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Behavioral Health Medical Interpreters: Cluster Analysis of Vicarious Traumatization and Posttraumatic Growth

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Abstract

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MA, California Institute of Integral Studies, 1999

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Medical interpreter services will be essential for developing and implementing culturally relevant interventions and treatment for limited English proficiency (LEP) populations. This study sought to identify the possible risks or protective factors that may be associated with vicarious traumatization (VT) or vicarious posttraumatic growth among medical interpreters in behavioral health settings. A 2-step cluster analysis was conducted yielding 2 distinct groupings of medical interpreters (Subtype 1, $n = 73$; Subtype 2, $n = 101$). The most important predictor determining the 2 subtypes was whether the participant had a personal history of trauma. In addition, there were significant differences between the 2 subtypes among the following variables: Trauma and Attachment Belief Scale *T*-scores of VT; years as a medical interpreter; years as a behavioral health medical interpreter; level of education as it relates to interpreting; personal history of trauma; personal or family history similar to any of the trauma survivors served in the past year; specific mental health training; sought personal therapy related to exposure to traumatic material from work environment; current relationship status; race; and whether spoken, sign, or both spoken and sign language interpretation was provided. The results of this quantitative study further support the constructivist self-development theory where VT is the result of the accumulated effects of repeated exposure to trauma material in combination with the person of the provider. Understanding these risk and protective factors will continue to support the provision of effective treatment of LEP individuals in behavioral health settings and the ongoing professional development of behavioral health medical interpreters.

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Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Study

As the cultural demographics of the United States continue to change and individuals seeking psychotherapy services increasingly come from diverse backgrounds, providing culturally competent psychotherapy interventions is essential (Hays, 2008; Norcross, Kohout, & Wicherski, 2005). More than 2 million individuals have immigrated to the United States as of 2010 and 8.5% of adults in U.S. households speak English less than "very well" (U.S. Census Bureau, 2012). It is well documented that the ability to receive health care services in an individual's primary language improves access, engagement, and outcomes (Jacobs et al., 2001; Kaczorowski et al., 2011; Shattell et al., 2009; Sue, Fujino, Hu, Takeuchi, & Zane, 1991). The services of medical interpreters, individuals trained to provide language interpretation services in professional settings (Dysart-Gale, 2005, 2007), will be essential for developing and implementing culturally relevant interventions and treatment for limited English proficiency (LEP) populations. This study sought to identify the possible risks or protective factors that may be associated with vicarious traumatization or vicarious posttraumatic growth among medical interpreters in behavioral health settings with hope for contributing to the continued professional development of this valuable member of the behavioral health treatment team.

Background

Although some research addresses the experiences of medical interpreters in behavioral health settings, it is primarily qualitative and examines how the role of the interpreter affects the therapeutic relationship, how the various communication models

affect the accuracy of interpretation, or how to improve the effectiveness of the interpreter as part of the treatment team to improve treatment outcomes (Beeber, Lewis, Cooper, Maxwell, & Sandelowski, 2009; Dubus, 2009; de Bruin & Brugmans, 2006; Miller et al., 2005; Tribe & Morrissey, 2004; Yakashko, 2010). An extensive body of knowledge addresses the potential risk of vicarious traumatization among mental health professionals, medical professionals, and rescue workers, who treat trauma survivors in various settings, including civilian and military settings, as well as inpatient and outpatient mental health services across psychology disciplines (Adams & Riggs, 2008; Baker, 2012; Ben-Porat & Itzhakey, 2009; Brady, Guy, Poelstra, & Brokaw, 1999; Bride et al., 2004; Cunningham, 2003; Elwood, Mott, Lohr, & Galovski, 2011; Hernández, Engstrom, & Gangsei, 2010; Jenkins & Baird, 2002; Jordan, 2010; Knight, 2010; McCann & Pearlman, 1990; McLean, Wade, & Encel, 2003; Pearlman & Mac Ian, 1995; Sexton, 1999; Tabor, 2011; Van Deusen & Way, 2006), and among medical and emergency services providers (Setti & Argento, 2012; Tabor, 2011). A limited body of knowledge exists on the possible effect of exposure to trauma stories on medical interpreters in the behavioral health field. Various qualitative studies have acknowledged the potential risk of vicarious traumatization and potential benefit of vicarious posttraumatic growth among medical interpreters working with trauma survivors (Burns, 2010; Cornes & Napier, 2005; Dubus, 2009; Miller et al., 2005; Sande, 1998; Splevins et al., 2010); however, quantitative studies were less evident (this will be reviewed in more detail in Chapter 2). Understanding the potential effect of exposure to trauma stories on professional medical interpreters may help to inform future training needs for these

valuable members of the behavioral health treatment team, which may further improve the potential outcomes of LEP individuals in mental health treatment.

Problem Statement

Medical interpreters in behavioral health settings are expected to interpret verbatim what both the client and therapist say, using the same tone and emotion as the individual for whom they are interpreting (Apostolou, 2009; Dysart-Gale, 2005). What is not known for this population of professionals are the number and nature of risk, or protective profiles (i.e., clusters), with respect to vicarious traumatization, vicarious posttraumatic growth, and 12 trauma-related personal and professional experience variables (described in Chapter 3). We also do not know whether the resulting clusters differ with respect to age, sex, ethnicity, country of residence, employment setting (independent contractor, agency employed, or clinic employed), and relationship status (married/committed relationship, single).

Understanding potential risks or protective profiles for medical interpreters in behavioral health settings may help shape training in existing certification programs. Identify ongoing supervision needs to better prepare medical interpreters who enter the behavioral health field may also be a benefit. Discovering whether there are potential benefits of working with trauma survivors, such as vicarious posttraumatic growth, may encourage medical interpreters to remain in the behavioral health setting. This may in turn improve the quality of services provided to LEP individuals when more experienced professional medical interpreters remain in behavioral health.

Nature of the Study

The nature of the study was a quantitative, cross-sectional, time-limited survey designed to explore whether subgroups could be identified among behavioral health medical interpreters using cluster analysis. Subgroups were determined based on measures of vicarious traumatization, vicarious posttraumatic growth, and other variables identified through the literature review (Creswell, 2009; Kaufman & Rousseeuw, 1990). Participants were adults recruited through online professional organizations for medical interpreters, such as the International Medical Interpreters Association (IMIA) and the National Board of Certification for Medical Interpreters (NBCMI), as well as through interpreting agencies found through web searches, using such phrases as *interpreters in therapy*. Several socio-demographic variables were examined along with quantitative measures of vicarious traumatization and vicarious posttraumatic growth to determine whether differences existed between subgroups. If differences were evident, this researcher intended to provide information for future training needs to either reduce the potential negative consequences or increase the potential benefits of working with trauma survivors in behavioral health settings. Specific variables will be detailed in Chapter 3.

Research Questions

Vicarious traumatization (McCann &Pearlman, 1990; Pearlman & Saakvitne, 1995) and vicarious posttraumatic growth (Calhoun & Tedeschi, 2001; Tedeschi & Calhoun, 2004) are well established phenomena among professionals who provide trauma-focused treatment and interventions. Vicarious traumatization and vicarious posttraumatic growth have been suggested in qualitative studies with medical interpreters

in behavioral health (Doherty, MacIntyre, & Wyne, 2010; Green, Sperlinger, & Carswell, 2012; Miller et al., 2005; Sande, 1998; Splevins et al., 2010); however, only one quantitative study that included five freelance interpreters has been found thus far (Birck, 2001). Few quantitative studies have examined the relationship between socio-demographic variables, including recommended professional practices, and the possible relationship between vicarious traumatization and vicarious posttraumatic growth among behavioral health medical interpreters. This study aimed to answer the following questions:

Research Question 1

Can medical interpreters in behavioral health settings be subtyped using cluster analysis on the basis of vicarious traumatization (as measured by the Trauma and Attachment Belief Scale [TABS]; Pearlman, 2003), vicarious posttraumatic growth (as measured by the Posttraumatic Growth Inventory [PTGI]; Tedeschi & Calhoun, 1996), and 12 trauma-related personal and professional experience variables derived from the literature that have been associated with or recommended to either reduce or increase risks or benefits associated with exposure to traumatic material in a behavioral health setting?

Research Question 2

If subtypes among medical interpreters are evident, are there significant differences between subtypes based on the 12 trauma-related personal and professional experience variables derived from the literature that have been associated with or

recommended to either reduce or increase risks or benefits associated with exposure to traumatic material in a behavioral health setting?

Variables Included in the Cluster Analysis

Continuous variables. The following continuous variables were used: TABS, PTGI, years as a medical interpreter, years as a behavioral health medical interpreter, percentage of time spent interpreting traumatic material (calculation based on number of sessions per month providing interpretation services that contained traumatic material divided by total number of sessions per month providing interpretation services).

Categorical variables. The following categorical variables were used: level of education as it relates to interpreting (certification program < 40 hours, certification program ≥ 40 hours, 2-year associate's degree specific to medical interpretation, 4-year bachelor's degree specific to medical interpretation, > than 4-year degree specific to medical interpretation), specific mental health training (yes, no), personal history of trauma (yes, no), personal or family history similar to any of the trauma survivors served in the past year (yes, no), sought personal therapy related to exposure to traumatic material from work environment (yes, no), exposure to suicide or homicide assessment within the last six months (yes, no), witnessed recovery from trauma (yes, no), participation in briefing or debriefing before or after a therapy session (always, sometimes, never), and participation in supervision on a weekly basis (always, sometimes, never).

Purpose of the Study

The purpose of this exploratory study was to examine whether medical interpreters could be subtyped based on measures of vicarious traumatization and vicarious posttraumatic growth and whether recommended practices based on the literature further contributed to distinct groupings (these variables will be further defined in Chapter 3). A gap was filled in the literature by (a) conducting a study using quantitative measures, (b) providing evidence that medical interpreters can be subtyped into two distinct groupings, and (c) identifying potential risks or protective factors that may lead to improvements in existing education and training programs for behavioral health medical interpreters. Thus far, evidence of vicarious traumatization or vicarious posttraumatic growth has primarily been indicated through qualitative or anecdotal accounts. This was the first known quantitative study conducted with behavioral health medical interpreters, which will add to the existing literature of professionals working with trauma survivors.

Theoretical Framework

The theoretical framework for this study will be the constructivist self-development theory (CSDT) originally employed by McCann and Pearlman (1990) and again by Pearlman and Saakvitne (1995) to understand the effect of repeated exposure to trauma stories on therapists. This approach focuses on the "psychological needs and cognitive schemas" that are affected when working with trauma victims (McCann & Pearlman, 1990, p. 137). CSDT is an interactive, psychodynamic theory that examines

the interaction between the psychological experiences of the therapist or provider and their emotional responses to the repeated exposure to trauma stories of the client.

Although vicarious traumatization was the primary concern of CSDT, the authors of this theory alluded to the potential spiritual growth or vicarious posttraumatic growth that may be possible when working with trauma survivors for an extensive period (McCann & Pearlman, 1990; Pearlman & Saakvitne, 1995). The literature regarding posttraumatic growth also suggests the possible contagion effect of witnessing another's recovery from trauma as vicarious posttraumatic growth (Calhoun & Tedeschi, 2001; Tedeschi & Calhoun, 2004). The qualitative literature regarding medical interpreters has indicated that changes in schemas are evident among these professions who have been involved in trauma services; supporting that the CSDT is an appropriate model to use to understand their experiences (Collings & Long, 2003; Green et al., 2012; Miller et al., 2005; Splevins et al., 2010). This will be reviewed in more detail in Chapter 2.

Definitions

Burnout: An accumulation of work related stress that is associated with physical and emotional exhaustion, a general sense of cynicism and detachment from one's work, and feeling ineffective in one's job (Maslach, Schaufeli, Leiter, 2001).

Constructivist self-development theory (*CSDT*): CSDT is an interactive theory that considers the interaction between the therapist's personal characteristics, emotional responses, world view, and the client's trauma story (McCann & Pearlman, 1990).

Medical interpreter: A medical interpreter is any bilingual individual who is employed in a professional setting to provide live interpretation services between a

professional provider and a receiver of services. This individual provides translation in the dominant language of the provider as well as the primary language of the service receiver (Dysart-Gale, 2005, 2007).

Posttraumatic growth: The potential to experience growth from traumatic experiences (Calhoun & Tedeschi, 2001; Tedeschi & Calhoun, 2004).

Posttraumatic stress disorder (*PTSD*): Symptoms that result from an experience that is experienced as life threatening or witnessing a potentially life threatening experience of another where the symptoms are intrusive and may include increased heart rate, intrusive images of traumatic material, nightmares associated with the traumatic material, and experiencing previously neutral objects as triggers (Argentero & Setti, 2011; Setti & Argentero, 2012).

Schemas: The beliefs about self and the world (McCann & Pearlman, 1990).

Vicarious posttraumatic growth: Vicarious exposure to witnessing posttraumatic growth (Calhoun & Tedeschi, 2001).

Vicarious traumatization: A cumulative phenomenon experienced by treatment professionals who provide services to trauma victims and survivors that includes symptoms that are similar to PTSD (American Psychiatric Association [APA], 2013) and changes in schemas (McCann & Pearlman, 1990; Pearlman & Mac Ian, 1995; Pearlman & Saakvitne, 1995).

Assumptions

Given the existence of online professional organizations and local interpreting agencies, it was assumed that a sufficient number of medical interpreters had access to

the internet to complete the online survey and had sufficient reading skills to complete the online survey. A random sampling was assumed, as all individuals self-identified as medical interpreters had an equal opportunity to participate in the survey (Creswell, 2009). All participants were adults, understood the instructions, and provided accurate and unbiased responses to the online surveys.

Scope and Delimitations

This study was a cross-sectional, time-limited, survey study to determine whether medical interpreters could be subtyped into distinct groupings based on measures of vicarious traumatization, vicarious posttraumatic growth, and potential risk or protective factors/practices derived from the literature that may contribute to the distinct subtyping. To date, only one known quantitative study has examined this question that included five freelance interpreters (Birck, 2001). The aim of this study was to obtain a larger sample size to add to the current body of literature and provide some insights into the potential risks and benefits of working with trauma survivors for medical interpreters to inform training programs and ongoing professional development.

This study was limited to individuals 18 years and older. The option to use an online sample for this study was primarily due to cost, convenience, and efficiency.

Limitations

This study had several limitations. With regard to the online study, subjects were limited to those individuals who belonged to a professional organization for medical interpreters, who were employed by an interpreting agency, who had access to the internet to complete the survey, and who were proficient enough in English to complete

the survey. Motivation to complete or self-exclude from the survey was not known. Participant data are not verifiable and bias may have been introduced as those with internet access and interest in the topic may have been more likely to complete the survey. Given that this was a cross-sectional study, causal relationships are not possible and any generalizations are made with caution as data are provided at one-point-in-time only and not longitudinally (Creswell, 2009). Research design literature will be covered in more detail in Chapter 3.

Significance of the Study

Limited access to culturally relevant services for LEP populations is associated with poor access to mental health services and outcomes (Jacobs et al., 2001; Kaczorowski et al., 2011; Shattell et al., 2009, Sue et al., 1991). In addition, the distress associated with vicarious traumatization may lead to early career turn-over, eliminating the potential to experience vicarious posttraumatic growth, and discontinuing treatment with a receiver of services interrupting their treatment progress as well.

Social Change Implications

A positive social change implication from this research includes adding another professional perspective to the current body of knowledge that exists on vicarious traumatization; the perspective of the behavioral health medical interpreter. Additional social change implications included providing information that may improve the education and training of medical interpreters in behavioral health by providing evidence for potential risk and protective factors associated with working with trauma survivors, as well as ultimately improving the delivery of culturally competent mental health services

to the growing diverse population of LEP clients. By providing an opportunity to further understand vicarious traumatization and vicarious posttraumatic growth from the perspective of the medical interpreter, position turnover may be reduced for these services, improving the overall interpretation experience in the therapeutic relationship and, ultimately, improving treatment outcomes for LEP populations.

Summary

Vicarious traumatization and more recently vicarious posttraumatic growth have long been an interest for individuals who treat trauma survivors (McCann & Pearlman, 1990; Pearlman & Saakvitne, 1995; Calhoun & Tedeschi, 2001; Tedeschi & Calhoun, 2004). Although studies have examined the prevalence of vicarious traumatization and vicarious posttraumatic growth among various mental health professions (Ben-Porat & Itzhaky, 2009; Brady et al., 1999; Cunningham, 2003; Elwood et al., 2011; Jenkins & Baird, 2002; McLean et al., 2003; Pearlman & Mac Ian, 1995) and emergency and medical workers (Dominguez-Gomez & Rutledge, 2009; Setti & Argentero, 2012), little is known about the experiences of behavioral health medical interpreters outside of qualitative, anecdotal information that suggests trauma focused treatment may be distressing or rewarding for these professionals as well (Burns, 2010; Cornes & Napier, 2005; Dubus, 2009; Miller et al., 2005; Sande, 1998; Splevins et al., 2010). As behavioral health medical interpreters continue to develop their professional standing through the development of certification and training programs it will be important to determine whether they are also at risk of vicarious traumatization and whether protective factors may lead to vicarious posttraumatic growth. This information has the potential to

improve education and training experiences for individuals who wish to specialize in behavioral health medical interpretation and improve the quality of culturally competent treatment interventions for LEP populations.

This study aimed to contribute to the body of research addressing vicarious traumatization and vicarious posttraumatic growth by quantitatively examining the experiences of medical interpreters who are exposed to trauma material through their professional roles in the behavioral health setting. Chapter 2 provides a literature review on vicarious traumatization, CSDT, vicarious posttraumatic growth, and literature related to the field of medical interpretation. Chapter 3 contains the proposed research method and design, including the sampling procedures and instrumentation and operationalization of the variables to be studied.

Chapter 2: Literature Review

The diversity of the United States continues to increase. More than 2 million individuals have immigrated to the United States since 2010 (U.S. Census Bureau, 2012). In addition, approximately 25 million (8.5 %) individuals in U.S. households are identified as speaking English less than "very well" (U.S. Census Bureau, 2012). Limited access to health care services in an individual's primary language has been identified as a barrier to seeking and receiving services (Shattell et al., 2009). This includes mental health services. The medical interpreter, an individual trained to provide professional language interpretation services in multiple settings, will be a valuable member of the professional team in ensuring access to various health care services. This study focused on medical interpreters who provide services in the mental health setting. Many individuals with LEP are refugee and asylum seekers who have experienced significant trauma (Bot & Wadensjö, 2004), whereas others have experienced trauma through violence, childhood sexual abuse, and natural disasters. The ability to provide trauma focused treatment for the LEP population will rely heavily on medical interpreters.

Given the growing need for medical interpretation in the mental health field, it will be important to understand the potential effect of witnessing trauma-related stories on the medical interpreter who is a member of the behavioral health provider team. Vicarious traumatization has been examined quantitatively among mental health providers (Adams & Riggs, 2008; Baker, 2012; Ben-porat & Itzhaky, 2009; Bober & Regehr, 2006; Bober, Regehr, & Zhou, 2006; Brady et al., 1999; Brockhouse, Msetfi, Cohen, & Joseph, 2011; Devilly, Wright, & Varker, 2009; Gerding, 2012; Harrison &

Westwood , 2009; Jordan, 2010; McCann & Pearlman, 1990; Pearlman & Mac Ian, 1995; Rasmussen, 2005; Sexton, 1999; VanDeusen & Way, 2006), medical providers (Dominguez-Gomez & Tutledge, 2009; Sinclair & Hamill, 2007), and disaster and emergency workers (Palm, Polusny, & Follett, 2004; Setti & Argentero, 2012). With regard to medical interpreters there have been a number of qualitative studies examining the emotional and psychological effect of witnessing trauma stories (Doherty, MacIntyre, & Wyne, 2010; Green, Sperlinger, & Carswell, 2012; Miller et al., 2005; Sande, 1998; Splevins et al., 2010); however, little research has used existing quantitative measures to assess the potential effect of witnessing trauma material on this group of providers.

The inability to generalize findings limits qualitative studies (Creswell, 2009). This study was a quantitative study focusing on the experiences of medical interpreters in general behavioral health practice. This expanded upon much of the existing literature that has been limited to interpreters working with refugee populations (Bot & Wadensjö, 2004; Doherty et al., 2010; Gong-Guy, Cravens, & Patterson, 1991; Green et al., 2012; Kaczorowski et al., 2011; Miller et al., 2005; Sande, 1998; Smith, Keller, & Lhewa, 2007). The aim of this study was to further examine whether medical interpreters working with trauma survivors show evidence of vicarious traumatization or vicarious posttraumatic growth and whether recommended strategies for reducing the possible negative consequences or increasing potential benefits of exposure to trauma stories are effective using standardized measures. The ability to provide culturally competent mental health services to LEP populations will depend on the continued support and professional development of medical interpreters.

Organization of the Literature Review and Literature Search Strategy

This literature review has been organized into the following sections: (a) literature related to vicarious traumatization, (b) literature related to CSDT (McCann & Pearlman, 1990; Pearlman & Mac Ian, 1995), (c) the literature related to risk and protective factors associated with vicarious traumatization including vicarious posttraumatic growth, and (d) the literature related to the field of medical interpretation.

The Walden University library, web searches, and the reference lists provided in the peer-reviewed journal articles were used for the literature review process. Specific databases searched for peer-reviewed research included PsychINFO, PsychARTICLES, MEDLINE, and CINAHL Plus. Seminal works in the field of trauma treatment and burnout were also referenced. Search words included, *interpreter*, *interpretation*, *mental health*, *behavioral health*, *therapist*, *psychotherapy*, *vicarious trauma*, *secondary trauma*, *secondary traumatic stress*, *stress*, *burnout*, *posttraumatic growth*, *vicarious post traumatic growth*, and *medical interpreter associations*. Articles that focused on sign-language interpretation were restricted to those focused on the role of interpretation in behavioral health and any references to burnout or traumatization.

Vicarious Traumatization

The field of trauma focused therapy is extensive and continues to grow. Along with this growth is the need for trained trauma therapists and mental health providers who are able to address the needs of survivors who have experienced the psychological consequences of war, childhood physical and sexual abuse, violent crimes, natural disasters, and being a refugee and asylum seeker (Adams & Riggs, 2008; Argento &

Setti, 2011; McCann & Pearlman, 1990; Miller et al., 2005; Pearlman & Mac Ian, 1995; Pearlman & Saakvitne, 1995; Sexton, 1999; Tabor, 2011). A large body of knowledge exists regarding the potential risk of vicarious traumatization for professionals who treat trauma survivors in various settings, including civilian and military psychiatric services, inpatient and outpatient mental health services across disciplines (Adams & Riggs, 2008; Argento & Setti, 2011; Baker, 2012; Bride et al., 2004; Hernández, Engstrom & Gangsei, 2010; Jordan, 2010; Knight, 2010; McCann & Pearlman, 1990; Pearlman & Mac Ian, 1995; Pearlman & Saakvitne, 1995; Sexton, 1999; Tabor, 2011; Van Deusen & Way, 2006), and among medical professionals and emergency workers (Argento & Setti, 2011; Setti & Argento, 2012; Tabor, 2011). Vicarious traumatization is described as a cumulative phenomenon experienced by treatment professionals who provide services to trauma victims and survivors (McCann & Pearlman, 1990; Pearlman & Mac Ian, 1995; Pearlman & Saakvitne, 1995).

