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# The Relationship Between Vicarious Traumatization and Job Retention Among Child Welfare Professionals

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# THE RELATIONSHIP BETWEEN VICARIOUS TRAUMATIZATION AND JOB RETENTION AMONG CHILD WELFARE PROFESSIONALS

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## Abstract

This dissertation study examined the relationship between vicarious traumatization and job retention among 1,192 child welfare professionals in five different child welfare organizations. Propositions from Constructivist Self Development Theory (CSDT) were utilized to examine the differential factors influencing the impact of vicarious trauma on child welfare professionals' intent to leave their organization, including coping strategies, professional efficacy, and professional satisfaction. Structural Equation Modeling (SEM) was used to assess the degree of fit between the observed data and several hypothesized theoretical models examining the relationship between vicarious trauma, coping strategies, professional efficacy, professional satisfaction, and retention. Findings from SEM analyses revealed a significant relationship between vicarious traumatization and intent to leave, as mediated by professional efficacy and professional satisfaction. This finding indicated that child welfare professionals who experienced higher rates of vicarious traumatization were more likely to leave their organization. Implications of these findings for theory, research, and social work practice are delineated.

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## Chapter One: Introduction

Child welfare professionals who work on the front lines with maltreated children and their families each day most likely experience vicarious traumatization due to frequent exposure to traumatic material (Baird & Jenkins, 2003). Specifically, child welfare workers who investigate child abuse, and provide services to child abuse victims and their families, work directly with traumatized and resistive clients. As such, they bear witness to some of the most severe forms of child abuse and trauma, including sexual abuse and physical abuse resulting in death. Further, child welfare professionals operate within a variety of stressful and often unpredictable work environments, including hospitals, residential treatment facilities, crime scenes, and severely neglectful homes. Therefore, the very nature of the work can have a significant impact on the emotional well-being and ability of child welfare professionals to effectively perform their jobs, potentially limiting quality service delivery to those in need of trauma services and contributing to overall workforce capacity issues. Importantly, organizational factors may serve to increase or buffer the impact of this trauma over time (Bell, Kulkarni, & Dalton, 2003; Perron & Hiltz, 2006).

In an effort to implement and sustain quality services to children experiencing abuse and neglect, child welfare agencies commonly face workforce-related challenges, specifically in regards to workforce capacity. Challenges such as extremely high caseload ratios, work absences, and rates of turnover are due, in large part, to the burnout

and vicarious traumatization child welfare professionals experience from having a job that consists of working with traumatized children and families (Pryce, Shackelford, & Pryce, 2007). Vicarious trauma is an occupational health hazard that impacts an already inadequate distribution of credentialed child welfare professionals and severely limits quality service delivery to those in need of child welfare services. In spite of this, minimal research has been conducted to explore the impact of vicarious trauma on organizational climate and workforce-related outcomes among child welfare professionals.

**Conceptual and Operational Definitions**

The occupational stress of social workers serving traumatized populations has begun to receive significant attention as a workforce issue within child welfare organizations. Terms to describe this phenomenon are varied. The most common terms include: compassion fatigue (Figley, 1995), secondary traumatic stress (Figley, 1995; Stamm, 1995), and vicarious traumatization (McCann & Pearlman, 1990; Pearlman & Saakvitne, 1995).

Although overlap exists between the concepts underlying these terms, there are differences. Specifically, compassion fatigue is viewed as the helper's reduced capacity for compassion and encompasses the natural consequent behaviors and emotions resulting from knowing about a traumatizing event experienced by another person (Figley, 1995). Secondary traumatic stress refers to a cluster of psychological symptoms that mimic post-traumatic stress disorder (PTSD) acquired through exposure to persons suffering trauma (Figley, 1995; Stamm, 1995). Vicarious traumatization involves profound changes to professionals' cognitive schemas and core beliefs about themselves,

others, and the world, that occur as a result of exposure to graphic and/or traumatic material relating to their clients' experiences. Unlike compassion fatigue and secondary traumatic stress, vicarious traumatization is grounded in Constructivist Self Development Theory (McCann & Pearlman, 1990) and depicts the resulting changes to be pervasive, cumulative, and permanent.

While these constructs have been compared and debated at length, a full discussion of them is outside the scope of this dissertation. However, because vicarious traumatization is a theory-driven construct, emphasizing more gradual, covert, and permanent changes in a helping professional's cognitive schema, it may hold significant implications for understanding workforce outcomes such as job retention. For this reason, the construct of vicarious traumatization will be used throughout this dissertation proposal, unless another term has been used specifically in the research cited. By the same token, for the purposes of this study, vicarious traumatization is defined as the response of helping professionals who have witnessed, have been subjected to explicit knowledge of, or had the responsibility to intervene in a seriously distressing or traumatic event. A discussion arguing the importance of workforce retention as an outcome variable and supporting vicarious traumatization as an occupational health hazard for child welfare professionals is presented below.

**Importance of the Problem**

Retention of employees in child welfare, social service, and other human service agencies is a serious concern. The high turnover rate of professional workers poses a major challenge to child welfare agencies (Pryce et al., 2007) and to the social work field in general. Reports of turnover rates among child welfare workers range from 30 to 60

percent in a typical year (General Accounting Office, 2003). The American Public Health Services Association (APHSA) report from the Child Welfare Workforce Survey (2005) indicates that the upper range of child welfare worker turnover grew to 67 percent in 2004, from 38 percent in 2000. More importantly, the amount of this turnover that could have been prevented (e.g., leaving for reasons other than retirement, death, marriage/parenting, returning to school, moving, or interagency transfers) was 60 percent for child protective services workers (APHSA, 2005). Further, not only are child welfare workers leaving their posts for preventable reasons, but the positions remain vacant for significant periods of time, impacting children and families in need of immediate services. On average, a child will not have a child protection worker for 13 weeks if his or her worker leaves the agency (APHSA, 2005).

In this regard, high worker turnover has grave implications for the quality, consistency, and stability of services provided to children and families in the child welfare system. Turnover can have detrimental effects on clients when positions are vacated and then filled by inexperienced workers. Empirical research indicates that higher rates of caseworker turnover significantly decrease permanency achievement rates for children (Flower, McDonald, & Sumski, 2005). High turnover rates can reinforce clients' mistrust of the system and can discourage workers from remaining in or even entering the field. Notably, turnover costs can include the loss of efficacy of child welfare workers before they actually leave the organization, which can reduce organizational effectiveness and employee productivity (Pryce et al., 2007).

An understanding of the causes and antecedents of turnover is a first step for taking action to reduce turnover rates. To effectively retain child welfare professionals,

organizations must know what factors motivate their workers to stay in the field and what factors cause them to leave. Empirical research indicates that heavy workloads, heavy caseloads, after-hours work, amount and type of paperwork, insufficient resources, lack of career advancement opportunities, and low salaries are factors which contribute to worker turnover (APHSA, 2005). Interestingly, variables which indicate a high level of professional satisfaction (e.g., commitment to child welfare, psychological rewards) as well as a high level of professional efficacy (e.g., perceived efficacy, job utility) are strongly correlated with intent to stay (Harrison, 1995). Perhaps most notable, however, are recent findings indicating that factors pertaining to the *nature of the work* (e.g., stress, emotional exhaustion, burnout, and job satisfaction) are more strongly correlated with child welfare worker turnover than organizational structure issues such as those listed above (Beaver, 1999; Dickenson & Perry, 2002). This supports the inclusion of vicarious trauma as an important construct in influencing child welfare worker turnover.

**Study Purpose**

This dissertation study focuses on the role that vicarious traumatization plays in influencing child welfare professionals' intent to leave their jobs. Specifically, this study utilizes propositions from Constructivist Self Development Theory (CSDT) to examine the differential factors influencing the relationship between vicarious trauma and job retention among child welfare professionals, as shown in Figure 1. Vicarious trauma has the potential to negatively impact the psychological well-being of child welfare professionals, as implicated through changes in their professional efficacy and professional satisfaction. Additionally, research indicates that constant work with victimized clients can lead to job turnover (Pearlman, 1999). To decrease the incidence of

vicarious traumatization for child welfare professionals and improve the overall health of a child welfare organization, it is essential for researchers to better understand the relationship between vicarious trauma and retention, in order to retain a competent, healthy workforce.

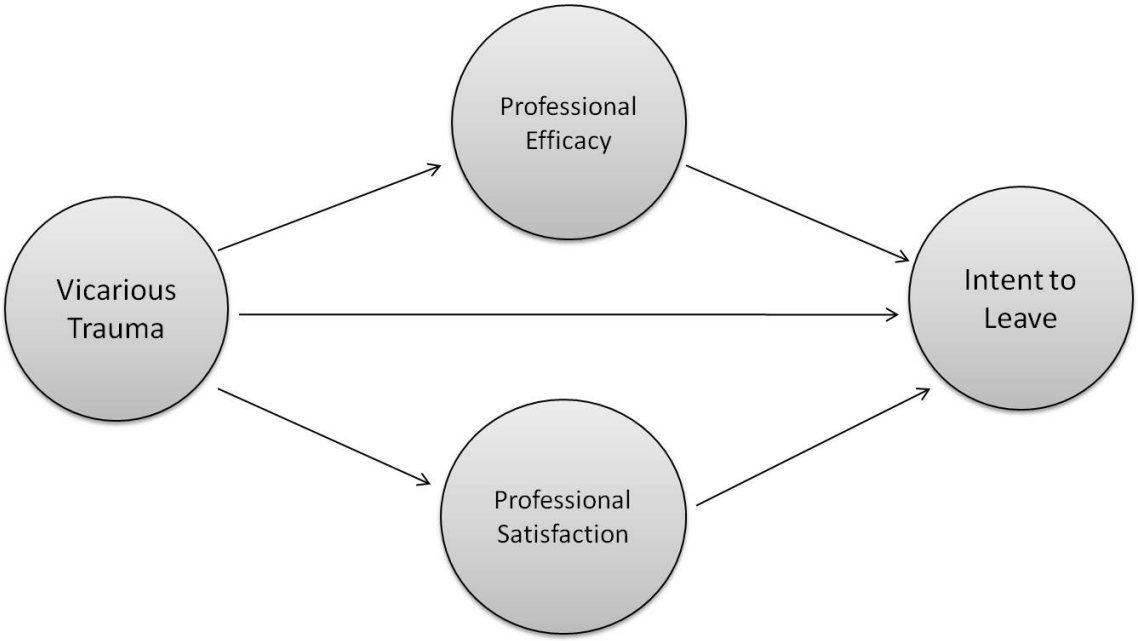


*Figure 1: Conceptual Model*

Since this current study uses a sample of child welfare workers from five diverse child welfare sites to explore the relationship between vicarious trauma and retention, it is hoped that the study will be useful for administrators in child welfare agencies who provide services to traumatized children and their families. Results of this study will be utilized to highlight the important role vicarious trauma plays in predicting the retention of child welfare professionals, and to inform the development and testing of approaches that promote effective and appropriate organizational responses to child welfare staff experiencing vicarious traumatization.

**Summary**

As evidenced by this chapter's discussion, turnover is a serious issue impacting child welfare organizations across the country. Perhaps most concerning is the negative impact that worker turnover may have on client services and client outcomes. Additionally, initial research indicates that the occupational stress (e.g., vicarious trauma) that child welfare professionals experience due to the traumatic nature of their job is an important factor to consider in relation to their decision to leave their job. In order to better understand this phenomenon within the social context of the organization, a brief summary of current perspectives regarding organizational health in child welfare is discussed in the following chapter. In addition, a review of the theoretical and empirical literature noting the importance of vicarious traumatization as an occupational health hazard for child welfare professionals is presented. Particular attention is paid to the differential factors thought to influence the impact of vicarious trauma on child welfare professionals' intent to leave their organization.

## Chapter Two: Literature Review

### Organizational Health in Child Welfare

Organizational theory and research indicate that organizational health is represented by a number of overlapping dimensions, including workforce practices and outcomes (e.g., recruitment, retention, and workload), organizational climate, organizational culture, service patterns, and client outcomes. Conceptually, the social context of an organization is important to consider when assessing organizational health, as it helps to shape the implementation of quality services. Specifically, the social context of an organization includes the norms, values, expectation, perceptions, and attitudes of the members of the organization, all of which affect how services are delivered. By the same token, an organization's social context determines how things are accomplished in the organization and what the psychological impact of the work environment is on the professionals who work there (Glisson, 2007).

A significant body of empirical evidence indicates that organizational culture and climate play central roles in the social context of an organization (Glisson, 2000; Hemmelgarn, Glisson, & James, 2006). A number of studies in child welfare and mental health organizations link culture and climate to service quality, service outcomes, worker morale, staff turnover, the adoption of innovations, and organizational effectiveness (Glisson, 2002, 2007; Glisson & Green, 2006; Glisson & Hemmelgarn, 1998; Glisson & James, 2002). From this research, culture and climate have emerged as key constructs in

the conceptual model of organizational social context, first proposed by Glisson (2007). As shown in Figure 2, culture and climate are two important but distinct domains which mold the work attitudes and behaviors of the members of the organization, and thus, affect the organization's performance and success.

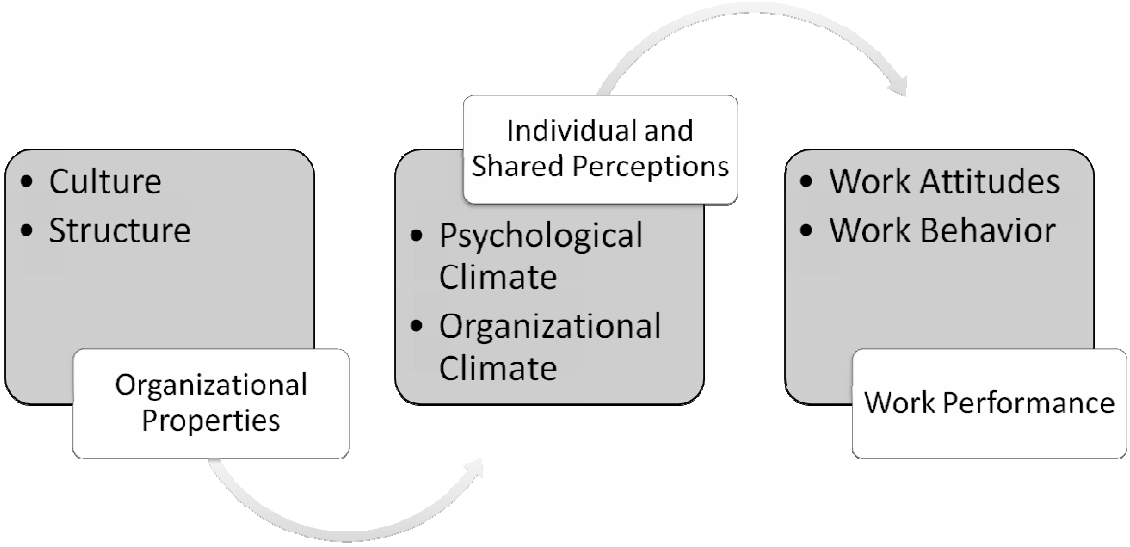


*Figure 2:* Conceptual Model of Organizational Social Context

A historical examination of the organizational literature helps to further distinguish culture and climate as important constructs that inform organizational health. Verbeke, Volgering, and Hessels conducted an extensive literature review in the late 1990s which uncovered more than 50 definitions of culture and more than 30 definitions of climate (1998). This literature review helped to address the confusion regarding the overlapping definitions of the two constructs. Based on the authors' content analysis of the 84 definitions, the review found consensus that *culture* depicts the way things are done in an organization, and *climate* depicts the way people perceive their work

environment (Verbeke et al., 1998). This distinction suggests that culture is a property of the organization and climate is a property of the individual (Glisson, 2007), and has important implications for how health is measured within an organization. Culture is defined as the norms, expectations, and way things are done in the organization. Climate is separated into two reflexive domains: psychological climate and organizational climate. Psychological climate is viewed as the individual employees' perceptions of the psychological impact of their work environment on their own wellbeing. In turn, organizational climate is created when individuals in a work unit, team, or organization share the same perceptions of how their work environment affects them as individuals (Glisson, 2007). In this manner, psychological climate directly informs organizational climate.

Further, organizational climate includes such psychological constructs as stress, burnout, emotional exhaustion, job satisfaction, and self efficacy (Glisson, Dukes, & Green, 2006). In this light, organizational climate describes the nature of the work. As mentioned previously, research indicates that factors pertaining to the nature of the work, perceived as organizational climate, have been shown to be more strongly correlated with child welfare worker turnover than organizational structure issues, also known as organizational culture. This research is discussed below.

