors were explored before the researcher interpreted the factors and determined a three-factor solution.

Figure 4.1 *Scree Plot of Exploratory Factor Analysis for Sample A*

Interpreting the factor solution consisted of evaluating communality values, primary loadings, simple structure, the number of items per factor and their theoretical alignment with the factor. The researcher evaluated communality values to determine the shared variance explained by the factor. Items with communality values below .2 were removed from the inventory (Bandalos, 2018). Further, the researcher investigated primary loadings of the items resulting in items with loadings greater than 0.32 were
utilized in the model while items with primary loadings less than 0.32 were removed. This resulted in an item reduction of nine items. These items were also identified as cross-loading onto multiple factors, therefore further justifying their removal. The final model resulted in a range of six to ten items per factor and meeting the criteria of a minimum of three items per factor (Figure 4.3). The final three-factor solution accounted for 35% of the total variance in the scores (see Table 4.4).

Figure 4.2 Parallel Analysis of Exploratory Factor Analysis for Sample A

**Factor 1: Internal Changes**

The first factor, per the EFA results, consisted of 10 items yielding an eigenvalue of 8.18 and representing 15% of the variance (Table 4.4). Items within the factor were a collapse of three themes used to construct the instrument: (a) changes in world view, (b)
creating meaning to change self, and (c) changes in interpersonal relationships. The researcher presents the item mean, standard deviation in Table 4.3 and the factor loadings of each item in Table 4.4. Interpretation and discussion of Factor 1 will be discussed in Chapter 5.

**Factor 2: Client Progress Impacting Growth**

The seconded factor emerging from the EFA included 7 items yielding an eigenvalue of 3.16 and representing 11% of the variance. Items within Factor 2 were representative of the theme *client progress impacting growth* used to construct the instrument. The researcher presents the item mean, standard deviation in Table 4.3 and the factor loadings of each item in Table 4.4. Further interpretation of Factor 2 will be discussed in Chapter 5.

**Factor 3: Negative Responses**

The third factor, per the EFA results, contained 6 items, returning an eigenvalue of 1.72 and accounting for 9% of the shared variance (Table 4.4). Items within this factor were related to the *negative responses* theme used to construct the items. The researcher presents the item mean, standard deviation in Table 4.3 and the factor loadings of each item in Table 4.4. Further interpretation of Factor 3 will be discussed in Chapter 5.

**Summary of EFA**

The exploratory factor analysis emerged factors different than the proposed themes used to create the initial inventory. There were six themes represented in the items: (a) *negative responses*, (b) *change in world view*, (c) *creating meaning to change self*, (d) *changes in interpersonal relationships*, (e) *engaging in efforts of support and self-care*, (f) *client progress impacting growth*. Two themes were sustained in the factor
Table 4.4 Summary of Principal Factor Analysis Results Using Oblimin Rotation (n = 347)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Factor 1 Internal Changes</th>
<th>Factor 2 Client Progress Impacting Growth</th>
<th>Factor 3 Negative Responses</th>
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</thead>
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<td>25</td>
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</tr>
<tr>
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</tr>
<tr>
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<td>.42</td>
<td></td>
</tr>
<tr>
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</tr>
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<tr>
<td>21</td>
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<td>-.21</td>
</tr>
</tbody>
</table>

| Eigenvalues | 8.18 | 3.16 | 1.72 |
| No. of Items | 10   | 7    | 6    |
| % Variance   | 15%  | 11%  | 9%   |
| Alpha Coefficient | .87 | .82 | .79 |
Figure 4.3 Model Diagram of EFA of Sample A

analysis, client progress impacting growth (Factor 2) and negative responses (Factor 3). Factor 1, however, consisted of items from three themes: (a) change in world view, (b) creating meaning to change self, and (c) changes in interpersonal relationships. Each of these themes describe a change to the individual such as “As a result of working with clients or patients who have experienced trauma, I express more kindness in my
relationships,” “As a result of working with clients or patients who have experienced trauma, I am more empathic towards others and their experiences,” or “As a result of working with clients or patients who have experienced trauma, I have been inspired to overcome adversity in my own life.” For the remainder of this dissertation, Factor 1 will be referred to as “Internal Changes” and will be further discussed in Chapter 5. Factor 2 will be referred to as “Client Progress Impacting Growth” and Factor 3 will be referred to as “Negative Responses”. Items that were cross loading across multiple factors were reviewed at the item level. These items predominately included items within the “engaging in efforts of support and self-care” theme and were removed from the inventory when moving forward with the analysis.

The researcher calculated a Cronbach’s alpha to evaluate reliability of each factor and the overall factor solution. The factor solution yielded a reliability coefficient of $\alpha = .88$. Additionally, each factor yielded the necessary reliability coefficients to support internal consistency of the factor structure: Internal Changes ($\alpha = 0.87$), Client Progress Impacting Growth ($\alpha = 0.82$) and Negative Responses ($\alpha = 0.79$). Therefore, the factor structure was used to inform the hypothesized model for the CFA and test model fit with Sample B.

**Confirmatory Factor Analysis**

Confirmatory factor analysis began with the specification of the three-factor model produced from the EFA to test the fit of the model with Sample B ($N = 348$). As noted earlier in the chapter, prior to beginning the factor analysis, the researcher examined the dataset for linearity, normality, factorability, sampling adequacy, and
equivalence of the samples (Table 4.5). Therefore, Sample B met the criteria to move forward with confirmatory factor analysis. The researcher set the parameters for the CFA.

Table 4.5 Descriptive Statistics of Sample B

<table>
<thead>
<tr>
<th>Item No.</th>
<th>M</th>
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<th>Skew</th>
<th>Kurtosis</th>
<th>SE</th>
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<td>-1.05</td>
<td>.04</td>
</tr>
<tr>
<td>22</td>
<td>5.04</td>
<td>.98</td>
<td>-1.03</td>
<td>-1.03</td>
<td>.05</td>
</tr>
</tbody>
</table>

Note. n = 348. ^a Reflects the items that were reverse coded in the analysis

as specified by the EFA to construct a hypothesized model for the analysis: Factor 1 included items 2, 5, 7, 9, 11, 12, 14, 16, 17, 25; Factor 2 included items 3, 8, 29, 30, 31, 32, 33; and Factor 3 included items 4, 6, 10, 18, 23, 24. This hypothesized model met the recommended criteria of each factor consisting of three or more variables, each variable only loading on one factor, and measurement error variances that are not correlated (Bollen, 1989).
Table 4.6 *Table of Model Fit Indices and Reliability Results for Sample B*

<table>
<thead>
<tr>
<th>Fit Indices for Model Testing</th>
<th>Guidelines</th>
<th>Rationale</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chisquare ($\chi^2$)</td>
<td>Nonsignificant p-value (p &gt; .05)</td>
<td>Indicates similarity between sample variance-covariance matrix and model-implied variance-covariance matrix</td>
<td>$\chi^2 = 816.852, df = 227, p &lt; .001$</td>
</tr>
<tr>
<td>CFI</td>
<td>Greater than 0.9</td>
<td>Compares the model-implied variance-covariance matrix to a restricted baseline model</td>
<td>CFI = .80</td>
</tr>
<tr>
<td>RMSEA</td>
<td>Less than .05</td>
<td>Direct assessment to the differences among between the covariance-variance matrix and the model-implied matrix</td>
<td>RMSEA = .08 (90% CIs [0.08, 0.09])</td>
</tr>
<tr>
<td>SRMR</td>
<td>Less than .08</td>
<td>Direct assessment to the differences among between the covariance-variance matrix and the model-implied matrix</td>
<td>SRMR = .08</td>
</tr>
</tbody>
</table>

**Overall Reliability ($\alpha$)**

- Internal Changes ($\alpha = .87$)
- Client Progress ($\alpha = .86$)
- Impacting Growth ($\alpha = .77$)
- Negative Responses ($\alpha = .77$)
(n = 348)

The researcher used a full information maximum likelihood estimation method (ML) to estimate the model as recommended for normal data (Bandalos, 2018).
Additionally, the researcher examined the fit of the model with Sample B using the following model fit indices (see Table 4.6); the chi-square statistic ($\chi^2$), the comparative fit index (CFI), the root mean square error approximation (RMSEA), and the standardized root mean square residual (SRMR). The chi-square statistic ($\chi^2$) of model fit yielded $\chi^2 = 816.852$, $df = 227$, $p < .001$; indicating the fit of the data to the hypothesized model was not an adequate fit. Further, the chi-square statistic of baseline model fit yielded $\chi^2 = 3169.42$, $df = 253$, $p < .001$; also indicating a less than favorable model fit. Bandalos (2018) cautions the use of the chi-square statistic as it is likely to indicate significance when sample size is greater than 200 participants as in Sample B. The chi-square statistic is sensitive sample size and any violations of normality (van Prooijen & van der Kloot, 2001). The dataset met the assumptions for normality therefore, it should be noted that the sample size may have affected the chi-square statistic.

Next, the researcher reviewed the CFI incremental indices which compares the hypothesized model to a restricted baseline model. The CFI measures the discrepancy between the population and the tested model to evaluate the lack of fit (DiStefano, 2016). The CFI value for this CFA was .80 however, a value greater than .90 indicates good model fit (Brown, 2015; Hair et al., 2006). Further, the researcher examined the absolute fit indices, the RMSEA and the SRMR. The recommended fit between the covariance-variance matrix and the model-implied matrix are an RMSEA less than .08 and a SRMR less than .08. The RMSEA was .08 (90% CIs [0.08, 0.09]) and the SRMR was .08 which were deemed a fair fit with reasonable errors of approximation (Bandalos, 2018; Hu & Bentler, 1999). The standardized loadings of the items, as shown in Table 4.7, within Factor 1 ranged from .34 to .74, Factor 2 ranged from .40 to .73, and a range of .23 to .85
for Factor 3. The correlations between the factors were both positively and negatively correlated. Factor 1 and Factor 2 were positively correlated \((r = .67, p < .001)\). However, Factor 3 was negative correlated with the other two factors: Factor 2 \((r = -.19, p < .001)\) and Factor 1 \((r = -.09, p > .05)\). Moreover, Factor 1 and Factor 3 were not significantly correlated with each other.