The effect of vicarious traumatization is considered pervasive in that it affects the individual's life in multiple areas as evidenced by changes to schemas affecting sense of safety, sense of trust in self and others, self and other-esteem, intimacy, sense of control over one's environment and experiences, and memories (McCann & Pearlman, 1990; Pearlman & Saakvitne, 1995). Vicarious traumatization is viewed as an understandable "occupational hazard" for anyone who engages in an empathic relationship with a trauma survivor (Pearlman & Saakvitne, 1995, p. 31). The effect of vicarious traumatization may be felt long after treatment with the trauma survivor has ended as the experience is now integrated into the individual's psychological experiences.

Alternative Terminology

Alternative terminology associated with vicarious traumatization has included *countertransference* (Pearlman & Saakvitne, 1995), *secondary traumatic stress*, *compassion fatigue* (Figley, 1995), and *burnout* (Karasek, 1979; 1990; Maslach, Schanfeli & Leiter, 2001). Compassion fatigue and secondary traumatic stress have been described as having a more sudden onset of symptoms and a quicker recovery rate when compared to burnout (Figley, 1995), which is in contrast to the cumulative and pervasive characteristics of vicarious traumatization.

Vicarious traumatization literature has included an examination of the construct of burnout as well (Devilly et al., 2009; Jordan, 2010; Sexton, 1999; Tabor, 2011). Burnout is more generally associated with the accumulated stress of working in high demand work environments with a reduced ability to influence change (Karasek, 1979, 1990; Maslach et al., 2001). The work demands associated with burnout are not necessarily associated with trauma treatment, but rather are more general to work situations experienced as demanding and stressful. It would make sense that burnout could be experienced by providers of trauma services given the emotional demands associated with such work. This was further supported by research that examined the constructs of secondary traumatic stress, vicarious traumatization, and burnout (Devilly et al., 2009). Burnout (along with being new to the profession) appeared to be a better predictor of therapist distress than secondary traumatic stress measures or vicarious traumatization measures, outside of schema changes (Devilly et al., 2009).

Vicarious Traumatization and Burnout

Considerable overlap exists between vicarious traumatization and burnout such as the reported experience of feeling fatigued, feeling depressed or anxious, feeling cynical about one's work and people in general, and how both are manifestations of the accumulation of experiences of working with difficult populations and feeling overwhelmed by the various demands of the job (Devilly et al., 2009; Karasek, 1979, 1990; McCann & Pearlman, 1990; Maslach et al., 2001). Vicarious traumatization has been described as distinct from burnout in that vicarious traumatization is pervasive. The phenomenon effects all aspects of an individual's life, including professional and personal relationships, and psychological changes associated with changes in schemas as they relate to intimacy, trust, and overall sense of well-being (Baird & Kracen, 2006; Baker, 2012; Figley, 1995; Tabor, 2011).

Burnout has been described as confined to interactions with the work environment and considered less all encompassing when compared to vicarious traumatization (Sexton, 1999; Tabor, 2011). The constructs for secondary traumatic stress, vicarious traumatization, and burnout have been found to be highly correlated (Devilly et al., 2008). Devilly et al. (2008) found that all three constructs appeared to predict therapist distress similarly and that the main predictors of therapist distress were related to work environment demands (burnout) and being new to the profession. Being exposed to trauma related material did not appear to influence the level of distress reported by therapists, which would further support the construct of burnout over vicarious traumatization.

A specific construct that has been more associated with vicarious traumatization, changes in schemas related to sense of personal safety, was also identified as a predictor of emotional distress among therapists (Devilly et al., 2008). This appeared to be the case regardless of whether the therapist provided trauma focused treatment as part of their work experience. This appears to challenge the assertion that vicarious traumatization and burnout are distinct due to burnout not necessarily being a result of direct work with trauma survivors and changes in schemas may be evident when not working with trauma survivors. This study will focus on the construct of vicarious traumatization through focusing on changes in schemas.

One aspect of vicarious traumatization, the long lasting effect on the psychology of the person, was not addressed in the Devilly et al. (2008) research. When examining the differences between vicarious traumatization and burnout, the progressive nature of vicarious traumatization has been defined as an integrative process where personal meaning in one's life evolves through the continued work with survivors through to completion and recovery (Pearlman & Saakvitne, 1995). This reflects the vicarious posttraumatic growth potential, which will be reviewed later in this section. The construct of perceived posttraumatic growth was not examined in the Devilly et al. (2009) study.

The ability to influence caseload size, which would seem more in alignment with burnout, was reported by Bober and Regehr (2006) in their pilot of the coping strategies inventory (CSI). The CSI was developed based on a literature review of recommended strategies for therapists to reduce the negative effects of working with trauma survivors (Bober et al., 2006). What was found was that caseload size and the number of trauma

clients seen was the biggest predictor of distress. Qualitative interviews with six self-identified trauma therapists who had been in the field for more than 10 years also noted that being able to have more than one professional role was important in reducing risk of vicarious traumatization so that not all of their time was devoted to trauma work (Harrison & Westwood, 2009). This would seem to support the findings that control over caseload size and type of clients seen may be important in the management of vicarious traumatization symptoms.

When reviewing the literature regarding vicarious traumatization and burnout, associated changes to schemas would also be assumed to have a different course of resolution. According to vicarious traumatization research schemas affected by trauma work would be long lasting (McCann & Pearlman, 1995; Pearlman & Mac Ian, 1990; Sexton, 1999), but may also evolve as the individual adjusts and adapts their experiences through continued work in the field and ability to witness successful recovery (Pearlman & Saakvitne, 1995). It is not clear if this would be the same in the context of burnout as schema changes have not been addressed under this construct. The pervasive nature of schema changes associated with the psychology of the individual would remain regardless of changes to the work environment and caseload configuration according to the vicarious traumatization literature and CSDT (McCann & Pearlman, 1990; Pearlman & Mac Ian, 1995). This also seems to be supported by research examining vicarious posttraumatic growth (addressed later in this section), which would suggest an ongoing evolution of schemas even after completing work with trauma survivors (Brockhouse et al., 2011; Splevins et al., 2010).

Vicarious traumatization has been associated with intrusive symptoms similar to PTSD (APA, 2013; McCann & Pearlman, 1990), including increased heart rate, intrusive images of traumatic material discussed in session, nightmares associated with the traumatic material, and experiencing previously neutral objects as triggers (Argento & Setti, 2011; McCann & Pearlman, 1990; Setti & Argentero, 2012). Emotional responses include "sadness, anger, rage, shame, numbing, and distortion" (McCann & Pearlman, 1990, p. 143). The one main difference between vicarious traumatization and PTSD is that the service provider has not directly experienced the traumatic situation and is only a witness through the client's telling of the traumatic experience (Tabor, 2011). Burnout has been associated with symptoms of depression and anxiety (Maslach et al., 2001) rather than PTSD further supporting a difference in the understanding of vicarious traumatization and burnout.

The constructs of vicarious traumatization and burnout are closely related given that both are considered to be a result of accumulated exposure to difficult clients and work environments, both are considered a result of the interaction between the work environment and the individual providing services, and both can be long lasting (Devilly et al., 2009; Karasek, 1979, 1990; McCann & Pearlman, 1990; Maslach et al., 2001); however, the changes in schemas is distinct in vicarious traumatization. Given this difference, the theoretical framework of vicarious traumatization, CSDT (McCann & Pearlman, 1990; Pearlman & Mac Ian, 1995), will provide the theoretical framework for this study.

Constructivist Self-Development Theory

The CSDT was first described by McCann and Pearlman (1990) as an approach to understanding vicarious traumatization. CSDT is grounded in psychodynamic theory and focuses on the "psychological needs and cognitive schemas" of the provider that are affected when working with trauma victims (McCann & Pearlman, 1990, p. 137). CSDT is an interactive theory that considers the interaction between the therapist's personal characteristics, emotional responses, world view, and the client's trauma story (McCann & Pearlman, 1990). Several factors have been examined that influence the manifestation of vicarious traumatization, (a) time – how long someone has worked with trauma victims and whether they have had an opportunity to witness an individual's recovery from trauma, (b) volume – number of trauma clients served in comparison to other types of clients; (c) coping skills or self-care skills, (d) supervision – professional and community support, (e) training and education, (f) personal trauma history, and (g) use of personal therapy (Adams & Riggs, 2008; Attarriba & Santiago-Rivera, 1994; Beeber et al., 2009; Bober et al., 2006; Bober & Regehr, 2006; Brockhouse et al., 2011; Burns, 2010; Dubus, 2009; Dean & Pollard, 2001; Gannett-Sanchez, 2013; Jordan, 2010; McCann & Pearlman, 1990; Pearlman & Mac Ian, 1995; Sande, 1998; Sexton, 1999; Splevins et al., 2010; Tabor, 2011; Van Deusen & Way, 2006; Yakashko, 2010). These factors along with the psychology of the individual then influence changes in schemas, supporting the cumulative and pervasive nature of vicarious traumatization.

Schema

As mentioned previously, specific schemas, or the beliefs about self and the world, held by an individual may be challenged when working with trauma survivors (McCann & Pearlman, 1990; Pearlman & Mac Ian, 1995; Pearlman & Saakvitne, 1995). Schemas involving intimacy may be challenged by the stigma of working with trauma survivors; further isolating the individual from social supports (McCann & Pearlman, 1990). This may include hearing questions such as, "How do you listen to those stories all day?" Isolation and alienation is perpetuated by the need for confidentiality when working with any therapy client, leaving the professional to hold the horrific images of trauma in isolation, especially if there are no other professional colleagues to consult with.

Hearing about how others are capable of inflicting such harm on others can affect schemas involving trust of others (VanDeusen & Way, 2006). Individuals may find themselves questioning the motivations of others and their behaviors. Are others trustworthy? An individual may find they are pulling away from previously trusted others as demonstrated by qualitative interviews conducted with therapists who provided trauma therapy (Baker, 2012).

Schemas involving a sense of safety may be challenged; the world is no longer seen as a safe and predictable place (McCann & Pearlman, 1990; Pearlman & Saakvitne, 1995). Adverse emotional and physical effects may include a fear for self and other's safety, feeling sad, tearful, and nervous. Symptoms may include experiencing poor sleep, nightmares, exhaustion, and being hyper vigilant (Baker, 2012). Some therapists have

described changes in confidence and feeling a loss of control. Therapists have described themes suggesting self-doubt, lack of confidence, and feeling as though something is wrong with them for feeling distressed or out-of-control (Baker, 2012; McCann & Pearlman, 1990). Providers have described not being able to separate the other's experience from their own (Baker, 2012), which may be understood as a loss of independence and sense of autonomy (McCann & Pearlman, 1990). Esteem, the belief in the general good of self and other may be challenged (McCann & Pearlman, 1990), resulting in an increase in cynicism and pessimism, questioning the general good in others.

Vicarious Posttraumatic Growth: Protective and Risk Factors

Vicarious posttraumatic growth is a relatively new area of research in the context of trauma treatment (Brockhouse et al., 2011; Splevins et al., 2010) and extends from the research related to posttraumatic growth among trauma survivors (Calhoun & Tedeschi, 2001; Tedeschi & Calhoun, 2004). While the research may be in the early stages, the idea is not necessarily new. The possibility of personal and spiritual growth was alluded to early on in the CSDT literature (McCann and Pearlman, 1990; Pearlman & Saakvitne, 1995). McCann and Pearlman (1990) acknowledged that while there is inherent sadness in engaging in trauma work, there is also a "sense of personal meaning in knowing that some lives have been helped through trauma work" (p. 147). The interaction between provider world view and the experience of witnessing trauma material continue to support a CSDT model where vicarious traumatization and vicarious posttraumatic growth are on a continuum. CSDT emphasizes an adaptive and integrative experience of

the provider to transform the experience of vicarious traumatization through the professional development of the provider to reach a point where one is able to recognize the rewards of helping others successfully recover from their trauma (Pearlman & Saakvitne, 1995). Vicarious exposure to witnessing posttraumatic growth may lead to vicarious posttraumatic growth (Calhoun & Tedeschi, 2001).

While trauma may understandably lead to distress the potential to experience growth, posttraumatic growth, is also a possibility (Calhoun & Tedeschi, 2001; Tedeschi & Calhoun, 2004). Growth is not always a result of trauma, but the experience of distress can coexist with growth (Tedeschi & Calhoun, 2004); "pain and positive transformation coexist" (Harrison & Westwood, 2009, p. 210). Change in schemas is a core component of posttraumatic growth, similar to that seen in vicarious traumatization from the CSDT model. Themes include an increased appreciation for life (Ben-Porat, 2009; Harrison & Westwood, 2009; Splevins et al., 2010; Tedeschi & Calhoun, 2004), a changed sense of priorities (Harrison & Westwood, 2009; Splevins et al., 2010; Tedeschi & Calhoun, 2004); valuing relationships and experiencing increased intimacy (Harrison & Westwood, 2009; Splevins et al., 2010), increased sense of personal strength and change in overall purpose (Harrison & Westwood, 2009; Splevins et al., 2010; Tedeschi & Calhoun, 2004), and spiritual growth (Baker, 2012; Harrison & Westwood, 2009; Tedeschi & Calhoun, 2004). Posttraumatic growth is seen as an evolution from a pre- to post-trauma state (Tedeschi & Calhoun, 2004), indicating an integrative process where the individual experiences themselves as different and transformed by the interaction. An individual's ability to cope with and integrate this traumatic event to create a new understanding of

their world and their experience in it results in the change in schemas. The change in schemas are similar in theme to CSDT, these include changes in trust, safety, intimacy, esteem, and spirituality (Pearlman & Saakvitne, 1995; Tedeschi & Calhoun, 2004).

The ability to cope with the initial overwhelming experience of the trauma or exposure to traumatic material appears to be an important element in whether growth is experienced (Harrison &Westwood, 2009; Splevins et al., 2010; Tedeschi & Calhoun, 2004). Experiencing and being able to communicate empathy is also supported in the literature as an element of posttraumatic growth for both the provider and the recipient (Brockhouse et al., 2011; Harrison & Westwood, 2009; Tedeschi & Calhoun, 2004); which is in contrast to other findings that suggested empathy increased risk for vicarious traumatization (Figley, 1995; McCann & Pearlman, 1990; Pearlman & Mac Ian, 1995; Pearlman & Saakvitne, 1995).

The Continuum of Vicarious Traumatization to Vicarious Posttraumatic Growth

The factors that appear to influence how vicarious traumatization is experienced will be explored further while continuing to examine the possible progression to vicarious posttraumatic growth. The literature regarding these factors will provide the support for some of the variables to be examined in this study. These include time, empathy, personal psychotherapy, witnessing recovery, supervision, coping strategies, and normalization. Vicarious traumatization and vicarious posttraumatic growth are viewed as interactive and integrative experiences of how exposure to trauma and the inner world of the individual interact to either produce negative or positive changes in schema (McCann & Pearlman, 1990).

Time. Time appears to be a significant factor influencing whether a professional experiences a sense of growth from trauma work or not. Time to grow as a professional and increase in confidence and skill, and time to see the work through completion and whether there has been an opportunity to witness an individual's recovery and resiliency from the experience of trauma may influence perception of vicarious traumatization or vicarious posttraumatic growth (Baker, 2012; Brockhouse et al., 2011; Calhoun & Tedeschi, 2001; Harrison & Westwood, 2009; Splevins et al., 2010). This has been described as the "double-edged sword of being a trauma therapist" (Baker, 2012, p. 5); experiencing the continuum of helplessness to feeling rewarded when progress is made. Splevins et al. (2010) acknowledged that in their qualitative study of medical interpreters who all reported instances of vicarious posttraumatic growth; the fact that they had all been in the field for three to five years in addition to all having had an opportunity to witness a trauma survivor's recovery likely contributed to their reports of experiencing vicarious posttraumatic growth. Not knowing the experiences of those who may have left the field early on, changed career paths, or simply had not had an opportunity to witness recovery from trauma, leaves the question of whether they had experienced vicarious trauma symptoms that may have resulted in their leaving the field of interpretation.

As therapists continue to work with trauma survivors, their competence and confidence in working with this population may increase, resulting in lower distress levels (Pearlman & Mac Ian, 1995). This is reflected in CSDT which emphasizes the interaction between the self of the therapist, the witnessing of trauma stories, and the ability to transform these experiences to make meaning out of these experiences and

regain hope (Pearlman & Saakvitne, 1995). This is supported in the literature where medical interpreters who had been in the field for more than 3 years (Splevins et al., 2010), and therapists who had been in the field for more than 10 years (Harrison & Westwood, 2009) had experienced a continuum of changes in schemas from experiencing the disbelief associated with witnessing such horrors that others could perpetrate on each other to seeing others as resilient as they were able to overcome these experiences. Among the medical interpreters, participants experienced a period of withdrawal and isolation and general distrust of others and the world, to being more genuinely engaged and caring of others (Splevins et al., 2010). The ability to integrate a more positive world view and sense of positive personal change was associated with the ability to cope with and work through the associated distress of witnessing trauma material.

CSDT describes vicarious traumatization as affecting all aspects of a participant's life, including their relationships and sense of change within themselves. When considering the potential for spiritual growth or vicarious posttraumatic growth, this change was identified in qualitative interviews with medical interpreters (Splevins et al., 2010) and therapists (Harrison & Westwood, 2009) who reported less need for material possessions and an increase in their sense of accomplishment and pride in their work. This supports Pearlman and Mac Ian's (1995) hypothesis that continued work with trauma survivors may lead to a greater sense of purpose and meaning in one's life over time.

Empathy and personal psychotherapy. Addressing the effects of trauma work in personal therapy has been associated with both increased distress (McCann &

Pearlman, 1990) and with vicarious posttraumatic growth (Brockhouse et al., 2011). It is unclear if this contradiction is related to the amount of time one has been in the field providing treatment to trauma survivors or not. Empathy has long been associated with vicarious traumatization as it is assumed that having empathy for the client increases a sense of closeness and therefore increases the risk of vicarious traumatization (Figley, 1995; McCann & Pearlman, 1990; Pearlman & Mac Ian, 1995; Pearlman & Saakvitne, 1995). Other findings suggested that higher levels of empathy were associated with higher levels of vicarious posttraumatic growth among therapists (Brockhouse et al., 2011). The resulting report of vicarious posttraumatic growth, rather than vicarious traumatization associated with increased empathy may be related to the opportunity to engage in long-term work with individuals and having had an opportunity to witness the resiliency in others and their recovery. Qualitative interviews with therapists who had been in the field for over 10 years, who were self-identified as trauma therapists suggested that empathy must be accompanied with an understanding of personal and professional boundaries in order to prevent vicarious traumatization (Harrison & Westwood, 2009).

Witnessing recovery. It would seem based on the qualitative interviews with medical interpreters (Splevins et al., 2010) and therapists (Baker, 2012; Harrison & Westwood, 2009) that vicarious traumatization and vicarious posttraumatic growth are not necessarily different constructs, but rather the same construct on a continuum that is influenced by time and the opportunity to witness growth. Whether one has had an opportunity to witness growth and whether this leads to vicarious posttraumatic growth

has yet to be investigated (Splevins et al., 2010). Pearlman and Mac Ian (1995) did note that for therapists with a history of personal trauma more time in the field engaging in trauma work was correlated with "fewer disruptions in self-trust, self-esteem, and self-intimacy" (p. 563). It is not clear if this was a result of a gained sense of mastery and competence or if this could be related to witnessing recovery in others or both. This potential for posttraumatic growth was also suggested in qualitative interviews with therapists who had been in the field for over 10 years, where professional satisfaction was seen as the ability to bear witness to the depths of an individual's journey through trauma recovery (Harrison & Westwood, 2009). It seems there would be a strong relationship between witnessing another's successful treatment of trauma related symptoms and a gained sense of mastery at having been involved in that process.

Reducing Potential Negative Effects of Vicarious Traumatization

There are several consistent recommendations when it comes to reducing the potential negative emotional and cognitive effects of working with trauma survivors. These recommendations include seeking professional and peer supervision, engaging in active self-care behaviors, examining personal experiences with trauma, ongoing trauma-specific training, and organizational or community support (Adams & Riggs, 2008; Brockhouse et al., 2011; Gannett-Sanchez, 2013; Harrison & Westwood, 2009; Pearlman & Mac Ian, 1995; Sexton, 1999; Van Deusen & Way, 2006). The literature is contradictory in some cases, which may speak to the uniqueness of each provider and their needs. Brockhouse et al. (2011) found that individual supervision and utilization of personal therapy to address reactions to trauma work helped to decrease the negative

effects of trauma work. This was in contrast to Pearlman and Mac Ian (1995) that found specifically addressing trauma work in personal therapy was associated with an increase in distress for the therapist.

Supervision and training. Supervision and seeking out other professionals who work with trauma survivors has been described as important to reducing risks associated with the potential for professional isolation (Harrison & Westwood, 2009; McCann & Pearlman, 1990). This ties in to the professional community and organizational support. Creating a safe space to address the potential intrusive experiences, including thoughts and images associated with conducting trauma work decreases professional isolation and the possible stigma associated with working with trauma survivors (McCann & Pearlman, 1995; Sexton, 1999, Tabor, 2011, Van Deusen & Way, 2006).

Supervision goes hand-in-hand with ongoing trauma-specific training, especially for those professionals early in their career (Adams & Riggs, 2008). The amount of previous trauma-specific training was found to have an effect on vicarious traumatization symptoms among students in the field of psychology (Adams & Riggs, 2008). Those with less training were more vulnerable to symptoms associated with vicarious traumatization.

The developers of the coping strategies inventory (CSI) (Bober et al., 2006) found that whether therapists engaged in supervision was more dependent on whether they believed it was important. They also discovered that engaging in supervision did not seem to influence the level of distress reported by participants. The authors admitted that the tool would need to be tested on additional samples to determine the validity of the instrument. This study is further examined in the next section.

Coping strategies. Engaging in active self-care skills has been repeatedly addressed in the literature regarding vicarious traumatization as well as burnout (Bober & Regehr, 2006; Bober et al., 2006; Gannett-Sanchez, 2013; Harrison & Westwood, 2009; Pearlman & Mac Ian, 1995; Tabor, 2011). Being able to recognize the signs and symptoms of vicarious traumatization and burnout is a precursor in being able to engage in effective coping strategies (Gannett-Sanchez, 2013).

Bober et al. (2006) developed the Coping Strategies Inventory (CSI) to measure the effectiveness of recommended coping strategies identified through a review of the literature on vicarious traumatization. Two constructs were identified in the CSI; (a) beliefs about coping strategies, and (b) time devoted to engaging in these coping strategies. The authors found that what seemed to be most effective in reducing vicarious traumatization was reducing the number of hours per week spent with trauma survivors rather than the time spent engaging in coping skills (Bober & Regehr, 2006). Coping strategies included seeking out supervision, engaging in leisure and self-care activities, and engaging in research activities. The time devoted to these behaviors appeared to be related to an individual's belief as to whether it would be helpful. These findings seem to contradict the general recommendations in the literature, as it seemed that what actually reduced the experience of vicarious traumatization was not whether one engaged in these behaviors or the amount of time spent engaging in them, but the actual number of hours devoted to treating trauma survivors on one's case load. Schema changes were more likely to be effected by years of experience rather than amount of time spent per week working with trauma survivors. This would seem to support the cumulative effect of

working with trauma survivors and time as a factor in the experience of vicarious traumatization or vicarious posttraumatic growth.

Bober and Regehr (2006) suggested that exerting control over case load size and changing the environment through organizational supports would reduce the negative consequences of working with trauma survivors, further suggesting a change in focus from educating therapists on self-care skills to that of examining the work environment and how to reduce the effect of trauma work from an organizational perspective. The authors proposed that this would result in reducing the overall effect of trauma treatment on any one worker.