In an effort to identify personal and organizational factors that may enhance retention and limit turnover among child welfare professionals, DePanfilis and Zlotnik (2008) completed a systematic review of 154 research documents that utilized retention or turnover as the dependent variable. The authors focused on studies that utilized

multivariate analyses to explore the relationship between personal and/or organizational factors as independent variables and retention or turnover as dependent variables. The findings of this rigorous review indicate that the most important personal factors for influencing the retention of child welfare workers include: emotional exhaustion, self-efficacy, and workers' commitment to child welfare. Importantly, in regards to organizational factors, both job stress and organizational stress were found to be related to worker retention as well (DePanfilis & Zlotnik, 2008). Specifically, in one reviewed study conducted by Dickinson and Perry (2002), when child welfare workers who left public child welfare job were directly asked what influenced their decision to leave, the most important reason they cited was "feeling burned out or over stressed" (2002, p. 97). The findings of this systematic review highlight the important role that organization climate factors related to the stressful nature of the work play in child welfare professionals' intent to leave their job.

Additionally, other research indicates that organizational climate relates not only to intention to leave, but also to quality of services and client outcomes (Bednar, 2003; Glisson & Hemmelgarn, 1998). Specifically, in a 3-year longitudinal study examining child welfare agencies, Glisson & Hemmelgarn found that a positive organizational climate as defined by low conflict, low depersonalization, role clarity, and cooperation resulted in improved service quality and improved psychosocial functioning for children being served (1998). Incidentally, organizational climate was the primary predictor of positive client outcomes. Therefore, attention to climate might be expected to have a significant impact on an organization, doing much more than simply retaining workers.

As evidenced above, factors pertaining to organizational climate are important to consider in regards to child welfare professionals' intent to leave their job. However, while a majority of the climate factors include constructs related to the stressful nature of the work, current research has not considered the occupational health phenomenon of vicarious trauma in this psychological and organizational climate framework. As such, this study targets the important dimension of organizational climate, examining the implications of vicarious traumatization as an important climate factor related to workforce outcomes among child welfare professionals.

**Theoretical Base for Vicarious Trauma and Differential Factors**

In an effort to describe the effects of vicarious trauma experiences, McCann and Pearlman (1990) conceptualized the impact within Constructivist Self Development Theory (CSDT). CSDT combines psychoanalytic theories, such as self-psychology and object relations theory, with social cognition theories to develop a framework for understanding the phenomenon (Pearlman & Mac Ian, 1995). CSDT perceives individuals' adaptations to trauma "as interactions between their own personalities (defensive styles, psychological needs, coping strategies) and salient aspects of the traumatic events, all in the context of social and cultural variables that shape psychological responses" (Pearlman & Mac Ian, 1995, p. 558).

Thus, while the context for the trauma survivor may include social and cultural details pertaining to the traumatic event and its aftermath, when applying this theoretical tenet to child welfare, the context for the child welfare professional may include the culture and climate of the professional's child welfare unit and organization. In this

manner, a child welfare professional's immediate work environment may help shape the worker's psychological response as it is contained within the worker's professional role (e.g. professional efficacy, professional satisfaction). By the same token, based on the previously discussed empirical literature pertaining to worker turnover, professional efficacy and professional satisfaction may serve as proximal predictors of intent to leave. The constructs of professional efficacy and professional satisfaction will be tested as mediators of the relationship between vicarious traumatization and job retention (see Figure 1).

Furthermore, CSDT notes the importance of considering individuals' coping strategies in predicting trauma responses, as coping strategies are perceived as a protective factor against trauma. According to Lazarus and Folkman's (1984) transactional theory of stress, coping strategies are "thoughts or acts that an individual uses to manage the external and/or internal demands of a specific person-environment transaction that is appraised as stressful" (Folkman, 1992, p. 34). In this regard, when considering child welfare professionals, it stands to reason that lack of success employing individual coping efforts at work may increase perceived occupational stress. Further, high levels of emotion adversely impact cognitive functioning and one's capacity for information processing (Lazarus & Folkman, 1984). This has particular relevance to child welfare professionals and the highly charged emotional content and context of their work. Consequently, coping strategies is a construct worthy of consideration in regards to the vicarious traumatization of child welfare professionals. Thus, coping strategies as a

construct will be tested as a predictor of vicarious traumatization among child welfare professionals.

**Empirical Base for Vicarious Trauma And Differential Factors**

As supported in the empirical literature, vicarious trauma symptoms can present in a multitude of ways throughout a helping professional's system, as indicated by physical symptoms, emotional symptoms, behavioral symptoms, work related issues, interpersonal problems, and professional efficacy such as a decrease in concern and esteem for clients (Baird & Jenkins, 2003; Bell et al., 2003; Cherniss, 1992; Clemans, 2004; Dane, 2002; Dane, 2000; Trippany, White Kress, & Wilcoxon, 2004; Perry, 2003; Salston & Figley, 2003). A child welfare professional may experience these traumatic effects as changes in trust, feelings of control, issues of intimacy, esteem needs, safety concerns, and/or intrusive imagery (Pearlman & Saakvitne, 1995).

A significant body of research exists which documents the prevalence of vicarious traumatization among social work professionals currently working in the field (Bell et al., 2003; Bride, 2007; Bride, Jones, & MacMaster, 2007; Sommer, 2008). In a recent study, 70% of master's level social workers reported experiencing at least one symptom of secondary traumatic stress in the past week, and 55% met at least one core diagnostic criteria for PTSD, with intrusion being the most commonly reported criteria (Bride, 2007). Notably, a majority of articles report primarily on the prevalence of vicarious traumatization among social workers in general, as well as psychotherapists and sexual assault workers. Two articles suggest a heightened risk for vicarious traumatization in child welfare workers given their daily contact with physically, sexually, and emotionally

abused children (Bell et al., 2003; Horwitz, 1998). However, both articles are literature reviews on the subject, and are not based on empirical studies specifically examining child welfare professionals.

Vicarious trauma studies to date also focus on identifying risk factors associated with vicarious trauma. The major identified risk factors for vicarious trauma among helping professionals include: significant exposure to traumatic material, having a personal trauma history, greater exposure to traumatized individuals, lower educational level, less experience, and younger age (Baird & Jenkins, 2003; Baird & Kracen, 2006; Bride et al., 2007; Lerias and Byrne, 2003; Nelson-Gardell & Harris, 2003; Pearlman & Mac Ian, 1995).

Despite the fact that child welfare professionals are viewed as being especially at risk for vicarious traumatization due to the nature of their work, only three studies (Bride et al., 2007; Cornille & Myers, 1999; Nelson-Gardell & Harris, 2003; Meyers & Cornille, 2002) have been published that examine vicarious traumatization, or similar occupational stress phenomena with this specific population. These studies are discussed below.

In an effort to assess the prevalence and severity of secondary traumatic stress symptoms among child welfare workers, Cornille & Meyers (1999) surveyed 183 southern child protective service workers who had worked in child protection for more than one year. The researchers utilized the Brief Symptom Inventory (BSI; Weiss & Marmar, 1997) to assess specific traumatic stress symptoms and the Impact of Event Scale-Revised (IES-R; Derogatis, 1975) to assess general psychological symptoms in child protective services workers. Results of the study indicate that 37% of the child

protective services workers were found to be experiencing clinical levels of emotional distress associate with secondary traumatic stress. Further, for some caseworkers, the symptoms were reported to be so distressing as to interfere with their ability to function adequately in the workplace and at home (Cornille & Meyers, 1999; Meyers & Cornille, 2002).

In addition, levels of work exposure and work related personal trauma were found to be strongly associated with the presence of secondary traumatic stress symptoms. Seventy-two percent of workers reported having worked with a child who had witnessed an actual death and all but one worker reported having worked with a child who had been sexually abused. In addition to being exposed to trauma of the children under their care, many workers also experienced direct, personal trauma both before and since beginning their job. Eighty-two percent of workers reported that they had experienced a trauma prior to working in child welfare and 77% reported having been assaulted or threatened while on the job (Cornille & Meyers, 1999; Meyers & Cornille, 2002).

While this study was the first of its kind to demonstrate the prevalence and severity of secondary traumatic stress symptoms among child welfare workers, it has several limitations. First, the two measures utilized by the researchers were out-dated and were initially intended to measure traumatic stress symptoms in primary trauma victims. Second, while 360 workers were initially sampled, only 205 questionnaires were returned, and only 183 participants made the final cut to be included in the final sample. This leaves room for potential sampling bias to occur. Third, only workers who had worked for more than one year were included in the final sample. An assumption was

made by the researchers that workers who have worked over one year will be more likely to experience more severe secondary traumatic stress symptoms. This researcher bias did not allow for study of young, inexperienced workers, who, current research shows, are more at risk for experiencing secondary traumatic stress symptoms. Lastly, child protective services workers reported experiencing both primary and secondary traumatic experiences. However, the survey instrument did not distinguish between these two types of trauma exposure when measuring symptomology.

In an effort to document a link between a personal history of primary trauma and secondary traumatic stress among child welfare workers, Nelson-Gardell and Harris (2003) surveyed a convenience sample of 166 professional child welfare training participants in two southeastern states. The researchers utilized the Compassion Fatigue Self Test for Psychotherapists (Figley, 1995) to measure compassion fatigue/secondary trauma and burnout among study participants. The multidimensional instrument contains two subscales that measure each construct and provides categorizations allowing for score interpretation for each subscale. The researchers also utilized the Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998) to inquire about five types of childhood maltreatment (emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect). Scale items are summed to produce scores for respective reports of child maltreatment and threshold scores are provided to indicate the severity of maltreatment experiences (Nelson-Gardell & Harris, 2003).

Results of the study indicate that all five types of maltreatment are significantly correlated with secondary traumatic stress; emotional abuse and sexual abuse were found

to be the most strongly correlated with secondary traumatic stress among study participants. In addition, the findings indicate that a combination of more than one type of childhood maltreatment presents the greatest risk for secondary traumatic stress (Nelson-Gardell & Harris, 2003). While a mean score for the compassion fatigue/secondary traumatic stress subscale was provided in a table in the article, the researchers did not interpret the mean score and did not provide other statistics in relation to prevalence of secondary traumatic stress among the study participants. However, based on the categorizations provided by the scale author (Figley 1995), the mean score of 41.54 indicates that, on average, study participants are at extremely high risk for compassion fatigue/secondary traumatic stress.

While the findings of this study indicate that a history of childhood trauma heightens the risk of secondary traumatic stress among child welfare workers, there are several limitations. First, the study failed to include other variables that could impact the findings, such as respondents' histories of therapy, the nature of their caseloads, and their specific job duties. Second, the researchers accessed a convenience sample of child welfare training participants, which greatly limits the generalizability of the results of the study to the general population of child welfare workers. Lastly, the researchers operationalized secondary traumatic stress by utilizing the compassion fatigue sub-scale of the Compassion Fatigue Self Test for Psychotherapists. However, current theoretical literature and newer instruments clearly distinguish secondary traumatic stress from compassion fatigue.

Most recently, in an effort to expand the limited research on correlates of secondary traumatic stress in child welfare, Bride and colleagues (2007) surveyed 187 child protective services workers in the state of Tennessee regarding personal history of trauma, peer and administrative support, intent to remain employed in child welfare, professional experience, and size of caseload. To measure the construct of secondary traumatic stress, the researchers utilized the Secondary Traumatic Stress Scale (Bride, Robinson, Yegidis, & Figley, 2004). The STSS is comprised of three subscales: intrusion, avoidance, and arousal; these subscales are congruent with PTSD symptom clusters. Child welfare respondents were asked to report how often they experienced each of the 17 symptoms during the previous week using a five-point Likert response pattern.

Results of the study indicate that 92% of child welfare respondents report experiencing at least one secondary traumatic stress symptom at least "occasionally" in the past week and 59% report experiencing one or more secondary traumatic stress symptom "often" in the past week. Further, over one-third of the child welfare participants met the core criteria for work related PTSD. Perhaps the most interesting findings presented in the article pertain to the documentation of statistically significant relationship between levels of secondary traumatic stress and the following correlates: lifetime trauma history, peer support, caseload size, and intent to remain employed. Importantly, the strongest correlation was found between secondary traumatic stress symptoms and intent to remain employed (Bride et al., 2007). This finding is particularly

relevant to this dissertation study as it suggests that higher levels of secondary traumatic stress symptoms are associated with a desire to leave the field.

While this study adds to the limited research regarding prevalence and correlates of secondary traumatic stress in child welfare, it has several limitations. First, the researchers utilized a convenience sample of child protection workers from once state. As such, the results may not be representative of the entire child welfare workforce. Further, the participation rate for the survey was only 56%, which may allow for selection bias to occur. Lastly, the sample size (n = 187) is not large enough for the researchers to generalize study conclusions to the entire population of child welfare workers (Bride et al., 2007).

Importantly, researchers have begun to examine how vicarious trauma impacts the helping professional. While the research is limited, and no studies have been conducted specifically examining child welfare professionals, initial studies regarding helping professionals suggest that vicarious traumatization negatively impacts important constructs related to job performance. The utility of these constructs for understanding and addressing the process by which vicarious trauma impacts child welfare workforce outcomes such as retention and turnover is discussed in the next section.

While sparse, the empirical literature suggests that professional efficacy and professional satisfaction are important to consider in understanding the impact of vicarious traumatization on the helping professional (Bell et al., 2003; Bober, Regehr, & Zhou, 2006; Bride et al., 2007). Notably, the effects of vicarious trauma are believed to impair the ability of professionals to effectively help those seeking their services (Figley,

1999). Professionals experiencing vicarious trauma are potentially at higher risk to make poor professional judgments such as misdiagnosis, abuse of clients, or poor treatment planning than those not experiencing vicarious traumatization (Rudolph, Stamm, & Stamm, 1997). Furthermore, vicarious trauma is proposed to impact job satisfaction and professional satisfaction outcomes, and is one reason why many professionals leave the field (Figley, 1999). In other words, professional efficacy and professional satisfaction most likely play an important role in mediating the relationship between vicarious traumatization and job retention among helping professionals. As indicated above, these potential relationships are yet to be tested within the child welfare workforce. Therefore, as depicted in the conceptual model for this dissertation study (Figure 1), professional efficacy and professional satisfaction will be tested as potential mediators of the relationship between vicarious traumatization and job retention.

As evidenced above, there is a limited amount of research on vicarious traumatization, or its related occupational stress phenomena, among the child welfare workforce. In fact, it is important to note that all of the studies described above utilized measurement instruments targeting secondary traumatic stress symptoms, rather than vicarious traumatization. While, arguably, secondary traumatic stress and vicarious traumatization refer to the same phenomenon, the construct of secondary traumatic stress focuses primarily on symptomology, while the construct of vicarious traumatization focuses on meaning and adaptation (Pearlman & Saakvitne, 1995). Additionally, as discussed in a previous section of this paper, vicarious traumatization is a theory-driven construct, emphasizing more gradual, covert, and permanent changes in a helping

professional's cognitive schema. As such, it may hold significant implications for understanding workforce outcomes such as job retention among child welfare professionals. Based on this contextual review of the theoretical and empirical literature, important research questions to be explored in this dissertation project are described below.

**Research Questions**

As indicated by the conceptual model, this study aims to test the process by which vicarious trauma impacts job retention among child welfare professionals. Using structural equation modeling, this study hypothesizes that job retention can be explained, in part, by the degree to which child welfare workers are impacted by the traumatic nature of the work, as mediated by professional efficacy and professional satisfaction. Within this conceptual model, the coping strategies of the child welfare professionals will be evaluated as a potential protective factor for vicarious traumatization. Furthermore, the model will test the strength of professional efficacy and professional satisfaction as full or partial mediators.

Specific research questions of this study include: 1) What relevant measurement models for vicarious traumatization, coping strategies, professional efficacy, professional support, and job retention are supported? 2) How do child welfare professionals' coping strategies affect vicarious traumatization? 3) What is the role of vicarious traumatization in job retention among child welfare professionals? 4) How does vicarious traumatization affect professional efficacy and professional satisfaction? 5) What role does professional efficacy play in mediating the relationship between vicarious trauma and job retention? 6)

What role does professional satisfaction play in mediating the relationship between vicarious trauma and job retention?

**Summary**

As presented in this chapter, vicarious trauma has a strong theoretical and empirical base for inclusion in this study and may have an important role in influencing child welfare professionals' intent to leave their jobs. Specifically, vicarious trauma is a potential organizational climate factor that has not been previously explored in this fashion in empirical research involving child welfare organizations. As previously stated, findings from this study will help to inform the design and testing of interventions aimed at enhancing organizational climate, thereby increasing retention of competent, committed, and satisfied staff. The following chapter describes the methodology used in the current study.

## Chapter Three: Methodology

The Comprehensive Organizational Health Assessment (COHA) was designed as part of a federally funded grant to assess and evaluate the organizational health and functioning of public and tribal child welfare agencies. Assessment results are used diagnostically to identify strengths and challenges, and to guide the development of targeted systems-change interventions, in an effort to promote child welfare workforce stability. Data collection methods included surveys, interviews, and focus groups with staff at all levels of the organization, community partners, and child welfare clients. This dissertation project utilized quantitative data from this larger study.

### Sample

The COHA included quantitative data collected onsite and remotely, at five unique and diverse child welfare agencies (total n = 1192). The study sites included one state-administered public child welfare agency located in a Southern state (n = 912), as well as two county-administered child welfare agencies located in two different Midwestern states (n = 226; 28). Two tribal child welfare sites located in North Dakota were also included (n = 12; 14). The sites were selected based on their willingness to participate in the project, and their ability to represent a diverse range of child welfare organizations.