Table 4.7 Summary of Confirmatory Factor Analysis \((n = 348)\)

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Estimate</th>
<th>Std. Err</th>
<th>Two Tailed p – value</th>
<th>Standardized Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>F1 =~</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>1.00</td>
<td>.00</td>
<td>0.00</td>
<td>.72</td>
</tr>
<tr>
<td>17</td>
<td>1.14</td>
<td>.10</td>
<td>0.00</td>
<td>.66</td>
</tr>
<tr>
<td>11</td>
<td>.70</td>
<td>.104</td>
<td>0.00</td>
<td>.70</td>
</tr>
<tr>
<td>16</td>
<td>.63</td>
<td>.07</td>
<td>0.00</td>
<td>.71</td>
</tr>
<tr>
<td>9</td>
<td>.58</td>
<td>.09</td>
<td>0.00</td>
<td>.64</td>
</tr>
<tr>
<td>5</td>
<td>.53</td>
<td>.08</td>
<td>0.00</td>
<td>.51</td>
</tr>
<tr>
<td>12</td>
<td>.52</td>
<td>.06</td>
<td>0.00</td>
<td>.74</td>
</tr>
<tr>
<td>2</td>
<td>.50</td>
<td>.06</td>
<td>0.00</td>
<td>.34</td>
</tr>
<tr>
<td>14</td>
<td>.47</td>
<td>.08</td>
<td>0.00</td>
<td>.70</td>
</tr>
<tr>
<td>7</td>
<td>.46</td>
<td>.07</td>
<td>0.00</td>
<td>.55</td>
</tr>
<tr>
<td><strong>F2 =~</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>1.00</td>
<td>.00</td>
<td>0.00</td>
<td>.73</td>
</tr>
<tr>
<td>32</td>
<td>.62</td>
<td>.07</td>
<td>0.00</td>
<td>.57</td>
</tr>
<tr>
<td>30</td>
<td>.35</td>
<td>.04</td>
<td>0.00</td>
<td>.49</td>
</tr>
<tr>
<td>29</td>
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</tr>
<tr>
<td>33</td>
<td>1.04</td>
<td>.09</td>
<td>0.00</td>
<td>.72</td>
</tr>
<tr>
<td>3</td>
<td>.51</td>
<td>.07</td>
<td>0.00</td>
<td>.40</td>
</tr>
<tr>
<td>8</td>
<td>.54</td>
<td>.07</td>
<td>0.00</td>
<td>.46</td>
</tr>
<tr>
<td><strong>F3 =~</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>1.00</td>
<td>.00</td>
<td>0.00</td>
<td>.68</td>
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<td>10</td>
<td>1.3</td>
<td>.10</td>
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<td>.85</td>
</tr>
<tr>
<td>18</td>
<td>1.1</td>
<td>.09</td>
<td>0.00</td>
<td>.81</td>
</tr>
<tr>
<td>6</td>
<td>.67</td>
<td>.09</td>
<td>0.00</td>
<td>.44</td>
</tr>
<tr>
<td>4</td>
<td>.48</td>
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<td>.42</td>
</tr>
<tr>
<td>23</td>
<td>-.28</td>
<td>.07</td>
<td>0.00</td>
<td>-.25</td>
</tr>
<tr>
<td><strong>F1 ~ ~</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F2</td>
<td>.31</td>
<td>.04</td>
<td>0.00</td>
<td>.67</td>
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<tr>
<td>F3</td>
<td>-.06</td>
<td>.04</td>
<td>.17</td>
<td>-.09</td>
</tr>
<tr>
<td><strong>F2 ~ ~</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F3</td>
<td>-.12</td>
<td>.04</td>
<td>0.00</td>
<td>-.19</td>
</tr>
</tbody>
</table>
Overall, the incremental fit indices (chi-square and CFI) indicated the proposed three factor model for this sample did not fit. The CFI is compared to a baseline model implying the variables within the model are not correlated with each other. The variables within Sample B yielded biserial correlations indicating the variables’ relationship to each other (.8 < r > .2) within each factor and only Factor 1 and Factor 3 were not significantly correlated resulting in the poor model fit among the incremental indices. The absolute fit indices (SRMR and RMSEA), however, suggest a fair fit of the model. It
should be noted that the SRMR is the average residual among which some residuals may be larger. The researcher further examined the discrepancies of the residuals to identify 4 items within Factor 3 suggesting a potential source of a higher SRMR. Moreover, RMSEA values favor parsimonious models supporting the accuracy of the fit estimation (Hu & Bentler, 1999). Further, the researcher evaluated the amount of variance accounted for in the dependent variables. The variance of the dependent variables all indicated a strong relationship (>.2) with the latent variable within the model (DiStefano, 2016).

The researcher identified a three-factor model that accounted for 35% of the variance explained. Statisticians recommended extracting factors that account for 75-90% of the variance (Pett, Lackey, & Sullivan, 2003). Therefore, this is a noteworthy limitation moving into the CFA and likely contributed to the poor model fit. Further interpretation of the factor structure is discussed in Chapter 5. The researcher considered modification of the specified model. There were two items that stood out in performance compared to the other items in the CFA. Item 23 in Factor 3 (“As a result of my work with clients or patients who have experienced trauma, I seek out ways to escape, or detach, from my work during my time off.”) was the only item loading negatively on the specified model suggesting a negative association between the observed and latent variable. This item is similar to the items that were cross loading in the EFA that were related to seeking support and ways to mitigate negative responses and facilitate positive responses. Therefore, in aligning with the emerging theory of the EFA, this item could be considered in the modification. A second item was considered for removal due to low factor loading within the CFA, item 2 in Factor 1 (“As a result of my work with clients or patients who have experienced trauma, I am more self-aware”). This item is not as closely aligned to
the theory as the other items within the factor and could be considered in the modification.

Bandalos and Finney (2010) caution modifications that include removing pathways as this potentially risks compromising the underlying theory, introduces sampling error, and decreases evidence of content validity. The researcher further evaluated the modification indices which suggested adding pathways to the specified model. However, the changes in the chi-square value were not sufficient to justify the changes. Further, these modifications were based on statistical considerations and do not theoretically align with the other items within the factor. Therefore, modification of the proposed model was not completed. The factor structure constructed in the CFA is displayed in Figure 4.4.

Reliability of the CFA was calculated using Cronbach’s alpha which reproduced the necessary reliability coefficient of $\alpha = .87$. Reliability of each of the factors in Sample B were as follows: Internal Changes ($\alpha = .86$), Client Progress Impacting Growth ($\alpha = .77$), and Negative Responses ($\alpha = .75$).

**Test Retest Reliability**

Finally, test retest reliability was calculated using Pearson’s correlation ($r$) to assess the stability of the scores between two administrations of the VPTGI. A total of 373 participants were asked to complete the VPTGI a second time based on their agreement to participate in a retest during the initial distribution of the inventory. Time between the two administrations of the VPTGI varied among participants with the longest time being three months and the shortest being approximately 30 days. Of those
participants, 147 responses were obtained by the survey software. This dataset was checked for missing data resulting in 106 participants. The retest of the inventory yielding a response rate of 39%. The test retest produced a correlation of $r = .78$ indicating a high correlation ($r > .5$) and stability within the scores (Bandalos, 2018).
Results of Research Question Two

The researcher conducted analysis of research question two using the ProQOL scale to examine convergent and discriminant validity among three constructs: STS, CS, and burnout. The analysis began with a check for normality and linearity of the ProQOL scale data ($N = 694$). Normality was indicated by the skewness and the kurtosis values of the ProQOL scale data. The skewness values (Table 4.8) ranged from -1.15 to 1.51 which were within the recommended range of $|2.0|$. The kurtosis values (Table 4.8) ranged from -.59 to 3.07 which were in the recommended range of $|7.0|$ (Bandalos, 2018).

The researcher first calculated the summation scores of each factor and the summation scores of each of the subscales of the ProQOL scale. Those scores were then converted into t-scores to accurately compare the scores of the initial VPTG inventory and the ProQOL scale (Bandalos, 2018). The results of the analysis indicated the scores of the initial inventory were positively correlated ($r > 0$) with the scores of each of the constructs on the ProQOL scale (Table 4.9). Pearson’s correlation revealed the participants’ scores in Internal Changes (Factor 1) had a positive relationship with STS ($r = .58, p < .001$), CS ($r = .81, p < .001$), and burnout ($r = .78, p < .001$). Among Client Progress Impacting Growth (Factor 2), Pearson’s correlation indicated the participants’ scores had a positive relationship with STS ($r = .65, p < .001$), CS ($r = .91, p < .001$), and burnout ($r = .87, p < .001$). Finally, Pearson’s correlation indicated the participants’ scores of Negative Responses (Factor 3) had a low correlation with STS ($r = .13, p < .001$), and a high correlation with CS ($r = .65, p < .001$) and burnout ($r = .5, p < .001$).

Further, the researcher evaluated the overall scores of the initial VPTG inventory (VPTG) with each construct of the ProQOL scale to examine convergent and
### Table 4.8 Descriptive Statistics of Professional Quality of Life Scale

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Construct</th>
<th>M</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BO</td>
<td>1.89</td>
<td>.72</td>
<td>.46</td>
<td>.10</td>
</tr>
<tr>
<td>5</td>
<td>BO</td>
<td>2.45</td>
<td>1.11</td>
<td>.64</td>
<td>-.21</td>
</tr>
<tr>
<td>7</td>
<td>BO</td>
<td>2.56</td>
<td>.96</td>
<td>.62</td>
<td>.25</td>
</tr>
<tr>
<td>9</td>
<td>BO</td>
<td>2.37</td>
<td>.98</td>
<td>.50</td>
<td>.09</td>
</tr>
<tr>
<td>11</td>
<td>BO</td>
<td>2.22</td>
<td>1.02</td>
<td>.64</td>
<td>.02</td>
</tr>
<tr>
<td>13</td>
<td>BO</td>
<td>1.87</td>
<td>.85</td>
<td>.77</td>
<td>.33</td>
</tr>
<tr>
<td>14</td>
<td>BO</td>
<td>1.56</td>
<td>.78</td>
<td>1.59</td>
<td>3.07</td>
</tr>
<tr>
<td>23</td>
<td>BO</td>
<td>1.77</td>
<td>.95</td>
<td>1.32</td>
<td>1.51</td>
</tr>
<tr>
<td>25</td>
<td>BO</td>
<td>1.68</td>
<td>.81</td>
<td>1.32</td>
<td>2.22</td>
</tr>
<tr>
<td>28</td>
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<td>.88</td>
<td>.99</td>
<td>.76</td>
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<tr>
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<td>-.02</td>
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<td>.83</td>
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<td>-.56</td>
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<td>.66</td>
<td>-1.15</td>
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</tr>
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<td>CS</td>
<td>3.98</td>
<td>.76</td>
<td>-.39</td>
<td>.01</td>
</tr>
<tr>
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<td>CS</td>
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<td>.71</td>
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<td>.29</td>
</tr>
<tr>
<td>20</td>
<td>CS</td>
<td>3.97</td>
<td>.68</td>
<td>-.24</td>
<td>-.11</td>
</tr>
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<td>CS</td>
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<td>.68</td>
<td>-.77</td>
<td>.19</td>
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<tr>
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<td>.66</td>
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<td>-.59</td>
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<td>-.37</td>
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<td>.96</td>
<td>.56</td>
<td>.02</td>
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<td>.56</td>
<td>-.43</td>
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<td>.74</td>
<td>1.51</td>
<td>3.39</td>
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<td>.95</td>
<td>1.18</td>
<td>.95</td>
</tr>
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<td>STS</td>
<td>1.75</td>
<td>.84</td>
<td>1.31</td>
<td>2.30</td>
</tr>
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<td>.79</td>
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<td>29</td>
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<td>1.56</td>
<td>.62</td>
<td>.84</td>
<td>1.0</td>
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</tbody>
</table>

*Note. (N = 694, α = .78) The ProQOL scale is a 5-point Likert scale of frequency (1 = Never and 5 = Very Often)*

Discriminant validity among three constructs: STS, CS, and burnout. The summation scores of each construct of the ProQOL scale and the summation scores of the overall initial inventory were converted into t-scores in order to accurately conduct the
correlation. The participants summation scores (VPTG) were positively correlated with STS ($r = .59$, $p < .001$), CS ($r = .90$, $p < .001$), and burnout ($r = .59$, $p < .001$).

Based on these results, the researcher can reject the null hypothesis ($r = 0$) as there is a relationship among scores of the VPTG and the STS scores of the ProQOL scale. This highly correlated relationship, however, does not provide evidentiary support for discriminant validity among VPTG and STS. This relationship is a significant finding among the results and provides evidentiary support for Negative Responses being an important aspect of VPTG. Further, the researcher can reject the null hypothesis ($r = 0$) as there is a positive relationship with the scores of the VPTG and the CS scores. These findings provide evidentiary support for convergent validity between VPTG and CS as evidenced by the highly correlated, positive relationship among the two constructs.