These findings would seem to support the literature on burnout which emphasizes the ability of the worker to be able to exert control over the demands in their work environment (Dean & Pollard, 2001; Karasek, 1979, 1990). What remains unanswered is whether having the ability to influence the environment would also have an effect on schemas. Bober and Regehr (2006) specifically focused on coping strategies, questions regarding potential vicarious posttraumatic growth were not addressed. Qualitative studies continue to emphasize the importance of coping skills in reducing the potential development of vicarious traumatization (Baker, 2012; Harrison & Westwood, 2009; Splevins et al., 2010). Bober and Regehr (2006) pointed out the need to further examine the CSI tool in other samples who serve trauma survivors to examine the validity and reliability of the instrument.

Normalizing the experience. The ability to recognize the potential risks of working with trauma survivors also means it is important to recognize that the distress

one may experience is understandable (Baker, 2012; McCann & Pearlman, 1990; Sexton, 1999; Tabor, 2011). Training, education, and supervision that focuses on working with trauma survivors (Baker, 2012) should emphasize that hearing and being witness to the traumatic experiences of a survivor would understandably lead to distressing feelings (Pearlman & Saakvitne, 1995). This is not a sign of weakness (McCann & Pearlman, 1990; Tabor, 2011). Creating a work environment that encourages exploration of reactions and provides support and a safe environment to examine and normalize these reactions is potentially important in reducing the negative consequences of providing trauma services to survivors (Sexton, 1999). Normalizing the experience may also help to decrease the associated stigma and risk of professional isolation (Baker, 2012). When exploring the type of training providers of trauma treatment have had, the literature would suggest it is important to include information on what to expect when working with trauma survivors and that ongoing supervision continues to address these reasonable responses to witnessing trauma stories (Pearlman & Saakvitne, 1995).

Medical Interpretation

"Bilingual individuals who facilitate communication between healthcare providers and patients" (Dysart-Gale, 2005, p. 92), including Sign-Language interpreters, are referred to as medical interpreters. The demand for interpretation services in multiple contexts continues to grow as the population of individuals with LEP continues to grow (Dysart-Gale, 2007, p. 238; U.S. Census Bureau, 2012). The need for such services can be seen in legal settings, medical, and psychiatric (Corsellis, 2003). This particular literature review will focus on the role of the medical interpreter in the mental health

setting while drawing on additional experiences in other settings to provide an understanding of the demands and expectations faced by medical interpreters.

Prior to the growing and welcomed trend of moving to more professional standards in medical interpretation services, these services were either provided by family members or paraprofessionals who happened to be members of the same linguistic and cultural group (Altarriba & Santiago-Rivera, 1994). Concerns related to confidentiality and accuracy of translation was indicated when working with family members, untrained bilingual professionals, or paraprofessionals (Shattell et al., 2009). The professional development of providing medical interpretation services can be seen through the increasing availability of national and international interpreter associations and organizations as well as the development of ethical codes of practice proposed by some associations and states. Here are some examples of such associations when conducting a web-search using the words "medical interpreter associations:" International Medical Interpreters Association (IMIA), The National Board of Certification for Medical Interpreters (NBCMI), California Healthcare Interpreting Association (CHIA), Texas Association of Healthcare Interpreters (TAHIT), and National Council on Interpreting Health Care (NCIHC). IMIA and NCIHC both have their own code of ethics.

California, Minnesota, and New York have taken steps to include legislation that specifies how insurance providers are to reimburse providers who serve LEP individuals and who use interpretation services (Au, Taylor, & Gold, 2009). New York State has partnered with IMIA to define various levels of professional interpretation services, encouraging all professional medical interpreters to seek certification through the

NBCMI (Candle, 2012). Despite these efforts, the literature indicates that the lack of a universal code of ethics may lead to some confusion among medical interpreters, especially in regards to the role of the interpreter in various settings, including mental health (Dysart-Gale, 2005).

Cultural Competency

Cultural sensitivity in the provision of mental health services will continue to be a focus as mental health providers seek to ensure that interventions are effective and culturally relevant (Altarriba & Santiago-Rivera, 1994; Tribe & Morrissey, 2004). The need for service provider and receiver to establish a meaningful relationship is seen as a natural and necessary process in establishing a successful therapeutic relationship (Avery, 2001). Without a common language between provider and receiver this task becomes more challenging (Bartlett et al., 2011; Tribe & Morrissey, 2004). Interpreters will be an indispensible member of such treatment teams (Kaczorowski et al., 2011) as interpreters "make it possible for mental health practitioners to communicate with their clients and vice versa" (Tribe & Lane, 2009, p. 234).

Lack of familiarity with a culture and lack of language interpretation services would make providing an accurate diagnosis difficult for most clinicians (Gong-Guy et al., 1991). Conducting psychological assessment in the non-dominant language can lead to misunderstanding and miss diagnosis (Altarriba & Santiago-Rivera, 1994; Marcos, 1976). Communication in the non-dominant language might lead to perceiving the LEP individual as withdrawn (Marcos, 1976). While having an interpreter present may not prevent inaccurate diagnosis entirely, such as when an interpreter deletes information

from an interpretation or alters the meaning originally intended (Jackson et al., 2010), it is still preferred over having no means of communication between LEP individuals and their provider (Beeber et al., 2009).

Communication Models

Part of the confusion regarding ethical practices among medical interpreters appears to be related to the expected communication model to be used. The literature identifies four main communication models utilized when providing medical interpretation services: *conduit, clarifier, cultural broker, and patient advocate* (Avery, 2001; Tribe & Morrissey, 2004). The most common model recommended, or even preferred, appears to be the conduit model (Apostolou, 2009; Beeber et al., 2009; Dysart-Gale, 2005, 2007). This particular model emphasizes that the medical interpreter is primarily a conduit of communication between the provider and the receiver of services. The interpreter is to use the first person "I" when interpreting and is to assume the tone, facial expressions, and body language of the individual they are providing interpretation for and to be as invisible as possible in the interaction (Apostolou, 2009). The interpreter is discouraged from providing any editorial information and is expected to be as "precise and complete" as possible in their interpretation (Dysart-Gale, 2005, p. 96). The underlying goal of the conduit model of interpretation is to provide accurate communication that is culturally sensitive and ensures the best treatment outcomes possible for both the individual and provider being served (Avery, 2001).

While the conduit model may be the preferred model of medical interpretation it is also understood to be a difficult model to adhere to at all times (Apostolou, 2009;

Beeber et al., 2009; Dysart-Gale, 2005, 2007; de Bruin & Brugmans, 2006). In contrast to providing interpretation services for written material, real-time translation for spoken communication can be very difficult (Apostolou, 2009; Dysart-Gale, 2007). Any misunderstandings or errors must be addressed at the time they are recognized in contrast to being able to proof-read written material to check for accuracy. Often times "words and meanings are not interchangeable between cultures" (Tribe, 1999, p. 570), further complicating the task of the medical interpreter who is expected to provide accurate translation in real-time.

The boundaries between the professional role and general human interactions can be confusing when the medical interpreter is expected to be a conduit and effectively invisible outside of the role of providing interpretation (Apostolou, 2009). One example in the literature spoke of the interpreter's bind when she was witness to a mother's miscarriage. When left alone in the room with the mother after providing the interpretation explaining she had had a miscarriage, the interpreter did not know if it was okay to offer condolences or acknowledgment of the woman's loss in anyway. Instead she remained silent and feared being perceived as uncaring (Dysart-Gale, 2005). This was similar to another account where the interpreters expressed conflict around not wanting to bring in personal emotions and yet not wanting to appear cold and distant either (Splevins et al., 2010).

In one study the authors had retrained interpreters to only use the conduit model to reduce any possible influence from the interpreter on the patient's ability to develop self-advocacy and self-agency skills (Beeber et al., 2009). The authors commented that

the transition from the advocate to the strictly conduit role was a challenge for some interpreters.

There is recognition that medical interpreters can be in a unique position to inform the provider of cultural norms, expectations, and potential advantages or barriers to treatment due to cultural influences (Cornes & Napier, 2005; de Bruin & Brugmans, 2006; Norris et al., 2005; Valero-Garcés, 2005). The range of the interpreter's role goes beyond that of conduit and direct translation to that of cultural broker, ensuring that the communication between service provider and receiver is meaningful (Raval, 2006). This can be challenging to the medical interpreter as they must be careful to not allow their personal views to interfere with the communication process, regardless of whether these views are shared by the recipient of interpretation services (Tribe & Lane, 2009). In the cultural broker or advocate role, the interpreter provides more than an interpretation of what is spoken; they communicate cultural expectations and context.

Interpreters interviewed in the context of providing end-of-life or life-threatening illness in a medical setting expressed that being seen as only a conduit limited their potential to be a useful and effective member of the treatment team (Norris et al., 2005). The interpreters pointed out they could contribute valuable information regarding the cultural context of the patient that might improve treatment adherence and outcomes. From this perspective, the importance of knowing when it was appropriate to move into different roles, the conduit role to advocate or cultural broker role was an important skill that was not clearly explained or understood. Due to the lack of universal ethical guidelines regarding when such a transition would be appropriate there seems to be a

sense of confusion among medical interpreters and their role when practicing in the healthcare setting (Dysart-Gale, 2005; Valero-Garcés, 2005).

Medical Interpreters in Mental Health

As the population of the United States continues to become more diverse the need for interpretation services will increase (Flaskerud, 2007; U.S. Census Bureau, 2012). Title VI of the Civil Rights Act of 1964 and the Executive Order 13166 specify that any agencies that receive federal funding must provide "meaningful" access to services to individuals with LEP (U.S. Department of Justice, 2000, p. 50121). This extends to mental health providers, who must also provide culturally meaningful and relevant services to LEP clients (Altarriba & Santiago-Rivera, 1994).

Providing meaningful services is just as important as providing accurate services. Language barriers in mental health treatment increase the risks of misunderstanding symptoms that may lead to inaccurate diagnosis and inaccurate treatment recommendations (Altarriba & Santiago-Rivera, 1994; Bartlett et al., 2011). Being able to collaborate with a trained medical interpreter may reduce these risks among the LEP population (Beeber et al., 2009). Providing mental health services in the primary language of the client increases accuracy of diagnosis and increases engagement in treatment (Flaskerud, 2007).

Several studies have examined the effect on access and utilization of healthcare services on LEP populations when either a lack of availability of medical interpreters is present or not (Jacobs et al., 2001; Kaczorowski et al., 2011; Shattell et al., 2009, Sue et al., 1991). Providing interpreter services to LEP populations in primary care and

outpatient clinic settings has been found to result in increased access to services, increased utilization, improved follow through with recommended treatments, reduced drop-out rates, and improved outcomes (Jacobs et al., 2001; Sue et al., 1991). The removal of language barriers to treatment through the provision of interpreter services is seen as beneficial to LEP clients (Kaczorowski et al., 2011).

Challenges

Providing medical interpretation services in mental health settings has been described as challenging (Beeber et al., 2009; Cornes & Napier, 2005; Dysart-Gale, 2005; Sande, 1998; Splevins et al., 2010; Vernon & Miller, 2001; Yakushko, 2010). Interpreters have commented on the lack of specialized training in language specific to mental health services and interventions (Bot & Wadensjö, 2004; Yakushko, 2010). The material that emerges in the context of mental health treatment can be very difficult and medical interpreters are often ill prepared to understand and process this material. Negative reactions on the part of the medical interpreter may also have a negative effect on the therapeutic process (Cornes & Napier, 2005).

The internal conflict mentioned earlier, between the various roles of the medical interpreter, may contribute to the distress experienced when providing interpretation services in mental health settings to trauma survivors. Medical interpreters may have experienced trauma similar to the clients for whom they are interpreting, especially if they are both refugee and asylum seekers from the same country. Dubus et al. (2009) shared this about an interpreter's experience, "She must contend with her own memories, her culture's norms regarding the inhibition of certain emotions, and her own comfort in

being in the helper role between the two cultures" (p. 334). The difficulty associated with managing conflicting roles is repeated throughout the literature (Apostolou, 2009; Beeber et al., 2009; Dysart-Gale, 2005; Sande, 1998; Splevins et al., 2010). The desire to avoid this conflict between cultural and professional expectations was reported as resulting in some interpreters being at risk for isolation (Sande, 1998).

Vicarious Traumatization and Medical Interpreters

When considering engaging in trauma work it is important to communicate to the individual in treatment that strong emotions can be expressed and contained by the therapist (Rasmussen, 2005). Part of the work of trauma survivors involves the expression of intense emotions: rage, hate, envy, disgust, shame, spite, despair, or dissociation from these feelings resulting in feeling numb, frozen, wooden, stunned, empty, or dazed (Rasmussen, 2005). Given that a medical interpreter is a part of this therapeutic experience, they too might experience strong emotions. As a member of the treatment team, it is equally important that medical interpreters are able to communicate that the environment is safe so that such emotions can be explored. This speaks to the challenge some interpreters have commented on in regards to working with trauma survivors. They have expressed concern with the overall sense of "being overwhelmed by the material" (Tribe, 1999, p. 575) and how this may be expressed in the room.

Similar to some of the reactions documented by therapists who provide trauma treatment to survivors, some medical interpreters have reported "feeling sad inside" (Miller et al., 2005, p. 34) when hearing of a client's past trauma that reminded them of their own. Some expressed feeling bad or unprofessional for having emotional reactions,

fearing they would appear unprofessional or, the opposite, that they would appear inhumane (Sande, 1998). Some interpreters reported that during the provision of interpretation services they would also imagine the context of the experience, therefore, increasing the sense of identification with the client (Splevins et al., 2010).

The potential risk of vicarious traumatization among medical interpreters has been acknowledged in the literature (Beeber et al., 2009; Burns, 2010; Dubus, 2009; Miller et al., 2005; Sande, 1998; Splevins et al., 2010; Sexton, 1999; Yakashko, 2010). Burns (2010) provides a personal account of recognizing feeling emotionally overwhelmed during a day of interpreting and recognizing that without good self-care skills she was at risk for burnout and vicarious traumatization and that other interpreters may be at risk as well.

Beeber et al. (2009) specifically trained interpreters in the conduit model for their research study in providing mental health services to LEP mothers in their home. Part of the training included encouraging the interpreter to ask for a break during the session if they were feeling emotionally overwhelmed and to resume once they were ready to complete the session. The nurses in the team were then to offer a debriefing session for the interpreter following the encounter, acknowledging the risk of vicarious traumatization for the interpreter.

Splevins et al., (2010) specifically examined vicarious posttraumatic growth among eight medical interpreters in a qualitative study. It should be noted that all interpreters had at least 3 or more years of experience and all had reported witnessing posttraumatic growth in the individuals they provided services for and attributed this to

their own experience of vicarious posttraumatic growth. In addition, the interpreters commented that they worked for several years with the same therapist and client and recommended against using an interpreter only once for a trauma focused session. The need for the same interpreter for the same client was repeated in the literature (Vernon & Miller, 2001; Yakushko, 2010). Miller et al. (2005) speculated that the experience of vicarious traumatization among refugees providing medical interpretation services is likely small as distress was reported by only one interpreter. It seems that making such a generalization from such a small sample size of seven refugee interpreters in a qualitative study should be made with caution.

Something missing in the qualitative literature is the specific mention of managing suicide risk. Pearlman and Saakvitne (1995) specifically point out that one of the difficulties in trauma work is the possible witnessing and containment of chronic suicidality and how distressing this can be for the therapist. A therapist is assumed to have specific training to assess and determine the level of intervention when a client presents with chronic suicidality: knowing when and when not to seek hospitalization. It seems that specific training or the ability to prepare the interpreter for this experience when interpreting for trauma clients would be an important instruction and speaks to the need to examine the occurrence of vicarious traumatization among all medical interpreters in behavioral health and not just those working with refugees. The interpreter is expected to not only interpret the suicidal statements of the client, but the interventions of the therapist, while maintaining the emotional accuracy of both communications. This would seem to reflect some of the sense of overwhelm reported by some interpreters and

the need to establish trust within the collaborative relationship (de Bruin & Brugmans, 2006).

Recommended Practices to Reduce Potential Negative Effects of Vicarious Traumatization for Medical Interpreters

Recommended strategies for managing the potential effects of vicarious traumatization among medical interpreters is similar to that found among therapists and other health care providers who work with trauma survivors. Suggestions include supervision, developing coping strategies to balance work and life demands, normalizing emotional responses to witnessing trauma stories, and specialized training in mental health language and procedures (Beeber et al., 2009; Burns, 2010; Dubus, 2009; Miller et al., 2005; Raval, 2006; Sande, 1998; Splevins et al., 2010; Tribe, 1999; Tribe & Lane, 2009; Valero-Garcés, 2005; Vernon & Miller, 2001; Yakushko, 2010). More specific to the role of the medical interpreter is the ability to brief before and debrief after the therapy session with the therapist (Beeber et al., 2009; Cornes & Napier, 2005; Dubus, 2009; Norris et al., 2005). The ability to brief before and debrief after a session between providers is not always possible given the current time limitations posed by insurance reimbursement structures (Yakashko, 2010). Frustrations regarding the inability to brief or debrief with interpreters due to their tight scheduling limitations had been expressed by some therapists (Raval & Smith, 2003).

Briefing and debriefing will be an important variable to examine given the frequency of reference to the importance of engaging in such a practice. Briefing and debriefing is suggested to reduce potential negative effects of exposure to difficult

material in psychotherapy for the medical interpreter and improve the overall effectiveness of the therapist-interpreter team in the therapeutic process (Kaczorowski et al., 20116; Raval, 2006; Tribe & Morrissey, 2004).

The ability to work with the same interpreter over time is another recommendation (Vernon & Miller, 2001). Not having the same interpreter over the course of treatment with a trauma survivor in mental health treatment was seen as having a negative effect on the therapeutic alliance and engagement in treatment (Raval & Smith, 2003). Negative consequences included families being less likely to complete treatment when there was a change in interpreters, which appeared to threaten the sense of trust and containment needed for the therapeutic process to be successful (Raval & Smith, 2003). Qualitative interviews with medical interpreters indicated that witnessing the growth of the clients they were interpreting for was important to their experience in regards to their report of vicarious posttraumatic growth (Splevins et al., 2010). Not having an opportunity to work with the same provider and client over the course of treatment would seem to interrupt the possible progression towards mastery and the ability to witness recovery as is referenced in the vicarious posttraumatic growth material and CSDT model.

Summary

The role of medical interpreters in providing culturally competent mental health services is essential for LEP individuals (Altarriba & Santiago-Rivera, 1994; Avery, 2001; Sue et al., 1991; Tribe & Morrissey, 2004). Medical interpreters make it possible for mental health providers to provide meaningful and culturally relevant treatment to

LEP populations (Tribe & Morrissey, 2004). The qualitative research involving medical interpreters with trauma survivors, especially refugee and asylum seekers (Green et al., 2012; Miller et al., 2005; Raval, 2006; Sande, 1998) has demonstrated that medical interpreters do report experiencing distressing feelings similar to those identified in the vicarious traumatization literature with mental health providers (Adams & Riggs, 2008; Baker, 2012; Jordan, 2011; Pearlman & Mac Ian, 1995), medical providers (Dominguez-Gomez & Tutledge, 2009; Tabor, 2011), and emergency services providers (Argentero & Setti, 2011; Setti & Argentero, 2012).

The CSDT (McCann & Pearlman, 1990; Pearlman & Mac Ian, 1995) literature would suggest that experiencing distressing emotions and changes to schemas would require prolonged exposure to trauma stories over time. The ability to influence some sense of control over the work environment through case load size and the ability to witness growth in others may result in less emotional distress and may even result in experiencing vicarious posttraumatic growth among some providers (Baker, 2012; Bober et al., 2006; Splevins et al., 2010).

A limitation of the qualitative research reviewed is the relatively small sample sizes; 6 (Green et al., 2012) to 8 (Splevins et al., 2009), and specific samples accessed which limit the ability to make any generalizations about the experiences of medical interpreters in behavioral health settings in regards to vicarious traumatization or vicarious posttraumatic growth. What is not known is if these reports of symptoms similar to vicarious traumatization or vicarious posttraumatic growth can be generalized to all medical interpreters working in mental health clinics with trauma survivors or not?

Do the recommended strategies or protective factors, such as time in the field, briefing and debriefing around therapy sessions, and working as part of an ongoing treatment team with the same therapist and same client over time, have any predictive values to determining risks or potential benefits to the medical interpreter in behavioral health? A quantitative research model addressing these questions will be proposed in the next section.

Chapter 3: Research Method

The purpose of this study was to explore whether medical interpreters could be subtyped on the basis of vicarious traumatization measures, vicarious posttraumatic growth measures, and 12 socio-demographic and professional practice variables derived from the literature. An aim of this study was to examine whether distinct differences existed among identified groupings of medical interpreters based on 12 socio-demographic variables derived from the literature that have been suggested to either increase risk or benefit associated with providing services to trauma survivors in a therapeutic setting.

This chapter will address questions related to (a) research design, (b) description of the population to be studied, (c) proposed sampling procedures and recruitment of participants, (d) identification of instrumentation to be used to operationalize the discriminant variables, and (e) address ethical considerations for the proposed study.

Research Design and Rational

This study was an exploratory study using a cross-sectional survey design. The aims of this study included: (a) examine whether distinct groupings of medical interpreters could be identified based on measures of vicarious traumatization, vicarious posttraumatic growth, and 12 suggested risk or protective factors and practices derived from the literature, and (b) examine whether distinct differences among the groups identified that would support the identification of potential risk or protective factors that could further support the professional development of medical interpreters who work in behavioral health settings.

A cross-sectional survey design using cluster analysis is appropriate for this study as the interest of this study is exploratory (Creswell, 2009; Kaufman & Rousseeuw, 1990). Cluster analysis has been applied in psychology research as it is thought to assist in identifying patterns of behavior or problems that individuals may be experiencing in order to determine more effective treatment interventions and improve outcomes (Borgen & Barnett, 1987).

Research Questions

Research Question 1

Can medical interpreters in behavioral health settings be subtyped using cluster analysis on the basis of vicarious traumatization (as measured by the Trauma and Attachment Belief Scale [TABS]; Pearlman, 2003), vicarious posttraumatic growth (as measured by the Posttraumatic Growth Inventory [PTGI]; Tedeschi & Calhoun, 1996), and 12 trauma-related personal and professional experience variables derived from the literature that have been associated with or recommended to either reduce or increase risks or benefits associated with exposure to traumatic material in a behavioral health setting?

Research Question 2

If subtypes among medical interpreters are evident, are there significant differences between subtypes based on the 12 trauma-related personal and professional experience variables derived from the literature that have been associated with or recommended to either reduce or increase risks or benefits associated with exposure to traumatic material in a behavioral health setting?

Participants

The participants for this study were self-selected medical interpreters 18 years of age or older who work in a behavioral health setting. This included both bilingual and sign language interpreters. They provided interpretation services in a behavioral health setting. Participants recruited through the IMIA email list, the NCMI LinkedIn group posting, and the NBCMI directory had access to internet services. Additional participants were recruited through interpreting agencies identified through web searches using the following search phrases: *therapy interpreters*, *interpreters for therapy*, and *interpreter services.*

Sampling Strategy

A cross-sectional survey design was determined to be the most time and cost effective method for this study. Quantitative research that employs a survey design allows for ease of gathering numerical information for statistical analysis to examine relationships between variables and allow for generalizing results to a specific population (Creswell, 2009). Using internet access allows for ease of administration and data collection without excessive cost to the researcher (Babbie, 2013; Rudenstam & Newton, 2007). An internet survey design also increases access to a larger geographic area in a shorter time-frame than would be available otherwise. Studies have found that response rates for web surveys are comparable to paper and pencil administered surveys when accompanied by a prenotification email (Kaplowitz, Hadlock, & Levine, 2004; Porter & Whitcomb, 2007).