**Data Collection Procedures**

The primary quantitative data collection method was a web-based and/or paper survey for all levels of child welfare staff. All eligible professional staff within the child welfare organizations indicated in this study constituted the purposive, non-random population for this study. The COHA staff survey contained approximately 300 items that examined individual psychological risk and protective factors, and local and organizational climate and culture. Two client surveys were also administered during interviews; these related to workers' perceptions of the child welfare agency's cultural competence and adherence to the principles of systems of care.

The COHA instrument was developed by the research team at the Butler Institute for Families, including the author of this paper. It comprised all three levels: organizational, local climate, and individual domains. Organizational and local climate domains include: leadership, inclusivity, readiness for change, systems of care practices, cultural competence, supervisor competence and support, shared vision, professional development, physical environment, public perception, and team cohesion. Individual domains include: vicarious trauma, professional quality of life, coping strategies, psychological capital, retention, and job satisfaction.

To investigate the relationship between vicarious traumatization and workforce outcomes as part of this dissertation study, two pertinent measures were designed and inserted into the larger COHA instrument to be administered to child welfare professionals. These individual level constructs include: vicarious traumatization and coping strategies. These constructs were included with the other individual level

constructs of professional quality of life (e.g., compassion fatigue, secondary trauma/burnout, and compassion satisfaction), coping strategies, and psychological capital (e.g., self efficacy, optimism, hope, and resilience). Initial analyses included confirmatory factor analysis of existing scales, as well as exploratory and confirmatory factor analysis of new scales. Once all psychometric work was complete, the remaining items and constructs were utilized to model the relationship between the occupational health hazard of vicarious traumatization and job retention, and the effects of important mediators. The results of these analyses are discussed in the results section of this dissertation manuscript.

**Measures**

As stated above, several pertinent measures were inserted into the larger COHA instrument in an effort to explore the process by which vicarious trauma impacts job retention among child welfare professionals. Some measures were intended to assist with further understanding of vicarious traumatization as a distinct construct, while others were to be tested as potential mediators. However, as exploratory and confirmatory factor analyses were conducted, the latent factors listed below evidenced strong measurement models. These constructs and their corresponding initial measures are described below. The final solutions for each measure are presented in Chapter Four.

**Vicarious traumatization.** Vicarious traumatization is conceptualized as the cumulative impact of distress that client trauma content and stories have on the professional. The *Vicarious Traumatization Scale* (Middleton, 2010), depicted in Table 1, is a new scale and was designed to specifically measure the "profound changes in the

core aspects of the professionals' self" involving "disruptions in the *cognitive schemas*" of child welfare professionals' "identity, memory system, and belief system" (Pearlman & Saakvitne, 1995, p. 152). This 34-item scale was developed based on a thorough review of the theory and research surrounding the construct, as well as qualitative data collected from a previous phenomenological study examining the impact of vicarious trauma on child welfare professionals (Middleton, Matera, & Nicotera, in progress). Based on a 6-point rating scale (1 = Strongly Disagree to 6 = Strongly Agree), higher scores on this scale represent greater vicarious traumatization related to the impact of the work with traumatized populations. A total of four items are likely to comprise a strong measurement model, as indicated in Chapter Four.

Table 1

*Vicarious Traumatization Scale*

| Item |
|---|
| 1. Because of my work, I realize that the world is not as safe as other people think it is. |
| 2. When I am not at work and other people ask me what I do for my job, I want to tell them I do something else for a living. |
| 3. The traumatic nature of my work affects me to the point where I am not always able to do my best work. |
| 4. My work negatively impacts how I function in my personal life. |
| 5. The nature of my work makes it difficult for me to be intimate with people. |
| 6. I feel that my work makes it difficult for me to be intimate with people. |
| 7. I feel that I am able to make a difference in the lives of the people I serve. |
| 8. I feel that I am successful in protecting children (also: helping families) at my job. |

| Item |
| --- |
| 9. When I am not at work, I find myself thinking about work. |
| 10. When I am not at work, I have trouble paying attention to what my partner/friend/loved ones are saying. |
| 11. I have trouble putting myself before my clients. |
| 12. My work has a negative effect on me spiritually. |
| 13. I feel conflicted about the decisions I make at work. |
| 14. I wish I could do more for my clients. |
| 15. I feel contaminated as a result of my work. |
| 16. Due to the nature of my job, I often feel baffled about what is going on in the world today. |
| 17. As part of my job, I am exposed to pictures and/or videos that are traumatic or disturbing in nature. |
| 18. I observe my colleagues being negatively impacted by the traumatic nature of this work. |
| 19. My work leaves me feeling emotionally numb. |
| 20. My work leaves me feeling physically drained. |
| 21. My work leaves me feeling helpless. |
| 22. My work impacts the way I think about other aspects of my life. |
| 23. After a difficult case, the traumatic material keeps coming back up for me. |
| 24. Due to the traumatic nature of my job, I have less empathy for the clients I serve. |
| 25. The nature of my work has led me to make poor decisions in my personal life. |
| 26. The nature of my work has led me to make poor work-related decisions as a caseworker. |
| 27. Due to the nature of my work, I am less likely to trust others. |

| Item |
| --- |
| 28. Due to the nature of my work, I am less likely to be patient with my co-workers. |
| 29. Due to the nature of my work, I am more irritable with my loved ones. |
| 30. As a result of my work, when I am out in public, I tend to "see abuse everywhere." |
| 31. Most people wonder how I can do this work. |
| 32. I feel uncomfortable admitting to others that I am a child protection worker. |
| 33. Most people wouldn't do the work I do. |
| 34. My own personal trauma history is an issue for me in the work place. |

An additional measure intended to depict vicarious traumatization was also initially included in the study. This factor was initially derived from the exploratory factor analysis conducted with the *Professional Quality of Life Scale (PQL)*. The PQL, as depicted in Table 2, is an existing scale which utilizes a 6-point response scale (1 = Never to 6 = Almost Always), and is intended to measure compassion satisfaction, burnout, and compassion fatigue/secondary trauma (Stamm, 2005). The first subscale assesses compassion satisfaction, which is defined as the pleasure derived from being able to do one's work well. Higher scores on this subscale represent greater satisfaction related to one's ability to be an effective caregiver. The second subscale measures burnout, defined as feelings of hopelessness and difficulties in dealing with work or in doing one's job effectively. Higher scores on this subscale represent a greater risk for burnout. The third subscale measures compassion fatigue/secondary traumatic stress, with higher scores representing greater levels of compassion fatigue/secondary traumatic stress. The ProQOL is structured as a 30-item self-report measure in which respondents are

instructed to indicate how frequently each item was experienced in the previous 30 days. Each item is anchored by a 6-option response scale. The ProQOL has acceptable reliability scores, although the burnout subscale is not as strong (Stamm, 2005). As there are significantly fewer items than originally proposed by the author of the scale, a different factor emerged and was identified as vicarious traumatization. In this way, the measurement model describes a construct that defines qualities of professional quality of life (e.g., secondary traumatic stress, compassion fatigue, and burnout) in a different way. A total of four items are likely to comprise a measurement model. As presented in Chapter Four, further analysis will determine whether or not the resulting factor structure can be verified.

Table 2

*Professional Quality of Life Scale*

| Item |
|---|
| 1. I am happy. |
| 2. I am preoccupied with more than one person I help. |
| 3. I get satisfaction from being able to help people. |
| 4. I feel connected to others. |
| 5. I jump or am startled by unexpected sounds. |
| 6. I have more energy after working with those I help. |
| 7. I find it difficult to separate my private life from my life as a helper. |
| 8. I am losing sleep over a person I help with his/her traumatic experiences. |
| 9. I think that I might have been “infected” by the traumatic stress of those I help. |

| Item |
| --- |
| 10. I feel trapped by my work as a helper. |
| 11. Because of my helping, I have felt “on edge” about various things. |
| 12. I like my work as a helper. |
| 13. I feel depressed as a result of my work as a helper. |
| 14. I feel as though I am experiencing the trauma of someone I have helped. |
| 15. I have beliefs that sustain me. |
| 16. I am pleased with how I am able to keep up with helping techniques and protocols. |
| 17. I am the person I always wanted to be. |
| 18. My work makes me feel satisfied. |
| 19. Because of my work as a helper, I feel exhausted. |
| 20. I have happy thoughts and feelings about those I help and how I could help them. |
| 21. I feel overwhelmed by the amount of work or the size of my caseload I have to deal with. |
| 22. I believe I can make a difference through my work. |
| 23. I avoid certain activities or situations because they remind me of frightening experiences of the people I help. |
| 24. I plan to be a helper for a long time. |
| 25. As a result of my helping, I have sudden, unwanted frightening thoughts. |
| 26. I feel “bogged down” by the system. |
| 27. I have thoughts that I am a “success” as a helper. |
| 28. I can’t remember important parts of my work with trauma victims. |
| 29. I am an unduly sensitive person. |
| 30. I am happy that I chose to do this work. |

These two vicarious traumatization scales were utilized to build a measurement model for vicarious traumatization. Both latent factors representing key aspects of vicarious trauma were tested as second order factors of an overarching vicarious trauma factor. Depending on the results, only one scale, or both scales, may be selected for use in the measurement model.

**Coping strategies.** The goal of coping is to protect the child welfare professional's worldview and psychological frame of reference to reduce the impact of vicarious trauma on his or her work and life (Pryce et al., 2007). According to Lazarus and Folkman's (1984) transactional theory of stress, coping strategies are responses that an individual utilizes to manage the demands of a specific, stressful experience. The *Coping Strategies Scale* (Middleton, 2010), which is described in Table 3, contains 11 items, utilizes a 6-point response scale (1 = Strongly Disagree to 6 = Strongly Agree), and is the first of its kind to measure specific coping strategies in child welfare professionals as they pertain to vicarious trauma. A total of seven items are likely to remain, as indicated in Chapter Four.

Table 3

*Coping Strategies Scale*

| Item |
|---|
| 1. I understand my exposure to the effects of vicarious trauma. |
| 2. I practice physical self care (e.g., sleep, rest, exercise, nutrition, etc.). |
| 3. I have a diverse network outside of work for social support. |

| Item |
| --- |
| 4. I use support available through my child welfare agency (e.g., supervision, colleagues, debriefing, education, and training). |
| 5. I have a work-to-home transition plan that I participate in as part of my self care. |
| 6. I have a clear self care plan. |
| 7. I take regular breaks during the work day. |
| 8. Humor is an important tool. |
| 9. I debrief with colleagues as part of my self care. |
| 10. I am aware of the physical responses I experience when I am exposed to traumatic situation. |
| 11. I practice spiritual renewal as part of my self care. |

**Professional efficacy.** Psychological capital (Luthans, Youssef & Avolio, 2007) has been shown to effectively predict performance and satisfaction. Published research indicates that psychological capital is related to multiple performance outcomes in the workplace, lower employee absenteeism, less employee cynicism and intentions to quit, and higher job satisfaction, commitment, and organizational citizenship behaviors. Research has also found that psychological capital can be enhanced by a supportive work climate. Specifically, psychological capital is defined as "an individual's positive psychological state of development" (Luthans et al., 2007, p. 3). The *Psychological Capital Scale*, depicted in Table 4, is an existing scale which utilizes a 6-point rating scale (1 = Strongly Disagree to 6 = Strongly Agree), to assess the four subscales: self efficacy, optimism, hope**,** and resilience (Luthans et al., 2007).

Table 4

*Psychological Capital Scale*

| Item | Subscale |
|---|---|
| 1. I feel confident analyzing a long-term problem to find a solution. | Efficacy |
| 2. I feel confident in representing my work area in meetings with management. | Efficacy |
| 3. I feel confident contributing to discussions about the organization's strategy. | Efficacy |
| 4. I feel confident helping to set targets/goals in my work area. | Efficacy |
| 5. I feel confident contacting people outside the organization (e.g., other providers, customers) to discuss problems. | Efficacy |
| 6. I feel confident presenting information to a group of colleagues. | Efficacy |
| 7. If I should find myself in a jam at work, I could think of many ways to get out of it. | Hope |
| 8. At the present time, I am energetically pursuing my work goals. | Hope |
| 9. There are lots of ways around problems. | Hope |
| 10. Right now, I see myself as being pretty successful at work. | Hope |
| 11. I can think of many ways to reach my current work goals. | Hope |
| 12. At this time, I am meeting the work goals that I have set for myself. | Hope |
| 13. When I have a setback at work, I have trouble recovering from it, moving on. | Resilience |
| 14. I usually manage difficulties one way or another at work. | Resilience |
| 15. I can be "on my own," so to speak, at work if I have to. | Resilience |
| 16. I usually take stressful things at work in stride. | Resilience |
| 17. I can get through difficult times at work because I've experienced difficulty before. | Resilience |

| Item | Subscale |
|---|---|
| 18. I feel I can handle many things at a time in this job. | Resilience |
| 19. When things are uncertain for me at work, I usually expect the best. | Optimism |
| 20. If something can go wrong for me work-wise, it will. | Optimism |
| 21. I always look on the bright side of things regarding my job. | Optimism |
| 22. I'm optimistic about what will happen to me in the future as it pertains to work. | Optimism |
| 23. In this job, things never work out the way I want them to. | Optimism |
| 24. I approach this job as if "every cloud has a silver lining." | Optimism |

By the same token, professional efficacy is the belief in one's capabilities to organize and execute the courses of action required to accomplish work-related goals. Professional efficacy plays a central role in motivation because workers expend effort based on the effects they are expecting from their actions. The factor depicting professional efficacy, or a sense of success at work, was derived from the exploratory and confirmatory factor analysis of the *Psychological Capital Scale.* As there are significantly fewer items, a different factor emerged and was identified as professional efficacy. In this way, the measurement model describes a construct that defines qualities of psychological capital in a different way. A total of four items are likely to comprise a strong measurement model, as presented in Chapter Four.

**Professional satisfaction.** This four-item scale depicting professional satisfaction was derived from the exploratory factor analysis of the Professional Quality of Life Scale (described above). Professional satisfaction, not entirely dissimilar to job satisfaction, describes the satisfaction a professional experiences through the experience of doing his

or her work. Professional satisfaction is thought to be related to a sense of personal commitment to the consumers who are served by the organization, and typically has a negative relationship to turnover. As there are significantly fewer items in this scale as compared to the Professional Quality of Life Scale, a different factor emerged and was identified as professional satisfaction. In this way, the measurement model describes a construct that defines qualities of professional quality of life in a different way. A total of four items are likely to comprise a strong measurement model, as depicted in Chapter Four.

**Retention (intent to leave).** Intention to leave is generally defined as seriously considering leaving one's current job. Intention to leave is commonly utilized by researchers in lieu of actual turnover as an outcome variable, as evidence suggests that before actually leaving the job, workers typically make a conscious decision to do so. As shown in Table 5, this six-item scale measures an employee's intentions to leave the agency, and was modified from other employee retention scales utilized in child welfare research (Auerbach, McGowan, Auesberger, Strolin-Goltzman, & Schudrick, 2010; Butler Institute for Families, 2008; Ellett, 2000). The scale utilizes a 6-point rating scale (1 = Strongly Disagree to 6 = Strongly Agree). A total of four items are likely to remain, as indicated in Chapter Four.

Table 5

*Intent to Leave Scale*

| Item |
| --- |
| 1. I plan to leave this organization. |
| 2. I prefer to leave the organization but salary and/or benefits are a strong incentive to stay. |
| 3. I am actively seeking other employment. |
| 4. I have often thought about leaving this organization. |
| 5. I would leave child welfare work tomorrow if I was offered a job for the same salary but with less stress. |
| 6. I have had many job interviews. |

**Data Analysis Procedures**

As part of the data analysis process, data collected from the four sites associated with the Western Workforce initiative were combined with data collected from the Southern state (Mississippi). Initial analyses included descriptive statistics for data cleaning and verification purposes. Descriptive statistics were used to screen for missing data, to identify outliers, establish normality, and verify other important assumptions were met (Tabachnick & Fidell, 2007).

Once descriptive statistics were obtained, the combined sample was randomly split in half. Half of the sample was utilized for exploratory factor analyses (EFA), and half of the sample was utilized for confirmatory factor analyses (CFA). An EFA model was utilized to identify the appropriate number of latent constructs that are likely to be present in each instrument. The results drawn from the EFA analysis were then

confirmed via CFA, by testing the goodness-of-fit of the resulting models. For instruments that are specifically designed to have certain items relating to a particular latent domain, such as the Professional Quality of Life Scale, there is sufficient prior knowledge to suggest that the instrument could be represented by some latent domains or factors. Hence, statistical analyses began with a CFA model with a given number of factors. Once the measurement models were complete, Structural Equation Modeling (SEM) was used with the entire sample to test model fit.