Table 4.9 *Pearson’s Correlations for Investigating Construct Validity (N = 754)*

<table>
<thead>
<tr>
<th></th>
<th>VPTG</th>
<th>Internal Changes (Factor 1)</th>
<th>Client Progress Impacting Growth (Factor 2)</th>
<th>Negative Responses (Factor 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STS</td>
<td>.59**</td>
<td>.58**</td>
<td>.65**</td>
<td>.13**</td>
</tr>
<tr>
<td>CS</td>
<td>.90**</td>
<td>.81**</td>
<td>.91**</td>
<td>.65**</td>
</tr>
<tr>
<td>BO</td>
<td>.59**</td>
<td>.78**</td>
<td>.87**</td>
<td>.5**</td>
</tr>
</tbody>
</table>

*Note.* The results include the full dataset ($N = 694$). The constructs STS, CS, and BO were measured using the Professional Quality of Life Scale (ProQOL; Stamm, 2010). **$p < .001$**
Summary

This chapter delineates the results for both research questions. The chapter began with a review of the research questions and their corresponding hypotheses. Next, the chapter described the researchers’ steps for data cleaning and data preparation. Following, the results of research question one were described in three parts: exploratory factor analysis, confirmatory factor analysis, and test retest reliability. The chapter concluded with the results for research question two. The final chapter of this dissertation will provide a discussion of the results, implications for counselor education, implications for supervision, and areas of future research.
CHAPTER 5
DISCUSSION

Chapter Five will begin with a summary of the study to review the purpose, research methodology, and the results. Following, a further discussion of the results of each research question and the corresponding hypotheses will be presented. Limitations of the study and implications for counselor education, professional counselors, and supervision will be discussed. The chapter will conclude with addressing areas of future research.

Summary of the Study

The purpose of this study was to investigate the factor structure of VPTG among helping professionals to generate theory regarding VPTG and explore the observed and latent variables of the construct. Prior to this study, scholars across disciplines have contributed to peer-reviewed literature in understanding the lived experiences of helping professionals indirectly affected by trauma (Arnold et al., 2005; Barrington & Shakespeare-Finch, 2013; Bartoskova, 2017; Baxter, 2012; Hyatt-Burkhart, 2014; Splevins et al., 2010; Sui & Padmanabhanunni, 2016). Across disciplines, scholars investigate VPTG using the PTGI; an instrument measuring the extent to which clients experience growth after trauma. This methodology presents limitations to which this study aimed to address. This methodology does not differentiate between the impact of direct trauma (e.g. personal trauma) and indirect trauma (e.g. working with client trauma). The PTGI was constructed for clients who have experienced trauma, but does
not account for the cumulative, chronic indirect trauma exposure that helping professionals uniquely experience (Abel et al., 2014). For instance, a client may experience one traumatic experience while a helping professional is indirectly exposed to several trauma experiences on their caseload or occupational encounters.

The experience of helping professionals differs from the client experience as professionals describe challenges in efficacy (Baxter, 2012), changes in interpersonal relationships (Bartoskova, 2017), and gaining hope to overcome adversity in their own lives inspired by their work with clients (Sui & Padmanabhanuui, 2016). Moreover, helping professionals describe unique negative responses that manifest from their work with trauma that serves as a meaningful aspect of their experience (Wheeler & McElvaney, 2018). Lastly, the five-factor model of the PTGI collapses when administered to participants experiencing indirect trauma (Abel et al., 2014). Therefore, there remains a lack of understanding of the factor structure and dimensions of VPTG among helping professionals. Thus, the second purpose of this study was to provide evidentiary support for the dimensions of VPTG through the investigation of convergent and discriminant validity among VPTG, STS, CS, and burnout. The following research questions were addressed:

**Research Question One**

What is the factor structure of the VPTG inventory data with a sample of helping professionals and helping professionals-in-training exposed to indirect trauma?

**Hypothesis one.** The hypothesis for the first research question is factors will emerge that align with proposed domains established from a thematic synthesis. This
hypothesis is generated utilizing qualitative studies that have inquired of the lived experiences of VPTG across disciplines.

**Research Question Two**

What is the relationship between initial VPTG inventory scores and scores of the Professional Quality of Life Scale (ProQOL; Stamm, 2010) with a sample of helping professionals and helping professionals-in-training (examining discriminant and convergent validity of VPTG)?

**Hypotheses two.** It is hypothesized that there will be a negative relationship between STS and VPTG ($r < 0$) and a positive relationship between VPTG and compassion satisfaction ($r > 0$).

An initial inventory was constructed using a thematic synthesis of the lived experiences of helping professionals experiencing VPTG. This thematic synthesis assembled the operational definitions that were then used to inform item construction in the initial inventory. Those six themes included: (a) negative responses, (b) changes in world view, (c) creating meaning to change self, (d) changes in interpersonal relationships, (e) engaging in efforts of support and self-care, and (f) client progress impacting growth. The items were the reviewed by a panel of experts across helping professions to support content validity of the initial inventory and distributed to a field test of master’s level counseling students. The initial VPTGI consisted of 32 items on a 6-point Likert response scale. Additional survey materials included a demographics information form, vicarious trauma item, and the ProQOL Scale.

The survey materials were administered to a national sampling frame of helping professionals. Participants were given the opportunity at the conclusion of the survey to
enter a drawing of $50 to reduce the risk of undue influence and increase the response rate of potential participants. Additionally, participants were given the opportunity to take the survey a second time for an additional entry into the drawing. The second round of survey materials were administered at end of the data collection period with a minimum of 30 days between the two test administrations.

**Discussion of Results**

The results of each research question presented in Chapter Four are discussed below. Discussion of these results will include interpretation of each factor and the overall factor structure as it relates to relevant literature, discussion of construct validity, and the overall inferences and conclusions drawn from the study.

**Factor Structure of VPTG**

Research question one aimed to explore the factor structure of VPTG among helping professionals using factor analysis. The investigation began with an EFA to generate theory regarding the factor structure of VPTG using Sample A. The researcher then conducted a CFA to evaluate the emerging hypothesized model fit in a variance-covariance structure analysis with Sample B. Items for the initial inventory were formed using six themes emerging from a thematic synthesis of lived experiences of helping professionals experiencing growth as a result of working with trauma. Those six themes included: (a) negative responses, (b) changes in world view, (c) creating meaning to change self, (d) changes in interpersonal relationships, (e) engaging in efforts of support and self-care, and (f) client progress impacting growth.

The EFA emerged a three-factor model which collapsed changes in world view, creating meaning to change self, and changes in interpersonal relationships into Factor
1, client progress impacting growth into Factor 2, and negative responses into Factor 3. The three-factor model accounted for a low 35% of the variance explained prior to moving forward in the CFA. The CFA yielded a fair model fit among the absolute fit indices (RMSEA and SRMR) with reasonable errors of approximation. The CFA, however, did not obtain an acceptable model fit among incremental indices (chi-square and CFI). Based on these results, the researcher can accept the null hypothesis of a poor model fit for the first research question.

Other factor solutions were considered throughout the iterative, exploratory process. In each of the factor solutions explored, three to five factor model solutions, the variance explained did not change across solutions indicating a significant amount of variance not represented in the items within the model. The three-factor solution retained indicates a significant aspect of the construct, as evidenced by the strong factor loadings (λ > .32), but insufficient in representing the construct. Therefore, the VPTGI requires significant revisions to identify the latent variables not presented in the items. Nonetheless, the three emerging factors provide insight to the developing theory of VPTG.

**Internal Changes**

The first factor represented items of internal changes within the helping professional as a result of working with clients or patients who have experienced trauma. Internal Changes formed from the collapse of three themes used to construct the initial inventory across 10 items; changes in world view, creating meaning to change self, and changes in interpersonal relationships. The items describe changes at the individual level such as (a) allowing the helping professional to become more self-aware, (b) being
inspired to overcome adversity in their own life, and (c) having a greater sense of purpose in their lives. Other items represent changes at the relational level such as being more empathic, emotionally expressive, and kinder in personal relationships or making more attempts to connect. Additionally, items in the factor represent a change in perspective to become less judgmental towards others and learn their perspective.

Internal changes accounted for the largest proportion variance within the factor solution (15%) as compared to the other factors. This is partially consistent with previous research from Abel and colleagues (2014) identifying a change in worldview aspect of VPTG that includes having a better understanding of others, being willing to express emotions, putting forth more effort in relationships, and a greater sense of value in their own life. These findings are only partially consistent as the items from this study were constructed based on the experiences of helping professionals while Able used the PTGI to conduct an EFA. A few examples of items from the PTGI are “I can clearly see that I can count on people”, “I accept needing others,” and “I have a greater sense of self-reliance.” Items within the PTGI do not align with experiences among helping professionals.

Moreover, the items in this factor have an underlying theme of empathy that is a unique finding in this study. Empathy is a necessary and natural characteristic among helping professionals (Ling, Hunter, & Maple, 2014). Norcross (2011) defines empathy in three modes: empathic rapport, communicative attunement, and person empathy. The helping professional must first place themselves in the shoes of the other person in order to engage empathically with a client or patient. When working with trauma, this is facilitated by metaphorically applying the trauma narrative to oneself (the helping
professional) to reframe the trauma narrative into a manageable context (Ling, Hunter, Maple, 2014; Linley & Joseph, 2007). A helping professional must “express more kindness” (Item 24), “learn the perspective of others” (Item 12), “be less judgmental towards others” (Item 5) and be “more empathic towards others and their experiences” (Item 11) to establish empathic rapport. Communicative attunement involves the helping professional to be “more emotionally expressive” (Item 15) and to “make attempts to connect” (Item 16) with the client or patient moment-to-moment. The third mode of empathy, person empathy, requires the helping professional to “be more self-aware” (Item 2) and “empathic towards others and their experiences” (Item 11) (Norcross, 2011). Empathy was not used to establish or evaluate construct validity in the development of the initial inventory; however, previous scholars have suggested individuals with higher levels of empathy have higher levels of VPTG (Brockhouse et al., 2011; Linley & Joseph, 2007). Furthermore, having the stamina to engage empathically is a necessary ability in order to endure working with clients or patients that have experienced trauma (Ling, Hunter, Maple, 2014).

**Client Progress Impacting Growth**

Clients and patients influence the helping professionals they are working closely with (O’Loughlin, 2006). The second factor represents items constructed from the theme *client progress impacting growth* which depicts witnessing the client’s growth serving as a catalyst for personal growth. Client Progress Impacting Growth accounted for 11% of the total variance explained in the EFA. The items describe feeling rewarded in being in a needed profession, witnessing growth which led to feelings of hope for their own lives, gaining respect for their client, being inspired by what the client or patient has been
through, and the helping professional learning about themselves as a result of their work with clients or patients who have experienced trauma. It should be noted that five of the seven items represented in the factor were the only five items in the initial inventory that did not have the stem “As a result of my work with clients or patients who have experienced trauma,” which may impact the factor loadings (Bandalos, 2018).

Nonetheless, the underlying theme of the client’s impact on the helping professional’s growth is an emerged aspect as a factor of VPTG.

Previous scholars have conceptualized vicarious resilience as the parallel process of experiencing growth and resilience in one’s own life as a result of observing the resilience of the client. Vicarious resilience is described in seven factors: (a) changes in life goals and perspective, (b) client-inspired hope, (c) increased recognition of clients’ spirituality as a therapeutic resource, (d) increased capacity for resourcefulness, (e) increased self-awareness and self-care practices, (f) increased consciousness about power and privilege relative to clients’ social location, and (g) increased capacity for remaining present while listening to trauma narratives (Killian et al., 2017). The findings of this study are only partly consistent with this overall construct as items within the initial inventory only align with client-inspired hope. Weingarten (2010) identified this as reasonable hope. The counselors’ hope emerges when the counselor is open to the influence of the client’s hope in the session. For example, in item 30 (“I am inspired by what clients and patients have been through.”), item 28 (“Witnessing my client’s growth has led to feelings of hope in my own life.”), and item 31 (“As a result of my work, I believe people are able to overcome and move on from their past.”). Accordingly, these
findings only partly align with vicarious resilience as not all items portray the conceptualization of vicarious resilience.