This researcher sent out emails to prospective participants that included a letter of introduction explaining the purpose of the study, a link to the online survey, information regarding the researcher, information on how to contact the researcher or the Walden University Internal Review Board (IRB) and the IRB approval number. Potential participants then determined at their leisure whether they wanted to complete the survey. A follow-up email was sent to NBCMI members.

Sampling Procedure

An announcement of the study along with a link to the survey was sent to IMIA members through the organization's monthly email new letters (Appendix A). A similar announcement with the survey link was posted on the NCMI LinkedIn group page (Appendix B). An email introducing the study was sent to NBCMI members and interpreting agencies identified through the web-searches (Appendix C, Appendix D). A second email was sent to NBCMI members (Appendix E). Once an individual clicked on the link they were directed to SurveyMonkey.com and an introductory letter explaining the purpose of the study, including informed consent and how to contact the researcher and the Walden representative overseeing the study (Appendix F).

Participants were invited to participate in the study if they met the following criteria: (a) they were18 years of age or older and, (b) they had provided professional interpretation services in a behavioral health setting. A copy of the introductory letter and informed consent is provided in Appendix F. Participants were informed that they could exit the study at any time by closing the web page without penalty. Participants were reminded that participation is strictly voluntary and anonymous. Contact information for

the researcher and the Walden representative were provided for any participant who had any further questions or concerns related to the study.

Inclusion and Exclusion Criteria

This study was primarily concerned with the experiences of medical interpreters in behavioral health. Individuals who did not provide medical interpretation services in behavioral health settings were excluded. This was addressed in the screening questions with a direct yes, no response to "Do you provide medical interpretation services in behavioral health or mental health settings?" Other exclusion criteria, age and agreement to allow survey responses to be used for the purposes of this research study, were addressed in the screening and informed consent area (Appendix G). If a participant indicated they were not 18 years of age or older, or they declined to have their responses included in the research study, a message was displayed thanking them for their time and interest and the survey was discontinued.

Participants remained anonymous. There was no personally identifying information collected and there was no way of contacting any of the participants independent of their contacting the researcher or the Walden representative. Even if a participant chose to contact the researcher or representative there is no way of linking a participant's responses to this inquiry. Participants were not compensated for their participation in the study. Results of the study will be provided through a link on the NCMI LinkedIn group page and at the discretion of the IMIA through their email list. There was no additional follow up regarding participation once the survey was completed and submitted by the participant.

Sample Size and Power Analysis

There is no predetermined sample size for a cluster analysis; however, it is important to consider the number of variables to be included in the discriminant analysis (Mooi & Sarstedt, 2011). There were 14 variables, five continuous and nine categorical, that were used in this two-step cluster analysis. There needed to be enough participants in order to make any identified subtype meaningful. This study aimed to collect 200 to 300 completed surveys.

Data Collection and Analysis

A link to the survey was emailed to IMIA members through the organization's monthly email new letters (Appendix A). Additionally a post requesting participants and the link to the survey was placed on the National Certification for Medical Interpreters (NCMI) LinkedIn page (certifiedmedicalinterpreters.org; Appendix B). The link redirected participants to the survey host site, SurveyMonkey.com, where participants then had an opportunity to review the introductory letter describing the study, the extent of confidentiality, the researcher, and the role of Walden University. This was then followed by the three screening questions; (a) an agreement to participate in the study and have responses included in the study, (b) age, and (c) whether the participant currently provides medical interpretation in behavioral health. The consent form and the subsequent screening questions are provided in Appendix F and G. Participants recruited through interpreting agencies were recruited through email recruitment. A letter of introduction was sent to the agency which included a copy of the email to be sent to fellow employees of the agency (Appendix D).

Once a sufficient number of surveys were collected, data was securely transferred to a password protected personal laptop computer using IBM SPSS version 21.0. All records will be maintained and secured on said password protected laptop for five years after completion of this study. After 5 years have passed, all records will be destroyed.

The data was analyzed using SPSS version 21. Due to a mixture of continuous and categorical variables, a two-step cluster analysis procedure was used, followed by a chi-square analysis for categorical variables and a *t* statistic for continuous variables. Data was screened for outliers as outliers may have a large effect on the formation of subtypes (Norusis, 2005, 2011). Although the assumptions for normal distribution for continuous variables and multinomial distribution for categorical variables are not generally necessary for the algorithm to behave reasonably well, data were screened for these assumptions as this would yield the best results. Since two-step cluster analysis does not directly test a specific hypothesis, significance levels were not used (Norusis, 2005). The log-likelihood was used for distance measurement due to mixed data and the number of clusters was determined by the Schwarz Bayesian Criterion (BIC).

Instrumentation and Operationalization

This exploratory study included several socio-demographic variables and standardized quantitative measures examining instances of vicarious traumatization and vicarious posttraumatic growth among behavioral health medical interpreters. A cross-sectional survey design was utilized due to ease of administration and data collection, and time and cost efficiency. A two-step cluster analysis was utilized to identify distinct groupings as there are both continuous and categorical variables (Mooi & Sarstedt, 2011).

Cluster analysis is an exploratory procedure and is appropriate for an examination of whether any risk or protective factors can be identified in association with either vicarious traumatization or vicarious posttraumatic growth (Kaufman & Rousseeuw, 1990). A cross-sectional survey design lends itself to questions of relationship and the ability to generalize to a larger population (Creswell, 2009).

Discriminant Variables

Instruments

Vicarious traumatization. The TABS, formerly the Traumatic Stress Institute-Belief Scale (TSI-Belief Scale) (Pearlman, 2003), is an 84-item self-report, six-point Likert scale (1 = Disagree strongly, 6 = Agree strongly) questionnaire that is designed to measure disruptions in five cognitive schemas/belief areas that are sensitive to traumatic experiences and is based on CSDT (McCann & Pearlman, 1990; Pearlman & Saakvitne, 1995). The five areas are Safety, Trust, Esteem, Intimacy, and Control; each has a self and other scale for a total of 10 subscale scores. Higher scores indicate greater disruption. The Cronbach's alpha for the total scale is .96, with internal consistency for each subscale as follows: self-safety $\alpha = .83$, other-safety $\alpha = .72$, self-trust $\alpha = .74$, other-trust $\alpha = .80$, self-esteem $\alpha = .83$, other-esteem $\alpha = .82$, self-intimacy $\alpha = .67$, other-intimacy $\alpha = .87$, self-control $\alpha = .73$, and other-control $\alpha = .76$. The average total score for mental health professionals is 166 (Jenkins & Baird, 2002; Pearlman & Mac Ian, 1995). The instrument has two forms, a child form for individuals ages 9 to 18 and an adult form for ages17 to 78. The adult form was utilized for this study. Permission for the use of this instrument is provided in Appendix H, I, J, and K.

The TABS instrument has been used extensively with populations of professionals in the mental health field (Brady et al., 1999; Birck, 2001; Cunningham, 2003; Deville et al., 2009; Jenkins & Baird, 2002; McLean et al., 2003; Pearlman, 1995). Specific content validity has not been reported; however, face validity is asserted based on the report of the test-takers' general acceptance of the TABS scores as an accurate representation of their experiences and the transparency of the test items (Pearlman, 2003). Construct and convergent validity are reported to be adequate. Discriminant validity is not reported. The TABS, as a standard clinical instrument in combination with other assessment tools in clinical practice, is reported to be an acceptable instrument for the purposes of examining the cumulative effects of trauma exposure. The instrument focuses on the beliefs about self and other, and how these beliefs then affect relationships, and is therefore an acceptable instrument for the purposes of this study.

Vicarious posttraumatic growth. The PTGI (Tedeschi & Calhoun, 1996) is a 21-item self-report questionnaire utilizing a six-point Likert scale (0 = "I did not experience this change as a result of experiencing a crisis", 5 = "I experienced this change to a very great degree as a result of experiencing a crisis"). This inventory is reported to measure the positive schema changes associated with experiencing traumatic events. The responses were modified to address vicarious posttraumatic growth by changing *result of your crisis* to *result of your role as a medical interpreter* with the permission of the authors (Appendix L). The inventory consists of five factor scores along with a total score. The five factors are New Possibilities (NP), Relating to Others (RO), Personal Strength (PS), Spiritual Change (SC), and Appreciation for Life (AL),

with higher scores indicating more growth (see Appendix M for the complete inventory). Internal consistency for the total score is α = .90. Internal consistency for each factor is: New Possibility α = .84, Relating to Others α = .85, Personal Strength α = .72, Spiritual Change α =. 85, and Appreciation of Life α = .67.

The PTGI has been used with individuals who have experienced trauma directly (Tedeschi & Calhoun, 1996) and with social workers (Ben Porat, 2009; Gibbons, Murphy, & Joseph, 2011). Concurrent validity has been demonstrated by high correlations with personality traits of extraversion and optimism and discriminant validity has been demonstrated by low correlation with neuroticism and social desirability (Tedeschi & Calhoun, 1996). Construct validity has been demonstrated by comparison of scores to the NEO Personality Inventory (Costa & McCrae, 1992) and that the perception of benefit is not entirely based on overall positive perception bias as indicated by comparison with the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960).

Demographic and Professional Variables

Demographic and professional variables included both continuous and categorical variables (Appendix G). These included, (a) years as a medical interpreter outside of behavioral health settings, (b) years as a behavioral health medical interpreter, (c) percentage of time spent interpreting traumatic material (calculation based on number of sessions per month providing interpretation services that contained traumatic material divided by total number of sessions per month providing interpretation services), (d) level of education as it relates to interpreting (certification program < 40 hours, certification

program ≥ 40 hours, two year associate degree specific to medical interpretation, 4 year bachelor degree specific to medical interpretation, > than 4 year degree specific to medical interpretation), (e) specific mental health training (yes, no), (f) personal history of trauma (yes, no), (g) personal or family history similar to any of the trauma survivors served in the past year (yes, no), (h) sought personal therapy related to exposure to traumatic material from work environment (yes, no), (i) exposure to suicide or homicide assessment within the last six months (yes, no), (j) witnessed recovery from trauma (yes, no), (k) participation in briefing or debriefing before or after a therapy session (always, sometimes, never), and (l) participation in supervision on a weekly basis (always, sometimes, never). The above variables were derived from the literature pertaining to vicarious traumatization and medical interpretation which is detailed in chapter 2.

Additional demographic variables included age, sex, relationship status, employment type, country of residence, and Race (Appendix G). These were not included in the discriminant analysis but were utilized to examine any differences between identified subtypes.

The analysis included *T*-scores of the TABS and the full scale scores for PTGI. High intercorrelations of variables in a cluster analysis are not necessarily problematic given that cluster analysis groups cases, not variables. Due to the time and financial limitations the subscale scores were not included in the final analysis.

Threats to Validity

As this is a cross-sectional design, any generalizations of results are restricted to medical interpreters in behavioral health settings and may not generalize to other

populations in behavioral health or to medical interpreters in other settings (Creswell, 2009). Participants were self-selected and assumed to provide accurate, unbiased responses. Threats to statistical conclusion validity was addressed through obtaining an adequate sample size and through the use of SPSS descriptive statistics.

Ethical Procedures

Participants were recruited through the LinkedIn page for National Certified Medical Interpreters by posting a request to all members to participate in the survey (appendix B). Additionally, IMIA members were sent a link through the organization's monthly email new letter (Appendix A) and NBCMI members were sent an email invitation (Appendix C). A link to the survey was provided in the posting, email news letter, or direct email. Participants were informed that they would not be compensated for their participation, their information would remain anonymous, and participation was completely voluntary and at no time were they obligated in any way to the researcher or to Walden University (Appendix F).

Potential Negative Effects

Participants were informed that they may experience mild discomfort in completing some of the questions, which was disclosed in the introductory letter. Information on how to contact the researcher or the Walden representative was included if further assistance was needed. If discomfort was too great, participants were encouraged to discontinue the survey at any time without any negative consequences to the participant. There was no way to save information for later completion. Data was not

transferred until the survey was completed and the information was submitted by the participant.

Confidentiality and Informed Consent

There was no identifying information collected on any of the participants; therefore, the information will remain anonymous. Consent was assumed through the completion of the survey. The introductory letter addressed concerns related to confidentiality and informed consent, including informing participants that they could discontinue participation at any time by closing the link to the survey without any penalty. All participants were 18 years or older to avoid any complications to informed consent procedures that would be required when working with minors.

Treatment of Data

Data was retained after the participant provided consent to participate. All data collected was transferred to SPSS from SurveyMonkey.com and this will be stored on a password protected laptop for up to five years after the completion of the dissertation, at which time the data will be destroyed. Data will be shared with the publisher(s) of the PTGI and TABS as is customary in exchange for their use in research. The results will also be shared with IMIA and NBCMI.

Summary

The delivery of culturally competent behavioral health services for LEP individuals is dependent on medical interpreters. Examining the possible risks or benefits associated with providing interpretation services for LEP individuals seeking trauma treatment has several positive social change implications, including providing valuable

information to existing education and training programs for medical interpreters in behavioral health, ensuring a skilled medical interpreter work force, and improved treatment outcomes for LEP populations.

This research was an exploratory study utilizing a cross-sectional survey design and cluster analysis to determine if subtypes among medical interpreters in behavioral health settings could be identified based on measurements of cognitive schemas associated with vicarious traumatization (TABS) and vicarious posttraumatic growth (PTGI) and whether these subtypes could be further differentiated based on socio-demographic information derived from the literature.

Participants were recruited from the IMIA monthly member news email, NCMI Linkedin group, NBCMI members, and interpreting agencies. Results may be posted on the IMIA website and NCMI Linkedin group website page. The results of the study will be presented in Chapter 4.

Chapter 4: Results

The purpose of this study was to examine whether medical interpreters can be subtyped based on measures of vicarious traumatization and vicarious posttraumatic growth and whether recommended practices based on the literature further contribute to distinct groupings. One aim of the study was to examine whether potential risks or protective factors can be identified to inform existing education and training programs for behavioral health medical interpreters. Another aim of this study was to contribute to the existing body of research regarding vicarious traumatization or vicarious posttraumatic growth by surveying medical interpreters in behavioral health settings through the use of quantitative measures which had only been alluded to in prior qualitative studies. In line with this, the following research questions guided the statistical analysis:

Research Question 1

Can medical interpreters in behavioral health settings be subtyped using cluster analysis on the basis of vicarious traumatization (as measured by the Trauma and Attachment Belief Scale [TABS]; Pearlman, 2003), vicarious posttraumatic growth (as measured by the Posttraumatic Growth Inventory [PTGI]; Tedeschi & Calhoun, 1996), and 12 trauma-related personal and professional experience variables derived from the literature that have been associated with or recommended to either reduce or increase risks or benefits associated with exposure to traumatic material in a behavioral health setting?

Research Question 2

If subtypes among medical interpreters are evident, are there significant differences between subtypes based on the 12 trauma-related personal and professional experience variables derived from the literature that have been associated with or recommended to either reduce or increase risks or benefits associated with exposure to traumatic material in a behavioral health setting?

The focus of this chapter is to present the results of the quantitative analyses that are used to address the research questions of the study. The study outcomes are presented in tables with descriptive narratives. First, a summary and comparison of the data between the medical interpreters that have complete responses in the PTGI and TABS versus those medical interpreters that did not have complete responses in the PTGI and TABS are presented. This is followed by the results of the cluster analysis to address research question one. Lastly, the results of the independent sample *t* test and chi-square analysis to address research question two are presented.

Data Collection

The data collection for this research study took place from January 24, 2015, through July 31, 2015. The data were exported from SurveyMonkey.com and were analyzed using Statistical Package for the Social Sciences (SPSS) 21.0. Prior to completing the survey respondents were directed to an introductory letter explaining the purpose of the study that included informed consent indicating all responses were anonymous and voluntary. Participants were self-selected adults, 18 years or older, and are assumed to have provided accurate, unbiased responses.

A total of 1,511 emails were sent to the members of NBCMI and an additional 65 emails were sent to agencies that provide medical interpreting services for a total of 1,576 emails. A total of 317 surveys (21.08%) were attempted with 201 completed surveys (13.30%).

Descriptive Statistics of Study Variables

The sample consists of 317 responders of self-selected medical interpreters 18 years of age or older that work in a behavioral health setting. Of those, 201 provided complete responses. Further examination of the survey responses revealed that a total of 27 participants did not have any exposure to interpreting traumatic material in their work. These participants were removed from the final analysis given that that research question specifically examined the influence of exposure to traumatic material. This resulted in a final sample of 174 participants. Descriptive statistic of mean and standard deviation were used to summarize the data of age. The frequency and percentage summaries of the categorically measured demographic variables: sex, current relationship status, employment status, country of residence, race, and whether a medical interpreter provided services in spoken or sign interpretation are summarized in Table 1.

Majority of the sample of medical interpreters were female (139; 79.9%). The mean age among the 174 medical interpreters was 44.20 years old (*SD* = 11.51). The oldest medical interpreter was 73 years old while the youngest was 22 years old. For the current relationship status, more than half (95; 54.6%) of the sample of medical interpreters were married. For the employment status, 62 (35.6%) were mental health clinic/hospital employee, 58 (33.3%) were independent contractor, and 31 (17.8%) were

Table 1

*Frequency and Percentage Summaries of Demographic Information (*N *= 174)*

Demographics	*n*	%
Sex		
Female	139	79.9
Male	35	20.1
Current relationship status		
Divorced	28	16.1
Domestic partnership	9	5.2
Married	95	54.6
Separated	2	1.1
Single/cohabitating	15	8.6
Single, never married	24	13.8
Widowed	1	0.6
Employment status		
Independent contractor	58	33.3
Interpreting agency employee	31	17.8
Mental health clinic/hospital employee	62	35.6
Other	23	13.2
Country of residence		
United States	170	97.7
Australia	1	0.6
Canada	1	0.6
Mexico	2	1.1
Race		
Asian	8	4.6
Black or African American	3	1.7
From multiple races	31	17.8
Hispanic	14	8.0
Other	2	1.1
White	116	66.7
Spoken or sign interpretation, or both?		
Spoken	156	89.7
Sign	9	5.2
Both	9	5.2

an interpreting agency employee. For the country of residence, almost all (170; 97.7%) resided in the United States. For the race, more than half (116; 66.7%) of the samples of medical interpreters were White, though there were significant numbers that were multiracial (31; 17.8%). Lastly, almost all (156; 89.7%) of the medical interpreters provide spoken interpretation and only, 9 (5.2%) provide sign language interpretation, and 9 (5.2%) used both.

The descriptive statistics summaries of the continuous variables are summarized in Table 2. The continuous variables include vicarious traumatization as measured by the TABS instrument (*t* score), vicarious posttraumatic growth as measured by the PTGI (total score), years as a medical interpreter, years as a behavioral health medical interpreter, and percentage of time spent interpreting traumatic material among the 174 samples of medical interpreters.

The mean *T*-score for vicarious traumatization was 46.50 (*SD* = 10.54). The mean score was in the average range of *T*-scores indicating that the sample of medical interpreters have average levels of vicarious traumatization. The mean score for vicarious posttraumatic growth was 45.30 (*SD* = 28.61). The mean score was in the lower end of the 0 to 105 range of scores indicating less vicarious posttraumatic growth. The mean number of years of experience as a medical interpreter was 10.43 years (*SD* = 7.62). The mean number of years of experience as a behavioral health medical interpreter was 6.48 years (*SD* = 6.26). The mean percentage of time spent interpreting traumatic material among the 174 samples of medical interpreters was 0.56 (*SD* = 0.31).

Table 2

*Descriptive Statistics of Continuous Variables (*N = *174)*

Continuous variables	*M*	*SD*	Min.	Max.	Mdn
Vicarious traumatization *T*-score (TABS)	46.50	10.54	25	76	46.0
Vicarious posttraumatic growth (PTGI)	45.30	28.61	0	105	45.0
Years as a medical interpreter	10.35	7.65	1	35	8.0
Years as a behavioral health medical interpreter	5.92	6.14	0	30	5.0
% of time spent interpreting traumatic material	0.49	0.35	0.05	1.00	0.5

The frequency and percentage summaries of the categorical variables: level of education as it relates to interpreting, specific mental health training, personal history of trauma, personal or family history similar to any of the trauma survivors served in the past year, sought personal therapy related to exposure to traumatic material from work environment, exposure to suicide or homicide assessment within the last six months, witnessed recovery from trauma, participation in briefing or debriefing before or after a therapy session, and participation in supervision on a weekly basis among the 174 samples of medical interpreters that are responders in the study, are summarized in Table 3.

For the level of education as it relates to interpreting, almost half (83; 47.7%) of the 174 medical interpreters achieved certification program of greater than 40 hours. Less than half of the 174 medical interpreters have specific mental health training (77; 44.3%), have personal history of trauma (73; 42.0%), and personal or family history similar to any of the trauma survivors served in the past year (60; 34.5%). Only 23 (13.24%) out of the 174 medical interpreters sought personal therapy related to exposure to traumatic material from work environment. More than half (97; 55.7%) of the 174 medical interpreters had

Table 3

*Frequency and Percentage Summaries of Personal and Professional Factors (*N = *174)*

Personal and professional factors	*n*	%
Level of education as it relates to interpreting		
Certification program < 40 hours	24	13.8
Certification program ≥ 40 hours	83	47.7
2-year associate's	12	6.9
4-year bachelor's	6	3.4
> 4 year bachelor's	9	5.2
Unknown	40	23.0
Specific mental health training		
No	97	55.7
Yes	77	44.3
Personal history of trauma		
No	101	58.0
Yes	73	42.0
Personal or family history similar to trauma survivor served		
No	114	65.5
Yes	60	34.5
Sought personal therapy		
No	151	86.8
Yes	23	13.2
Exposure to suicide or homicide assessment		
No	77	44.3
Yes	97	55.7
Witnessed recovery from trauma		
No	58	33.3
Yes	116	66.7
Participate in briefing or debriefing		
Never	42	24.1
Sometimes	110	63.2
Always	22	12.6
Participate in weekly supervision		
No supervision provided	114	65.5
Weekly supervision	21	12.1
Monthly supervision	39	22.4

exposure to suicide or homicide assessment within the last six months, participate in briefing or debriefing before or after a therapy session sometimes (110; 63.2%), have witnessed recovery from trauma (116; 66.7%), and have no participation in supervision (114; 65.5%).

Finally a comparison of participants who completed (201) and those who did not complete (116) the survey was conducted. Those who did not report exposure to trauma material were included in the comparison as they did complete the survey. The results of an independent *t* test showed that age was significantly different between the two sample groups, $t(304) = -2.03$, $p = .04$. Participants with completed surveys were older than those who did not complete the survey, 44.31 year s old ($SD = 11.58$) versus 41.54 years old ($SD = 10.92$). The results of the chi-square test showed that significant differences included, race, $\chi^2(7, N = 317) = 64.34$, $p < .001$; level of education as it relates to interpreting, $\chi^2(6, N = 317) = 108.02$, $p < .001$; current relationship status, $\chi^2(7, N = 317) = 58.96$, $p < .001$; employment status, $\chi^2(5, N = 317) = 48.93$, $p < .001$; and country of residence, $\chi^2(6, N = 317) = 60.28$, $p < .001$. Frequency and percentage summaries of the categorical variables of incomplete and complete responders are presented in Table 4.