Structural Equation Modeling (SEM) was used to assess the degree of fit between the observed data and several hypothesized theoretical models examining the relationship between vicarious trauma, coping strategies, professional efficacy, professional satisfaction, and intent to leave. McDonald and Ho (2002) and Raykov, Tomer, and Nesselroade (1991) describe several key procedures for estimating and reporting structural equation models. Importantly, they note that measurement and structural models must be correctly identified (McDonald & Ho, 2002; Raykov et al., 1991). As part of the identification process, Raykov et al. (1991) suggest that the kind of matrix to be analyzed, the treatment of missing values and outliers, the testing of key assumptions, and the method of parameter estimation must be specified. In the present analysis, the covariance matrix were analyzed for each model using MPLUS version 6.0 Base Program software (Muthén & Muthén, 2008). The key assumptions for SEM were tested and the method of parameter estimation were specified accordingly. Missing data were determined on all key measures and the Full Information Maximum Likelihood (FIML) estimator implemented in MPLUS were utilized. FIML parameter estimates generally

have less bias and less sampling variability than other estimation methods (Enders, 2001; Raykov, 2005). However, it is important to note that the FIML estimator "does not impute, or fill in, missing values but directly estimates model parameters and standard errors using all available raw data" (Enders, 2001, pp. 714-715).

Model evaluation includes examining the fit of each hypothesized measurement and structural model. McDonald and Ho (2002) recommend examining and reporting several global fit indices, such as chi square ($\chi^2$), comparative fit index (CFI), and root mean squared error of approximation (RMSEA). Raykov et al. (1991) concur that a combination of fit indices must be reported to describe the adequacy of the hypothesized models. Chi square ($\chi^2$), comparative fit index (CFI) and root mean squared error of approximation (RMSEA) are the most commonly reported fit indices (McDonald & Ho, 2002). As such, these fit indices will be used to assess the adequacy of each structural and measurement model (Kline, 2005).

Chi square ($\chi^2$), also known as likelihood ratio chi square or the generalized likelihood ratio, assesses the null hypothesis that the model is correct or has perfect fit in the population (Kline, 2005). Thus, chi square actually characterizes "badness-of-fit" as higher values indicate worse model fit (Kline, 2005, p. 135). However, it is commonly known that the chi-square test of exact fit is impacted by sample size. Large sample sizes can often lead to almost certain rejection of the null hypothesis (Tomarken & Waller, 2003). As a result, fit indices that can account for larger sample size, such as the CFI and RMSEA, will take precedence when determining model fit for the current study. CFI, which is stable across different sample sizes (Bentler, 1990), assesses the "difference in

noncentrality" when comparing the hypothesized model against the null model (Palmer, Graham, Taylor, & Tatterson, 2002, p. 541). A CFI value above .900 is typically considered adequate fit (McDonald & Ho, 2002). RMSEA, which is also free from sampling bias, assesses the degree to which the hypothesized model does not fit the population covariance matrix (McDonald & Ho, 2002). This particular fit index is not impacted by the number of parameters added to or removed from the model (Palmer et al., 2002). Typically a RMSEA of 0.05 or less indicates a close fit of the model, whereas a value between 0.05 and 0.08 is considered acceptable fit (McDonald & Ho, 2002).

However, Hu and Bentler (1999) argue that a cutoff greater (or, for some fit indexes, smaller) than the conventional rule of thumb is required for model evaluation. According to Hu and Bentler (1999), a cutoff value close to .95 for CFI and a cutoff value close to .06 for RMSEA seem to result in lower Type II error rates (i.e., the probability of accepting the null hypothesis when it is false) with acceptable costs of Type I error rates (i.e., the probability of rejecting the null hypothesis when it is true). Because recommended fit indices will be utilized to evaluate several measurement models as part of this dissertation study, these more stringent cutoff values will be considered and discussed as well.

**Summary**

This chapter described the research design and methods used to examine the relationship between vicarious traumatization and job retention among child welfare professionals. Included in the present chapter was a detailed discussion of the sampling strategy, data collection procedures, and measurement issues. A description of the data

analysis strategy, including explanations of initial descriptive analyses and structural equation modeling, provided a framework for the results presented in the following chapter.

# Chapter Four: Results

## Overview of Analytic Strategy

As presented in the previous chapter, the analytic strategy for the current study involved several stages. First, descriptive statistics were used to screen for missing data, identify outliers, verify other important assumptions were met, identify sample characteristics, and describe rates of vicarious traumatization and intention to leave in this sample. Next, structural equation modeling (SEM) was used to explore and confirm the factor structure of each measurement model. Lastly, SEM was utilized to explore the fit of four hypothesized theoretical models to the observed data. The results of each of these stages of analysis (e.g., sample characteristics, prevalence rates, measurement model results, scale descriptive statistics, and structural equation model results) are described in this chapter.

## Sample Characteristics

The final sample size for this study included 1192 child welfare professionals from five diverse and unique child welfare organizations. A total of 912 child welfare professionals from one state-administered public child welfare system located in Mississippi (78% response rate), 226 professionals from a metropolitan, county-administered child welfare agency in Colorado (56% response rate), 28 professionals from a rural county-administered child welfare agencies located in Wyoming (100%

response rate), and 26 professionals (12 and 14 respectively) from two tribal child welfare sites located in North Dakota (100% response rate) participated in the study.

Demographic characteristics by site are presented in Table 6. In regards to ethnic identity, over 56% of participants report being Black/African American, approximately 37% report being White/Caucasian, 4% American Indian/Alaska Native, and less than 1% Asian/Pacific Islander. Additionally, over 92% of the participants are female. In regards to highest educational degree obtained, 19% of participants have a graduate degree, 63% have a bachelor's level education, and 10% have either a high school diploma or an associate's degree. For 74% of child welfare professionals who responded, their current position is their first full time child welfare job. Further, participants indicate that they have worked an average of eight years in the field of child welfare, and an average of approximately seven years within their current organization. In regards to annual household income, 10% of participants report earning under $25,000, over 42% of participants report earning $25,000 to $40,000, and 16% of participants report earning more than $70,000 per year.

Table 6

*Demographic Characteristics by Site*

| | MS | CO | WY | Tribal | TOTAL |
|---|---|---|---|---|---|
| Participants (n) | 912 | 226 | 28 | 26 | 1192 |
| Gender (%) | | | | | |
| Female | 94 | 85 | - | 85 | 92 |
| Ethnicity (%) | | | | | |

| | MS | CO | WY | Tribal | TOTAL |
|---|---|---|---|---|---|
| White/Caucasian | 33 | 62 | - | 0 | 37 |
| Black/African American | 67 | 19 | - | 0 | 56 |
| Hispanic/Latino | 0 | 17 | - | 0 | 3 |
| American Indian/Alaska Native | <1 | 0 | - | 100 | 4 |
| Asian/Pacific Islander | <1 | 3 | - | 0 | <1 |
| Highest Educational Degree (%) | | | | | |
| MSW Degree | 9 | 31 | - | 4 | 13 |
| MA/MS Degree | 4 | 15 | - | 8 | 6 |
| BSW Degree | 48 | 9 | - | 12 | 41 |
| BA/BS Degree | 20 | 35 | - | 8 | 22 |
| Associate's Degree | 4 | 2 | - | 20 | 4 |
| High school diploma | 6 | 2 | - | 24 | 6 |
| Other | 9 | 7 | - | 24 | 9 |
| First full time child welfare job (%) | | | | | |
| Yes | 78 | 51 | - | 80 | 74 |
| Years worked in child welfare | | | | | |
| Mean | 7.5 | 10.3 | - | 8.2 | 8.0 |
| SD | 7.4 | 7.9 | - | 6.5 | 7.6 |
| Years worked within organization | | | | | |
| Mean | 7.0 | 8.0 | - | 9.6 | 7.3 |
| SD | 7.6 | 6.4 | - | 8.5 | 7.5 |
| Annual household income (%) | | | | | |

| | MS | CO | WY | Tribal | TOTAL |
|---|---|---|---|---|---|
| $25,000 or less | 12 | 0 | - | 8 | 10 |
| $25,000 to $40,000 | 49 | 12 | - | 44 | 42 |
| $40,001 to $55,000 | 17 | 30 | - | 16 | 19 |
| $55, 001 to $70,000 | 12 | 17 | - | 24 | 13 |
| $70,001 or more | 11 | 41 | - | 8 | 16 |

Key: MS = Mississippi, CO = Colorado; WY = Wyoming, Tribal = two tribal sites in North Dakota

It is important to note that statistics indicate approximately 23% of the data are missing in regards to demographic characteristics for the entire sample, as a significant number of participants chose to skip questions pertaining to demographics. In fact, 100% of participants at one site failed to respond to any of the demographic questions on the survey. Feedback from the research team indicates that this may be due to the overwhelming concern of participants about not wanting to be identified when reporting on their experience of their organizations. Additionally, this may serve as an example of the high level of suspicion and mistrust often prevalent among child welfare professionals working in potentially unhealthy organizations.

**Prevalence Rates**

To provide a context for the subsequent structural model results, the prevalence of vicarious traumatization was estimated by constructing dichotomous versions of the vicarious traumatization scale items. If participants reported any level of agreement in regards to the scale items (4 = agree slightly, 5 = agree, 6 = strongly agree), the dichotomous measure was coded one, and zero otherwise. Results are listed in Table 7.

It is important to note that items 1-4 are the items contained within the final vicarious traumatization measurement model, which is delineated in the following section.

Based on the results, approximately 26% - 35% of participants agree to some extent that they are experiencing core aspects of vicarious traumatization as a result of their work, including a negative impact on their interpersonal functioning, as well as their ability to engage emotionally. As indicated in Table 7, at least half of the reported agreement regarding prevalence of vicarious traumatization resides in the "slightly agree" area. However, a small percentage of the reported agreement regarding prevalence of vicarious traumatization resides in the "strongly agree" area, indicating that vicarious traumatization is a serious concern for a core group of participants. Trust appears to be most significantly impacted, as over 35% of participants indicate that, due to the nature of their work, they agree to some extent that they are less likely to trust other people. Further, over a quarter of the participants report that their work negatively impacts how they function in their personal lives and leaves them feeling emotionally numb.

While items 5-7 are not included in the final measurement model, they were initially included in the scale because of their important contribution to the impact of vicarious trauma on child welfare professionals, both conceptually and theoretically. As such, they are highlighted in this analysis section to help provide context to the subsequent models. Over 72% of participants agree to some extent to being exposed to traumatic pictures and/or videos as a result of their job, with over 17% agreeing strongly. In addition, while a majority of the prevalence rates regarding vicarious traumatization average around 30% for this sample, it is interesting to note that twice as many

participants (63.4%) report observing their colleagues being negatively impacted by the traumatic nature of their work. As indicated in Table 7, almost half of the reported agreement regarding observation of impacted colleagues resides in the "slightly agree" area. However, approximately one-sixth of the reported agreement resides in the "strongly agree" area, indicating that the negative impact of the traumatic nature of the work on colleagues is a serious concern for a smaller, core group of participants. Concerningly, almost 10% of participants agree to some extent that their own personal trauma history is an issue for them in the work place.

Table 7

*Prevalence of Vicarious Traumatization*

| Item | AS | A | SA | Total |
|---|---|---|---|---|
| 1. My work negatively impacts how I function in my personal life. | 16.8 | 7.3 | 3.9 | 28.0 |
| 2. My work leaves me feeling emotionally numb. | 15.9 | 7.8 | 3.1 | 26.8 |
| 3. Due to the nature of my work, I am less likely to trust others. | 20.5 | 10.7 | 4.6 | 35.8 |
| 4. Due to the nature of my work, I am more irritable with my loved ones. | 17.2 | 8.1 | 3.4 | 28.7 |
| 5. As part of my job, I am exposed to pictures and/or videos that are traumatic or disturbing in nature. | 19.0 | 36.6 | 17.1 | 72.7 |
| 6. I observe my colleagues being negatively impacted by the traumatic nature of this work. | 29.1 | 23.5 | 10.8 | 63.4 |
| 7. My own personal trauma history is an issue for me in the work place. | 5.9 | 2.6 | 1.3 | 9.8 |

Key: AS = Agree Slightly, A = Agree, SA = Strongly Agree

By the same token, retention is an important outcome variable to consider when providing a context for the subsequent models. As such, the rates of child welfare professionals' intent to leave were also estimated by constructing dichotomous versions of the intent to leave scale items. If participants reported any level of agreement in regards to the scale items (4 = agree slightly, 5 = agree, 6 = strongly agree), the dichotomous measure was coded one, and zero otherwise. Results are listed in Table 8.

Results indicate that over half of participants have often thought about leaving their organization, and approximately one quarter of participants plan to leave their organization in the next 12 months. In fact, over 51% of participants agree to some extent, with almost 20% agreeing strongly, that they would actually leave the field of child welfare tomorrow if they were offered a job for the same salary but with less stress. Notably, almost 25% of participants indicate that they are actively seeking other employment. These statistics indicate that retention concerns are prevalent among child welfare professionals in the current sample.

Table 8

*Intent to Leave Statistics*

| Item | AS | A | SA | Total |
|---|---|---|---|---|
| 1. I have often thought about leaving this organization. | 24.0 | 16.8 | 16.9 | 57.7 |
| 2. I would leave child welfare work tomorrow if I was offered a job for the same salary but with less stress. | 19.4 | 12.6 | 19.5 | 51.5 |
| 3. I plan to leave this organization in the next 12 months. | 10.5 | 6.8 | 7.5 | 24.8 |

| Item | AS | A | SA | Total |
|---|---|---|---|---|
| 4. I am actively seeking other employment. | 10.5 | 7.5 | 6.7 | 24.7 |

Key: AS = Agree Slightly, A = Agree, SA = Strongly Agree

**Measurement Model Results**

Once descriptive statistics were obtained, the combined sample was randomly split in half. Half of the sample was utilized for exploratory factor analyses (EFA), and half of the sample was utilized for confirmatory factor analyses (CFA). An EFA model was utilized to identify the appropriate number of latent constructs that are likely to be present in each instrument. The results drawn from the EFA analysis were then confirmed via CFA, by testing the goodness-of-fit of the resulting models. The following section details the results of the measurement models for each latent variable utilized in this study: vicarious traumatization, professional satisfaction, professional efficacy, coping strategies, and intent to leave.

Prior to modeling each latent construct, an independent samples t-test was conducted based on retained scale items to determine if there is a significant difference in each of the scale means between the EFA and the CFA samples. Results of Levene's Test for Equality of Variances indicate that equal variances can be assumed ($p > .05$). Further, based on the t-test for equality of means, no significant differences existed in scale means between the EFA and CFA samples. Independent samples t-test statistics are depicted in Table 9. In addition, demographic characteristics of each sample were compared and no significant differences were found. A description of each measurement model follows.

Table 9

*Results of Independent Samples T-test*

| Measure | Sample | N | Mean | SD | t | Sig.(2-tailed) |
|---|---|---|---|---|---|---|
| VT | EFA | 511 | 2.63 | 1.12 | -1.296 | 0.195 |
| | CFA | 527 | 2.72 | 1.06 | | |
| PS | EFA | 520 | 4.62 | 0.96 | 0.248 | 0.804 |
| | CFA | 536 | 4.61 | 0.94 | | |
| PE | EFA | 515 | 4.64 | 0.74 | 0.344 | 0.731 |
| | CFA | 532 | 4.63 | 0.80 | | |
| CS | EFA | 506 | 4.31 | 0.74 | 1.140 | 0.255 |
| | CFA | 525 | 4.26 | 0.69 | | |
| IL | EFA | 504 | 3.07 | 1.31 | -1.013 | 0.311 |
| | CFA | 528 | 3.15 | 1.27 | | |

Key: VT = Vicarious Traumatization, PS = Professional Satisfaction, PE = Professional Efficacy, CS = Coping Strategies, IL = Intent to Leave

The Vicarious Traumatization Scale was used to assess the cumulative impact of distress that client trauma content and stories have on the child welfare professional's core self. After conducting exploratory factor analysis, the scale was reduced from 34 items to five items. Items were removed due to low factor loadings and cross loadings. Then, confirmatory factor analysis (CFA) was performed on the remaining scale, using the CFA half of the data. Additional items were removed based on covariance issues (e.g., to reduce the number and/or use of covariances in the measurement model), as well as for conceptual reasons (e.g, to ensure that each item supported the indicated factor,

conceptually and theoretically). The resulting model was then confirmed an additional time, using the EFA half of the data. Standardized factor loadings for each item are presented in Table 10. Based on these analyses, the final scale included four items measuring a core aspect of vicarious traumatization: interpersonal functioning and emotional engagement. The confirmatory factor analyses revealed good model fit with the remaining four items using the EFA half of the data ($\chi^2(2) = 1.371$, $p > .05$, CFI = 1.000, RMSEA = 0.000, SRMR = .007), as well as the CFA half of the data ($\chi^2(2) = 2.952$, $p > .05$, CFI = 0.998, RMSEA = 0.030, SRMR = 0.012). Confirmatory factor analyses results are reported in Table 11.