Compassion satisfaction is described as the satisfaction the helping professional gains from contributing to the client’s progress based on their professional abilities (Stamm, 2010). This further supports the additional variables in the factor such as “feeling rewarded being in a needed profession” (item 3), gaining “respect [for the] strength my clients or patients have had in recovering from trauma” (item 29), and learning something about themselves (item 32) as a result of working with clients or patients who have experienced trauma. Therefore, this study provides evidentiary support for CS as a potential characteristic of VPTG. A further examination of the relationship between CS and VPTG is discussed in research question two.

Negative Responses

The third factor retained in the factor analysis were items representing negative responses and the helping professionals’ experience of distress as a result of working with clients who have experienced trauma. Negative responses accounted for 9% of the total variance explained in the EFA. The six items illustrate the experience of questioning their abilities, experiencing both physical and emotional manifestation of symptoms, and intrusive thoughts regarding the client or patient’s trauma experience. This aligns with previous literature noting the importance of negative responses and their relationship facilitating positive affective responses (Wheeler & McElvaney, 2018). It should be highlighted that these items were written in the past tense to align with the theory of an initial distress leading to growth, but small differences in item wording compared to others could impact the factor solutions (Bandalos, 2018).
Wheeler and McElvaney (2018) identified helping professionals having difficulty talking about the growth experienced from working with client’s trauma without first articulating their negative experiences. Moreover, Brockhouse et al. (2011) theorize such initial distress serves as a catalyst for VPTG. The results of this study, nonetheless, underline the importance of negative responses as an aspect of VPTG as evidenced by the strength in the factor loadings ($\lambda > .32$) and the item means representing the level of agreement among participants (Table 4.7).

Secondary traumatic stress experts parallel symptom manifestation to posttraumatic stress disorder with additional, unique experiences of moral distress, decreased empathy, decreased self-efficacy, and stigmatization. The experts further identify STS as a parallel process in reaction to the empathic engagement between the client and professional, the professionals’ feelings of connectedness, and the responsibility within their role as a provider (Sprang, Ford, Kerig, & Bride, 2019). Moreover, Gil (2015) delineates STS as a necessary therapeutic response that reflects the depth of the empathic connection between the helping professional and the client which contributes to VPTG. The findings of this study support the prevalence of negative responses as a characteristic of VPTG and align with the conceptualization of negative responses a contributor to VPTG as evidenced by items emerging in this factor depicting the helping professional “[questioning] my ability to fulfill my role” (item 6) and “there are horrifying trauma stories that I will never forget” (item 4). Further discussion of the relationship between negative responses, STS, and VPTG will be addressed in the discussion of research question two.
It is important to refer back the items when completing the iterative process of EFA and again during CFA to determine the underlying theory of the items, their nuances, and the characteristics of items that performed poorly (Bandalos, 2018). Items that loaded across factors in the EFA were reviewed for potential clues to their poor simple structure. The items identified were items illustrating an action utilized to mitigate negative responses or facilitate VPTG. Examples of items include: “As a result of my work with clients or patients who have experienced trauma, I talk with others who understand my work,” (item 18), “As a result of my work with clients or patients who have experienced trauma, I put my thoughts and feelings aside in order to continue working, (item 20), and “As a result of my work with clients or patients who have experienced trauma, I try to find ways to process the trauma of my clients or patients.” This unique finding suggests the helping professionals’ engagement with strategies to facilitate VPTG are not a characteristic of the construct itself.

The study provides preliminary evidence to support internal changes, client progress impacting growth, and negative responses and their operational definitions as aspects of VPTG accounting for 35% of the variance of the overall construct. These factors help identify the dimensions of VPTG and partially support the hypothesis of the factor structure aligning with the six themes used to construct the initial inventory. Overall, the six themes collapsed into three factors with a fair model fit among the absolute indices (RMSEA and SRMR). The researcher can infer that model fit may improve when additional variables are added to the inventory to account the remaining 65% variance not represented in the initial inventory, however, further research is required in this area.
Principles of structural equation modeling caution the use of CFA directly after conducting an EFA as the outcomes are likely to result in a rejected model (van Prooijen & van der Kloot, 2001). The EFA includes secondary pattern coefficients for factors that are left behind when specifying the model in CFA. These secondary pattern coefficients likely account for significant portions of the variance which are then set to 0. Thus, resulting in a less than favorable model fit due to the restrictions of the CFA. Further, models may acquire empirical under identification in CFA if the covariance between factors is close to zero (Kline, 2015). It appears this is reflected in the results of this study. Further modifications to the factor structure after the CFA, in this study, would abandon the theory-driven process and solely reflect data-driven analysis (van Prooijen & van der Kloot, 2001). Therefore, the researcher did not modify the factor structure.

Lastly, test retest reliability supports the stability of the scores and providing support of the factors emerging from the analysis and their relevance to the construct. Reliability of the measure was supported through a reliability coefficient of $\alpha = .88$ for Sample A and $\alpha = .87$ for Sample B. Therefore, reliability in the scores and reliability in the measure support the stability of the findings.

**Validity**

Research question two aimed to investigate the relationship between the initial VPTG inventory scores and the scores of the ProQOL Scale to examine discriminant and convergent validity. The researcher used the summation scores of the VPTG to evaluate the relationship between the overall construct of VPTG, STS, and CS. The investigation of discriminant validity was conducted through Pearson’s correlation yielding a high correlation between VPTG and STS. This finding is surprising as the hypothesis
proposed a negative correlation between the two constructs. This relationship was further examined through investigating the relationship between STS and Negative Responses (Factor 3) producing a low correlation.

Though unexpected, this finding aligns with the reconceptualization of negative responses are an essential element to VPTG (Gil, 2015). Previous scholars have suggested a positive relationship with STS and VPTG highlighting the importance of the initial distress in facilitating VPTG (Brockhouse, et al., 2011). When reviewed at the item level, the items representing negative responses in the VPTGI are constructed in past tense to represent helping professionals experiencing negative responses prior to experiencing growth (Wheeler & McElvaney, 2018). Items within the ProQOL scale representing STS and burnout are in the present tense and measured in frequency. Therefore, participants indicated they are currently not experiencing STS as evidenced by the low item means (1 = Never) and standard deviations in the ProQOL scale. Participants indicated, however, the prevalence of past negative responses on the VPTGI as evidenced by the item means and standard deviations of the negative response items and their factor loadings. Therefore, the researcher can conclude that participants are not currently experiencing STS but agree negative responses are an aspect of VPTG. This provides preliminary evidence to support for a linear model of VPTG where an initial distress serves as a catalyst for VPTG (Brockhouse et al., 2011) as opposed to other models conceptualizing a coexistence of both negative and positive affective responses (Manning-Jones et al., 2015). Nonetheless, this investigation did not provide evidentiary support for discriminant validity among STS and VPTG.
The investigation of convergent validity yielded a strong correlation between VPTG and CS providing evidentiary support for convergent validity. Moreover, CS was further analyzed and its relationship with each factor. This correlation yielded a strong relationship between Client Progress Impacting Growth and CS. Interestingly, the strong correlation between CS and VPTG was substantially larger than the necessary correlation ($r > .59$) for the relationship (Swank & Mullen, 2017). This aligns with the underlying theory emerging within the factor of CS being a potential characteristic of VPTG and should be considered for future research.

Overall, the dimensions of VPTG are further articulated as a result of this study. The emerging factors of Internal Changes, Client Progress Impacting Growth, and Negative Responses generate theory regarding the importance of these factors, the strength of their operational definitions, and the developing dimensions of VPTG. This study delivered further understanding of the relationship between VPTG and CS by providing evidentiary support for convergent validity. Unlike previous scholars, this study provided further understanding of the relationship of Negative Responses and VPTG in the context of a measure constructed for VPTG as opposed to using the PTGI. Further, these findings support the role of an initial distress serving as a notable dimension of VPTG but not a cooccurring experience.

**Implications**

The following section will discuss implications for counselor educators training students to work with clients who have experienced trauma. Further, implications for supervisors supporting counselors who are working with clients or patients who have
experienced trauma will be outlined. Finally, this section will address areas of future research of the emerging findings.

**Implications for Counselor Education**

Items describing areas of self-efficacy emerged from the findings as helping professionals feeling rewarded for being in a needed profession and its relationship to Client Progress Impacting Growth (Factor 2). Consequently, self-efficacy also emerged in Negative Responses as an experience of questioning one’s ability to fulfill their role. Therefore, when the counselor is equipped and trained to facilitate trauma-informed care, their increase in efficacy facilitates compassion satisfaction (Sprang, Clark, & Whitt-Woosley, 2007) rendering potential implications for facilitating VPTG. Based on these findings, counselor educators should prepare counselors-in-training to work with clients who have experienced trauma by providing coursework specific to skill development in trauma-informed practice (Knight, 2018). Additionally, trauma specific coursework should include instruction in both positive and negative affective responses encountered as a result of working with trauma. Moreover, education should reframe STS and Negative Responses as an anticipated response to the work with mitigation strategies to promote resilience, self-regulation, and self-awareness. Helping professionals are informed of the importance to self-regulation and relational skills but underestimate the impact STS has on those skills (Sprang, Ford, Kerg, & Bride, 2018).

Counselor educators may use the VPTGI, once further developed, to support new counselors in understanding the components of VPTG. Further, counselor educators may use the VPTGI among interns working with clients who have experienced trauma in their field experiences coursework. Scholars may also consider using the instrument for future
intervention research to address the efficacy of supervision and educational strategies in mitigating STS and facilitating VPTG.

**Implications for Supervision**

An important finding from this study is the relationship of Negative Responses and its contribution to the dimensions of VPTG. Therefore, supervisors should facilitate trauma informed supervision to normalize the helping professionals’ reactions to indirect trauma (Brockhouse et al., 2011; Dombo & Blome, 2016) and engage the counselor to discuss personal feelings and reactions to the trauma narrative (Deaton, Wymer, & Carlson, in review). This discussion of the counselor’s reactions begets the opportunity for social support around their work that is not obtainable outside of supervision due to limits of confidentiality. Thus, establishing a means of managing the emotional responses within supervision (de Boer et al., 2014; Linley & Joseph, 2007) and building coping strategies directly addressing and anticipating negative responses.

The findings of this study should inform supervision strategies to facilitate VPTG among counselors working with trauma. The study articulates aspects of VPTG such as (a) the counselor’s change in self-awareness, (b) gaining empathy and perspective towards others, and (c) a greater sense of purpose. Therefore, supervision should aim to support the counselor in building self-awareness and self-other awareness. Moreover, the findings of this study underscore the impact the client has on VPTG. Supervisors should reframe and support counselor’s conceptualization of their own skill set and its impact on the client. Once the instrument has been further developed, supervisors may utilize the VPTGI to support reframing adverse experiences of counselors working with clients who
have experienced trauma. Further, supervisors may support counselors by measuring VPTG and direct supervision based on the need areas indicated by the variables.

**Future Research**

While the emerging factors generate theory and develop dimensions for VPTG, future research should consider including CS, vicarious resilience, and empathy as hypothesized variables contributing to VPTG. These constructs are relevant to the emerging theory and should be included in future revisions of the inventory. Other variables underrepresented in the initial inventory are items that articulate the role making meaning has on VPTG. The ability to facilitate client growth empowers and affirms counselors in their role as helping professionals and making meaning of the professionals’ work (Bartoskova, 2017; Ling, Hunter, & Maple, 2014). Brockhouse and colleagues (2011) conceptualize VPTG as a linear model where an initial distress requires the counselor to make meaning of their work. According to this theory, meaning making serves as a moderator between distress and VPTG (Brockhouse et al., 2011) and should be included in future revisions of the inventory. Future editions of the instrument may also consider Likert scale items of frequency rather than agreement to determine the prevalence of each of the variables among participants in achieving and sustaining VPTG. This study provides evidentiary support for the static nature of VPTG but future research is needed to address the changes in VPTG.