Participants who completed the survey were more likely to be Asian (13 versus 5), Black or African American (3 versus 0), from multiple races (38 versus 9), Hispanic (15 versus 8), were not Native Hawaiian or other Pacific Islander (0 versus 2), and equally other (2 versus 2). Participants with completed surveys were more likely to have completed a certification program in interpretation less than 40 hours (28 versus 10), greater than or equal to 40 hours (97 versus 27), a 2-year associate's degree (12 versus 3),

and completed more than a 4-year degree specific to medical interpretation (9 versus 3). They were equally likely to have completed a 4-year degree specific to medical interpretation (6 versus 5). They were more likely to be married (112 versus 52), divorced (32 versus 8), single/never married (26 versus 11), or single/cohabitating (18 versus 7), less likely to be widowed (1 versus 6), and equally separated (2 versus 2). In regards to employment, participants with complete responses were more likely to be an independent contractor (62 versus 32), be employed by an interpreting agency (34 versus 15), be employed by a mental health hospital or clinic (74 versus 35), or identify as other (30 versus 9). Only one participant with a completed survey identified as retired. Participants with completed surveys were more likely to reside in the United States (197 versus 82). There were no significant differences between the two sample groups of medical interpreter with complete and incomplete responses for sex, $\chi^2(1, N = 292) = 0.04$, $p = .88$; and spoken or sign interpretation, $\chi^2(2, N = 288) = 4.34$, $p = .11$.

Table 4

*Frequency and Percentage Summaries of Categorical Variables by Groupings of Incomplete (*N *= 116) and Complete (*N *= 201) Responders*

	Incomplete		Complete		Total	
Variable	*n*	*%*	*n*	*%*	*n*	*%*
Sex						
Female	72	79.1	161	80.1	233	79.8
Male	19	20.9	40	19.9	59	20.2
Race						
Missing	29	25.0	0	0.0	29	9.1
Asian	5	4.3	13	6.5	18	5.7
Black or African American	0	0.0	3	1.5	3	0.9
From multiple races	9	7.8	38	18.9	47	14.8
Hispanic	8	6.9	15	7.5	23	7.3
Native Hawaiian or other Pacific Islander	2	1.7	0	0.0	2	0.6
Other	2	1.7	2	1.0	4	1.3
White	61	52.6	130	64.7	191	60.3
Level of education as it relates to interpreting						
Missing	51	44.0	0	0.0	51	16.1
Certification < 40 hours	10	8.6	28	13.9	38	12.0
Certification ≥ 40 hours	27	23.3	97	48.3	124	39.1
2 years associate degree	3	2.6	12	6.0	15	4.7
4 year bachelor	5	4.3	6	3.0	11	3.5
> 4 year bachelor	3	2.6	9	4.5	12	3.8
Other	17	14.7	49	24.4	66	20.8
Current relationship status						
Divorced	8	6.9	32	15.9	40	12.6
Domestic partnership	5	4.3	10	5.0	15	4.7
Married	52	44.8	112	55.7	164	51.7
Separated	2	1.7	2	1.0	4	1.3
Single/cohabitating	7	6.0	18	9.0	25	7.9
Single/never married	11	9.5	26	12.9	37	11.7
Widowed	6	5.2	1	0.5	7	2.2
Retired	25	21.6	0	0.0	25	7.9
Employment status						
Missing	25	21.6	0	0.0	25	7.9
Independent contractor	32	27.6	62	30.8	94	29.7
Interpreting agency employee	15	12.9	34	16.9	49	15.5
Mental health clinic/hospital employee	35	30.2	74	36.8	109	34.4
Other	9	7.8	30	14.9	39	12.3
Retired	0	0.0	1	0.5	1	0.3
Country of residence						
Missing	29	25.0	0	0.0	29	9.1
United States	82	70.7	197	98.0	279	88.0
Australia	1	0.9	1	0.5	2	0.6
Canada	1	0.9	1	0.5	2	0.6
Mexico	1	0.9	2	1.0	3	0.9
United Kingdom	1	0.9	0	0.0	1	0.3
Costa Rica	1	0.9	0	0.0	1	0.3
Spoken or sign interpretation						
Spoken	72	82.8	180	89.6	252	87.5
Sign	4	4.6	10	5.0	14	4.9
Both	4	4.6	10	5.0	14	4.9

Results

Pre-analysis Data Screening

As previously described, only cases with completed surveys and some exposure to trauma material in their roles as medical interpreters were utilized for the final analysis. A final review of the remaining 174 cases confirmed no missing data.

Outlier Investigation

An investigation of outliers was conducted for the continuous variables of vicarious traumatization, vicarious posttraumatic growth, years as a medical interpreter, years as a behavioral health medical interpreter, and percentage of time spent interpreting traumatic material. Boxplots and stem-and-leaf plots were reviewed. Outliers were identified for years as a medical interpreter and years as a behavioral health medical interpreter. These variables were transformed using the maximum value and used in the final analysis (TRMIYRS and TRBHMIYRS respectively).

In regards to the categorical variables, it can be seen in Table 3 that the frequency distribution of each variable; level of education as it relates to interpreting, specific mental health training, personal history of trauma, personal or family history similar to any of the trauma survivors served in the past year, sought personal therapy related to exposure to traumatic material from work environment, exposure to suicide or homicide assessment within the last six months, witnessed recovery from trauma, participation in briefing or debriefing before or after a therapy session, and participation in supervision on a weekly basis. The frequency distributions demonstrate there is an adequate *n* in each cell as no cell has less than 5 (Cochran, 1954).

Normality Testing

Normality testing was conducted on the continuous variables after transformation of the two variables with outliers, using the Kolmogorov-Smirnov and the Shapiro-Wilk tests for normality. The results of the tests are summarized in Table 5. The resulting Kolmogorov-Smirnov statistic showed that the study variables of vicarious posttraumatic growth, years as a medical interpreter, years as a behavioral health medical interpreter, and percentage of time spent interpreting traumatic material were not normally distributed. Only the data for the *T*-scores of vicarious traumatization as measured by the TABS followed normality, $KS\ (174) = .06$, $p = .08$. This was consistent with the Shapiro-Wilk test for normality as well, $SW\ (174) = .99$, $p = .13$.

Investigation of the skewness and kurtosis statistics were conducted to further explore whether the data follows normal distribution. While, the two-step cluster analysis is thought to behave "reasonably well" when assumptions of normality are not met (Norušis, 2012, p. 394), skewness and kurtosis values between ±2 are considered acceptable (George & Mallery, 2010). Looking at Table 5, the skewness statistic values ranged from 0.27 to 1.01 while the kurtosis values ranged from −1.31 to 0.38, which are well within range.

Table 5

Tests of Normality Among Continuous Variables

Variable	KS		SW		SK	K
	Value	*p*	Value	*p*		
Predictor variables						
Years as a medical interpreter transformed	.14	<.001	.91	<.001	1.01	0.38
Years as a behavioral health medical interpreter transformed	.17	<.001	.88	<.001	0.98	0.03
% of time spent interpreting traumatic material	.19	<.001	.88	<.001	0.30	−1.31
Evaluation variables						
Vicarious posttraumatic growth Total Score (PTGI)	.08	.02	.97	<.001	0.22	−0.93
Vicarious traumatization *T*-score (TABS)	.06	.20	.99	.13	0.18	−0.43

Note. KS = Kolmogorov-Smirnov with Lilliefors significance correction. SW = Shapiro-Wilk. SK = skewness. K = kurtosis.

Two-Step Cluster Analysis Results

A two-step cluster analysis was conducted to identify distinct groupings of the medical interpreters using the continuous and categorical variables. This analysis for research question 1 of the study is to determine if medical interpreters in behavioral health settings can be subtyped using cluster analysis on the basis of the trauma-related personal and professional experience variables derived from the literature that have been associated with or recommended to either reduce or increase risks or benefits associated with exposure to traumatic material in a behavioral health setting. Originally 14 variables, including the two trauma measures, TABS and PTGI, were included as predictor variables. A model building approach was conducted to find a suitable cluster fit that resulted in switching the two vicarious variables from predictors to evaluation fields, leaving 12 predictor variables. An evaluation field variable is not used to cluster variables, but rather is analyzed post-hoc to further examine differences between cluster

groupings. Examining the differences between the cluster groupings using the vicarious variables as evaluation fields yielded a better model fit.

The resulting two-step cluster analysis generated two subtypes of medical interpreters. The cluster quality was fair (Figure 1). In terms of cluster size between the two subtypes of medical interpreters Subtype 1 are composed of 73 (42%) medical interpreters while Subtype 2 are composed of 101 (58%) medical interpreters (Figure 2). The personal history of trauma was the most important predictor for the groupings, the second most important was personal or family history similar to any of the trauma survivors served in the past year, and the third most important was sought personal therapy related to exposure to traumatic material from work environment (Figure 3).

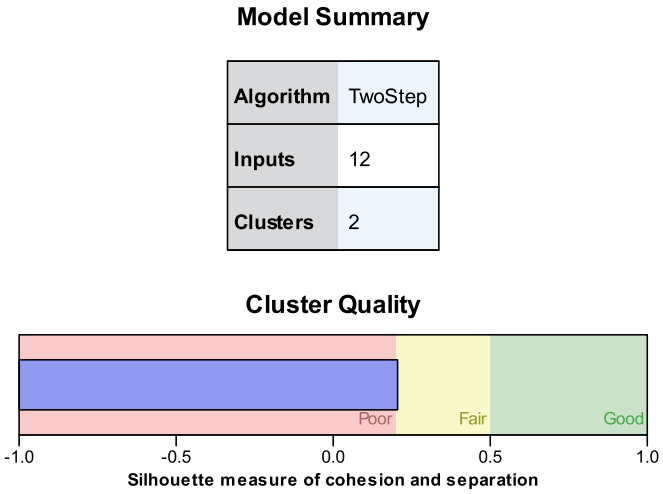
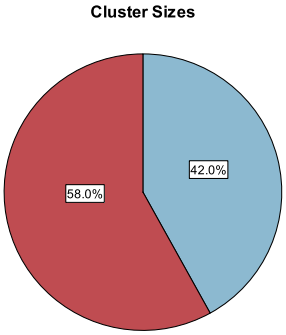


Figure 1. Model summary of cluster quality.



Size of Smallest Cluster	73 (42%)
Size of Largest Cluster	101 (58%)
Ratio of Sizes: Largest Cluster to Smallest Cluster	1.38

Figure 2. Cluster sizes.

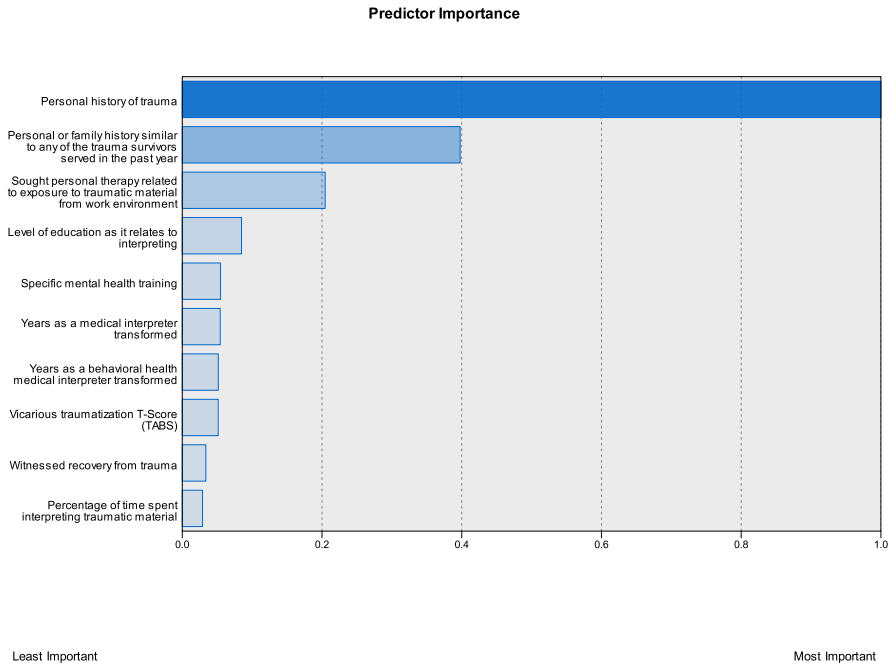


Figure 3. Predictor importance.

Comparison of Data of the Two Subtypes Generated

Another analysis was conducted to make a comparison of the data of the different study variables across the two subtypes generated. These analysis addressed research question 2 to determine if subtypes among medical interpreters are evident are there significant differences between subtypes based on the 12 trauma-related personal and professional experience variables derived from the literature that have been associated with or recommended to either reduce or increase risks or benefits associated with exposure to traumatic material in a behavioral health setting. Additionally, the evaluation field variables, TABS *T*-score and PTGI, were used to further compare the two groups. Again, chi-square analysis was conducted for categorical variables while independent sample *t* test was conducted for continuous variables.

The results of the independent *t* test to determine the differences of years as a medical interpreter, years as a behavioral health medical interpreter, and percentage of time spent interpreting traumatic material between the two subtypes are presented in Table 6. The results of the *t* test analysis showed that the years as a medical interpreter, $t(174) = 0.84$, $p = .02$, and years as a behavioral health medical interpreter, $t(174) = 2.31$, $p = .02$ were significantly different between the two subtypes. Subtype 1 had significantly higher years as a medical interpreter ($M = 11.99$, $SD = 7.23$) as compared to Subtype 2 ($M = 9.26$, $SD = 7.57$), as well as significantly higher years as a behavioral health medical interpreter (Subtype 1, $M = 7.34$, $SD = 5.97$; Subtype 2, $M = 5.41$, $SD = 5.05$). The results suggested that the years as a medical interpreter and years as a behavioral health medical interpreter influence which cluster a medical interpreter falls into.

Additionally, it should be noted that the Levene's statistic for years as a behavioral health medical interpreter is 5.26 with a *p* value of .02, and percentage of time spent interpreting traumatic material is 6.26 with a *p* value of .01. It should be noted that the assumption for equal variance is rejected for these variables; however, a violation of this assumption is not critical to the analysis (Mertler & Vannatta, 2010).

Table 6

Descriptive Statistics of Continuous Variables by Subtypes and Independent t *tests*

Predictor variables	Subtype	*N*	*M(SD)*	*t*	*p*
Years as a medical interpreter transformed	1	73	11.99 (7.23)	0.84	.02
	2	101	9.26 (7.57)		
Years as a behavioral health medical interpreter transformed	1	73	7.34 (5.97)	2.31	.02
	2	101	5.41 (5.05)		
Percentage of time spent interpreting traumatic material	1	73	0.61 (0.33)	1.58	.12
	2	101	0.53 (0.29)		

A chi-square test of association was performed to examine the differences of level of education as it relates to interpreting, specific mental health training, personal history of trauma, personal or family history similar to any of the trauma survivors served in the past year, sought personal therapy related to exposure to traumatic material from work environment, exposure to suicide or homicide assessment within the last six months, witnessed recovery from trauma, participation in briefing or debriefing before or after a

therapy session, and participation in supervision on a weekly basis between the two cluster groups of medical interpreters. The results are presented in Table 7.

Table 7

Chi-Square Test Results of Differences of Categorical Personal and Professional Factors by Subtypes

Categorical variable	χ^2	*df*	*p*
Level of education as it relates to interpreting	19.07[a]	5	.002
Specific mental health training	5.67	1	.02
Personal history of trauma	142.70	1	< .001
Personal or family history similar to any of the trauma survivors served in the past year	54.43	1	< .001
Sought personal therapy related to exposure to traumatic material from work environment	25.51	1	< .001
Exposure to suicide or homicide assessment within the last six months	0.05	1	.83
Witnessed recovery from trauma	3.02	1	.08
Participation in briefing or debriefing before or after a therapy session	0.45	2	.80
Participation in supervision on a weekly basis	2.37	2	.31

[a] *LR* χ^2 is reported for level of education as it relates to interpreting.

Due to the assumptions for the chi-square test being violated for the variable level of education, the likelihood ratio was used for this variable. The likelihood ratio showed that the level of education as it relates to interpreting was significant, *LR* $\chi^2(5, N = 174) = 19.07$, $p = .002$. The results of the chi-square test showed that specific mental health training, $\chi^2(1, N = 174) = 5.67$, $p = .02$; personal history of trauma, $\chi^2(1, N = 174) = 142.70$, $p < .001$; personal or family history similar to any of the trauma survivors served in the past year, $\chi^2(1\ N = 174) = 54.43$, $p < .001$; and sought personal therapy related to

exposure to traumatic material from work environment, $\chi^2(1, N = 174) = 25.51$, $p < .001$, were significantly different between the two subtypes of medical interpreter.

Regarding education, participants in Subtype 2 reported greater participation in all levels of education as it relates to medical interpreting, except for the category of > 4 year bachelor degree, where participants in Subtype 1 reported higher levels (100.0% versus 0.0%). Unfortunately, both groups reported roughly an equal number of "other" (unknown) for education (Subtype 1 = 52.0%; Subtype 2 = 48.1%). Participants in Subtype 1 reported a greater percentage of specific mental health training than participants in Subtype 2 (51.9% versus 48.1%). Regarding personal history of trauma and personal or family history similar to any of the trauma survivors served, participants in Subtype 1 reported higher instances of both (94.5% versus 5.5%, and 80.0% versus 20.0% respectively). Participants in Subtype 1 also reported they were more likely to have sought personal therapy related to exposure to traumatic material from work environment (91.4% versus 8.7%). Frequency and percentage summaries of statistically significant personal and professional factors between the two subtypes are presented in Table 8.

Evaluation Fields

In regards to the evaluation fields, the TABS *T*-score measuring vicarious traumatization was significantly different between the two cluster groupings, $t(174) = 2.31$, $p = .02$. The mean difference showed that the medical interpreters in Subtype 1 have higher *T*-scores for vicarious traumatization than the medical interpreters in Subtype 2, suggesting that medical interpreters in Subtype 1 are more likely to experience higher

levels of vicarious traumatization than medical interpreters in Subtype 2. The results of the *t* test analysis showed that vicarious posttraumatic growth was not significantly different between the two cluster groupings, $t(174) = -0.98$, $p = .33$. A summary of the significant differences between the two clusters in regards to all continuous variables along with descriptive statistics is presented in Table 9.

Table 8

Frequency and Percentage Summaries of Statistically Significant Personal and Professional Factors Between Subtypes

	Subtype 1 (*n* =73)		Subtype 2 (*n* =101)	
Predictor	*n*	%	*n*	%
Level of education as it relates to interpreting				
Certification program < 40 hours	5	20.8	19	79.2
Certificate program ≥ 40 hours	35	42.2	48	57.8
2-year associate degree specific to medical interpretation	4	33.3	8	66.7
4-year bachelor degree specific to medical interpretation	0	0.0	6	100.0
> than 4-year degree specific to medical interpretation	8	88.9	1	11.1
Other (Unknown)	21	52.5	19	47.5
Specific mental health training				
No	33	34.0	64	66.0
Yes	40	51.9	37	48.1
Personal history of trauma				
No	4	4.0	97	96.0
Yes	69	94.5	4	5.5
Personal or family history similar to any of the trauma survivors served in the past year				
No	25	21.9	89	78.1
Yes	48	80.0	12	20.0
Sought personal therapy related to exposure to traumatic material from work environment				
No	52	34.4	99	65.6
Yes	21	91.3	2	8.7

Table 9

Descriptive Statistics of Evaluation Fields by Subtypes and Independent t *tests*

Evaluation field	Subtype	*N*	*M(SD)*	*t*	*p*
Vicarious traumatization *t* score (TABS)	1	73	48.64 (11.01)	2.31	.02
	2	101	44.95 (9.93)		
Vicarious posttraumatic growth total score (PTGI)	1	73	42.81 (26.78)	-0.98	.33
	2	101	47.11 (29.86)		

Demographic Comparison Between Subtypes

A final analysis was conducted to determine demographic differences between subtypes. A chi-square test of association was performed to examine the differences of sex, current relationship status, employment status, country of residence, race, and spoken or sign interpretation between the two subtypes of medical interpreters. The results are presented in Table 10. Due to the assumptions for the chi-square test being violated for the variables race and current relationship status, the likelihood ratio was used for these variables. The likelihood ratio showed that race, $LR\ \chi^2(5, N = 174) = 12.58$, $p = .03$, and current relationship status, $LR\ \chi^2(6, N = 174) = 13.69$, $p = .03$, were significant. The results of the chi-square test showed that spoken or sign interpretation was significantly different between the two subtypes of medical interpreter, $\chi^2(2, N = 174) = 10.58$, $p = .01$.

Table 10

*Chi-Square Test Results of Differences of Demographic Variables by the Two Subtypes (*N = *174)*

Dependent variable	χ^2	*df*	*p*
Sex	0.07	1	.79
Current relationship status	13.69[a]	6	.03
Employment status	1.25	3	.74
Country of residence	5.65[a]	3	.13
Race	12.58[a]	5	.03
Spoke or sign interpretation	10.58	2	.01

[a] $LR\ \chi^2$ is reported for current relationship status, country of residence, and race.

Medical interpreters in Subtype 1 were more likely to report being divorced (57.1% versus 42.9%) and more likely to report being in a domestic relationships (77.8% versus 22.2%). Medical interpreters in Subtype 2 were more likely to report being married (66.3% versus 33.7), separated (100.0% versus 0.0%), single/cohabitating (53.3% versus 46.7%), single/never married (54.2% versus 45.8%), or widowed (100.0% versus 0.0%). In regards to race, medical interpreters in Subtype 1 were more likely to identify as being from multiple races (58.1% versus 41.9%) versus medical interpreters in Subtype 2 who were more likely to identify as Asian (100.0% versus .0.%), Black or African American (100.0% versus 0.0%), Hispanic (78.6% versus 21.4%), or White (58.0% versus 42.0%). Medical interpreters in both subtype were equally likely to identify as other (50.0% versus 50.0%). In regards to spoke or sign interpretation, medical interpreters in Subtype 1 were more likely to provide sign or both, spoken and sign interpretation (77.8% versus 22.2%) versus medical interpreters in Subtype 2 who were more likely to provide spoken interpretation only (62.2% versus 37.8%). The

Frequency and percentage summaries of the significant differences of demographic information by the two subtypes are presented in Table 11.

Table 11

Frequency and Percentage Summaries of Significant Differences Between Subtypes

	Subtype Number			
	1		2	
Demographic variable	*n*	%	*n*	%
Current relationship status				
Divorced	16	57.1	12	42.9
Domestic partnership	7	77.8	2	22.2
Married	32	33.7	63	66.3
Separated	0	0.0	2	100.0
Single/cohabitating	7	46.7	8	53.3
Single, never married	11	45.8	13	54.2
Widowed	0	0.0	1	100.0
Race				
Asian	1	12.5	7	87.5
Black or African-American	0	0.0	3	100.0
From multiple races	18	58.1	13	31.0
Hispanic	3	21.4	11	78.6
Other	1	50.0	1	50.0
White	50	43.1	66	56.9
Spoken or sign interpretation				
Spoken	59	37.8	97	62.2
Sign	7	77.8	2	22.2
Both	7	77.8	2	22.2

Independent *t* test was conducted to determine the difference of age between the two subtypes of entire medical interpreters. The results of the *t* test analysis showed that age was not significantly different between the two subtypes of medical interpreters, $t(172) = 0.34$, $p = .73$.

Summary

The purpose of this quantitative exploratory study is to examine whether medical interpreters can be subtyped based on 12 trauma-related personal and professional experience variables and whether recommended practices based on the literature further contribute to distinct groupings. The resulting two-step cluster analysis generated two subtypes of medical interpreters. The most important predictor of the cluster groupings of medical interpreters was the personal history of trauma, the second most important was personal or family history similar to any of the trauma survivors served in the past year, and the third most important was sought personal therapy related to exposure to traumatic material from work environment.