Table 10

*Vicarious Traumatization: Items and Loadings*

| Item | EFA | CFA |
|---|---|---|
| 1. My work negatively impacts how I function in my personal life. | 0.990 | 0.929 |
| 2. My work leaves me feeling emotionally numb. | 0.957 | 1.000 |
| 3. Due to the nature of my work, I am less likely to trust others. | 0.789 | 0.777 |
| 4. Due to the nature of my work, I am more irritable with my loved ones. | 1.000 | 0.947 |

Table 11

*Confirmatory Factor Analysis Results with Fit Indices and Reliabilities*

| Measure | $\chi^2$ | *df* | Sig. | CFI | TLI | RMSEA | SRMR | α |
|---|---|---|---|---|---|---|---|---|
| Vicarious Traumatization | | | | | | | | |

| Measure | $\chi^2$ | *df* | Sig. | CFI | TLI | RMSEA | SRMR | α |
|---|---|---|---|---|---|---|---|---|
| EFA half | 1.37 | 2 | .504 | 1.000 | 1.003 | 0.000 | 0.012 | .82 |
| CFA half | 2.95 | 2 | .229 | 0.998 | 0.994 | 0.030 | 0.012 | .76 |
| Professional Satisfaction | | | | | | | | |
| EFA half | 4.90 | 2 | .086 | 0.997 | 0.990 | 0.053 | 0.011 | .85 |
| CFA half | 1.37 | 2 | .505 | 1.000 | 1.002 | 0.071 | 0.006 | .83 |
| Professional Efficacy | | | | | | | | |
| EFA half | 0.00 | 1 | .996 | 1.000 | 1.014 | 0.000 | 0.000 | .74 |
| CFA half | 0.47 | 1 | .493 | 1.000 | 1.005 | 0.000 | 0.005 | .79 |
| Coping Strategies | | | | | | | | |
| EFA half | 13.30 | 13 | .425 | 0.999 | 0.999 | 0.007 | 0.021 | .67 |
| CFA half | 56.88 | 13 | .000 | 0.873 | 0.795 | 0.079 | 0.049 | .61 |
| Intent to Leave | | | | | | | | |
| EFA half | 0.313 | 1 | .580 | 1.000 | 1.005 | 0.000 | 0.002 | .85 |
| CFA half | 3.43 | 1 | .064 | 0.997 | 0.982 | 0.068 | 0.009 | .82 |

The Professional Quality of Life Scale was used to assess the level of satisfaction a professional experiences through the experience of doing his or her work. Professional satisfaction is thought to be related to a sense of personal commitment to the consumers who are served by the organization, and typically has a negative relationship to turnover. After conducting exploratory factor analysis, two factors emerged (secondary trauma/compassion fatigue and professional satisfaction), and the scale was reduced from 30 items to two subscales with four items in each subscale. Items were removed due to

low factor loadings and cross loadings. Then, confirmatory factor analysis (CFA) was performed on the remaining scale, using the CFA half of the data. Additional items were removed based on covariance issues, as well as for conceptual reasons. Further, one of the two factors (secondary trauma/compassion fatigue) was removed entirely due to poor model fit and covariance issues. The resulting model with one remaining factor was then confirmed an additional time, using the EFA half of the data. Standardized factor loadings for each item are presented in Table 12. Based on these analyses, the final scale included four items measuring a child welfare professional's level of professional satisfaction. The confirmatory factor analyses revealed good model fit with the remaining four items using the EFA half of the data ($\chi^2(2) = 4.899$, $p > .05$, CFI = 0.997, RMSEA = 0.053, SRMR = 0.011). The analyses revealed adequate fit using the CFA half of the data ($\chi^2(2) = 1.366$, $p > .05$, CFI = 1.000, RMSEA = 0.071, SRMR = 0.006), as the RMSEA statistic exceeds the more stringent cutoff value of .06 (Hu and Bentler, 1999), but is within the range of acceptable fit according to the more recent work of McDonald and Ho (2002). Confirmatory factor analyses results with complete fit indices are reported in Table 11.

Table 12

*Professional Satisfaction: Items and Loadings*

| **Item** | EFA | CFA |
|---|---|---|
| 1. My work makes me feel satisfied. | 0.910 | 1.000 |
| 2. I believe I can make a difference through my work. | 0.840 | 0.939 |
| 3. I have thoughts that I am a "success" as a helper. | 0.907 | 0.928 |

| **Item** | EFA | CFA |
|---|---|---|
| 4. I am happy that I chose to do this work. | 1.000 | 0.918 |

The Psychological Capital Scale was used to assess the belief in one's capabilities to organize and execute the courses of action required to accomplish work-related goals. Professional efficacy plays a central role in motivation because workers expend effort based on the effects they are expecting from their actions. After conducting exploratory factor analysis, one factor emerged, and the scale was reduced from 24 items to four items. Items were removed due to low factor loadings and cross loadings. Then, confirmatory factor analysis (CFA) was performed on the remaining scale, using the CFA half of the data. The resulting model was then confirmed an additional time, using the EFA half of the data. Standardized factor loadings for each item are presented in Table 13. The model includes one covariance between Item 3 and Item 4. A review of the two items from a conceptual standpoint supports the inclusion of this covariance in the final model, as both items focus on an outcome-related perception of efficacy in the workplace. Based on these analyses, the final scale included four items measuring a child welfare professional's level of professional efficacy, or sense of success at work. The confirmatory factor analyses revealed good model fit with the remaining four items using the EFA half of the data ($\chi^2(1) = 0.000$, $p > .05$, CFI = 1.000, RMSEA = 0.000, SRMR = 0.000), as well as the CFA half of the data ($\chi^2(1) = 0.469$, $p > .05$, CFI = 1.000, RMSEA = 0.000, SRMR = 0.005). Confirmatory factor analyses results with complete fit indices are reported in Table 11.

Table 13

*Professional Efficacy: Items and Loadings*

| **Item** | EFA | CFA |
|---|---|---|
| 1. Right now, I see myself as being pretty successful at work. | 0.949 | 1.000 |
| 2. I can think of many ways to reach my current work goals. | 0.874 | 0.751 |
| 3. At this time, I am meeting the work goals that I have set for myself. | 1.000* | 0.836* |
| 4. I feel I can handle many things at a time in this job. | 0.648* | 0.671* |

* covariance

The Coping Strategies Scale was designed to measure specific coping strategies in child welfare professionals that target and potentially mitigate the impact of vicarious trauma on the professional. After conducting exploratory factor analysis, the scale was reduced from 11 items to seven items. Items were removed due to low factor loadings and cross loadings. Then, confirmatory factor analysis (CFA) was performed on the remaining scale, using the CFA half of the data. The resulting model was then confirmed an additional time, using the EFA half of the data. Standardized factor loadings for each item are presented in Table 14. The model includes one covariance between Item 1 and Item 5. A review of the two items from a conceptual standpoint supports the inclusion of this covariance in the final model, as both items speak to an intentional commitment to self care.

Based on these analyses, the final scale included seven items measuring a professional's use of coping strategies targeting vicarious traumatization. The confirmatory factor analyses revealed good model fit with the remaining seven items

using the EFA half of the data ($\chi^2(13) = 13.303$, $p > .05$, CFI = 0.999, RMSEA = 0.007, SRMR = 0.021). However, the model did not achieve adequate fit with the CFA half of the data ($\chi^2(13) = 56.883$, $p < .001$, CFI = 0.873, RMSEA = 0.079, SRMR = 0.049), based on the $\chi^2$ statistic, as well as the CFI fit statistic. Confirmatory factor analyses results with complete fit indices are reported in Table 11. Based on the results, it is questionable whether or not this measurement model can be supported. As the majority of fit indices indicate adequate fit when referencing both halves of the data, coping strategies was included as a latent variable in the subsequent structural equation model. However, this concern in regards to measurement model fit is a limitation of the study and will be discussed further in Chapter 5.

Table 14

*Coping Strategies: Items and Loadings*

| Item | EFA | CFA |
|---|---|---|
| 1. I practice physical self care (e.g., sleep, rest, exercise, nutrition, etc.) | 0.682* | 1.000* |
| 2. I have a diverse network outside of work for social support. | 0.753 | 0.729 |
| 3. I use support available through my child welfare agency (e.g., supervision, colleagues, debriefing, education, and training). | 0.555 | 0.495 |
| 4. I have a work-to-home transition plan that I participate in as part of my self care plan. | 1.000 | 0.927 |
| 5. I have a clear self care plan. | 0.642* | 0.855* |
| 6. I take regular breaks during the work day. | 0.591 | 0.824 |
| 7. I practice regular spiritual renewal as part of my self care. | 0.773 | 0.276 |

* covariance

The Intent to Leave Scale was used to assess the level with which a professional is seriously considering leaving his or her current job. Intention to leave is commonly utilized by researchers in lieu of actual turnover as an outcome variable, as evidence suggests that before actually leaving the job, workers typically make a conscious decision to do so. A confirmatory factor analysis was performed, and the scale was reduced from six items to four items. Items were removed due to low factor loadings and cross loadings. Then, a confirmatory factor analysis was performed on the remaining scale, using the CFA half of the data. The resulting model was then confirmed an additional time, using the EFA half of the data. Standardized factor loadings for each item are presented in Table 15. The model includes one covariance between Item 1 and Item 2. A review of the two items from a conceptual standpoint supports the inclusion of this covariance in the final model, as both items speak to an active intent to leave the organization. Based on these analyses, the final scale included four items measuring a child welfare professional's intention to leave his or her job. The confirmatory factor analyses revealed close model fit with the remaining four items using the EFA half of the data ($\chi^2(1) = 0.313$, $p > .05$, CFI = 1.000, RMSEA = 0.000, SRMR = 0.002). The model achieved acceptable fit with the CFA half of the data ($\chi^2(1) = 3.436$, $p > .05$, CFI = 0.997, RMSEA = 0.068, SRMR = 0.009), as the RMSEA statistic exceeds the more stringent cutoff value of .06 (Hu and Bentler, 1999), but is within the range of acceptable fit according to the more recent work of McDonald and Ho (2002). Confirmatory factor analyses results with complete fit indices are reported in Table 11.

Table 15

*Intent to Leave: Items and Loadings*

| Item | EFA | CFA |
|---|---|---|
| 1. I plan to leave this organization in the next 12 months. | 0.703* | 0.774* |
| 2. I am actively seeking other employment. | 0.758* | 0.680* |
| 3. I have often thought about leaving this organization. | 1.000 | 1.000 |
| 4. I would leave child welfare work tomorrow if I was offered a job for the same salary but with less stress. | 0.880 | 0.815 |

* covariance

**Preliminary Analysis of the Scales**

Descriptive statistics were used to screen for missing data, identify outliers, establish normality, and verify that other important assumptions were met (Tabachnick & Fidell, 2007). Descriptive statistics indicate less than five percent missing data on each measure selected for the current study. Since the descriptive analysis indicates very little missing data, and MPLUS uses FIML to handle missing data, missing data was not a concern for the study's analyses. Additionally, according to Kline (2005), a minimal number of missing scores in a larger sample such as this one are of little concern in regards to structural equation modeling. Further, as less than five percent of missing data was found for all primary study variables, subsequent testing to identify the pattern of missingness, was not performed (Schafer & Graham, 2002). Furthermore, no cases were determined to be outliers on all of the measures included in the study.

To test for normality, mean scale scores were calculated for each primary measure. Normality is an important assumption in regards to SEM (Kline, 2005).

Normality assumes that each variable and all combinations of the variables are normally distributed (Tabachnick & Fidell, 2007). When met, normality also assumes that the residual terms are normally distributed as well as independent from one another (Tabachnick & Fidell, 2007). Two common tests assessing normality include skewness and kurtosis. Skewness measures the degree of symmetry of a distribution, and kurtosis measures the peakedness of a distribution (Howell, 2007). Table 16 details the skewness and kurtosis of each scale score. The statistics indicate that the measures are normally distributed (Tabachnick & Fidell, 2007).

Table 16

*Descriptive Analysis of Scale Scores*

| | N | Mean | SD | Skewness | Kurtosis |
|---|---|---|---|---|---|
| Vicarious Trauma | 1038 | 2.68 | 1.09 | 0.57 | -0.12 |
| Professional Satisfaction | 1056 | 4.61 | 0.95 | -0.57 | -0.10 |
| Professional Efficacy | 1047 | 4.64 | 0.77 | -1.01 | 2.19 |
| Coping Strategies | 1031 | 4.29 | 0.71 | -0.57 | 0.93 |
| Intent to Leave | 1032 | 3.11 | 1.29 | 0.47 | -0.57 |

The reliability of the scale scores was estimated using Cronbach's alpha coefficients to provide a measure of internal consistency and item homogeneity (Cronbach, 1951). It is important to note that alpha is impacted by the number of items in a scale; typically, alpha increases as the number of items increase (Cortina, 1993). As such, Cronbach's alpha coefficients are commonly adjusted (e.g., doubling the number of items) using the Spearman-Brown prophecy formula (Nunnaly, 1994). The Spearman-

Brown prophecy formula was developed to estimate the change in reliability for different numbers of items. Therefore, the original and adjusted Cronbach's alpha coefficients for the complete dataset are provided in Table 17.

Table 17

*Scale Reliabilities*

| Measure | Alpha | n | Rescaled Alpha* |
|---|---|---|---|
| Vicarious Traumatization | .79 | 4 | .89 |
| Professional Satisfaction | .85 | 4 | .92 |
| Professional Efficacy | .80 | 4 | .89 |
| Coping Strategies | .65 | 7 | .79 |
| Intent to Leave | .77 | 4 | .87 |

*Alpha was adjusted using Spearman-Brown prophecy formula

To assess linearity and multicolinearity, scatterplots and a correlation matrix were produced using the mean scale scores (Kline, 2005; Tabachnick & Fidell, 2007). Bivariate scatterplots showed a linear relationship between each scale score, suggesting that this assumption was met. In regards to multicollinearity, the correlation matrix (Table 18) revealed no significant problems with multicollinearity, as no two variables were too highly correlated, or had a Pearson's *r* value above .90 (Tabachnick & Fidell, 2007).

Table 18

*Scale Score Correlation Matrix*

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1.Vicarious Trauma | 1 | | | | |
| 2.Professional Satisfaction | -.331*** | 1 | | | |
| 3.Professional Efficacy | -.343*** | .577*** | 1 | | |
| 4.Coping Strategies | -.329*** | .383*** | .481*** | 1 | |
| 5.Intent to Leave | .456*** | -.408*** | -.313*** | -.195*** | 1 |

***p < .001

As indicated by the correlation matrix, a significant relationship exists between every variable in this model ($p < .001$). Vicarious traumatization is negatively correlated with professional satisfaction, professional efficacy, and coping strategies. In turn, vicarious traumatization is positively correlated with child welfare professionals' intent to leave their job. These results indicate that the more vicariously traumatized a child welfare worker is, the less likely they are to feel efficacious and satisfied with their work, and the more likely they are to consider leaving their job.

**Structural Equation Model Results**

The following section details the results of the structural equation models for this study examining: 1) the relationship between child welfare professionals' coping strategies and vicarious traumatization, 2) the relationship between vicarious traumatization and intent to leave, 3) the relationship between vicarious traumatization and intent to leave, as mediated by professional satisfaction, and 4) the relationship between vicarious traumatization and intent to leave, as mediated by professional efficacy. Each structural equation model includes the measurement model for x and y

constructs as well. The reported results for each structural equation model are then used to discuss the degree to which the study's hypotheses can be supported by the data.

**Coping strategies model.** In the first model, vicarious traumatization was regressed on coping strategies. The hypothesis tested in this structural equation model is that higher levels of coping strategies will be negatively related to vicarious traumatization. The structural equation models are specified in Figures 3 and 4. Figure 3 reports unstandardized estimates. Figure 4 includes standardized estimates that are used to discuss the relationship between coping strategies and vicarious traumatization. As no additional theoretical relationships were hypothesized prior to the analysis, model modifications were not used.

The structural equation model adequately fit the data based on RMSEA and CFI fit statistics ($\chi^2 = 127.21$, $p < .001$; CFI = 0.960; RMSEA = .044). While the $\chi^2$ statistic does not indicate model fit based on these results, it is commonly known that the chi-square test of exact fit is impacted by sample size. Large sample sizes can often lead to almost certain rejection of the null hypothesis (Tomarken & Waller, 2003). Given the sample size and that other fit indices suggest that fit is adequate, it is acceptable to interpret these model results. As such, the standardized estimates can be interpreted.

The standardized estimate for the path between coping strategies and vicarious traumatization is significant ($b = -0.508$; $p < .001$), indicating a direct effect of coping strategies on vicarious traumatization. Therefore, the hypothesis pertaining to the first model was supported, characterizing a moderate, negative relationship between coping strategies and vicarious traumatization. The significant path between coping strategies

and vicarious traumatization indicates that, as coping strategy scores increase, rates of vicarious traumatization decrease. This finding indicates that child welfare professionals who utilize higher levels of coping strategies, are less likely to experience vicarious trauma. Furthermore, 26% of the variance in vicarious traumatization is explained by coping strategies ($r^2 = 0.258$, $p < .001$). In other words, child welfare professionals' use of coping strategies is a significant contributor to how they experience the traumatic nature of the work.