A few participants offered informal feedback on their experience taking the survey in the form of responding to the email requests for participation. Several participants described their experience of the instrument serving as a tool for reflection of their own trauma experiences. Therefore, future research should investigate the
participant experience in taking the inventory, additional variables not represented in the inventory, and the use of the inventory as a tool for intervention research. Lastly, further factor analytic studies should be conducted among the helping professions underrepresented in the study; interpreters, medical professionals, nursing, and clinical administrative roles. The results of this study are not generalizable across helping professions due to the disproportional representation across the sample. Further, future research should consider addition helping professions such as teachers, first responders, and clergy.

Limitations

There are limitations within the study that should be presented and their contribution to the results. The self-report nature of the inventory relies on participants recollection of former clients and patients thus presenting reconstructive bias of those experiences (Park & Lechner, 2006). Further, recollection of positive experiences may influence participants to answer more favorably or socially acceptable (DiMaio, 1984; Ones, Viswesvaran, & Reiss, 1996). Moreover, participant feedback throughout the study alluded to retrospective reattribution (Westphal & Bonnano, 2007). Therefore, the exposure to the items themselves may have reframed past experiences prior to the actual experience of growth. Participants reported enjoying their reflection during the survey and several requested to use the survey for teaching and supervision purposes among helping professionals currently working with clients who had experienced trauma. Thus, the measure itself could potentially serve as an intervention reframing the participants’ past experiences in ways they had not previously considered. However future research is needed in this area.
The sample of participants also presents limitations as the sample consisted of predominately White females. Females made up 89.9% of the sample ($N = 678$) and participants identifying as White made up 78.6% of the sample ($N = 593$). Helping professions represented were predominately counseling ($N = 403$, 53.4%), social work ($N = 232$, 23.8%), and psychology ($N = 84$, 11.1%). Therefore, this study is not generalizable across helping professions and an additional limitation of the study.

Moreover, the sampling frame itself presents as a limitation of this study. The variability of exposure to indirect trauma and the nature of those interactions differs across professions. For example, counselors, psychologists, and social workers may conceptualize their work with trauma differently based on their respective approaches and roles within their work with clients or patients. It is likely this contributed to the poor model fit even among the predominately represented professions. Moreover, counselors, social workers, and psychologist likely engaged in the study based on their training and expertise of trauma, symptoms, and overall efficacy in trauma work as opposed to professionals driven by the medial model. Medical professionals, or those without any trauma training (e.g. nurses, interpreters, or direct support staff), are less likely to conceptualize patients through a trauma lens rendering selection bias from potential participants. Future research should investigate the factor structure among the other helping professions underrepresented in this study.

Synthetization of qualitative literature risks misinterpreting the findings the original authors were trying to convey (Sandelowski & Barroso, 2007). The researchers took steps to mitigate the limitations drawn from using thematic synthesis as a means for item construction. However, this may have attributed to the results of this study and
should be noted as a limitation in the development of the initial inventory. Lastly, the methodology of splitting the sample into two datasets serves as a limitation in this study. The data was collected within the same sampling frame and, to some extent, capitalizes on the same chance variation (Kline, 2015), even though the analysis was not conducted on the same dataset. The secondary coefficients removed from the EFA in Sample A may have been significant to Sample B but not included in the specified model.

**Conclusion**

This study aimed to investigate the factor structure of VPTG among helping professionals to generate theory regarding VPTG experienced by professionals working with clients or patients who had experienced trauma. The researcher conducted an EFA among a sample of helping professionals which emerged a three-factor model; (a) *Internal Changes*, (b) *Client Progress Impacting Growth*, and (c) *Negative Responses*. The researcher conducted a CFA resulting in poor model fit. This study further aimed to investigate construct validity and examine discriminant and convergent validity. The findings of this study provide evidence for convergent validity between VPTG and CS. The findings did not provide evidentiary support for discriminant validity between STS and VPTG. Further, these findings provide preliminary evidence for initial distress serving as a catalyst for VPTG among helping professionals.
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organizational support, and empathy. *Journal of Traumatic Stress, 24*(6), 735–742.


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**APPENDIX A**

**JOANNA BRIGGS INSTITUTE APPRAISAL CHECKLIST**

<table>
<thead>
<tr>
<th>Appraisal Criteria</th>
<th>Yes</th>
<th>No</th>
<th>Unclear</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is there congruity between the stated philosophical perspective and the research methodology?</td>
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<td>2. Is there congruity between the research methodology and the research question or objectives?</td>
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<td>3. Is there congruity between the research methodology and the methods used to collect data?</td>
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<td>4. Is there congruity between the research methodology and the representation and analysis of data?</td>
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<td>5. Is there congruity between the research methodology and the interpretation of results?</td>
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<td>6. Is there a statement locating the researcher culturally or theoretically?</td>
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<td>7. Is the influence of the researcher on the research, and vice- versa, addressed?</td>
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<td>8. Are participants, and their voices, adequately represented?</td>
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<td>9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?</td>
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<tr>
<td>10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?</td>
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</table>

*Note.* Table includes items from the JBI Appraisal Checklist for Qualitative Research.
## APPENDIX B

### PICO DESCRIPTIVE DETAILS OF ANALYZED STUDIES

Table 3.1 *PICO Descriptive Details of Analyzed Studies*

<table>
<thead>
<tr>
<th>Study</th>
<th>Discipline</th>
<th>Participant</th>
<th>Phenomena of Interest</th>
<th>Context</th>
<th>Setting</th>
</tr>
</thead>
</table>
What are the positive impacts identified by therapists?  
What are the impacts on their personal lives?  
How does working in Irish context influence them? | Data Collection/Analysis: Unstructured interviews  
Thematic Analysis  
Culture/Location: Irish Women  
Location: Ireland  
Race/Sex Interests: All Irish women | Setting: Working with child sexual abuse victims |
| Bartoskova, L. (2017)        | Counseling     | Age Range (Mean) 33-64 (43.3) | Sex: 70% female/30% male  
Explore trauma therapist’s trauma work experience; explore enabling factors of [vicarious] posttraumatic growth | Data Collection/Analysis: Semi-structured interviews  
Interpretive Phenomenological Analysis  
Culture/Location: Scotland  
Race/Sex Interests: N/a | Setting: Private practice or hospital setting |
<table>
<thead>
<tr>
<th>Arnold et al. (2005)</th>
<th>Psychologists</th>
<th>Avg (48)</th>
<th>21</th>
<th>10 men/11 women</th>
<th>Explore clinicians’ perceptions of the ways in which they have been affected by their work with trauma survivors; particular focus on changes in schemas about self and the world and perceived psychological growth</th>
<th>Naturalistic interviews</th>
<th>Southeastern city (US)</th>
<th>Race demographics not reported</th>
<th>Psychotherapists – 17/21 reported at least one event they identified as traumatic</th>
</tr>
</thead>
</table>

<p>| Splevins, et al. (2010) | Interpreters | 30-64 (46) | 8 | 2 men/6 women | Understanding vicarious impact of trauma work on interpreters | Semi-structured interviews | Freelance workers in the UK but cultural backgrounds varied; French, Iraqi, Iranian, British, African UK | Varying cultures | Settings varied; Medical and judicial but all worked with refugees seeking asylum. |</p>
<table>
<thead>
<tr>
<th>Study (Year)</th>
<th>Sample Description</th>
<th>Sample Size</th>
<th>Gender Breakdown</th>
<th>Methodology</th>
<th>Data Analysis</th>
<th>Country/Region</th>
<th>Qualification/Setting</th>
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</thead>
<tbody>
<tr>
<td>Barrington, A. &amp; Shakespeare-Finch, J. (2013)</td>
<td>Mental Health Workers</td>
<td>17</td>
<td>2 male/15 female</td>
<td>Semi-structured interviews</td>
<td>Interpretive Phenomenological Analysis</td>
<td>Australia (29%); South American (24%); European (24%)/Australia</td>
<td>Varying cultures</td>
</tr>
<tr>
<td>Hyatt-Burkhart, D. (2014)</td>
<td>Mental Health Workers</td>
<td>12</td>
<td>7 male/5 female</td>
<td>Exploring VPTG in mental health helpers</td>
<td>Pittsburgh, PA area/US</td>
<td>N/a</td>
<td>All employed at a residential treatment facility</td>
</tr>
<tr>
<td>Baxter, J. (2012)</td>
<td>Nursing</td>
<td>10</td>
<td>All female</td>
<td>Understanding the lived experiences of obstetric registered nurses</td>
<td>Phenomenological interviews</td>
<td>7 Non Hispanic White/3 “Non-Hispanic Black”/NYC</td>
<td>N/a</td>
</tr>
<tr>
<td>Sui, X. C. &amp; Padmanabhanunni (2016)</td>
<td>Psychologists</td>
<td>6</td>
<td>4 female/2 male</td>
<td>Explore lived experiences of South African psychologists working with trauma survivors</td>
<td>Semi-structured interviews</td>
<td>South African participants/Varying locations in South Africa</td>
<td>N/a</td>
</tr>
</tbody>
</table>
## APPENDIX C