The results of the *t* test analysis showed years as a medical interpreter and years as a behavioral health medical interpreter were significantly different between the two subtypes. Medical interpreters in Subtype 1 had higher years as a medical interpreter and higher years as a behavioral health medical interpreter. The results of the chi-square test showed that the level of education as it relates to interpreting, specific mental health training, personal history of trauma, personal or family history similar to any of the trauma survivors served in the past year, and sought personal therapy related to exposure to traumatic material from work environment were significantly different between the two subtypes of medical interpreter. Medical interpreters in Subtype 1 were more likely to have overall less education in most categories except for > 4 year bachelor degree, were more likely to have specific mental health training, more likely to have personal history of trauma, and personal or family history similar to any of the trauma survivors

served in the past year, and more likely to have sought personal therapy related to exposure to traumatic material from work environment than medical interpreters in Subtype 2.

The identified cluster groupings were further examined using the vicarious variables as evaluation fields. The results of the *t* test analysis showed that the TABS *T*-score of vicarious traumatization was significantly different between the two subtypes. The mean difference showed that the medical interpreters in Subtype 1 have higher *t* scores for vicarious traumatization than the medical interpreters in Subtype 2.

A final analysis was conducted to determine differences between the two cluster groupings based on the demographic variables. The results of the *t* test analysis showed that there were no differences between the two subtypes based on age. The results of the chi-square test showed that the two subtypes demonstrated significant differences in regards to current relationship status, race, and spoke or sign interpretation. Medical interpreters in Subtype 1 were more likely to indicate being from multiple races versus those in Subtype 2 who were more likely to identify being Asian, Black or African American, Hispanic, or White. Medical interpreters in Subtype 1 were more likely to report being divorced or in a domestic partnership, versus medical interpreters in Subtype 2 who were more likely to report being married, separated, single/cohabitating, single/never married, or widowed. Medical interpreters in Subtype 1 were more likely to provide sign or both, spoken and sign interpretation, versus medical interpreters in Subtype 2 who were more likely to provide spoke interpretation only. Chapter 5

concludes this study. Chapter 5 contains findings from the study, findings as they relate to literature, implications for action, and recommendations for future research.

Chapter 5: Discussion, Recommendations, and Conclusions

The diversity of the United States continues to increase. More than 2 million individuals have immigrated to the United States since 2010 (U.S. Census Bureau, 2012). In addition, approximately 25 million (8.5 %) individuals in American households are identified as speaking English less than "very well" (U. S. Census Bureau, 2012). Limited access to health care services in an individual's primary language has been identified as a barrier to seeking and receiving services (Shattell et al., 2009). This includes mental health services. Medical interpreters are an essential member of the treatment team to ensure that LEP individuals receive effective treatment. An aim of this study was to examine whether medical interpreters could be subtyped based on measures of vicarious traumatization and vicarious posttraumatic growth. A second aim was to examine whether recommended practices based on the literature further contributed to distinct groupings by identifying possible risks or protective factors that may be associated with vicarious traumatization or vicarious posttraumatic growth among medical interpreters in behavioral health settings.

This study yielded two distinct groupings of medical interpreters. The most important predictor determining the two subtypes was whether the participant had a personal history of trauma, next was whether the participant had a personal or family history of trauma similar to the individual being treated, and finally whether they had sought out personal therapy in response to their work. Subtype 1, composed of 42.0% (73) of the participants, could be characterized as being more likely to have experienced personal trauma (94.5 % versus 5.5%), more likely to have personal or family history of

trauma similar to that of the individual treated (80.0% versus 20.0%), and are more likely to have sought personal therapy in response to their work (91.3 % versus 8.7%) versus those in Subtype 2 which comprised of 58.0% (101) of the sample. Participants in Subtype 1 are more likely to have completed less education programs specific to medical interpretation except for an education of > 4 year bachelor program (88.9% versus 11.1%) and are more likely to have specific mental health training (51.9% versus 48.1%) than medical interpreters in Subtype 2. Medical interpreters in Subtype 1 are likely to have a higher *T*-score on the TABS inventory (M = 48.64 versus M = 44.95), indicating higher levels of vicarious trauma.

Additionally, in regards to demographic differences, differences were identified in the area of current relationship status, race, and spoke or sign interpretation. Medical interpreters is in Subtype 1 were more likely to indicate being from multiple races (58.1% versus 41.9%) versus those Subtype 2 who were more likely to identify being Asian (87.5% versus 12.5%), Black or African American (100.0% versus 0.0%), Hispanic (78.6% versus 21.4%), or White (58.0% versus 42.0%). Both were equally like to indicate other (50.0% versus 50.0%). Medical interpreters in Subtype 1 were more likely to report being divorced (57.1% versus 42.9%) or in a domestic partnership (77.8% versus 22.2%), versus medical interpreters in Subtype 2 who were more likely to report being married (66.3% versus 33.7), separated (100.0% versus 0.0%), single/cohabitating (53.3% versus 46.7%), single/never married (54.2% versus 45.8%), or widowed (100.0% versus 0.0%). Medical interpreters in Subtype 1 were more likely to provide sign or both, spoken and sign interpretation (77.8% versus 22.2%), versus medical interpreters is

Subtype 2 who were more likely to provide spoke interpretation only (62.2% versus 37.8%). A summary of distinctive cluster features is provided in Figure 4.

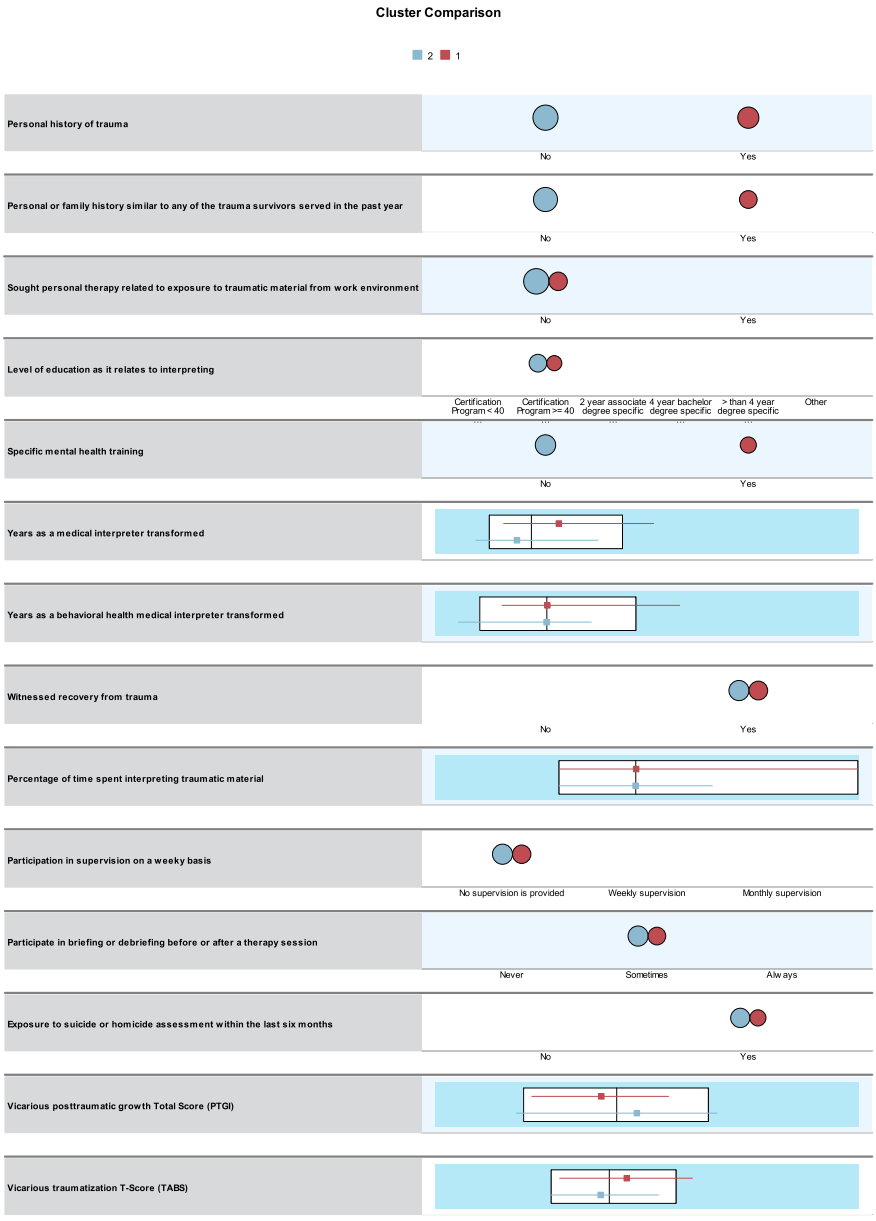


Figure 4. Summary of distinctive clusters.

Interpretations of Findings

The CSDT guided the investigation of this study. CSDT is an interactive, psychodynamic theory that examines the interaction between the psychological experiences of the provider and their emotional responses to the repeated exposure to trauma stories of the client. The results of this quantitative study further support that vicarious trauma is the result of the accumulated effects of repeated exposure to trauma material in combination with the person of the provider. Based on these findings it seems that behavioral health medical interpreters who have a personal history of trauma and a personal or family history of trauma similar to the individual being treated are at higher risk for vicarious traumatization (Subtype 1).

Personal and Professional Factors

The prevalence of personal history of trauma in this study was approximately 42%, with approximately 34.5% reporting having personal or family history of trauma similar to the trauma survivor being treated. This is greater than the prevalence rates for therapists reported in previous studies (Adams & Riggs, 2008; Pope & Feldman-Summers, 1992). While it has been speculated in previous qualitative research reports that vicarious traumatization among medical interpreters who are also refugees is likely small (Miller et al, 2005), the findings of this study would indicate otherwise and are consistent with previous results (Adams & Riggs, 2008; Bober & Regehr, 2006; Pearlman & Mac Ian, 1995; Vriklerski & Franklin, 2008). Medical interpreters with a history of trauma and a personal or family history of trauma similar to the client, such as medical interpreters who may also be refugees or asylum seekers, are at a significantly

increased risk for vicarious traumatization. This is also consistent with CSDT that indicates the experiences of the individual providers; their history, and the interaction with the experiences and personal history of the client would interact. Given the possibility of similar trauma experiences it would be understandable that the risk for vicarious traumatization would be increased for medical interpreters with a personal history of trauma and a family or personal history similar to the trauma survivor.

Personal history of trauma. The results of this study are similar to previous findings which indicated that therapists and other professionals with a previous history of trauma were at higher risk for vicarious traumatization (Adams & Riggs, 2008; Bober & Regehr, 2006; Pearlman & Mac Ian, 1995; Vriklerski & Franklin, 2008). While medical interpreters in Subtype 1 demonstrated higher TABS *T*-scores, it should be noted that the level of distress for the entire sample of medical interpreters (subtype 1 and 2) was in the average range, *T*-score; *M (SD)* = 46.43 (10.32). A prior finding indicated a previous history of personal trauma did not demonstrate a difference in level of distress (Schauben & Frazier, 1995); however, the investigators limited previous history of trauma to either rape or incest and did not address the possibility of other types of personal trauma. While the overall level of distress reported by medical interpreters in this study was not above average, the interpreters in Subtype 1 indicated a possible range of vicarious traumatization from low average to high average, whereas the interpreters in Subtype 2 reported a range of vicarious traumatization from low average to average.

Seeking therapy. There is contradictory information in regards to seeking personal therapy in response to trauma work and the level of distress experienced by

providers. Several researchers indicated that addressing the effects of trauma work in therapy has been associated with increased distress (Bober & Regehr, 2006; Pearlman & Mac Ian, 1995). The results of this study were consistent with these results indicating medical interpreters in Subtype 1 were more likely to seek personal psychotherapy in response to their work with trauma survivors and report higher levels of distress. This contradicts the findings from Brockhouse et al. (2011) which also suggested that combining supervision and personal therapy may have reduced the negative effects of trauma work. The results of this study revealed the majority of medical interpreters did not receive any supervision (65.5%). It is not known if the role of supervision may be a protective factor given that this is not a regular experience for most medical interpreters and deserves further study. Although the differences were not significant, the results of this study revealed that approximately 71.4% of medical interpreters in Subtype 2 received weekly supervision versus 28.6%, and 61.5% received monthly supervision versus 38.5% of medical interpreters in Subtype 1. In addition, given the higher incidence of personal trauma history among participants in Subtype 1, it may be that these individuals may recognize signs and symptoms associated with their own personal trauma history and may be more willing to seek out their own personal therapy to address the effect of exposure to trauma material in the course of their professional work.

Experience. The literature regarding length of time in the field and the effect on the level of distress experienced by the provider is contradictory. Several findings indicated that professionals with less experience tended to demonstrate increased levels of distress (Devilly et al., 2009; McLean et al., 2003; Pearlman & Mac Ian, 1995; Van

Deusen et al., 2006) and that the opposite, more experience resulted in less disruptions and possibly posttraumatic growth (Brady et al., 1999; Brockhouse, 2011; Cunningham, 2003; Pearlman & Mac Ian, 1995; Spelvins et al., 2010). Contradicting the above findings, some researchers have reported that more experience in the field, coupled with increased time spent with trauma survivors was associated with increased levels of distress (Bober & Regehr, 2006; Brady et al., 1999). The findings of this study indicated that medical interpreters in Subtype 1 had been in the field of medical interpretation and specifically provided interpretation in behavioral health settings significantly longer than those in Subtype 2. These findings, along with previous findings reflect the cumulative nature of vicarious traumatization.

Time. The factor of time spent with trauma survivors was not an important predictor variable and differences between the two subtypes were not significant This is consistent with previous findings that indicated there was no association with time spent with survivors and level of distress (Bober & Regehr, 2006; DeVilly et al., 2009). In contrast, other findings that reported more time spent with trauma survivors increased the level of distress (Schauben & Frazier, 1995). Additionally, prior studies indicated that being able to control the amount of time spent with trauma survivors and having control over caseload size reduced the level of distress experienced by therapists (Harrison & Westwood, 2009).

Another aspect of time, time to witness recovery was not indicated as a protective factor as suggested by previous studies (Calhoun & Tedeschi, 2001; Splevins et al., 2010; Tedeschi & Calhoun, 2004). Several qualitative studies suggested that being able to

witness recovery from trauma may have led to increased instances of vicarious posttraumatic growth. However, the results of this study indicated that neither group reported increased levels of posttraumatic growth, nor was this an important predictor variable. The results of this study would indicate that witnessing recovery is not a significant protective factor against vicarious traumatization which was suggested in previous studies.

Recommended Practices

The literature in Chapter 2 made several recommendations in regards to specific practices for medical interpreters working in behavioral health settings. These included briefing and debriefing before or after a session, receiving specific mental health training, and supervision (Beeber et al., 2009; Sexton, 1999; Splevins et al., 2010; Van Deusen & Way, 2006; Yakashko, 2010). The recommendations were based on qualitative studies; however, in this study none of these practices contributed to the two cluster groupings; however, specific mental health training was significantly different between the two groupings. While the suggestion would imply that more mental health training would be a protective factor, this was not the case in this study. It appears that specific mental health training was associated with higher rates of vicarious trauma. What is not clear in this study is whether more specific mental health training was sought out in response to recognizing a trauma response or if this was more specifically related to having provided medical interpretation for more years than participants in Subtype 2. Therefore, it is not clear if this is a true risk factor as it is not clear if training was provided prior to working

in the field or as a result of working in the field of behavioral health for a longer period of time.

Supervision. In regards to supervision, previous studies have been inconsistent, with one indicating it may be a protective factor when combined with personal therapy (Brockhouse et al., 2011) and one indicating it had no effect on the level of distress reported by therapists (Bober et al., 2006). As noted previously, the majority of medical interpreters in this study did not receive any supervision (65.5%). As suggested in previous studies supervision provides a level of professional support to help normalize experiences (Sande,1998; Tribe & Morrissey, 2004), and may be an important element missing for many medical interpreters working in behavioral health.

Education and training. In regards to education and training, medical interpreters in Subtype 2 were more likely to have more education in regards to the general practice of medical interpretation. It is not known if this group sought out additional training in the field before or after starting their work in behavioral health since having more training was associated with less distress. While, specific mental health training was not a significant predictor it was statically different between the two subtypes as had been suggested by previous findings (Raval, 2006); however, the direction of the findings is in contradiction to what had been suggested as more specific mental health training was associated with higher levels of VT rather than lower levels. A previous study examined specific trauma training among early career therapist and found that more training was associated with less distress (Adams & Riggs, 2008). This study

did not examine whether medical interpreters received specific training in regards to trauma work, but rather focused on specific mental health training.

Risk Assessment

No known study had examined exposure to suicide and homicide assessment in the past six months as a possible factor influencing the level of distress in the context of vicarious traumatization prior to this study. Pearlman and Saakvitne (1995) had suggested that risk assessment could be a factor contributing to the level of distress when providing services to trauma survivors. Sexual abuse counselors had also suggested that suicidal behavior was difficult to manage (Schauben & Frazier, 1995). The results of this study indicated that exposure to suicide and homicide assessment was not an important predictor variable.

Limitations and Recommendations

A limitation of this study was the use of total scores for both of the standardized instruments; the TABS and PTGI. This was due to sample size and the nature of cluster analysis. In order to have examined the possible differences between subtypes incorporating the subscales, approximately 300 more participants would have been required. The lack of examination of specific schemas measured by each instrument limited the potential of useful information. Identifying specific schemas may provide additional information in regards to how the personal history of the medical interpreter and seeking out therapy may contribute to increased risk for vicarious traumatization. Identifying specific schemas may also shed additional light on the lack of evidence for vicarious posttraumatic growth in this study. Future studies may combine both qualitative

and quantitative methods to further examine the effect of providing trauma specific services on medical interpreters to see if there are any discrepancies between what is reported on the standardized measures and what is reported in narrative form.

This study examined the general education/training background of medical interpreters and whether they received specific mental health training. What was not known is whether they received training specific to working with trauma survivors. Prior research indicated that supervision combined with specific trauma training helped to reduce the level of distress experienced by therapists early in their career (Adams & Riggs, 2008; Brockhouse et al., 2011). This may be due to having opportunities to normalize the experiences of distress associated with trauma work and the professional support afforded through supervision. The majority of the medical interpreters in his sample did not receive supervision. It is not known if providing regular supervision might indeed decrease the overall level of distress experienced by medical interpreters in behavioral health settings and possibly increase opportunities to experience posttraumatic growth.

The results of this study are limited to medical interpreters working in behavioral health settings and cannot be generalized to medical interpreters working in non-behavioral health settings, such as medical practices or rescue workers, even though there may be exposure to traumatic material in these settings as well. Given the evidence of vicarious traumatization further research might examine if there are other factors providing additional support to these medical interpreters that enables them to remain in the field, such as resiliency or a specific personality trait. The results of this study should

be generalized cautiously as there may be self-selection bias among the medical interpreters who chose to participate in this study.

Implications

The results of this study confirm the existence of personal and professional risk and protective factors in regards to vicarious traumatization among an online sample of behavioral health medical interpreters. The two most significant predictors of risk for vicarious traumatization are both personal factors; a personal history of trauma and a personal or family history of trauma similar to the individual being treated. Seeking personal therapy in response to exposure to traumatic material in the work environment (Subtype 1) was the third most predictive. The associated risk is not seeking therapy specifically, but that doing so would suggest a level of distress. Additionally, medical interpreters who indicated higher levels of distress according to *T*-scores on the TABS instrument were more likely to have been in the field longer, both as general medical interpreters and behavioral health medical interpreters. In contrast, spending more time with trauma survivors was not significantly different between the two subtypes, suggesting that more time spent with trauma survivors in the context of a general work schedule does not necessarily increase the risk for distress as suggested by prior studies (e.g., Schauben & Frazier, 1995). Witnessing recovery, previously suggested as a possible factor contributing to posttraumatic growth (Spelvins et al., 2010), was not supported in this study.

Although recommended professional practices, such as briefing and debriefing, and supervision did not demonstrate a significant contribution to the sub-typing or

significant differences between the two groups, specific mental health training was significantly different between the two subtypes with the unexpected result that more mental health training was associated with higher levels of distress. In general these practices should not be overlooked. Given the evidence of risk for vicarious traumatization among medical interpreters in behavioral health settings, especially those who provide services to refugee and asylum seekers who are from the same cultural group, education and training should provide information on the potential risks for vicarious traumatization as well as normalize the experience given the natural interaction and reaction to being exposed to such material that may be so similar to their own. Being informed of these risks ahead of time may encourage medical interpreters to seek out supervision prior to experiencing significant levels of distress.

Conclusions

One of the aims of this study was to contribute to social change through extending the literature on vicarious traumatization to a sample of medical interpreters in the behavioral health field. This study demonstrates that vicarious traumatization is as much of a risk for this population of professionals as in other helping professions. This study further supports the theoretical model of CSDT which emphasizes the interaction of the person of the provider with the person of the client and the effect this has on the provider when it comes to repeated exposure to trauma material.

Another aim of this study was to provide information on the possible risk or protective factors that may contribute to or prevent vicarious traumatization among medical interpreters in behavioral health settings to better inform educational programs

and employers. Based on the results of this study it would be important to inform medical interpreters entering the behavioral health field of the potential risks for vicarious traumatization especially if they have experienced trauma themselves or know of family members who have experienced trauma. In addition to a general history of trauma, the risk increases if the individual they are serving has similar trauma to their own or family's history of trauma. While the amount of time spent with trauma survivors was not statistically significant, it may still be of benefit to assist medical interpreters in being able to balance the number of hours spent with trauma survivors to reduce the possible cumulative effect of trauma exposure is another important aspect of this work to keep in mind for both the medical interpreter and employer. The hope is that by providing this information and by normalizing this possible response, distress associated with providing trauma specific services would decrease and medical interpreters with experience would remain in behavioral health to ensure effective treatment for LEP individuals seeking mental health services.

References

Adams, S. A, & Riggs, S. A. (2008). An exploratory study of vicarious trauma among therapist trainees. *Training and Education in Professional Psychology, 2*(1), 26–34. doi: 10.1037/1931-3918.2.1.26

Altarriba, J., & Santiago-Rivera, A. L. (1994). Current perspectives on using linguistic and cultural factors in counseling the Hispanic client. *Professional Psychology: Research and Practice*, *25*(4), 388-397. doi: 10.1037/0735-7028.25.4.388

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: Author.

Apostolou, F. (2009). Mediation, manipulation, empowerment: Celebrating the complexity of the interpreter's role. *Interpreting, 11*(1), 1–19. doi: 11.1075/intp.11.1.02apo

Argentero, P., & Setti, I. (2011). Engagement and vicarious traumatization in rescue workers. *International Archives of Occupational and Environmental Health, 84*(1), 67–75. doi: http://dx.doi.org/10.1007/s00420-010-0601-8

Avery, M. B. (2001). *The role of the health care interpreter: An evolving dialogue.* The National Council on Interpreting in Health Care Working Papers Series. Retrieved from http://www.a2hc.org/articles/The%20role_of_health_care_interpreter.pdf

Babbie, E. (2013). *The practice of social research* (12th ed.). Belmont, CA: Wadsworth, Cengage Learning.