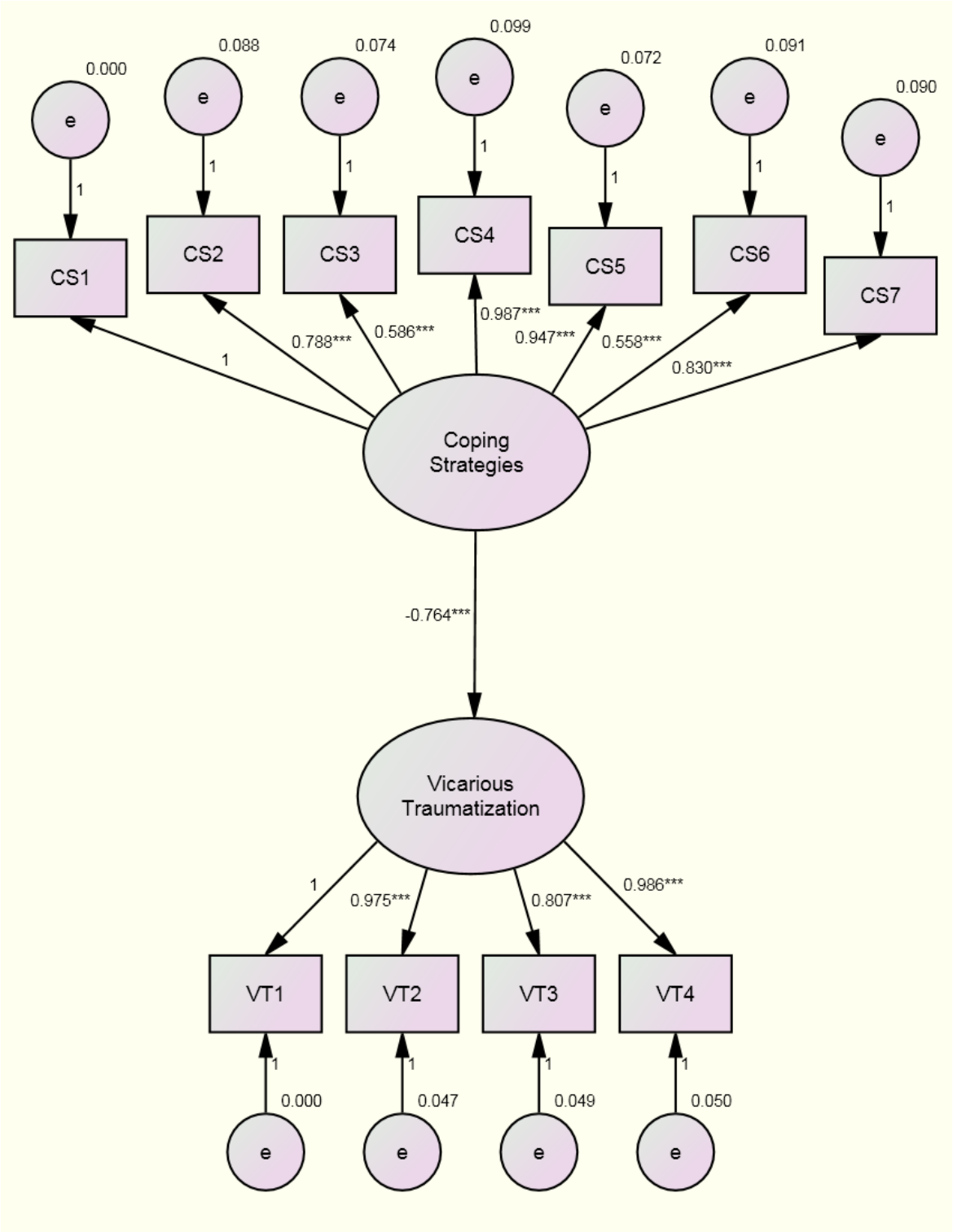


*Figure 3:* Model 1: Coping Strategies with Unstandardized Estimates

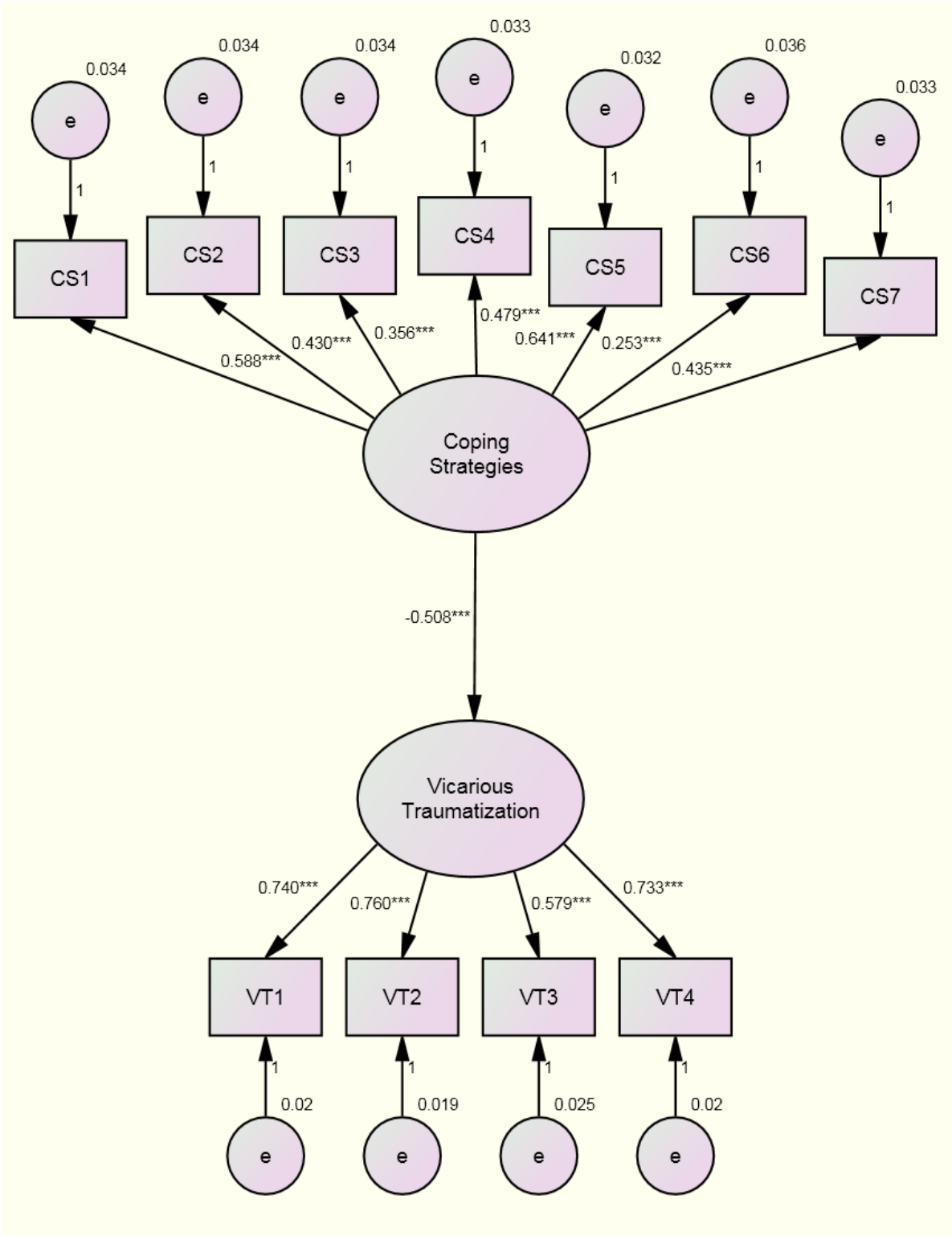


*Figure 4:* Model 1: Coping Strategies with Standardized Estimates

**Vicarious traumatization model.** In the second model, intent to leave was regressed on vicarious traumatization. The hypothesis tested in this structural equation model is that higher rates of vicarious trauma will be positively related to intention to leave. The structural equation model is specified in Figures 5 and 6. Figure 5 reports unstandardized estimates. Figure 6 includes standardized estimates that are used to discuss the relationship between vicarious traumatization and intent to leave. As no additional theoretical relationships were hypothesized prior to the analysis, model modifications were not used.

The structural equation model achieved good model fit ($\chi^2 = 27.729$, $p > .05$; CFI = 0.997; RMSEA = .023) and the standardized estimates can be interpreted for the model. The standardized estimate for the path between vicarious traumatization and intent to leave is significant ($b = 0.720$; $p < .001$), indicating a strong direct effect of vicarious traumatization on intent to leave. Therefore, the hypothesis pertaining to this model characterizing a positive relationship between vicarious traumatization and intent to leave was supported.

The significant path between vicarious traumatization and intent to leave indicates that, as vicarious trauma scores increase, rates of intention to leave also increase. This finding indicates that child welfare professionals who experience higher levels of vicarious traumatization, are more likely to leave their jobs. Furthermore, 33% of the variance in intent to leave is explained by vicarious traumatization ($r^2 = 0.330$, $p < .001$), In other words, vicarious trauma is a significant contributor to child welfare professionals' intention to leave their job.

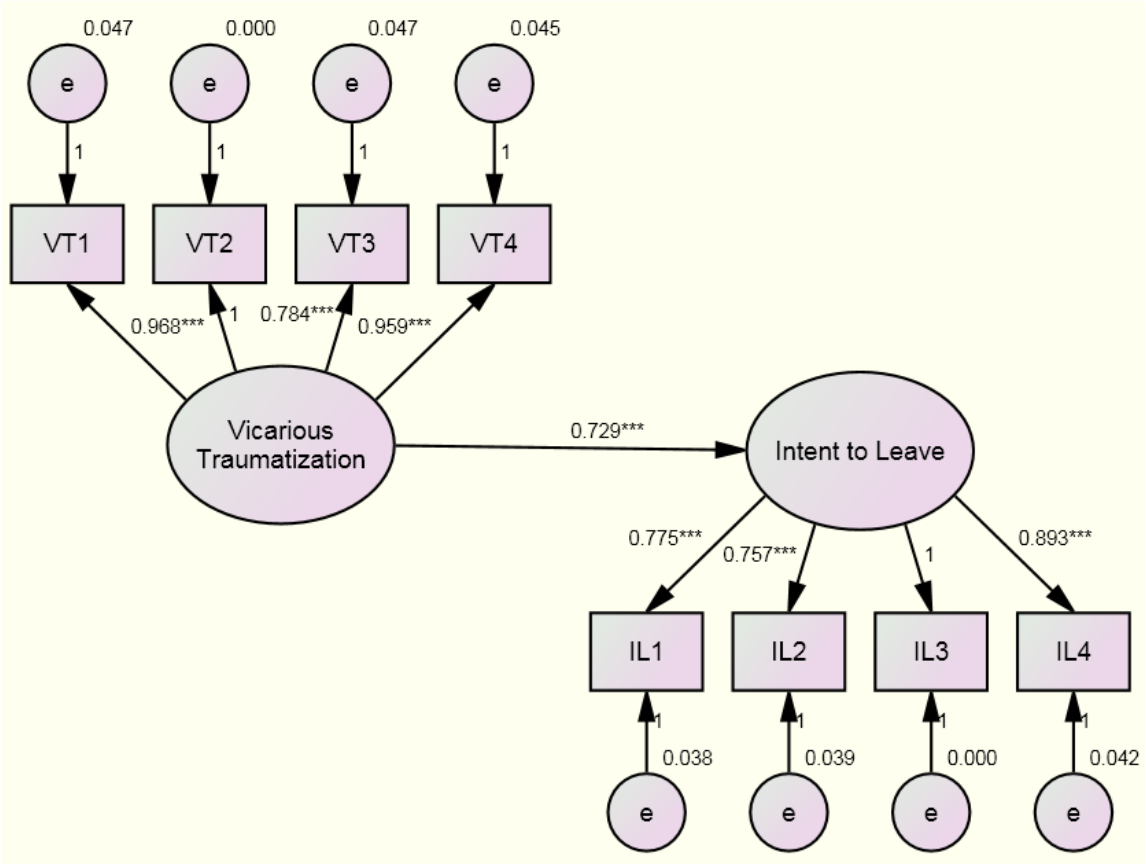


*Figure 5:* Model 2: Vicarious Traumatization with Unstandardized Estimates

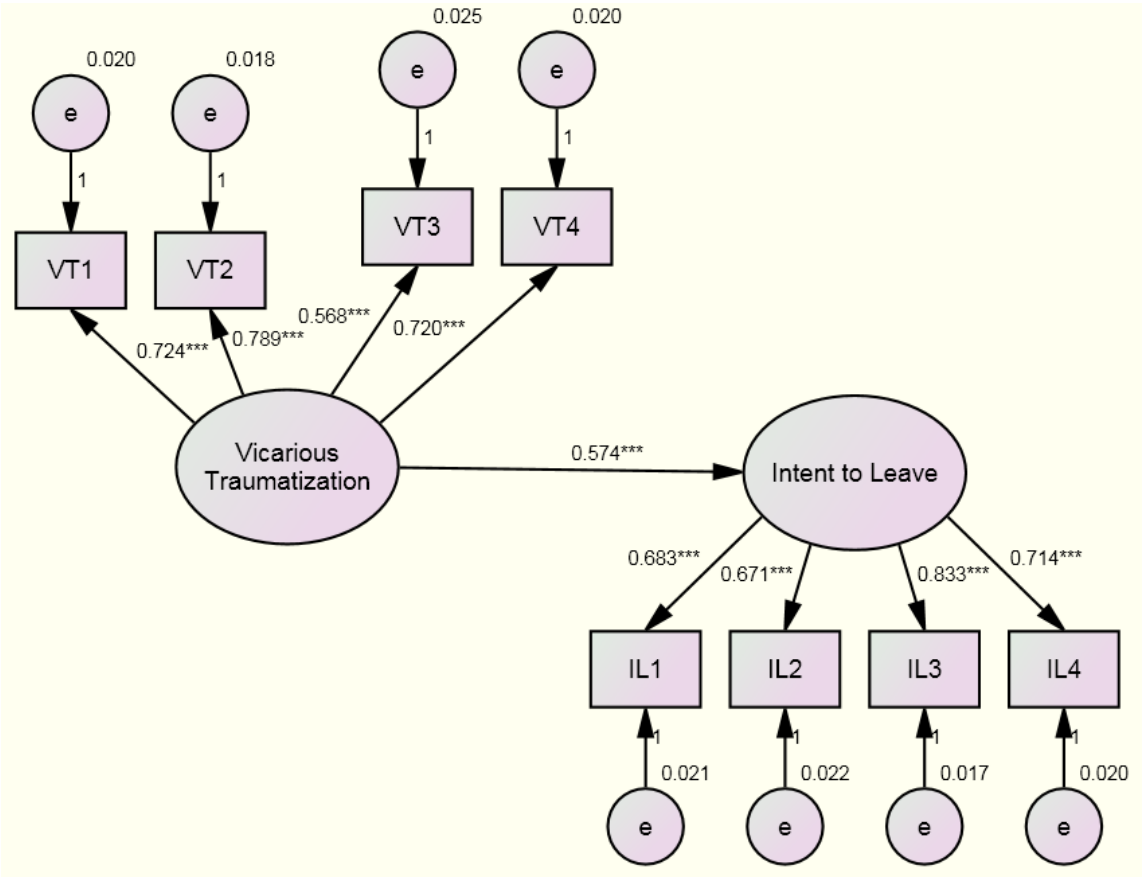


*Figure 6:* Model 2: Vicarious Traumatization with Standardized Estimates

**Professional satisfaction mediation model.** In the third model, intent to leave was regressed on vicarious traumatization, as mediated by professional satisfaction. The hypotheses tested in this structural equation model include: higher rates of vicarious trauma will be positively related to intention to leave (first hypothesis), as mediated by professional satisfaction (second hypothesis). The structural equation models are specified in Figures 7 and 8. Figure 7 reports unstandardized estimates. Figure 8 includes standardized estimates that are used to discuss the relationships among vicarious traumatization, professional satisfaction, and intent to leave. As no additional theoretical relationships were hypothesized prior to the analysis, model modifications were not used.

The model adequately fit the data based on RMSEA fit statistics ($\chi^2 = 127.75$, $p < .001$; CFI = 0.985; RMSEA = .038). Therefore, the standardized estimates can be interpreted for the model. The standardized estimate for the path between vicarious traumatization and intent to leave is significant (b = 0.556; p < .001). Similarly, the standardized estimates for the paths between vicarious traumatization and professional satisfaction, and professional satisfaction and intent to leave are significant (b = -0.361; p < .001 and b = -0.467; p < .001, respectively). Therefore, the hypotheses pertaining to this third model characterizing the relationships between vicarious traumatization, professional satisfaction, and intent to leave were supported.