### DESCRIPTION OF THEMES AND SUBTHEMES

Table 3.2 Description of Themes and Subthemes

<table>
<thead>
<tr>
<th>Themes</th>
<th>Free Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Negative Responses</strong></td>
<td>Therapist’s transient negative response to trauma work</td>
</tr>
<tr>
<td>An initial distress experienced by the helping professional as a result of indirect exposure to trauma to include physical, emotional, and psychological responses.</td>
<td>Intrusive images or memories of client’s trauma</td>
</tr>
<tr>
<td></td>
<td>Increase in irritability, sadness, anger, frustration and feelings of helplessness</td>
</tr>
<tr>
<td></td>
<td>Psychological symptoms; dreams and emotional reactions</td>
</tr>
<tr>
<td></td>
<td>Increase in reactivity and hypervigilance</td>
</tr>
<tr>
<td></td>
<td>Increase in physical symptoms such as headaches and muscle tension</td>
</tr>
<tr>
<td></td>
<td>Therapists struggled to talk about positive, but all were able to identify positives.</td>
</tr>
<tr>
<td></td>
<td>Needed to describe the negative aspects</td>
</tr>
<tr>
<td></td>
<td>Grappling with those emotions personally and professionally</td>
</tr>
<tr>
<td></td>
<td>Interpreters who are victims/refugees themselves being triggered and not knowing how to cope</td>
</tr>
<tr>
<td></td>
<td>Counselors feeling like they were experiencing the torture with their clients</td>
</tr>
<tr>
<td></td>
<td>Having PTSD symptoms after hearing client stories</td>
</tr>
<tr>
<td></td>
<td>Loss of confidence in skills as a nurse</td>
</tr>
<tr>
<td></td>
<td>Insecurity about whether words or actions are appropriate/effective</td>
</tr>
<tr>
<td></td>
<td>Difficulty forgetting and moving on from trauma</td>
</tr>
<tr>
<td></td>
<td>Can’t get particularly traumatic images out of their heads</td>
</tr>
<tr>
<td></td>
<td>Recounting details increases the richness of memories</td>
</tr>
<tr>
<td></td>
<td>Vocal reactions of patients are traumatic and triggering</td>
</tr>
<tr>
<td></td>
<td>Avoiding talking to others outside of work/profession</td>
</tr>
</tbody>
</table>
| **Changes in World View** | Impact of trauma work on general outlook on the world and other people  
A change in world view is defined as a shift in perspective of others and the world as a result of hearing the trauma that clients or patients have endured leading to an increase in awareness of world issues and understanding.  
Changes in view of safety and personal vulnerability  
Changes in philosophy of life  
Greater appreciation of life  
Hearing about atrocities you didn’t even think were possible  
Grappling with the frequency at which trauma occurs  
Eventually, shock gives way to positive views of the human resilience  
Clinicians becoming more understanding and less judgmental  
Increased awareness of world issues |
| **Creating Meaning to Change Self** | Impact of trauma work on self-perception  
Creating meaning is defined as the helping professional’s reflection of their work, skill set, and overall purpose that changes to person of the helping professional as a result of indirect trauma exposure.  
Developed at least one personality trait from a [client]  
Learning how to overcome adversity from the [client]  
Growing self-awareness  
Honoring/being grateful for one’s own humanity  
Change in priorities  
Therapists’ identification of challenging client groups  
Caveats about the difficulty of determining impact of trauma  
Therapist’s Professional philosophy regarding trauma work  
Therapists’ personal experience with trauma  
Cumulative vs. Individual impact of clients on therapist’s growth/development  
Satisfaction from helping children  
Gained a sense of value and importance of their work  
Inspiration from client resilience  
Facilitating change with the client  
Meaning making of vicarious trauma and the work with the client  
Managing expectations of the client  
Being in a needed field supports rewarding feelings |
<table>
<thead>
<tr>
<th>Changes in Interpersonal Relationships</th>
<th>Improved interpersonal relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changes in interpersonal relationships are defined as an adjustment or shift in engagement within interpersonal relationships as a result of their work with trauma clients or patients.</td>
<td>Appreciation that their own children had been shielded from these experiences</td>
</tr>
<tr>
<td></td>
<td>Increased effort in relationships with their children</td>
</tr>
<tr>
<td></td>
<td>Increased appreciation for self, others, and relationships</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Engaging in Efforts of Support and Self Care</th>
<th>Trauma work and Spirituality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engaging in efforts of support and self-care is defined as the helping professional taking measures to identify support, self-care, and work life balance to manage responses and</td>
<td>Therapists’ attention to self-care</td>
</tr>
<tr>
<td></td>
<td>Increase in ability to cope with personal adversity after witnessing client resilience</td>
</tr>
<tr>
<td></td>
<td>Feeling supported in the work environment with strong ethos to maintain well-being</td>
</tr>
<tr>
<td></td>
<td>Each person has to find their own way to cope</td>
</tr>
<tr>
<td></td>
<td>Over time, you learn how to handle the burden more effectively</td>
</tr>
<tr>
<td></td>
<td>Experimentation in different coping skills</td>
</tr>
<tr>
<td></td>
<td>Establishing boundaries for work life balance</td>
</tr>
<tr>
<td></td>
<td>Creating a routine of self-care</td>
</tr>
<tr>
<td></td>
<td>Having social support of those that understand</td>
</tr>
<tr>
<td></td>
<td>Utilizing support and coping skills</td>
</tr>
</tbody>
</table>
*continue working with trauma.*

- Doing things in order to help escape what has happened
- Placing thoughts and feelings to the side in order to keep working
- Suppressing feelings around the situation in order to continue working
- Talking with other nurses about experience
- Helpful to talk with someone who has had similar experiences
- Feeling good getting to vent to others
- Going to counseling

<table>
<thead>
<tr>
<th>Client Progress</th>
<th>Clients’ post-traumatic growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impacting Growth</td>
<td>Witnessing client’s growth led to feelings of hope in their own lives</td>
</tr>
<tr>
<td><em>Client progress impacting growth is defined as the witnessing of strength, resiliency and growth from the client which inspires and supports growth among the helping professional.</em></td>
<td>Strong therapeutic relationship</td>
</tr>
<tr>
<td></td>
<td>Experience joy within the session with the child</td>
</tr>
<tr>
<td></td>
<td>Taking comfort in client growth</td>
</tr>
<tr>
<td></td>
<td>Respect for the strength of the children they work with</td>
</tr>
<tr>
<td></td>
<td>Knowledge that children can move on from their past</td>
</tr>
<tr>
<td></td>
<td>Amazement that someone could survive it</td>
</tr>
<tr>
<td></td>
<td>Experienced learning from the children</td>
</tr>
</tbody>
</table>


**APPENDIX D**

**ESTABLISHING CONTENT VALIDITY – RUBRIC/ASSESSMENT RESPONSE FORM**

Establishing Content Validity – Rubric/Assessment Response Form (note: creating an electronic version of this form via Google Drive or an online Survey tool is acceptable).

Name of Reviewer: __________________________________________ Position: __________________________________________

INSTRUCTIONS: This measure is designed to evaluate the content validity of *Vicarious Posttraumatic Growth Inventory*. Please rate each item as follows:

- Please rate the level of representativeness of item in measuring the aligned overarching construct on a scale of 1-4, with 4 being the most representative. Space is provided for you to comment on the item or suggest revisions.
- Please rate the importance of the item in measuring the aligned overarching construct on a scale of 1-4, with 4 being the most essential. Space is provided for you to comment on the item or suggest revisions.
- Please rate the level of clarity for each item on a scale of 1-4, with 4 being the most clear. Space is provided for you to comment on the item or suggest revisions.

<table>
<thead>
<tr>
<th>Overarching construct (i.e., “big idea to measure”)</th>
<th>Operational Definition</th>
<th>Representativeness of item in measuring the overarching construct</th>
<th>Importance of item in measuring the overarching construct</th>
<th>Clarity of item</th>
<th>Comments:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1 = item is not representative 2 = item needs major revisions to be representative 3 = item needs minor revisions</td>
<td>1 = item is not necessary to measure the construct 2 = item is provides some information but is not essential to measure the construct 3 = item is useful not but essential to measure the construct</td>
<td>1 = item is not clear 2 = item needs major revisions to be clear 3 = item needs minor revisions to be clear 4 = item is clear</td>
<td></td>
</tr>
</tbody>
</table>
**Construct 1: Negative Responses to Trauma Work**

| Negative Responses to Trauma Work. | An initial distress experienced by the helping professional as a result of indirect exposure to trauma to include physical, emotional, and psychological responses. | 18: *As a result of my work with trauma...*  
I have experienced negative emotional reactions (i.e. irritability, sadness, anger, or frustration) | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 |
<table>
<thead>
<tr>
<th>Negative Responses to Trauma Work.</th>
<th>An initial distress experienced by the helping professional as a result of indirect exposure to trauma to include physical, emotional, and psychological responses.</th>
</tr>
</thead>
<tbody>
<tr>
<td>10: As a result of my work with trauma...</td>
<td></td>
</tr>
<tr>
<td>I have experienced negative physical symptoms (i.e. headaches, sleep disturbance, nausea, increased heart rate, or hypervigilance)</td>
<td></td>
</tr>
<tr>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Negative Responses to Trauma Work.</th>
<th>An initial distress experienced by the helping professional as a result of indirect exposure to trauma to include physical, emotional, and psychological responses.</th>
</tr>
</thead>
<tbody>
<tr>
<td>6: As a result of my work with trauma...</td>
<td></td>
</tr>
<tr>
<td>I have questioned my ability to fulfill my role or scope of practice.</td>
<td></td>
</tr>
<tr>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
</tbody>
</table>
| Negative Responses to Trauma Work. | An initial distress experienced by the helping professional as a result of indirect exposure to trauma to include physical, emotional, and psychological responses. | 4: *As a result of my work with trauma...*  
There are trauma stories from my clients or patients that I will never forget. | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
|-----------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Negative Responses to Trauma Work. | An initial distress experienced by the helping professional as a result of indirect exposure to trauma to include physical, emotional, and psychological responses. | 15: *As a result of my work with trauma...*  
I am shocked at the trauma individuals have experienced. | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| Negative Responses to Trauma Work. | An initial distress experienced by the helping professional as a result of indirect exposure to trauma to include physical, emotional, and psychological responses. | 24: *As a result of my work with trauma...* I have experienced intrusive thoughts regarding my client or patients' trauma experience. | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 |

**To the reviewer:** What additional items would you recommend including to measure the construct? If you have no suggestions, please enter “none.”

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
</table>

**To the reviewer:** What additional items would you recommend deleting? If you have no suggestions, please enter “none.”

<table>
<thead>
<tr>
<th>Overarching construct (i.e, “big idea to measure”)</th>
<th>Operational Definition</th>
<th>Item measuring overarching construct</th>
<th>Representativeness of item in measuring the overarching construct</th>
<th>Importance of item in measuring the overarching construct</th>
<th>Clarity of item</th>
<th>Comments:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(use the exact wording as appears on the)</td>
<td></td>
<td>• 1 = item is not representative • 2 = item needs major revisions to be representative</td>
<td></td>
<td>• 1 = item is not necessary to measure the construct • 2 = item needs some information but is not essential to measure the construct</td>
<td></td>
</tr>
</tbody>
</table>
Construct 2: Changes in World View

<table>
<thead>
<tr>
<th>Changes in World View</th>
<th>A change in world view is defined as a shift in perspective of others and the world as a result of hearing the trauma that clients or patients have endured leading to an increase in awareness of world issues and understanding.</th>
</tr>
</thead>
</table>
| **7: As a result of my work with trauma...**  
I have a greater appreciation of my life. | 1 2 3 4  
1 2 3 4  
1 2 3 4  |

Assessment rubric:
- 3 = item needs minor revisions to be representative
- 4 = item is representative
- 3 = item is useful not but essential to measure the construct
- 4 = item is essential to measure the construct
| Changes in World View | A change in world view is defined as a shift in perspective of others and the world as a result of hearing the trauma that clients or patients have endured leading to an increase in awareness of world issues and understanding. | 8: *As a result of my work with trauma...*
I have changed the way that I view other people for the better. | | | | | | | | | | | | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 |

| Changes in World View | A change in world view is defined as a shift in perspective of others and the world as a result of hearing the trauma that clients or patients have endured leading to an increase in awareness of world issues and understanding. | 28: *As a result of my work with trauma...*
I am more knowledgeable about social justice issues and concerns. | | | | | | | | | | | | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 |
and understanding.

| Changes in World View | A change in world view is defined as a shift in perspective of others and the world as a result of hearing the trauma that clients or patients have endured leading to an increase in awareness of world issues and understanding. | 5: As a result of my work with trauma... I am less judgmental towards others. | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 |
A change in world view is defined as a shift in perspective of others and the world as a result of hearing the trauma that clients or patients have endured leading to an increase in awareness of world issues and understanding.

**Changes in World View**

**Item**

11: *As a result of my work with trauma...*

I am more understanding of others.

<table>
<thead>
<tr>
<th>Clarity of item</th>
<th>Representativeness of item in measuring the overarching construct</th>
<th>Importance of item in measuring the overarching construct</th>
<th>Comments:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
</tbody>
</table>

---

**To the reviewer:** What additional items would you recommend including to measure the construct? If you have no suggestions, please enter “none.”

**To the reviewer:** What additional items would you recommend deleting? If you have no suggestions, please enter “none.”