Baird, K. & Kracen, A. C. (2006). Vicarious traumatization and secondary traumatic stress: A research synthesis. *Counseling Psychology Quarterly, 19*(2), 181–188. doi: 10.1080/09515070600811899

Baker, A. A. (2012). Training the resilient psychotherapist: What graduate students need to know about vicarious traumatization. *Journal of Social, Behavioral, and Health Sciences, 6*(1), 1–12. doi: 10.5590/JSBHS.2012.06.1.01

Ball, S. A., Carroll, K. M., Babor, T. F., & Rounsaville, B. J. (1995). Subtypes of cocaine abusers: Support for a Type A–Type B distinction. *Journal of Consulting and Clinical Psychology, 63*(1), 115–124. doi: 10.1037/0022-006X.63.1.115

Bartlett, R., Williams, A., & Lucas, R. (2011). A common language is so basic! *Issues in Mental Health Nursing, 32,* 608–609. doi: 10.3109/01612840.2011.597539

Beeber, L. S., Lewis, V. S., Cooper, C., Maxwell, L., & Sandelowski, M. (2009). Meeting the "now" need: PM –APRN – Interpreter teams provide in-home mental health intervention for depressed Latina mothers with limited English proficiency. *Journal of the American Psychiatric Nurses Association, 15*(4), 249–259. doi: 10.1177/1078390309344742

Ben-porat, A., & Itzhaky, H. (2009). Implications of treating family violence for the therapist: Secondary traumatization, vicarious traumatization, and growth. *Journal of Family Violence, 24*(7), 507–515. doi: 10.1007/s10896-009-9249-0

Birck, A. (2001). Secondary traumatization and burnout in professionals working with torture survivors. *Traumatology, 7*(2), 85–90. doi: 10.1177/153476560100700203

Bober, T. & Regehr, C. (2006). Strategies for reducing secondary or vicarious trauma: Do they work? *Brief Treatment and Crisis Intervention, 6*(1), 1–9. doi: 10.1093/brief-treatment/mhj001

Bober, T., Regehr, C., & Zhou, Y. (2006). Development of the coping strategies inventory for trauma counselors. *Journal of Loss and Trauma, 11*(1), 71–83. doi: 10.1080/15325020500358225

Borgen, F. H., & Barnett, D. C. (1987). Applying cluster analysis in counseling psychology research. *Journal of Counseling Psychology, 34*(4), 456–468. doi: 10.1037/0022-0167.34.4.456

Bot, H., & Wadensjö, C. (2004). The presence of a third party: A dialogical view on interpreter-assisted treatment. In J. P. Wilson & B. Drožđek (Eds., *Broken spirits: The treatment of asylum seekers and refugees with PTSD* (pp. 355–378). New York, NY: Brunner Routledge Press.

Brady, J., Guy, J. D., Poelstra, P. L., & Brokaw, B. (1999). Vicarious traumatization, spirituality, and the treatment of sexual abuse survivors: A national survey of women psychotherapists. *Professional Psychology, Research and Practice, 30*(4), 386–393.

Bride, B. E., Robinson, M. M., Yegidis, B., & Figley, C. R. (2004). Development and validation of the secondary traumatic stress scale. *Research on Social Work Practice, 14*(1), 27–35. doi: 10.1177/1049731503254106

Brockhouse, R., Msetfi, R. M., Cohen, K., & Joseph, S. (2011). Vicarious exposure to trauma and growth in therapists: The moderating effects of sense of coherence,

organizational support, and empathy. *Journal of Traumatic Stress, 24*(6), 735–742. doi: 10.1002/jts

Burns, J. (2010). Stress busters for interpreters (and everyone else). *The ATA Chronicle,* 24–27. Retrieved from http://www.imiaweb.org/uploads/docs/InterpreterStress_Julie_Burns.pdf

Calhoun, L. G., & Tedeschi, R. G. (2001). Posttraumatic growth: The positive lessons of loss. In R. A. Neimeyer (Ed.), *Meaning reconstruction & the experience of loss* (pp. 157-172). American Psychological Association. doi: 10.1037/10397-008

Candle, E. (2012). New York Medicaid coverage of language services and medical interpreter qualification requirements. Joint IMIA/NYSDOH webinar. International Medical Interpreters Association. Retrieved from http://www.imiaweb.org/uploads/docs/Eric_Candle_IMIA_medicaid_coverage_presentation_12_14_2012_1.pdf

Cochran, W. G. (1954). Some Methods for Strengthening the Common χ^2 Tests. *Biometrics, 10*(4), 417–451. Retrieved from http://doi.org/10.2307/3001616

Cornes, A., & Napier, J. (2005). Challenges of mental health interpreting when working with deaf patients. *Australasian Psychiatry*, *13*(4), 403–407. doi: 10.1080/j.1440-1665.2005.02218.x

Corsellis, A. (2003). Interpreting and translation in the UK public services: The pursuit of excellence versus, and via, expediency. In G. M. Anderman, & M. Rogers (Eds), *Translation today. Trends and perspectives* (pp. 71 – 90). Glevedon, Great Brittan: Multilingual Matters.

Costa, P. T., & McCrae, R. R. (1992). Normal personality assessment in clinical practice: The NEO Personality Inventory. *Psychological Assessment, 4*(1), 5–13. doi: 10.1037/1040-3590.4.1.5

Creswell, J. W. (2009). *Research design: Qualitative, quantitative and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Crowne, D. P, & Marlowe, D. (1982). A new scale of social desirability independent of psychopathology. *Journal of Counseling Psychology, 24*(4), 349–354. doi: 10.1037/h0047358

Cunningham, M. (2003). Impact of trauma work on social work clinicians: empirical findings. *Social Work, 48*(4), 451–459. doi: 10.1093/sw/48.4.451

Dean, R. K., & Pollard, R. R. (2001). Application of demand-control theory to sign language interpreting: Implications for stress and interpreter training. *Journal of Deaf Studies and Deaf Education, 6*(1), 1–14. doi:10.1093/deafed/6.1.1

Devilly, G. J., Wright, R. & Varker, T. (2009). Vicarious trauma, secondary traumatic stress or simply burnout? Effect of trauma therapy on mental health professionals. *The Royal Australian and New Zealand College of Psychiatrists, 43*(4), 373–385. doi: 10.1080/00048670902721079

Doherty, S. M., MacIntyre, A. M., & Wyne, T. (2010). How does it feel for you? The emotional impact and specific challenges of mental health interpreting. *The Mental Health Review, 15*(3), 31–44. doi: http://dx.doi.org/10.5042/mhrj.2010.0657

Dominguez-Gomez, E., & Tutledge, D. N. (2009). Prevalence of secondary traumatic stress among emergency nurses. *Journal of Emergency Nursing, 35*(3), 199–204. doi: 10.1016/j.jen.2008.05.003

Dubus, N. (2009). Creating a bridge to healing: A professional/ paraprofessional team approach. *Journal of Social Work Practice, 23*(3), 327–336. doi: 10.1080/02650530903102684

Durán, A. L., & Iglesias, E. B. (2008). Subtyping of individuals undergoing treatment for cocaine dependence. *Psicothema, 20*(4), 538–544.

Dysart-Gale, D. (2005). Communication models, professionalization, and the work of medical interpreters. *Health Communication, 17*(1), 91–103. doi: 10.1207/s15327027hc1701_6

Dysart-Gale, D. (2007). Clinicians and medical interpreters: Negotiating cultural appropriate care for patients with limited English ability. *Family & Community Health: The Journal of Health Promotion & Maintenance, 30*(3), 237–246.

de Bruin, E., & Brugmans, P. (2006). The psychotherapist and the sign language interpreter. *Journal of Deaf Studies & Deaf Education, 11*(3), 360–368. doi: 10.1093/deafed/enj034

Felton, J. S. (1998). Burnout as a clinical entity – its importance in health care workers. *Occupational Medicine*, *48*(4), 237–250. Retrieved from http://occmed.oxfordjournals.org/ by guest on February 12, 2014.

Flaskerud, J. (2007). Cultural competence column: What else is necessary? *Issues in Mental Health Nursing, 28*(2), 219–222. doi: 10.1080/01612840601096487

Gannett-Sánchez, K. (2013). Medical interpreters and burnout: Preventing a negative outcome. *The ATA Chronicle, 42*(3), 19–21. Retrieved from http://www.atanet.org/publications/chronicle.php

Gibbons, S., Murphy, D., & Joseph, S. (2011) Countertransference and positive growth in social workers. *Journal of Social Work Practice: Psychotherapeutic Approaches in Health, Welfare and the Community, 25*(1), 17–30. doi: 10.1080/02650530903579246

Gong-Guy, E., Cravens, R. B., & Patterson, T. E. (1991). Clinical issues in mental health service delivery to refugees. *American Psychologist, 46*(6), 642–648. doi: 10.1037/0003-066X.46.6.642

Green, H., Sperlinger, D., & Carswell, K. (2012). Too close to home? Experiences of Kurdish refugee interpreters working in UK mental health services. *Journal of Mental Health, 21*(3), 227–235. doi: 10.3109/09638237.2011.651659

Harrison, R. L., & Westwood, M. J. (2009). Preventing vicarious traumatization of mental health therapists: Identifying protective practices. *Psychotherapy: Theory, Research, Practice, Training, 46*(2), 203–219. doi: 10.1037/a0016081

Hartman, A. (1991). Social worker-in-situation. *Social Work, 13*(3), 195–196.

Jackson, J., Nguyen, D., Hu, N., Harris, R., & Terasaki, G. S. (2010). Alterations in medical interpretation during routine primary care. *Journal of General Internal Medicine, 26*(3), 259–264. doi: 10.1007/s11606-010-1519-2

Jacobs, E. A, Lauderdale, D. S., Meltzer, D., Shorey, J. M., Levinson, W., & Thisted, R. A. (2001). Impact of interpreter services on delivery of health care to limited-

english-proficient patients. *Journal of General Internal Medicine, 16*(7), 468–74. doi: http://dx.doi.org/10.1046/j.1525-1497.2001.016007468.x

Jenkins, S., & Baird, S. (2002). Secondary traumatic stress and vicarious trauma: A validational study. *Journal of Traumatic Stress, 15*(5), 423–432.

Jordan, K. (2010). Vicarious trauma: Proposed factors that impact clinicians. *Journal of Family Psychotherapy, 21*, 225–237. doi: 10.1080-08975353.2010.529003

Kaczorowski, J. A., Williams, A., Smith, T. F., Fallah, N., Mendez, J. L., & Nelson–Gray, R. (2011). Adapting clinical services to accommodate needs of refugee populations. *Professional Psychology: Research and Practice, 42*(5), 361–367. doi: 10.1037/a0025022

Kaplowitz, M. D., Hadlock, T. D., & Levine, R. (2004). A comparison of web and mail survey response rates. *The Public Opinion Quarterly*, *68*(1), 94–101. doi: 10.1093/poq/nfh006

Karasek, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly, 24*(2), 285–308. doi: 0001-8392/79/2402-0285$00.75

Karasek, R. (1990). Lower health risk with increased job control among white collar workers. *Journal of Organizational Behavior, 11*(3), 171–185. doi: 08943796/90/030171-15$07.50

Kaufman, L., & Rousseeuw, P. J. (1990). *Finding groups in data: An introduction to cluster analysis.* Toronto, Canada: John Wiley & Sons, Inc.

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology, 52*(1), 397.

McCann, L., & Pearlman, L. A. (1990). Vicarious traumatization: A framework for understanding the psychological effects of working with victims. *Journal of Traumatic Stress, 3*(1), 131–149. doi: 0894.9867/90/010(M)l31$06.00/0

McLean, S., Wade, T. D., & Encel, J. S. (2003). The contribution of therapist beliefs to psychological distress in therapists: An investigation of vicarious truamatization, burnout and symptoms of avoidance and intrusion. *Behavioural and Cognitive Psychotherapy, 31*(4), 417–428. doi: 10.1017/S135246580300403X

Mertler, C.A., & Vannatta, R.A. (2010). *Advanced and multivariate and statistical methods: Practical application and interpretation* (4th ed.). Los Angeles: Pyrczak.

Miller, K. E., Martell, Z. L., Pazdirek, L, Caruth, M., & Lopez, D. (2005). The role of interpreters in psychotherapy with refugees: An exploratory study. *American Journal of Orthopsychiatry, 75*(1), 27–39. doi: 10.1037/0002-9432.75.1.27

Mooi, E, & Sarstedt, M. (2011). *A concise guide to market research: The process, data, and methods using IBM SPSS statistics.* doi: 10.1007/978-3-642-12541-6

Norris, W., Wenrich, M., Nielsen, E., Treece, P., Jackson, J., & Curtis, J. (2005). Communication about end-of-life care between language-discordant patients and clinicians: Insights from medical interpreters. *Journal of Palliative Medicine, 8*(5), 1016–1024.

Norusis, M. (2005). *SPSS 13.0 Statistical procedures companion*. Prentice Hall. ISBN 0-13-186535-8

Norusis, M. (2011). *IBM SPSS statistics 19: Statistical procedures companion*. Prentice Hall. ISBN-10: 0-321-74842-5

Palm, K. M., Polusny, M. A, & Follett, V. M. (2004). Vicarious traumatization: Potential hazards and interventions for disaster and trauma workers. *Prehospital and Disaster Medicine*, *19*(1), 73–78. Retrieved from http://www.impact.arq.org/doc/kennisbank/1000011453-1.pdf

Pearlman, L. A., & Mac Ian, P. S. (1995). Vicarious traumatization: An empirical study of the effect s of trauma work on trauma therapists. *Professional Psychology: Research and Practice, 26*(6), 558–565. doi: 0735-7028/95/S3.00

Pearlman, L. A., & Saakvitne, K. W. (1995). *Trauma and the therapist: Contertransference and vicarious traumatization in psychotherapy with incest survivors*. New York, NY: W. W. Norton & Company, Inc.

Porter, S. R., & Whitcomb, M. E. (2007). Mixed-mode contacts in web surveys: Paper is not necessarily better. *The Public Opinion Quarterly*, *71*(4), 635–648. doi: 10.1093/poq/nfm038

Rasmussen, B. (2005). An intersubjective perspective on vicarious trauma and its impact on the clinical process. *Journal of Social Work Practice, 19*(1), 19–30. doi: 10.1080/0265053050071829

Raval, H. (2006). Mental health training for bilingual co-workers in the context of working with people seeking asylum and refuge. *Primary Care Mental Health, 4*(1), 37–44.

Raval, H., & Smith, J. A. (2003). Therapists' experiences of working with language interpreters. *International Journal of Mental Health, 32*(2), 6–31. doi: 10.2307/41345050

Registry of Interpreters for the Deaf. (2014). Publications overview. Retrieved from http://rid.org/publications/overview/index.cfm

Robiner, W. N. (2006). The mental health professions: Workforce supply and demand, issues, and challenges. *Clinical Psychology Review, 26*, 600–625. doi: 10.1016/j.cpr.2006.05.002

Sande, H. (1998). Supervision of refugee interpreters: 5 years of experience from Northern Norway. *Nordic Journal of Psychiatry, 52*(5), 403–409. doi: 10.1080/08039489850139436

Setti, I., & Argentero, P. (2012). Vicarious trauma: A contribution to the Italian adaptation of the Secondary Traumatic Stress Scale in a sample of ambulance operators. *Bollettino Di Psicologia Applicata*, *264*(59), 58–64.

Sexton, L. (1999). Vicarious traumatization of counselors and effects on their workplaces. *British Journal of Guidance & Counselling, 27*(3), 393–403. doi: 0306/9885/99/030393-11

Shattell, M., Villalba, J., Stokes, N., Hamilton, D., Foster, J., Petrini, R. H, … Faulkner, C. (2009). Depression in Latinas residing in emerging Latino immigrant

communities in the United States. *Hispanic Health Care International, 7*(4), 190–202. Retrieved from http://search.proquest.com/docview/205482742?accountid=14872

Sinclair, H. A. H., & Hamill, C. (2007). Does vicarious traumatization affect oncology nurses? A literature review. *European Journal of Oncology Nursing, 11,* 348–356. doi: 10.1016/j.ejon.2007.02.007

Smith, H. E., Keller, A. S., & Lhewa, D. W. (2007). *"…Like a Refugee Camp on First Avenue": Insights and Experiences from the Bellevue/NYU Program for Survivors of Torture.* New York City: The Bellevue/NYU Program for Survivors of Torture. Retrieved from http://www.refugeehealthta.org/files/2011/07/intro_like_a_refugee_camp_on_first_avenue.pdf#page=114

Splevins, K. A., Cohen, K., Joseph, S., Murray, C., & Bowley, J. (2010). Vicarious posttraumatic growth among interpreters. *Qualitative Health Research, 20,* 1705–1707. doi: 10.1177/1049732310377457

Sue, S., Fujino, D. C., Hu, L., Takeuchi, D. T., & Zane, N. S. (1991). Community mental health services for ethnic minority groups: A test of the cultural responsiveness hypothesis. *Journal of Consulting and Clinical Psychology, 59*(4), 533–540. doi: 10.1037/0022-006X.59.4.533

Tabor, P. D. (2011). Vicarious traumatization: Concept analysis. *Journal of Forensic Nursing, 7,* 203–208. doi: 10.1111/j.1939-3938.2011.01115.x

Tedeschi, R. G., &. Calhoun, L. G. (2004) Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological Inquiry: An International Journal for the Advancement of Psychological Theory, 15*(1), 1–18. doi: 10.1207/s15327965pli1501_01

Tribe, R., & Lane, P. (2009). Working with interpreters across language and culture in mental health. *Journal of Mental Health, 18*(3), 233–241. doi: 10.1080/09638230701879102

Tribe, R, & Morrissey, J. (2004). Good practice issues in working with interpreters in mental health. *Intervention, 2*(2), 139–142. Retrieved from http://www.interventionjournal.com/downloads/22pdf//129_142%20Tribe.pdf

U.S. Census Bureau. (2012). American Community Survey: 1-Year estimates. Retrieved from http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_12_1YR_DP02&prodType=table

U.S. Department of Justice. (2000). Executive Order 13166 - Improving access to services for persons with limited English proficiency: Enforcement of Title VI of the civil rights act of 1964 – national origin discrimination against persons with limited English Proficiency; notice. *Federal Register, 65*(159), 50120–50125. Retrieved from http://www.justice.gov/crt/about/cor/Pubs/eolep.pdf

VanDeusen, K. M., & Way, I. (2006). Vicarious trauma: An exploratory study of the impact of providing sexual abuse treatment on clinicians' trust and intimacy. *Journal of Child Sexual Abuse, 15*(1), 69–85. doi: 10.1300/J070v15n01_04

Vernon, M., & Miller, K. (2001). Interpreting in mental health settings: Issues and concerns. *American Annals of the Deaf, 146*(5), 429–434. Retrieved from http://ezp.waldenulibrary.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2002056591&site=eds-live&scope=site

Yakushko, O. (2010). Clinical work with limited English proficiency clients: A phenomenological exploration. *Professional Psychology: Research and Practice, 41*(5), 449–455. doi: 10.1037/a0020996

Appendix A: IMIA Link

Seeking Participants in Survey:

In effort to better understand the experiences of medical interpreters in behavioral health settings, especially in regards to the treatment of trauma survivors. This research may help contribute to the professional development of medical interpreters in behavioral health settings as well as improve treatment experiences of limited English proficient (LEP) individuals seeking mental health services.

The study is being conducted by Pauline Stahlbrodt - Principal Investigator, Mitchell Hick, Ph.D. - Advisor at Walden University

Survey closing date: November, 2015

To participate, click (link inserted)

Appendix B: NCMI LinkedIn Invitation to Participate Post

Medical Interpreter Research: Participation Requested:

Hello, my name is Pauline Stahlbrodt, and I am a pre-doctoral student in counseling psychology at Walden University. I am conducting research exploring the experiences of medical interpreters in mental health settings and whether or not they have experienced vicarious traumatization or vicarious posttraumatic growth in the context of their work. If you are such a professional, please take the time to complete a survey by clicking on the following link https://www.surveymonkey.com/s/MedicalInterpreters to complete the survey.

More information regarding the research can be found at the linked mentioned above. It is the hope of this researcher that the information gained through this study will help to further the ongoing professional development of medical interpreters and add another important voice to the field of trauma research. I would expect the survey to take about 30 minutes, which I understand is a significant amount of time and I thank you in advance.

Sincerely,

Pauline Stahlbrodt

Walden University

Counseling Psychology

Appendix C: NBCMI Members Email

Hello,

My name is Pauline Stahlbrodt, and I am a pre-doctoral student in counseling psychology at Walden University. I am hoping to conduct research exploring the experiences of medical interpreters in mental health settings and whether or not they have experienced vicarious traumatization or vicarious posttraumatic growth in the context of their work. Two objectives of the survey include: (a) contributing to the continued professional development of the profession, and (b) providing additional insights in how to better prepare medical interpreters who work in mental health settings.

If you are such a professional, please take the time to complete a survey by clicking on the following link: https://www.surveymonkey.com/s/MedicalInterpreters

I understand your time is extremely valuable and I hope you will take the time to contribute to this research.

More information regarding the research can be found at the link mentioned above. It is the hope of this researcher that the information gained through this study will help to further the ongoing professional development of medical interpreters and add another important voice to the field of trauma research. I would expect the survey to take about 30 minutes, which I understand is a significant amount of time and I thank you in advance. If you know of anyone else who may be interested in participating in this survey please feel free to forward this message.

Contact Information:

If you have any questions about this study, you can contact the person(s) below:

Walden University Research Participant Advocate

USA number - 001-612-312-1210 or irb@waldenu.edu

IRB approval number: 01-21-15-0198563 Expiration date: January 20, 2016

Pauline Stahlbrodt – Principal Investigatory
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Mitchell Hick, Ph.D. – Advisor
Walden University
Clinical Psychology
Mitchell.Hicks@waldenu.edu

Sincerely,

Pauline Stahlbrodt

Counseling Psychology

Appendix D: Interpreting Agency Email

Hello, my name is Pauline Stahlbrodt, and I am a pre-doctoral student in counseling psychology at Walden University. I am hoping to conduct research exploring the experiences of medical interpreters in mental health settings and whether or not they have experienced vicarious traumatization or vicarious posttraumatic growth in the context of their work.

As an agency that provides professional medical interpretation services, you are in a unique position to contribute to the field of vicarious trauma and vicarious posttraumatic growth research. If at all possible, would you be willing to forward the below email request to your medical interpreters? Two objectives of the survey include: (a) contributing to the continued professional development of the profession, and (b) providing additional insights in how to better prepare medical interpreters who work in mental health settings. I understand your time is extremely valuable and I hope you will take the time to encourage participation in this research.

Thank you for your consideration.

Subject Line: Medical Interpreter Research- Seeking Participants:

Hello, my name is Pauline Stahlbrodt, and I am a pre-doctoral student in counseling psychology at Walden University. I am conducting research exploring the experiences of medical interpreters in mental health settings and whether or not they have experienced vicarious traumatization or vicarious posttraumatic growth in the context of their work. If

you are such a professional, please take the time to complete a survey by clicking on the following link:https://www.surveymonkey.com/s/MedicalInterpreters

More information regarding the research can be found at the link mentioned above. It is the hope of this researcher that the information gained through this study will help to further the ongoing professional development of medical interpreters and add another important voice to the field of trauma research. I would expect the survey to take about 30 minutes, which I understand is a significant amount of time and I thank you in advance. If you know of anyone else who may be interested in participating in this survey please feel free to forward this message.

Contact Information:

If you have any questions about this study, you can contact the person(s) below:

Walden University Research Participant Advocate

USA number - 001-612-312-1210 or irb@waldenu.edu

IRB approval number: 01-21-15-0198563 Expiration date: January 20, 2016

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Sincerely,

Pauline Stahlbrodt
Counseling Psychology

Appendix E: NBCMI Follow-up Email

Hello,

My name is Pauline Stahlbrodt, and I am a pre-doctoral student in counseling psychology at Walden University. I am hoping to conduct research exploring the experiences of medical interpreters in mental health settings and whether or not they have experienced vicarious traumatization or vicarious posttraumatic growth in the context of their work.