The significant path between vicarious traumatization and intent to leave indicates that, as vicarious trauma scores increase, rates of intention to leave also increase. This finding indicates that child welfare professionals who experience higher levels of vicarious traumatization, are more likely to intend to leave their jobs. The significant path between vicarious traumatization and professional satisfaction indicates that, as vicarious trauma scores increase, professional satisfaction scores decrease. This finding indicates that child welfare professionals who experience higher levels of vicarious traumatization, are less likely to feel satisfied with their work. Lastly, the significant path between professional satisfaction and intent to leave indicates that, as professional satisfaction scores increase, rates of intention to leave decrease. This finding indicates that child welfare professionals who experience higher levels of professional satisfaction, are less likely to intend to leave their jobs.

To further explore the relationships in this hypothesized mediating model, total direct and indirect effects for the structural model were calculated. The amount of mediation, also termed the indirect effect, is conceptualized as the reduction of the effect of the initial variable, in this case, vicarious traumatization, on the outcome variable, intent to leave. Results indicate a statistically significant total direct effect of vicarious traumatization on intent to leave ($b = 0.579$, $p < .001$) and a significant total indirect effect of vicarious traumatization on intent to leave through professional satisfaction ($b = 0.135$, $p < .001$). Based on the statistically significant standardized estimates, partial mediation is indicated. While professional satisfaction partially mediates the relationship between vicarious traumatization and intent to leave, it does not fully mediate the relationship between the two variables. In fact, vicarious traumatization maintains a moderately strong specific direct effect on intent to leave ($b = 0.444$, $p < .001$).

Notably, 42% of the variance in intent to leave is explained by vicarious traumatization and professional satisfaction ($r^2 = 0.423$, $p < .001$), indicating that the model explains a moderate amount of the variance in intent to leave. Further, since the model depicting the direct effect of vicarious traumatization on intent to leave explained 33% of the variance, this model depicting the indirect effect of vicarious traumatization through professional satisfaction explains 9% more variance in intent to leave.

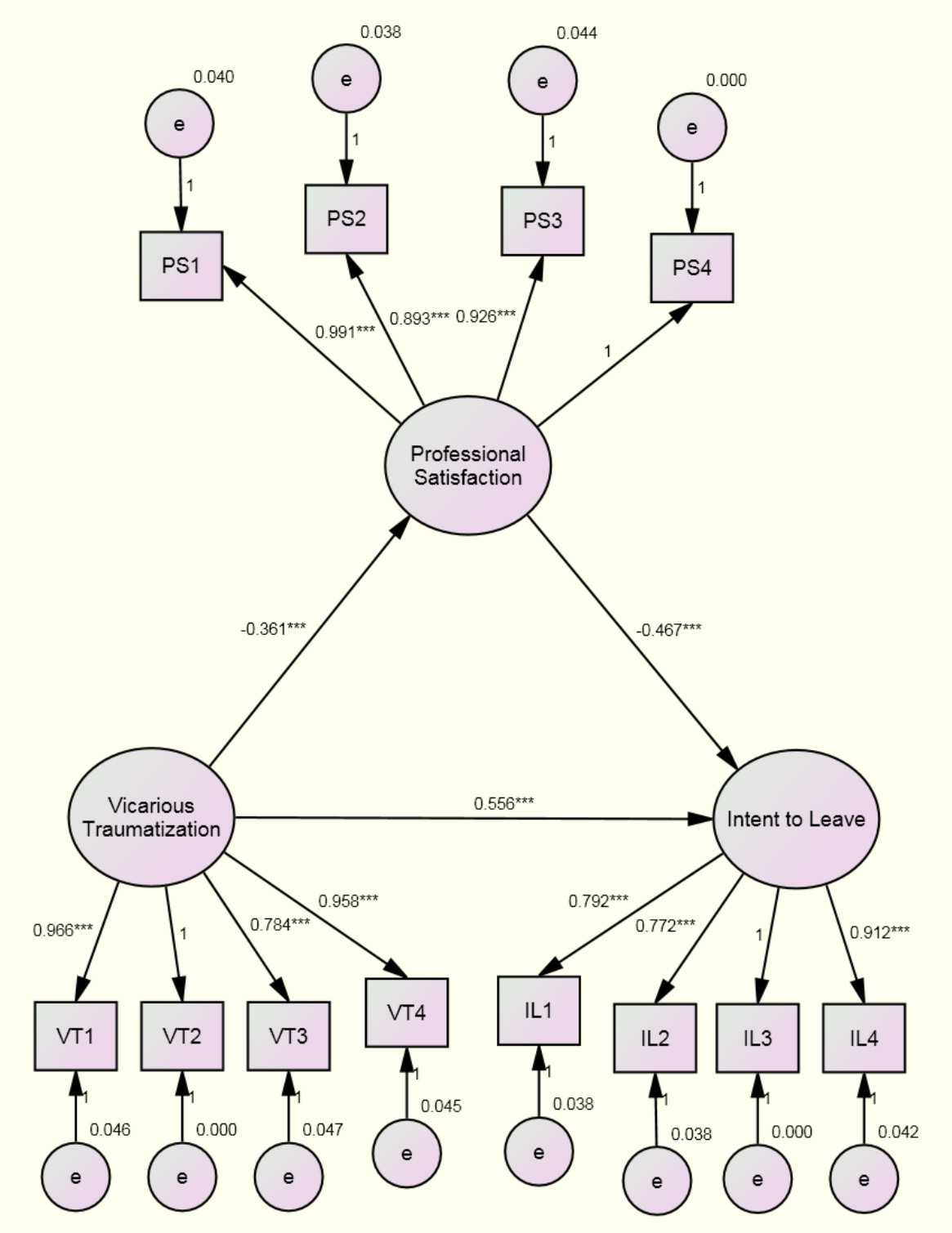


*Figure 7:* Model 3: Professional Satisfaction with Unstandardized Estimates

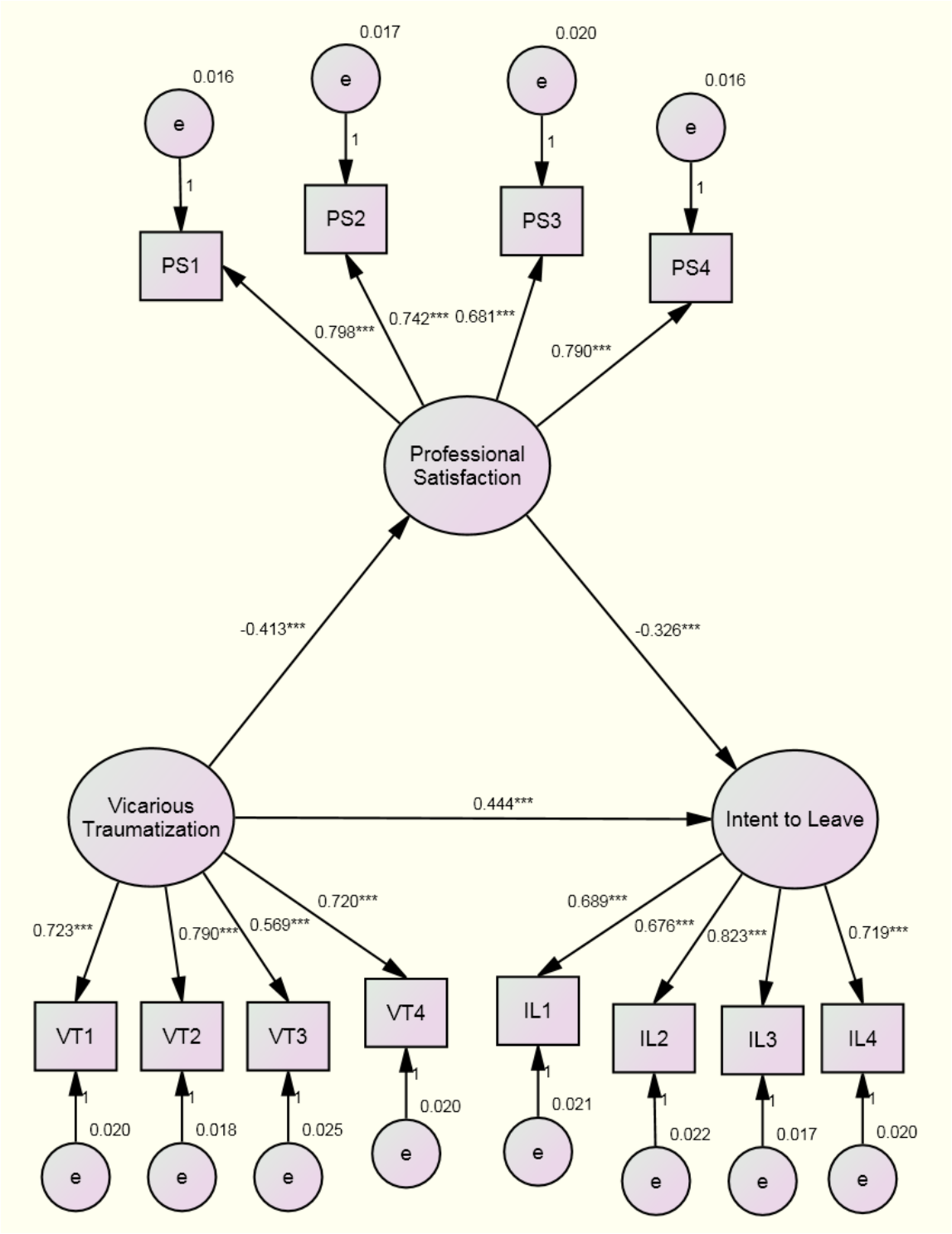


*Figure 8:* Model 3: Professional Satisfaction with Standardized Estimates

**Professional efficacy mediation model.** In the fourth model, intent to leave was regressed on vicarious traumatization, as mediated by professional efficacy. The hypotheses tested in this structural equation model included: higher rates of vicarious trauma are positively related to intention to leave (first hypothesis), as mediated by professional efficacy (second hypothesis). The structural equation models are specified in Figures 9 and 10. Figure 9 reports unstandardized estimates. Figure 10 includes standardized estimates that are used to discuss the relationships among vicarious traumatization, professional efficacy, and intent to leave. As no additional theoretical relationships were hypothesized prior to the analysis, model modifications were not used.

The model adequately fit the data based on CFI and RMSEA fit statistics ($\chi^2$ = 90.48, $p < .001$; CFI = 0.991; RMSEA = .028). Therefore, the standardized estimates can be interpreted for the model. The standardized estimate for the path between vicarious traumatization and intent to leave was significant (b = 503; p < .001). Similarly, the standardized estimate for the paths between vicarious traumatization and professional efficacy, and professional efficacy and intent to leave were significant (b = -0.422; p < .001 and b = -0.173; p < .001, respectively). Therefore, the hypotheses pertaining to this fourth model characterizing the relationships between vicarious traumatization, professional efficacy, and intent to leave were supported.

The significant path between vicarious traumatization and intent to leave indicates that, as vicarious trauma scores increase, rates of intention to leave also increase. This finding indicates that child welfare professionals who experience higher levels of vicarious traumatization, are more likely to intend to leave their jobs. The significant

path between vicarious traumatization and professional efficacy indicates that, as vicarious trauma scores increase, professional efficacy scores decrease. This finding indicates that child welfare professionals who experience higher levels of vicarious traumatization, are less likely to feel efficacious about their work. Lastly, the significant path between professional efficacy and intent to leave indicates that, as professional efficacy scores increase, rates of intention to leave decrease. This finding indicates that child welfare professionals who experience higher levels of professional efficacy, are less likely to intend to leave their jobs.

To further explore the relationships in this hypothesized mediating model, total direct and indirect effects for the structural model were calculated. Results indicate a statistically significant total direct effect of vicarious traumatization on intent to leave ($b = 0.556$, $p < .001$) and a small, but significant, total indirect effect of vicarious traumatization on intent to leave ($b = 0.073$, $p < .001$). Based on the statistically significant standardized estimates, partial mediation is indicated in this model as well. However, while professional efficacy partially mediates the relationship between vicarious traumatization and intent to leave, it is not a huge contributor to the relationship between the two variables. In fact, vicarious traumatization maintains a moderately strong specific direct effect on intent to leave ($b = 0.503$, $p < .001$). Notably, 36% of the variance in intent to leave is explained by vicarious traumatization and professional efficacy ($r^2 = 0.356$, $p < .001$), indicating that the model explains a moderate amount of the variance in intent to leave. Further, since the model depicting the direct effect of vicarious traumatization on intent to leave explained 33% of the variance, this model

depicting the indirect effect of vicarious traumatization through professional efficacy explains only 3% more variance in intent to leave. As such, professional efficacy as a mediating variable only contributes a very small amount in helping to explain the variance in intent to leave.