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<table>
<thead>
<tr>
<th>Overarching construct (i.e., “big idea to measure”)</th>
<th>Operational Definition</th>
<th>Item measuring overarching construct (use the exact wording as)</th>
<th>Representativeness of item in measuring the overarching construct</th>
<th>Importance of item in measuring the overarching construct</th>
<th>Clarity of item</th>
<th>Comments:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construct 3: Creating Meaning to Change Self</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------</td>
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<tr>
<td>Creating Meaning to Change Self</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Creating meaning is defined as the helping professional’s reflection of their work, skill set, and overall purpose that changes to person of the helping professional as a result of indirect trauma exposure.</td>
<td>9: As a result of my work with trauma... I have learned to overcome adversity in my own life.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creating Meaning to Change Self</td>
<td>Creating meaning is defined as the helping professional’s reflection of their work, skill set, and overall purpose that changes to person of the helping professional as a result of indirect trauma exposure.</td>
<td>13: <em>As a result of my work with trauma...</em> I have gained a sense of value and importance in my work.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>Creating Meaning to Change Self</td>
<td>Creating meaning is defined as the helping professional’s reflection of their work, skill set, and overall purpose that changes to person of the helping professional as a result of indirect trauma exposure.</td>
<td>14: <em>As a result of my work with trauma...</em> I have a greater purpose in life.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>Creating Meaning to Change Self</td>
<td>Creating meaning is defined as the helping professional’s reflection of their work, skill set, and overall purpose that changes to person of the helping professional as a result of indirect trauma exposure.</td>
<td>2: As a result of my work with trauma… I am more self-aware.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
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</tr>
<tr>
<td></td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3: As a result of my work with trauma… I feel rewarded from being in a needed field.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
To the reviewer: What additional items would you recommend including to measure the construct? If you have no suggestions, please enter “none.”

To the reviewer: What additional items would you recommend deleting? If you have no suggestions, please enter “none.”

<table>
<thead>
<tr>
<th>Overarching construct (i.e., “big idea to measure”)</th>
<th>Operational Definition</th>
<th>Item measuring overarching construct (use the exact wording as appears on the assessment rubric)</th>
<th>Representativeness of item in measuring the overarching construct</th>
</tr>
</thead>
</table>
|                                                     |                        | • 1 = item is not representative  
• 2 = item needs minor revisions to be representative  
• 3 = item needs major revisions to be representative  
• 4 = item is representative                     |                                                                  |

<table>
<thead>
<tr>
<th>Importance of item in measuring the overarching construct</th>
</tr>
</thead>
</table>
| • 1 = item is not necessary to measure the construct  
• 2 = item is provides some information but is not essential to measure the construct  
• 3 = item is useful not but essential to measure the construct  
• 4 = item is essential to measure the construct |

<table>
<thead>
<tr>
<th>Clarity of item</th>
</tr>
</thead>
</table>
| • 1 = item is not clear  
• 2 = item needs major revisions to be clear  
• 3 = item needs minor revisions to be clear  
• 4 = item is clear |

<table>
<thead>
<tr>
<th>Comments:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construct 4: Changes in Interpersonal Relationships</td>
</tr>
</tbody>
</table>

189
| Changes in Interpersonal Relationships | Changes in interpersonal relationships are defined as an adjustment or shift in engagement within interpersonal relationships as a result of their work with trauma clients or patients. | 12: As a result of my work with trauma... I have a greater appreciation for my personal relationships. | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 |
| Changes in Interpersonal Relationships | Changes in interpersonal relationships are defined as an adjustment or shift in engagement within interpersonal relationships as a result of their work with trauma clients or patients. | 16: As a result of my work with trauma... I am more emotionally expressive in my relationships. | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 |
Changes in Interpersonal Relationships

Changes in interpersonal relationships are defined as an adjustment or shift in engagement within interpersonal relationships as a result of their work with trauma clients or patients.

<table>
<thead>
<tr>
<th>17: As a result of my work with trauma...</th>
</tr>
</thead>
<tbody>
<tr>
<td>I make more attempts to connect with others in my personal relationships.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12: As a result of my work with trauma...</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have a greater appreciation for my personal relationships.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1 2 3 4</th>
<th>1 2 3 4</th>
<th>1 2 3 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Changes in Interpersonal Relationships are defined as an adjustment or shift in engagement within interpersonal relationships as a result of their work with trauma clients or patients.

25: As a result of my work with trauma...
I express greater kindness in my relationships.

<table>
<thead>
<tr>
<th>Overarching construct (i.e., “big idea to measure”)</th>
<th>Operational Definition</th>
<th>Item measuring overarching construct (use the exact wording as appears on the assessment rubric)</th>
<th>Representativeness of item in measuring the overarching construct</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1 = item is not representative 2 = item needs major revisions</td>
<td>1 = item is not necessary to measure the construct 2 = item needs some information but</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 = item needs minor revisions to be clear</td>
</tr>
</tbody>
</table>

To the reviewer: What additional items would you recommend including to measure the construct? If you have no suggestions, please enter “none.”

To the reviewer: What additional items would you recommend deleting? If you have no suggestions, please enter “none.”

Clarity of item:
- 1 = item is not clear
- 2 = item needs major revisions to be clear
- 3 = item needs minor revisions to be clear

Comments:
<table>
<thead>
<tr>
<th>Construct 5: Engaging in Efforts of Support and Self Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engaging in Efforts of Support and Self Care</td>
</tr>
<tr>
<td>Engaging in efforts of support and self-care is defined as the helping professional taking measures to identify support, self-care, and work life balance to manage responses and continue working with trauma.</td>
</tr>
<tr>
<td>to be representative</td>
</tr>
<tr>
<td>• 3 = item needs minor revisions to be representative</td>
</tr>
<tr>
<td>• 4 = item is representative</td>
</tr>
<tr>
<td>is not essential to measure the construct</td>
</tr>
<tr>
<td>• 3 = item is useful not but essential to measure the construct</td>
</tr>
<tr>
<td>• 4 = item is essential to measure the construct</td>
</tr>
<tr>
<td>4 = item is clear</td>
</tr>
</tbody>
</table>
| Engaging in Efforts of Support and Self Care | Engaging in efforts of support and self-care is defined as the helping professional taking measures to identify support, self-care, and work life balance to manage responses and continue working with trauma. | **23**: *As a result of my work with trauma...*  
I seek out ways to escape, or detach, from my work. | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 |
| Engaging in Efforts of Support and Self Care | Engaging in efforts of support and self-care is defined as the helping professional taking measures to identify support, self-care, and work life balance to manage responses and continue working with trauma. | **19**: *As a result of my work with trauma...*  
I find talking with others who understand my work is helpful. | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 |
<table>
<thead>
<tr>
<th></th>
<th>Engaging in Efforts of Support and Self Care</th>
<th>Engaging in efforts of support and self-care is defined as the helping professional taking measures to identify support, self-care, and work life balance to manage responses and continue working with trauma.</th>
</tr>
</thead>
</table>
|   | **26:** *As a result of my work with trauma...*  
I have established boundaries to support work life balance. | 1 2 3 4 1 2 3 4 1 2 3 4 |
|   | Engaging in Efforts of Support and Self Care | Engaging in efforts of support and self-care is defined as the helping professional taking measures to identify support, self-care, and work life balance to manage responses and continue working with trauma. |
|   | **27:** *As a result of my work with trauma...*  
Support from colleagues helps me maintain my well-being. | 1 2 3 4 1 2 3 4 1 2 3 4 |
Engaging in Efforts of Support and Self Care

Engaging in efforts of support and self-care is defined as the helping professional taking measures to identify support, self-care, and work life balance to manage responses and continue working with trauma.

21: *As a result of my work with trauma...*
I must put my thoughts and feelings aside in order to continue working.

<p>| | | | |</p>
<table>
<thead>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

To the reviewer: What additional items would you recommend including to measure the construct? If you have no suggestions, please enter “none.”
To the reviewer: What additional items would you recommend deleting? If you have no suggestions, please enter “none.”

<table>
<thead>
<tr>
<th>Construct 6: Client Progress Impacting Growth</th>
<th>Operational Definition</th>
<th>Item measuring overarching construct (use the exact wording as appears on the assessment rubric)</th>
<th>Representativeness of item in measuring the overarching construct</th>
<th>Importance of item in measuring the overarching construct</th>
<th>Clarity of item</th>
<th>Comments:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 = item is not representative</td>
<td>1 = item is not necessary to measure the construct</td>
<td>1 = item is not clear</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 = item needs major revisions to be representative</td>
<td>2 = item needs major revisions to be clear</td>
<td>2 = item needs major revisions to be clear</td>
<td></td>
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<tr>
<td></td>
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<td></td>
<td>3 = item needs minor revisions to be representative</td>
<td>3 = item is useful not but essential to measure the construct</td>
<td>3 = item needs minor revisions to be clear</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4 = item is representative</td>
<td>4 = item is essential to measure the construct</td>
<td>4 = item is clear</td>
<td></td>
</tr>
</tbody>
</table>

197
<p>| Client Progress | Impacting Growth | | | | 29: Witnessing my client’s, or patient’s, growth has led to feelings of hope in my own life. | | | | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 | | | 30: I respect the strength my clients, or patients, have had in recovering from trauma. | | | | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 | |</p>
<table>
<thead>
<tr>
<th>Client Progress Impacting Growth</th>
<th>Client progress impacting growth is defined as the witnessing of strength, resiliency and growth from the client which inspires and supports growth among the helping professional.</th>
<th>31: I am inspired by what my clients and patients have been through.</th>
<th>1 2 3 4</th>
<th>1 2 3 4</th>
<th>1 2 3 4</th>
<th>1 2 3 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client Progress Impacting Growth</td>
<td>Client progress impacting growth is defined as the witnessing of strength, resiliency and growth from the client which inspires and supports growth among the helping professional.</td>
<td>32: People are able to overcome and move on from their past.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
</tbody>
</table>
Client Progress Impacting Growth

<table>
<thead>
<tr>
<th>Client progress impacting growth is defined as the witnessing of strength, resiliency and growth from the client which inspires and supports growth among the helping professional.</th>
<th>33: I experience joy from my work with trauma clients or patients.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

**To the reviewer:** What additional items would you recommend including to measure the construct? If you have no suggestions, please enter “none.”

**To the reviewer:** What additional items would you recommend deleting? If you have no suggestions, please enter “none.”

If additional questions or review is needed, please indicate your willingness to review revisions made based on the feedback provided.

_____Yes  ________ No

Thank you for serving as an expert panelist for the *Vicarious Posttraumatic Growth Inventory.*
### APPENDIX E
**TABLE OF SPECIFICATION FOR INITIAL INVENTORY**

Table 3.3 *Table of Specification for Initial Inventory*

<table>
<thead>
<tr>
<th>Synthesized Theme</th>
<th>Operational Definition</th>
<th>Corresponding Items</th>
<th>Construct Validity Index (CVI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Negative responses.</strong></td>
<td><em>An initial distress experienced by the helping professional as a result of indirect exposure to trauma to include, but not limited to, physical, emotional, and psychological responses.</em></td>
<td>4, 6, 10, 15, 18, 24</td>
<td>0.8, 0.6, 1.0, 0.6, 1.0, 1.0</td>
</tr>
<tr>
<td><strong>Changes in world view.</strong></td>
<td><em>A change in world view is defined as a shift in perspective of others and the world as a result of hearing the trauma that clients or patients have endured leading to an increase in awareness of world issues and understanding.</em></td>
<td>5, 7, 8, 11, 28</td>
<td>0.8, 1.0, 1.0, 0.8, 1.0</td>
</tr>
<tr>
<td><strong>Creating meaning to change self.</strong></td>
<td><em>Creating meaning is defined as the helping professional’s reflection of their work, skill set, and overall purpose that leads to internalized changes to the self of the helping professional as a result of indirect trauma exposure.</em></td>
<td>2, 3, 9, 13, 14</td>
<td>1.0, 0.8, 1.0, 1.0, 1.0</td>
</tr>
<tr>
<td>Changes in interpersonal relationships.</td>
<td>Changes in interpersonal relationships are defined as an adjustment or shift in engagement within interpersonal relationships as a result of their work with trauma clients or patients.</td>
<td>12</td>
<td>0.8</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>----</td>
<td>-----</td>
</tr>
<tr>
<td>Engaging in efforts of support and self-care.</td>
<td>Engaging in efforts of support and self-care is defined as the helping professional taking measures to identify support, self-care, and work life balance to manage responses and continue working with trauma.</td>
<td>19</td>
<td>1.0</td>
</tr>
<tr>
<td>Client progress impacting growth.</td>
<td>Client progress impacting growth is defined as the witnessing of strength, resiliency and growth from the client which inspires and supports growth among the helping professional.</td>
<td>29</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>30</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>31</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>32</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>33</td>
<td>0.5</td>
</tr>
</tbody>
</table>
APPENDIX F

GENERAL DEMOGRAPHICS SURVEY

General Demographics Survey
Vicarious Posttraumatic Growth in Helping Professionals: Exploratory Factor Analysis

*Please complete the following general demographics survey (all responses are confidential).*

**General Demographics**

**Gender:** [ ] Male [ ] Female [ ] Transgender Male [ ] Transgender Female [ ] Nonbinary [ ] Other

**Age:**

**Ethnicity:** [ ] African-American [ ] Asian-American [ ] Caucasian/White (Non-Hispanic) [ ] Hispanic [ ] Native-American [ ] Pacific/Islander [ ] Hispanic/Latino [ ] Other

**Educational Demographics**

*What is the highest degree or level of school you have completed? (Check ONE box. If currently enrolled, mark the highest degree received)*

[ ] High School Diploma [ ] GED or alternative credential [ ] Associate degree

[ ] Bachelor’s degree [ ] Master’s degree

[ ] Professional degree (ex. MD) [ ] Doctorate degree (ex. Ph.D., PsyD., EdD., DPT)

*Are you currently enrolled in a degree seeking program? [ ] Yes [ ] No*

*If yes, what is the degree program you are currently enrolled?*

[ ] High School Diploma [ ] GED or alternative credential [ ] Associate degree
Professional Demographics

What field best describes your current work with clients and/or patients who have experienced trauma? (Please select ONE. If you are currently enrolled in a program, please select the field which best describes your program of study.)