If you have already received this email and made a contribution, I thank you in advance.

If you are someone who works in mental health settings please consider adding your experience to this research.

Two objectives of the survey include: (a) contributing to the continued professional development of the profession, and (b) providing additional insights in how to better prepare medical interpreters who work in mental health settings.

If you are such a professional, please take the time to complete a survey by clicking on the following link: https://www.surveymonkey.com/s/MedicalInterpreters

I understand your time is extremely valuable and I hope you will take the time to contribute to this research.

More information regarding the research can be found at the link mentioned above. It is the hope of this researcher that the information gained through this study will help to further the ongoing professional development of medical interpreters and add another important voice to the field of trauma research. I would expect the survey to take about 30 minutes, which I understand is a significant amount of time and I thank you in

advance. If you know of anyone else who may be interested in participating in this survey please feel free to forward this message.

Contact Information:

If you have any questions about this study, you can contact the person(s) below:

Walden University Research Participant Advocate

USA number - 001-612-312-1210 or irb@waldenu.edu

IRB approval number: 01-21-15-0198563 Expiration date: January 20, 2016

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Sincerely,

Pauline Stahlbrodt

Counseling Psychology

To prospective survey participants,

My name is Pauline Stahlbrodt and I am a pre-doctoral student conducting research exploring the experiences of medical interpreters in mental health settings and whether or not they have experienced vicarious traumatization or vicarious posttraumatic growth in the context of their work.

Content:

The survey will ask you to provide socio-demographic information such as age, sex, ethnicity, etc. as well as answer questions related to your work as a **medical interpreter** and questions specific to your work with **trauma survivors**.

Time:

I expect it will take between **20 to 30 minutes** for the average reader to complete the survey.

Benefits:

There are **no** monetary or other incentives for completing this survey directly offered by this researcher. However, your participation will be greatly appreciated by this researcher and may help inform future training and education for professional medical interpreters as well as possibly improve services for **limited English proficiency (LEP)** individuals seeking mental health services.

Potential Negative Effects:

You may experience **mild discomfort** answering questions related to your work with trauma survivors. Since you will be able to complete the survey anywhere you have internet access you may take the survey in the privacy of your home. You may call the Crisis Call Center toll-free at 1-800-273-8255 if you do experience a situation where you need to speak with someone immediately.

Contact Information:

If you have any questions about this study, you can contact the person(s) below:

Walden University Research Participant Advocate

USA number - 001-612-312-1210 or irb@waldenu.edu

Pauline Stahlbrodt – Principal Investigatory
Walden University
Counseling Psychology
pauline.stahlbrodt@waldenu.edu

Mitchell Hick, Ph.D. - Advisor
Walden University
Clinical Psychology
Mitchell.Hicks@waldenu.edu

I hope that you choose to participate in this study by clicking on the following link https://www.surveymonkey.com/s/MedicalInterpreters to complete the survey.

Sincerely,

Pauline Stahlbrodt

Counseling Psychology

Appendix F: Consent Form

To prospective survey participants,

Thank you for your interest in this study. Below you will find a description of the study. Please answer the questions at the end of the letter before proceeding to the survey questions.

Purpose of the study:

This study is being conducted by Pauline Stahlbrodt, a student in the Psychology Department at Walden University, in order to better understand the experiences of medical interpreters in behavioral health settings, especially in regards to the treatment of trauma survivors. This research may help contribute to the professional development of medical interpreters in behavioral health settings as well as improve treatment experiences of limited English proficient (LEP) individuals seeking mental health services. I plan to make the results of this study available to the websites of the International Medical Interpreters Association (IMIA) and National Board of Certification for Medical Interpreters (NBCMI) LinkedIn group page based on the data provided by survey respondents such as you.

Description of the survey procedures and approximate duration of the study:

I would greatly appreciate your taking the time to complete the following survey questions. The validity of the survey results depends on a high response rate and your participation is crucial to the success of this study. Survey questions will include demographic data, questions related to your work with trauma survivors, and questions related to your work as a medical interpreter. This process will likely take the average respondent approximately 20 to 30 minutes to complete.

How confidentiality will be assured and the limits of these assurances, if any:
Your participation and completion of the survey indicates your consent to participate in this study. Please be assured that your responses will be held in the strictest confidence, and your data will be completely anonymous. Your data will be saved as a set of information and no personally identifying information, such as name, date of birth, or address, will be collected. As soon as you submit your responses you will receive confirmation that your completed survey information has been received. All data will be stored electronically for five years after completion of the dissertation and then securely destroyed. The results of this study may be published, but again no identifying information has been collected and therefore cannot be used.

Anticipated benefits resulting from this study:
The potential benefits to you from participating in the study are indirect. The study may be helpful to you in the future as it is the hope of this researcher that this study will reveal valuable information about potential risks or benefits associated with providing

interpretation services for traumatized individuals and that this may lead to improved training, education, and professional practices for medical interpreters in behavioral health settings. It is the hope of this researcher that in addition, mental health services and outcomes for limited English proficiency individuals will improve as a result of this study.

The potential benefits to science and humanity that may result from this study is the additional contribution to the existing body of research examining the possible risks and benefits of working with trauma survivors by adding the voice of the medical interpreter. This study may provide information on how to improve the therapist-medical interpreter team in providing services to LEP individuals as well as improve working conditions for medical interpreters. You will not receive any personal feedback from your survey responses since the study is anonymous, but you will have the opportunity to read the results of the study on either www.imiaweb.org or www.certifiedmedicalinterpreters.org and then selecting the LinkedIn icon to be directed to the NCMI group page.

Potential Negative Effects:

The potential negative effects for participation include some minor discomfort associated with answering some of the questions related to your work with trauma clients. If at any time to you wish to discontinue the survey, simply exit the survey and no information will be retained. There is no penalty to you for discontinuing the survey. If you wish to complete the survey at a later time you will need to start the survey from the beginning as

there is no way of saving any of the responses as there is no identifying information associated with any one respondent. You may call the Crisis Call Center toll-free at 1-800-273-8255 if you do experience a situation where you need to speak with someone immediately.

Contact Information:

If you have questions about this study, you can contact the person(s) below:

Walden University Research Participant Advocate

USA number - 001-612-312-1210 or irb@waldenu.edu

Pauline Stahlbrodt – Principal Investigator
Walden University
Counseling Psychology
pauline.stahlbrodt@waldenu.edu

Mitchell Hick, Ph.D. - Advisor
Walden University
Clinical Psychology
Mitchell.Hicks@waldenu.edu

This study has been reviewed and approved by Walden University's Institutional Review Board (IRB). The IRB determined that this study meets the ethical obligations required by federal law and University policies. If you have any questions or concerns regarding this study please contact the Walden University Research Participant Advocate at USA number - 001-612-312-1210 or irb@waldenu.edu.

I hope that you choose to participate in this study.

Please print this screen and save a copy of this consent form for your records.

Sincerely,

Pauline Stahlbrodt

Counseling Psychology

Consent

Please indicate whether or not you provide consent to participate in this survey and have your responses included in the study by selecting one of the following: (a) Yes, I agree to participate in this survey and consent to have my responses included in the final study results, (b) No, I do not agree to participate in this survey.

Appendix G: Screening Questions and Survey

Screening Questions

Please answer the following questions before proceeding to the survey:

1) Do you or have you provided medical interpretation services in behavioral health or mental health settings? (a) Yes, (b) No. If the response is no, the survey will close. The following message will appear, “Thank you for your interest in this survey. You indicated you do not work in behavioral health or mental health settings.
2) Please specify your age. Please enter a whole number. If the participant indicates they are less than 18 years old the survey will close. The following message will appear, “Thank you for your interest in this survey. You indicated you were not 18 years or older and, therefore, may not participate in this survey.

Demographic Questions

Please answer the following questions:

1. Are you male or female?: (a) Male, (b) Female
2. Which of the following best describes your current relationship status? (a) Married, (b) Widowed, (c) Divorced, (d) Separated, (e) In a domestic partnership or civic union, (f) Single, but cohabitating with a significant other, (g) Single, never married

3. Which of the following best describes your current employment type?: (a) independent contractor, (b) interpreting agency employee, (c) mental health clinic/hospital employee
4. In what country do you currently reside? (a) United States, (b) Other-please specify
5. Are you White, Black or African American, American Indian or Alaskan Native, Asian, Native Hawaiian or other Pacific Islander, From multiple races, Other?: (a) White, (b) Black or African American, (c) American Indian or Alaskan Native, (d) Asian, (e) Native Hawaiian or other Pacific Islander, (f) From multiple races, (g) Other race-please specify
6. Do you provide spoken or sign interpretation, or both? Please select all that apply.: (a) Spoken, (b) Sign

Personal and Professional Experiences

7. How many years have you worked as a medical interpreter in total? Please specify a whole number.
8. How many years have you specifically worked as a behavioral health medical interpreter? Please specify a whole number.
9. How many hours per month do you provide interpretation services in a mental health setting? Please specify the closest estimation in whole numbers.
10. How many hours per month do you provide interpretation services in a mental health setting that contain traumatic material? Please specify the closest estimation in whole numbers.

11. Percentage of time spent witnessing traumatic material. This is will be calculated based on the total number of hours per month providing interpretation services that contained traumatic material (question number 9) divided by total number of hours per month providing interpretation services (question number 8)
12. Which of the following best describes your level of education as it relates to interpreting? (a) certification program < 40 hours, (b) certification program ≥ 40 hours, (c) 2 year associate degree specific to medical interpretation, (d) 4 year bachelor degree specific to medical interpretation, (e) > than 4 year degree specific to medical interpretation
13. Have you had specific mental health training? (a) Yes, (b) No
14. Do you have a personal history of trauma? (a) Yes, (b) No
15. Do you have a personal or family history similar to any of the trauma survivors served in the past year? (a) Yes, (b) No
16. Have you sought personal therapy related to exposure to traumatic material directly related to your role as a medical interpreter? (a) Yes, (b) No)
17. Have you been exposed to a suicide or homicide assessment within the last six months? (a) Yes, (b) No
18. Have you witnessed recovery from trauma in your role as a medical interpreter? (a) Yes, (b) no
19. Which answer best represents your practices related to briefing or debriefing before or after a therapy session? (a) Aways, (b) Sometimes, (c) Never

20. Which answer best represents your level of supervision provided to you in your role as a medical interpreter? (a) Weekly supervision, (b) Monthly supervision, (c) No supervision is provided

Posttraumatic Growth Inventory

Indicate for each of the statements below the degree to which this change occurred in your life as a result of your role as a medical interpreter in a behavioral health setting using the following scale.

0= I did not experience this change as a result of my role.

1= I experienced this change to a very small degree as a result of my role.

2= I experienced this change to a small degree as a result of my role.

3= I experienced this change to a moderate degree as a result of my role.

4= I experienced this change to a great degree as a result of my role.

5= I experienced this change to a very great degree as a result of my role.

	0	1	2	3	4	5
	No Change	Very Small Degree	Small Degree	Moderate Degree	Great Degree	Very Great Degree
I changed my priorities about what is important in						

life						
I have a greater appreciation for the value of my own life						
I developed new interests						
I have a greater feeling of self-reliance						
I have a better understanding of spiritual matters						
I more clearly see that I can count on people in times of trouble						
I established a new path for my life						
I have a greater sense of closeness with others						
I am more willing to express my emotions						
I know better that I can handle difficulties						
I am able to do better things with my life						

I am better able to accept the way things work out						
I can better appreciate each day						
New opportunities are available which wouldn't have been otherwise						
I have more compassion for others						
I put more effort into my relationships						
I am more likely to try to change things which need changing						
I have a stronger religious faith						
I discovered that I'm stronger than I thought I was						
I learned a great deal about how wonderful people are						
I better accept needing						

others						

Trauma and Attachment Belief Scale

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

1 = Disagree Strongly

2 = Disagree

3 = Disagree Somewhat

4 = Agree Somewhat

5 = Agree

6 = Agree Strongly

	1	2	3	4	5	6
	Disagree Strongly	Disagree	Disagree Somewhat	Agree Somewhat	Agree	Agree Strongly
I believe I am safe						
You can't trust						
I don't feel like I deserve much						
Even when I am with friends and family, I don't						

feel like I belong						
I can't be myself around people						

Appendix H: Trauma and Attachment Belief Scale Permission Letter

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July 23, 2014

Pauline N. Stahlbrodt

Graduate Student

Walden University

Re: Trauma and Attachment Belief Scale (TABS)

Dear Pauline—

In follow-up to your email of 22July'14 and Dr. Mitchell Hicks' letter of support on 23June'14, this serves to provide terms that will permit you to adapt the format of the TABS for administration and scoring via a secure, password-protected on-line environment, for sole application within your registered, scholarly study, examining whether or not distinct groupings of medical interpreters can be identified based on measures of vicarious traumatization, vicarious posttraumatic growth, and suggested risk or protective factors and practices derived from the literature.

Western Psychological Services will authorize you to adapt and arrange for delivery of English language TABS material as described – parallel with and consistent to the entire prevailing item set, and using prevailing response categories – including your administering the scale a specific number of times within the project, and your creating a scoring-only computerized key for tabulation of item responses, as based on our proprietary hand-scoring key. Our authorization is for the sole purpose of conducting the above-described study, and not for continued or commercial use, and is subject to satisfaction of the following conditions:

(1) You must purchase from WPS a non-exclusive license for the anticipated number of TABS administrations.

(2) The license fee for this described use of the TABS will be based on prevailing prices for the hand-scored TABS Test Form (W-393A), less 20% Research Discount. Note that we license this instrument in units of twenty-five (25) with a minimum licensed fee of one hundred uses; shipping and handling fees are not applicable to licensing fees (e.g., 200 total adapted TABS administrations @ $50.00/25 = $400.00 x 80% = $320.00 total license fee).

(3) The license fees must be prepaid in U.S. dollars drawn on a U.S. bank or by international money order (Visa, MasterCard, Discover and American Express are accepted and swiftest), and are non-refundable. To ensure proper handling of your licensing arrangements, and to guarantee the rate in condition 2 above, please send the payment to my attention with a signed copy of this letter, within the next sixty (60) days.

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Pauline N. Stahlbrodt

Graduate Student

Walden University

July 23, 2014

Page Two of Two

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and

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NOTE: To source the administration instructions, item content, and scoring guidelines needed for your customized application, please refer to the TABS Manual. In case you do not have (or have direct access to) the TABS Manual (W-393B), this

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WPS appreciates your research interest in the TABS, as well as your consideration for its copyright. Please feel free to contact me if you have any questions. I look forward to your reply.

Sincerely yours,

Sandra I. Ceja

Rights & Permissions Assistant

WPS Rights and Permissions

e-mail: sceja@wpspublish.com

SC:sc

I agree to the terms stated herein.

Date Pauline N. Stahlbrodt, Walden University

Appendix I: Trauma and Attachment Belief Scale – No Reprint Letter

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As a publisher of formally developed test materials, WPS policy in such matters is to not authorize reprinting of our tests, subtests, or scales in their entirety, unless there is a committee requirement or other research-based reason that (1) requires you to reprint a

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We appreciate your interest in our material, as well as your consideration for its copyright. Please contact me if you have any questions.

Sincerely yours,

Susan Dunn Weinberg

WPS Rights and Permissions Manager

e-mail: weinberg@wpspublish.com

SDW:se

Appendix J: Trauma and Attachment Belief Scale – Permission to Reprint Select Items Letter

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November 3, 2014

Pauline N. Stahlbrodt

Graduate Student

Walden University

Re: Trauma and Attachment Belief Scale (TABS)

Hello—

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On behalf of WPS, I appreciate your interest in this instrument as well as your consideration for its copyright. It's our privilege to assist helping professionals, and I hope we can be of service to your future work.

Sincerely yours,

Sandra I. Ceja

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e-mail: sceja@wpspublish.com

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Appendix K: Trauma and Attachment Belief Scale Copy Right Notice

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August 6, 2014

Pauline N. Stahlbrodt

Graduate Student

Walden University

31 Perry Place

Canandaigua, NY 14424

Re: Trauma and Attachment Scale (TABS), Adult Form

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examining whether or not distinct groupings of medical interpreters can be identified based on measures of vicarious traumatization, vicarious posttraumatic growth, and suggested risk or protective factors and practices derived from the literature— with no authorization for continued or commercial use — subject to the provisions of terms and conditions provided to you July 23, 2014.

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On behalf of WPS, I hope the TABS well serves your study, and look forward in due course to learning of your research results.

Sincerely yours,

Sandra I. Ceja

WPS Rights & Permissions Assistant

e-mail: sceja@wpspublish.com

FD:sc

Appendix L: Posttraumatic Growth Inventory Permission Letter

As you requested, a copy of the *Posttraumatic Growth Inventory* (PTGI) follows. There is no charge for use of the PTGI in not-for-profit research. However, the inventory is not to be reproduced for any kind of general distribution, and it may not be used in for-profit enterprises.

In reciprocation for its use in your work, please send us a gratis copy of any manuscripts, theses, dissertations, research reports, preprints, and publications you prepare in which our materials, or any version of them, is used.

Both L. G. Calhoun and R. G. Tedeschi can be contacted at: Department of Psychology - UNC Charlotte - Charlotte, NC 28223 USA, or by email at *lcalhnjr@uncc.edu* and *rtedesch@uncc.edu*

Appendix M: Posttraumatic Growth Inventory

Indicate for each of the statements below the degree to which this change occurred in your life as a result of your crisis [**or researcher inserts specific descriptor here**], using the following scale.

Note to investigators – you will need to format the items so that participants have a way of responding to each one. The procedure we recommend is to place the numerical values of the scale after each item.

In addition, the Roman numeral codes for the factors should also be removed.

0= I did not experience this change as a result of my crisis.

1= I experienced this change to a very small degree as a result of my crisis.

2= I experienced this change to a small degree as a result of my crisis.

3= I experienced this change to a moderate degree as a result of my crisis.

4= I experienced this change to a great degree as a result of my crisis.

5= I experienced this change to a very great degree as a result of my crisis.

1. I changed my priorities about what is important in life. (V)

2. I have a greater appreciation for the value of my own life. (V)

3. I developed new interests. (II)

4. I have a greater feeling of self-reliance. (III)

5. I have a better understanding of spiritual matters. (IV)

6. I more clearly see that I can count on people in times of trouble. (I)

7. I established a new path for my life. (II)

8. I have a greater sense of closeness with others. (I)

9. I am more willing to express my emotions. (I)

10. I know better that I can handle difficulties. (III)

11. I am able to do better things with my life. (II)

12. I am better able to accept the way things work out. (III)

13. I can better appreciate each day. (V)

14. New opportunities are available which wouldn't have been otherwise. (II)

15. I have more compassion for others. (I)

16. I put more effort into my relationships. (I)

17. I am more likely to try to change things which need changing. (II)

18. I have a stronger religious faith. (IV)

19. I discovered that I'm stronger than I thought I was. (III)

20. I learned a great deal about how wonderful people are. (I)

21. I better accept needing others. (I)

Note: Scale is scored by adding all responses. Factors are scored by adding responses to items on each factor. Items to which factors belong are not listed on form administered to participants.

PTGI Factors

Factor I: Relating to Others

Factor II: New Possibilities

Factor III: Personal Strength

Factor IV: Spiritual Change

Factor V: Appreciation of Life

References of Potential Interest

Baker, J. M., Kelly, C., Calhoun, L. G., Cann, A., & Tedeschi, R. G. (2008). An examination of posttraumatic growth and posttraumatic depreciation: Two exploratory studies. *Journal of Loss and Trauma, 13,* 460-465.

Calhoun, L. G., & Tedeschi, R. G. (2001). Posttraumatic growth: The positive lessons of loss. In R. A.

Neimeyer (Ed.), *Meaning reconstruction and the experience of loss (*pp. 157-172). Washington, DC: American Psychological Association.

Calhoun, L. G., & Tedeschi, R. G. (2004). The foundations of posttraumatic growth: New considerations. *Psychological Inquiry, 15,* 93-102.

Calhoun, L. G., & Tedeschi, R. G. (Eds.). (2006). *Handbook of Posttraumatic Growth: Research and Practice.* Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Calhoun, L. G., & Tedeschi, R. G. (2013). *Posttraumatic growth in clinical practice.* New York: Taylor & Francis.

Calhoun, L. G., Tedeschi, R. G., Cann, A., & McMillan, J. (2000). A correlational test of the relationship between posttraumatic growth, religion, and cognitive processing. *Journal of Traumatic Stress, 13,* 521-527.

Cann, A., Calhoun, L. G., Tedeschi, R. G., Kilmer, R. P., Gil-Rivas, V., Vishnevsky, T., & Danhauer, S. C. (2010). The Core Beliefs Inventory: A brief measure of disruption in the assumptive world. *Anxiety, Stress, & Coping*, *23,* 19-34.

Cann, A., Calhoun, L. G., Tedeschi, R. G., Taku, K., Vishnevsky, T., Triplett, K.N., & Danhauer, S.C. (2010). A short form of the Posttraumatic Growth Inventory, *Anxiety, Stress, & Coping, 23,* 127-137.

Cann, A., Calhoun, L. G., Tedeschi, R. G., Triplett, K. N., Vishnevsky, T., & Lindstrom, C**.** (2011). Assessing posttraumatic cognitive processes: The Event Related Rumination Inventory. *Anxiety, Stress, & Coping*, *24,* 137-156.

Groleau, J., Calhoun, L. G., Cann, A., & Tedeschi, R. G. (2013). The role of centrality of event in posttraumatic growth and posttraumatic distress. *Psychological Trauma: Theory, Research, Practice, and Policy*, *5*, 477-483.

Lindstrom, C. M., Cann, A., Calhoun, L. G., & Tedeschi, R. G. (in press). The relationship of core belief challenge, rumination, disclosure, and socio-cultural elements to posttraumatic growth. *Psychological Trauma: Theory, Research, Practice, and Policy.*

Morris, B., Shakespeare-Finch, J., Rieck, M., & Newbery, J. (2005). Multidimentional nature of posttraumatic growth in an Australian population. *Journal of Traumatic Stress*, *18,* 575-585.

Shakespeare-Finch, J., & Enders, T. (2008). Corroborating evidence of posttraumatic growth. *Journal of Traumatic Stress, 21,* 421-424.

Taku, K, Cann, A., Calhoun, L. G., & Tedeschi, R. G. (2008). The factor structure of the Posttraumatic Growth Inventory: A comparison of five models using confirmatory factor analysis. *Journal of Traumatic Stress, 21,* 158-164.

Tedeschi, R.G., & Calhoun, L.G. (1995). *Trauma and transformation: Growing in the aftermath of suffering*. Thousand Oaks, CA: Sage Publications.

Tedeschi, R.G., & Calhoun, L.G. (1996). The Posttraumatic Growth Inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress, 9,* 455-471.

Tedeschi, R. G., & Calhoun, L. G. (2004). *Helping bereaved parents: A clinician's guide*. New York: Brunner - Routledge.

Tedeschi, R. G., & Calhoun, L. G. (2009). The clinician as expert companion. In C. L. Park, S. C. Lechner, M. H. Antoni, & A Stanton (Eds.) *Medical illness and positive life change: Can crisis lead to personal transformation* (pp. 215-235)? Washington, DC: American Psychological Association.

Triplett, K. N., Tedeschi, R. G., Cann, A., Calhoun, L. G., & Reeve, C. L. (2012). Posttraumatic growth, meaning in life, and life satisfaction in response to trauma. *Psychological Trauma: Theory, Research, Practice, and Policy, 4,* 400-410.