____ Office/Administration Staff   ____ Nursing   ____ Counseling   ____ Social Work   ____ Licensed Psychology   ____ Medical Doctor   ____ Medical Specialist   ____ Interpreter
____ Other Direct Support Staff, please specify: __________________________________________

Years of Experience: _______

What setting best describes your work with clients and/or patients who have experienced trauma?

____ Private Practice
____ Mental Health Agency (For Profit)
____ Mental Health Agency (Public/State)
____ Mental Health Agency (Non-Profit)
____ Acute Care/Hospital Setting
____ Long Term Care Facility
____ Residential Treatment Facility
____ Outpatient Medical Office/Agency
____ Inconsistent Location/Contract Work
____ School/Educational Setting
____ Other, please specify: __________________________________________

If you have been asked to complete this survey from your employer, the information below will be used to establish an anonymous, general profile of information regarding the experiences of growth and professional quality of life for the office/agency. If not, please skip this question.

Please identify the name of your employer.
Exclusion Criteria:

Are you currently receiving services for a personal trauma experience, grief or loss of a loved one, or a trauma experience of a loved one unrelated to your work?  
_____ Yes _____No
APPENDIX G

VICARIOUS TRAUMA ITEM

Vicarious Trauma Item
Vicarious Posttraumatic Growth in Helping Professionals: Exploratory Factor Analysis

*Please complete the following items in reference to your work with clients or patients who have experienced trauma.*

**I have worked with clients or patients who have experienced the following traumatic experiences:** Please check all that apply.

- [ ] Threat of death
- [ ] Serious injury
- [ ] Threat of serious injury
- [ ] Sexual violence
- [ ] Threat of sexual violence
- [ ] Adult survivor of childhood physical abuse/neglect
- [ ] Adult survivor of sexual abuse
- [ ] Child survivor of physical abuse/neglect
- [ ] Child survivor of sexual abuse

**Number of current clients and/or patients who have experienced trauma.** ________

**Number of total caseloads.** ________
APPENDIX H
VICARIOUS POSTTRAUMATIC GROWTH INVENTORY

Vicarious Posttraumatic Growth Inventory

The follow statements are a range of experiences pertaining to helping professionals working with clients or patients who have experienced trauma. Please indicate your level of agreement (1 = Strongly Disagree and 6 = Strongly Agree) with the following items as it relates to your work with trauma.

<table>
<thead>
<tr>
<th>As a result of my work clients or patients who have experienced trauma…</th>
<th>Strongly Disagree (1)</th>
<th>Disagree (2)</th>
<th>Slightly Disagree (3)</th>
<th>Slightly Agree (4)</th>
<th>Agree (5)</th>
<th>Strongly Agree (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I have a greater appreciation for my personal relationships who have not experienced trauma.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I am more self-aware.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3. I feel rewarded being in a needed profession.</td>
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<tr>
<td>4. There are horrifying trauma stories that I will never forget.</td>
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<tr>
<td>5. I am less judgmental towards others.</td>
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<tr>
<td>6. I have questioned my ability to fulfill my role or scope of practice.</td>
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<tr>
<td>7. I have a greater appreciation of my life experiences.</td>
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<tr>
<td>8. I seek understanding of other people and their experiences.</td>
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<tr>
<td>9. I have been inspired to overcome adversity in my own life.</td>
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</tbody>
</table>
10. I have experienced negative physical symptoms as a result of hearing the trauma story (i.e. headaches, sleep disturbance, nausea, or increased heart rate)

11. I am more empathic towards others and their experiences.

12. I have learned a perspective of others whom are different than me.

13. I have gained a sense of value and importance in my work.

14. I have a greater sense of purpose in life.

15. I am more emotionally expressive in my relationships.

<table>
<thead>
<tr>
<th>As a result of my work with trauma…</th>
<th>Strongly Disagree (1)</th>
<th>Disagree (2)</th>
<th>Slightly Disagree (3)</th>
<th>Slightly Agree (4)</th>
<th>Agree (5)</th>
<th>Strongly Agree (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. I make more attempts to connect in my personal relationships.</td>
<td></td>
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</tr>
<tr>
<td>17. I have experienced negative emotional reactions as a result of hearing the trauma story (i.e. irritability, sadness, anger, or frustration)</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>18. I talk with others who understand my work.</td>
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</tr>
<tr>
<td>19. I am protective of my personal relationships to prevent trauma.</td>
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<tr>
<td>20. I put my thoughts and feelings aside in order to continue working.</td>
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<tr>
<td>21. I try to find my own ways to process the trauma of my clients or patients.</td>
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</tr>
<tr>
<td>22. I seek out ways to escape, or detach, from my work during my time off.</td>
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<td></td>
</tr>
</tbody>
</table>
23. I have experienced negative intrusive thoughts regarding my client or patients’ trauma experience.

24. I express more kindness in my relationships.

25. I have established boundaries to support work life balance.

26. I seek support from colleagues to help me maintain my well-being.

27. I am more knowledgeable and aware of social justice issues and concerns.

Please answer your level of agreement based on your work with trauma:

<table>
<thead>
<tr>
<th>Strongly Disagree (1)</th>
<th>Disagree (2)</th>
<th>Slightly Disagree (3)</th>
<th>Slightly Agree (4)</th>
<th>Agree (5)</th>
<th>Strongly Agree (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>28. Witnessing my client’s growth has led to feelings of hope in my own life.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29. I respect the strength my clients or patients have had in recovering from trauma.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30. I am inspired by what my clients and patients have been through.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31. As a result of my work, I believe people are able to overcome and move on from their past.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32. My client(s) or patient(s) have who have experienced trauma have taught me something about myself.</td>
<td></td>
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</tr>
</tbody>
</table>
When you help people, you have direct contact with their lives. As you may have found, your compassion for those you help can affect you in positive and negative ways. Below are some questions about your experiences, both positive and negative, as a helping professional. Consider each of the following questions about you and your current work situation. Select the number that honestly reflects how frequently you experienced these things in the last 30 days.

<table>
<thead>
<tr>
<th>Items</th>
<th>1 = Never</th>
<th>2 = Rarely</th>
<th>3 = Sometimes</th>
<th>4 = Often</th>
<th>5 = Very Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am happy.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2. I am preoccupied with more than one person I help.</td>
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<td></td>
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</tr>
<tr>
<td>3. I get satisfaction from being able to help people.</td>
<td></td>
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<tr>
<td>4. I feel connected to others.</td>
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</tr>
<tr>
<td>5. I jump or am startled by unexpected sounds.</td>
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</tr>
<tr>
<td>6. I feel invigorated after working with those I [help].</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>7. I find it difficult to separate my personal life from my life as a [helper].</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. I am not as productive at work because I am losing sleep over traumatic experiences of a person I [help].</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. I think that I might have been affected by the traumatic stress of those I [help].</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10. I feel trapped by my job as a [helper].
11. Because of my [helping], I have felt “on edge” about various things.
12. I like my work as a [helper].
13. I feel depressed because of the traumatic experiences of the people I [help].
14. I feel as though I am experiencing the trauma experiences of the people I [help].
15. I have beliefs that sustain me.
16. I am pleased with how I am able to keep up with [helping] techniques and protocols.
17. I am the person I always wanted to be.
18. My work makes me feel satisfied.
19. I feel worn out because of my work as a [helper].
20. I have happy thoughts and feelings about those I [help] and how I could help them.
22. I believe I can make a difference through my work.
23. I avoid certain activities or situations because they remind me of frightening experiences of the people I [help].
24. I am proud of what I can do to [help].
25. As a result of my [helping], I am intrusive, frightening thoughts.
26. I feel “bogged down” by the system.
27. I have thoughts that I am a “success” as a [helper].
28. I can’t recall important parts of my work with trauma victims.
29. I am a very caring person.
30. I am happy that I chose to do this work.
APPENDIX J
INFORMED CONSENT

Dear Potential Participant,

My name is Jennifer Deaton. I am a doctoral candidate in the Educational Studies Department at the University of South Carolina. I am conducting a research study as part of the requirements of my degree in Counselor Education and Supervision, and I would like to invite you to participate.

I am interested in understanding vicarious posttraumatic growth among helping professionals; the experience of growth as a result of working with clients or patients who have experienced trauma. You will be presented with information relevant to vicarious posttraumatic growth and asked to complete a 20-minute online survey.

In particular, you will be asked questions about your experiences as a result of working with clients and/or patients who have experienced trauma. There are no anticipated risks associated with participating in this study. Your participation in this research is voluntary. You have a right to withdraw at any point during the study, for any reason, and without any prejudice.

Participation is anonymous, which means that no one (not even the research team) will know what your answers are. So, please do not write your name or other identifying information on any of the materials. If your employer has directed you to participate in the study, you will be asked your location of employment but no identifying information will be collected.

In order to participate in the study, you must meet the following criteria:

1. 18 years or older
2. Within the last year, you have worked with a patient(s) or client(s) who have experienced trauma.
3. You are currently not receiving mental health treatment related to personal trauma.

For student participants, participation, non-participation or withdrawal will not affect your grades in any way. If you begin the study and later decide to withdraw, you will still receive research credit or there are other research credit opportunities available to satisfy your research requirement.
I am happy to answer any questions you have about the study. If you would like to contact the Principal Investigator, you may contact me at 803.206.6847 or via email at deatonj@email.sc.edu or my faculty advisor, Dr. Jonathan Ohrt, 803.777.3053, and ohrt@mailbox.sc.edu.

Thank you for your consideration. If you would like to participate, please open the survey link below and begin. By clicking the survey link, you acknowledge that your participation in the study is voluntary, you are 18 years of age, and are that you are aware that you may choose to terminate your participation in the study at any time for any reason. By consenting to the study, you agree that should you terminate your participation, the researcher may choose to use any partial data completed. Upon completion of the full survey, you may elect to enter your email address to be included in a drawing for one of 40 $50 gift cards.

With kind regards,

[Signature]

Jennifer D. Deaton, M.Ed, LPC
Doctoral Candidate, University of South Carolina
Counselor Education

Jonathan Ohrt, PhD
Dissertation Chair, University of South Carolina
Counselor Education