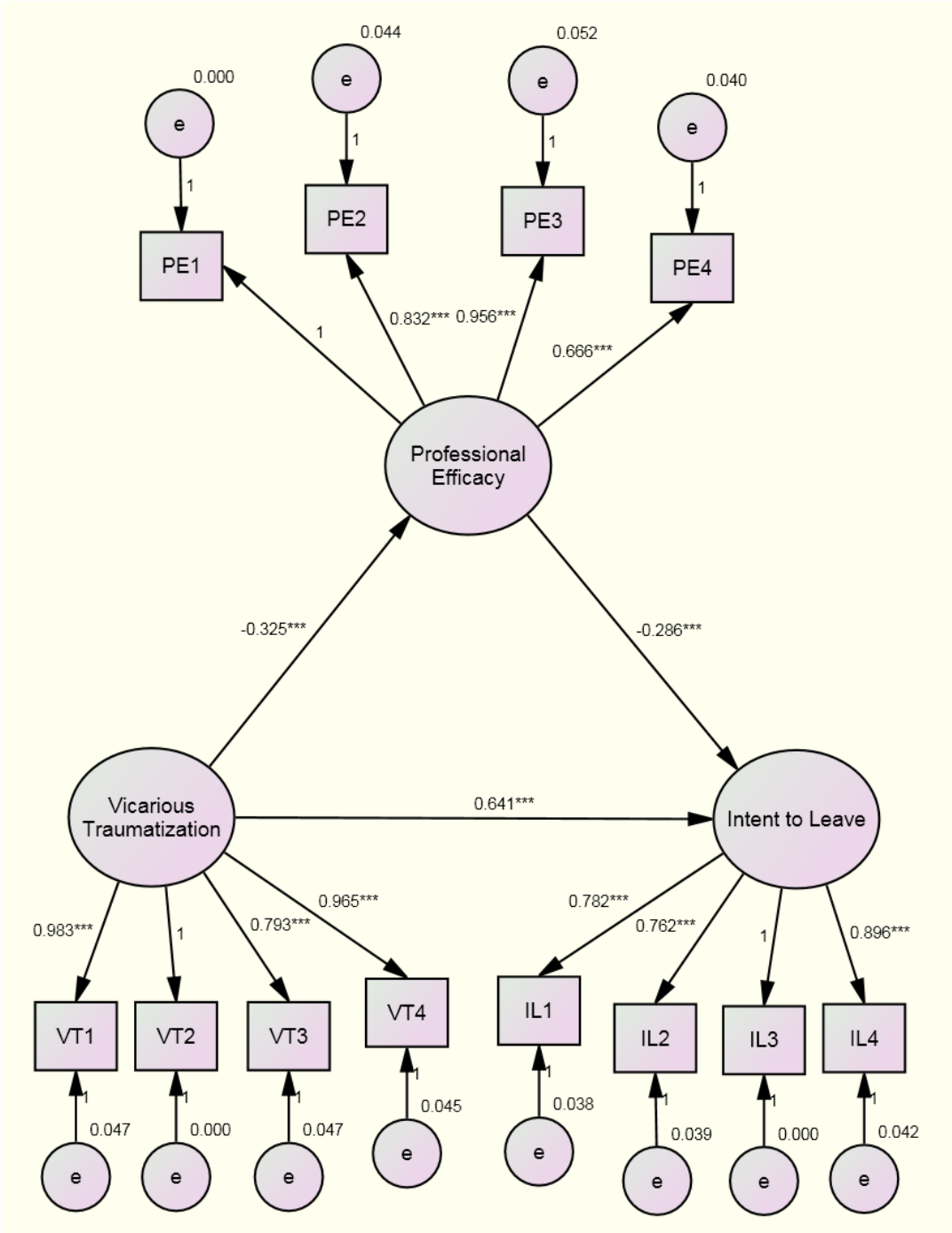


*Figure 9:* Model 4: Professional Efficacy with Unstandardized Estimates

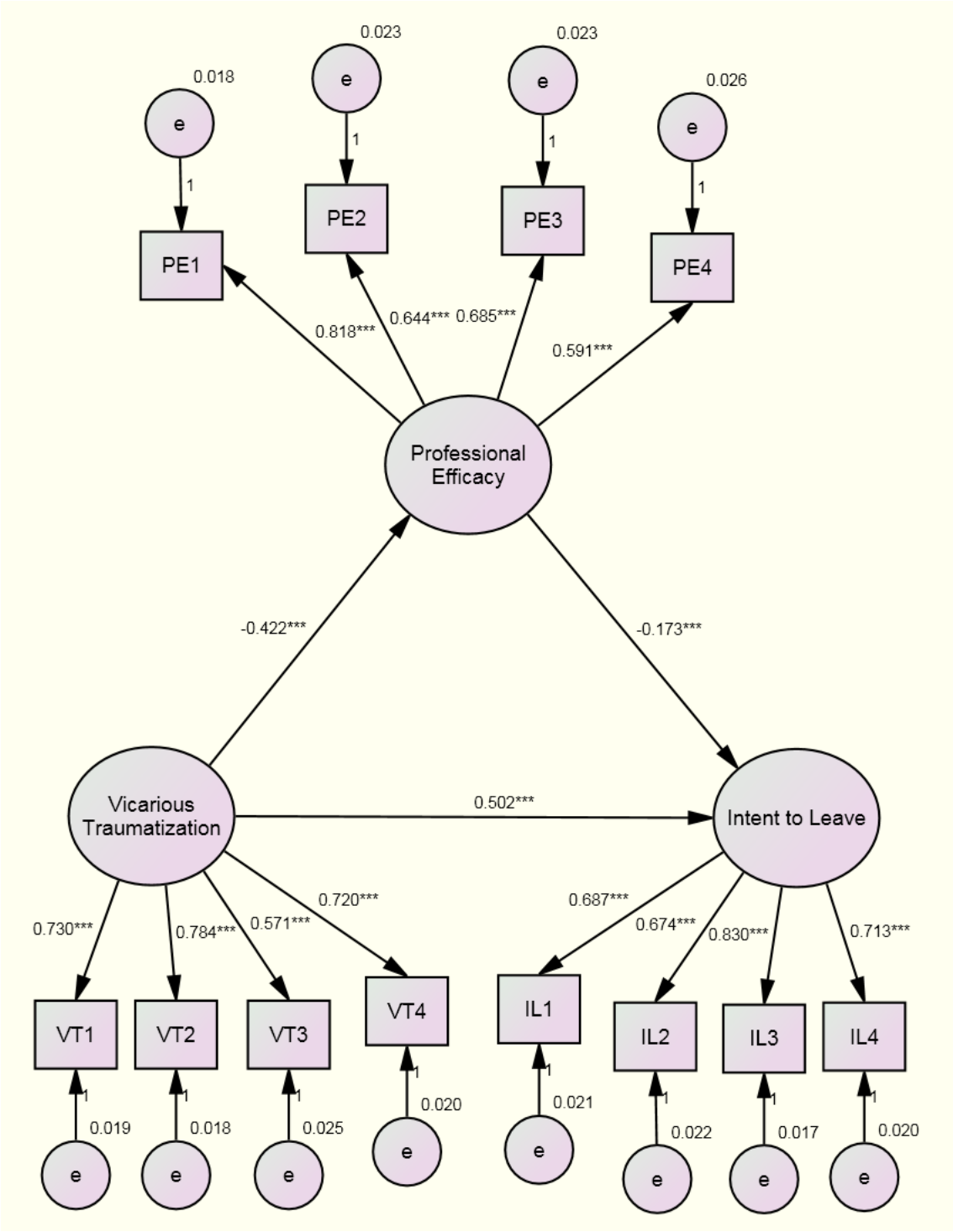


*Figure 10:* Model 4: Professional Efficacy with Standardized Estimates

## Summary

This chapter presented the results of the measurement models and the structural equation models characterizing the relationship between vicarious traumatization and intent to leave in a large, diverse sample of child welfare professionals from five different sites. First, the sample's characteristics were described and a discussion of the preliminary descriptive analyses was provided. The prevalence of vicarious traumatization and intention to leave among the sample was discussed to provide a context for understanding the structural equation model results. Next, five measurement models were presented, depicting the latent variables of vicarious traumatization, professional satisfaction, professional efficacy, coping strategies, and intent to leave. The chapter concludes with results from four structural equation models. A discussion of the practical significance of the findings in relation to the retention and health of the child welfare workforce is presented in the following chapter. Limitations of the study and implications for social work practice and future research are also delineated.

## Chapter Five: Discussion

This study examined the relationship between vicarious traumatization and intent to leave among child welfare professionals. Using propositions from Constructivist Self Development Theory, as well as organizational theory, this study aimed to address the following research questions: 1) What relevant measurement models for vicarious traumatization, coping strategies, professional efficacy, professional support, and job retention are supported? 2) How do child welfare professionals' coping strategies affect vicarious traumatization? 3) What is the role of vicarious traumatization in job retention among child welfare professionals? 4) How does vicarious traumatization affect professional efficacy and professional satisfaction? 5) What role does professional efficacy play in mediating the relationship between vicarious trauma and job retention? 6) What role does professional satisfaction play in mediating the relationship between vicarious trauma and job retention?

The following chapter integrates the results presented in Chapter 4 with current literature on vicarious traumatization, as it pertains to retention among child welfare professionals. Following an overview of key findings, implications for existing theory and empirical research are discussed. Importantly, considerations for social work practice in the field of child welfare are addressed. The chapter concludes with methodological limitations of the study.

**Discussion and Implications of Key Findings**

Results indicate that approximately one-third of participants report experiencing core aspects of vicarious traumatization as a result of their work. These negative consequences include a negative impact on professionals' interpersonal functioning, as well as their ability to engage emotionally. Trust was found to be most significantly impacted, as over 35% of participants indicate that they are less likely to trust other people due to the traumatic nature of their work. Further, over a quarter of the participants report that their work negatively impacts how they function in their personal lives and leaves them feeling emotionally numb. These results indicate that, for the current sample of child welfare professionals, psychological need areas such as trust and intimacy are negatively impacted by the traumatic nature of the work. These findings are congruent with existing empirical and theoretic literature regarding the impact of vicarious trauma on trauma therapists (Pearlman & Mac Ian, 1995; Pearlman & Saakvitne, 1995). However, more importantly, these findings expand on the child welfare literature by providing a better understanding of how vicarious trauma impacts the child welfare workforce. A child welfare professional's capacity to trust, particularly after being exposed to severe interpersonal violence such as child maltreatment, may become so impaired that a belief develops that no one can be trusted. Likewise, a professional's trust in his or her own judgment and perceptions may also be negatively altered. In this manner, a decrease in a child welfare professional's capacity to trust can negatively impact not only his or her personal life, but also his or her professional life and interactions with colleagues. This can have negative consequences in regards to the

work environment and organizational climate surrounding the worker, as well as in regards to a worker's ability to make sound decisions, thus potentially negatively impacting client outcomes.

Descriptive statistics indicate that 72% of study participants report being exposed to traumatic pictures and/or videos as a result of their job. This is congruent with the findings of the literature review and supports the expectation that the nature of child welfare work is often stressful and traumatic. Further, theoretically, direct exposure to traumatic material via pictures and/or videos is thought to have a more long lasting impact on an individual. Thus, a majority of child welfare professionals in this sample are at a higher risk for vicarious traumatization simply due to their exposure to traumatic material.

While approximately one-third of participants report experiencing core aspects of vicarious traumatization as a result of their work, it is interesting to note that twice as many participants (63.4%) report observing their colleagues being negatively impacted by the traumatic nature of their work. This has implications for considering the reliability of self report in regards to child welfare professionals' awareness of and ability to identify vicarious traumatization. More importantly, this has implications pertaining to the potential for contagion within an organization. As suggested by the theoretical literature, a child welfare professional's work environment will help to shape his or her response to vicarious trauma exposure. In this manner, the findings in regards to the current sample indicate that a large majority of the participants' immediate work environment (e.g., coworkers, team members, supervisors, and administrators), is

negative in nature and may be already suffering from the effects of vicarious traumatization. This highlights the need for multi-level interventions such as peer mentoring models and specialize training for supervisors to better combat the effects of vicarious traumatization on the workforce as a whole. Incidentally, almost 10% of participants report that their own personal trauma history is an issue for them in the work place. While this is a seemingly small percentage of workers, the implications for an impacted worker on client outcomes is concerning, and is worth noting in regards to workforce recruitment and support issues. Implications of these findings for social work practice will be further discussed in the latter portion of this chapter.

By the same token, the important outcome variable of retention was considered when providing a context for the current sample. Descriptive statistics indicate that over half of participants have often thought about leaving their organization, and approximately one quarter of participants plan to leave their organization in the next 12 months. In fact, over 51% of participants agree to some extent that they would actually leave the field of child welfare tomorrow if they were offered a job for the same salary but with less stress. Notably, almost 25% of participants indicate that they are *actively* seeking other employment. These results hold important implications for child welfare organizations, highlighting the importance of examining retention as a major workforce issue. In addition, they indicate that the current sample of workers is ideal for examining the impact of vicarious traumatization and other climate-related constructs on retention, as retention concerns are prevalent.

The present study's first research question investigated potential measurement models for five key constructs to be utilized in the final structural equation models: vicarious traumatization, professional satisfaction, professional efficacy, coping strategies, and intent to leave. The results depict strong measurement models for each of these constructs, with the exception of coping strategies. Implications for these results are discussed below.

**Implications for measuring vicarious traumatization.** While the initial Vicarious Traumatization Scale included 34 items, the resulting measurement model includes only four items, which primarily focus on a negative shift in professionals' interpersonal functioning and emotional engagement. Such a dramatic decrease in items illustrates the difficult task of measuring the complex construct of vicarious traumatization. Further, these results indicate the need for further psychometric testing regarding the complex factor components of vicarious traumatization.

Interesting, the four remaining items target the core aspects of vicarious traumatization, and help to distinguish it from other work related stress phenomena. Vicarious trauma writers such as Pearlman and Mac Ian (1995) argue that helping professionals often experience the effects of exposure to their clients' graphic or traumatic material *throughout* their system. They propose that these effects can include emotional symptoms and interpersonal problems, such as changes in trust and issues of intimacy. Further, unlike secondary traumatic stress, which is measured by assessing specific, acute symptoms experienced by the professional within seven days of exposure (Bride et al., 2004), these effects can be long lasting and pervasive, eventually impacting

professionals' cognitive schemas causing permanent changes in professionals' world views. This pervasive emotional and cognitive impact warranted the examination of vicarious trauma as having a significant impact on professionals' intent to leave their jobs. Incidentally, the final measurement model depicting vicarious traumatization exhibited good fit and performed well within the subsequent structural equation models.

**Implications for measuring professional satisfaction.** The Professional Quality of Life (ProQOL) Scale is an excellent example of a widely used instrument, previously validated by conventional means, that did not perform well when subjected to confirmatory factor analysis in MPLUS. Originally intended to measure compassion satisfaction, burnout, and compassion/fatigue/secondary traumatic stress, the ProQOL was reduced from 30 items to four items, derived from exploratory factor analysis. As there were significantly fewer items, a different factor emerged and was identified as professional satisfaction. In this way, the measurement model describes a construct that defines qualities of professional quality of life in a different way.

Potential reasons for failure of the ProQOL to support its initial measurement model include a general lack of item clarity and a lack of distinct factors or subscales supported by a sufficient number of congruent items. However, the final measurement model depicting professional satisfaction exhibited good fit and performed well within the subsequent structural equation model. The latent variable of professional satisfaction, described as the satisfaction a professional experiences through the experience doing his or her work, is significantly related to every other latent variable in the current study.

**Implications for measuring professional efficacy.** The Psychological Capital Scale is another example of a widely used instrument, previously validated by conventional means, that did not perform well when subjected to confirmatory factor analysis in MPLUS. Originally intended to capture self efficacy, optimism, hope, and resilience, the Psychological Capital Scale was reduced from 24 items to four items, also derived from exploratory factor analysis. As there were significantly fewer items, a different factor emerged and was identified as professional efficacy.

Potential reasons for failure of the Psychological Capital Scale to support its initial measurement model include a general lack of item clarity, a lack of distinct factors or subscales supported by a sufficient number of congruent items, and frequent use of vocabulary inappropriate or unfamiliar to the current sample. Specifically, while the authors of the scale report that research indicates that psychological capital is related to performance outcomes in the workplace, the scale has most frequently been utilized in the business sector, and its items do not appear to resonate with child welfare staff. However, the final measurement model depicting professional efficacy exhibited good fit and performed well within the subsequent structural equation model. The latent variable of professional efficacy, described as the belief in one's capabilities to organize and execute courses of action required to accomplish work-related goals, is congruent with findings of the literature review and is significantly related to every other latent variable in the current study. In addition, it remains an important construct to consider in relation to vicarious traumatization among child welfare professionals, as decreased professional efficacy has significant implications for client outcomes.

**Implications for measuring coping strategies.** The Coping Strategies Scale was designed to measure specific coping strategies in child welfare professionals that target and potentially mitigate the impact of vicarious traumatization on the professional. Originally consisting of 11 items, exploratory factor analysis produced a seven item measurement model. However, conflicting results indicate questionable fit for this measurement model, which was intended to depict the latent variable of coping strategies. The inability to achieve a consistent, close fitting measurement model is primarily due to the compensatory nature of the individual items or indicators. A close evaluation of the items, in light of the conflicting measurement model results, as well as the low reliability statistics, raises an important psychometric question: is the Coping Strategies Scale a scale or an index?

While scales and indices both employ multiple indicators or items as measurement, the two terms are often used imprecisely and interchangeably in social research. Because of the implications for reliability and validity outcomes, it is important to understand and establish a distinction between the two when designing and testing instruments. Often times, the distinction hinges on whether the indicators measure cause or effect. A scale intends to measure a construct that is “latent" by utilizing indicators that reflect the *effect* of the construct. In this way, the multiple indicators may be considered to be close alternatives to the construct and they must be intercorrelated, due to a common cause, to support this assumption (Diamantopoulos & Winklhofer, 2001).

Indices, on the other hand, tend to utilize indicators thought to *cause* the concept. As such, the indicators themselves are not due to a common cause and may not be

intercorrelated. Further, multiple indicators may be considered compensatory in nature; namely, a high score on one item may compensate for a low score on another item. In this case, items do not have to intercorrelate to make meaningful contributions (Diamantopoulos & Winklhofer, 2001).

Based on this distinction, a further review of the indicators of the Coping Strategies Scale indicates that it could be utilized as an index, rather than a scale. Specifically, from an empirical standpoint, the items are not highly intercorrelated, and the scale produces a low reliability statistic. Additionally, from a conceptual standpoint, the items are compensatory in nature. For example, a high score for the item "I practice physical self care" may compensate for a low score on another item such as "I practice regular spiritual renewal." Professionals may utilize different coping strategies, depending on the nature of the work related stressor and their own psychological makeup. Therefore, for future analyses, the scale will be reformatted as an index and utilized in a path analysis with formative indicators, rather than as a latent construct in a structural equation model.

**Implications for measuring intent to leave.** The Intent to Leave Scale was used to operationalize the construct of retention among child welfare professionals, assessing the level with which a professional is seriously considering leaving his or her job. Originally consisting of six items, confirmatory factor analysis produced a four item measurement model. The remaining four items exhibit strong face validity. The items reference a strong intent to leave the organization, making the scale an adequate proximal indicator of actual turnover. The final measurement model exhibited good fit and

performed well as the dependent variable within the subsequent structural equation models.

**Implications of structural equation model results.** In addition to testing five measurement models, the study tested six hypotheses using structural equation modeling to examine the fit of four hypothesized theoretical models to the observed data. The first structural equation model examined the relationship between child welfare professionals' coping strategies and vicarious traumatization. The hypothesis tested in this model asserted that higher levels of coping strategies will be negatively related to vicarious traumatization. This hypothesis was supported in the present study.

This finding is congruent with the literature, as Constructivist Self Development Theory emphasizes the importance of considering individuals' coping strategies in predicting trauma responses (McCann & Pearlman, 1990). Further, according to Lazarus and Folkman's (1984) transaction theory of stress, coping strategies are used to manage the external and internal demands of a specific interaction that is deemed to be stressful. In this way, coping strategies can be perceived as protective factors against trauma. Implications for this finding will be discussed in the following section.

The second structural equation model examined the relationship between vicarious traumatization and intent to leave. The hypothesis in this model tested for a direct effect of vicarious traumatization on intent to leave, asserting that higher rates of vicarious traumatization will be positively related to intention to leave. This hypothesis was supported in the present study, as vicarious traumatization was found to have a specific direct effect on intent to leave.

This finding highlights vicarious trauma as an important organizational climate factor related to workforce outcomes and serves to connect the theoretical and empirical literature pertaining to vicarious trauma and turnover among child welfare professionals. In the current study, vicarious traumatization, a theory driven construct, was shown to directly impact child welfare professionals' intention to leave their organization. Congruent with the theoretical literature concerning workforce turnover and occupational stress phenomena (Beaver, 1990; DePanfilis & Zlotnik, 2008; Dickenson & Perry, 2002; Pryce et al., 2007), findings indicate that higher levels of vicarious traumatization significantly increase the likelihood that a child welfare professional will leave his or her job. To date, no other study has examined the direct effect of vicarious traumatization on intention to leave among child welfare professionals. In this manner, this finding contributes to the empirical literature connecting occupational stress phenomena to child welfare workforce issues. As turnover and retention are important workforce issues in the field of child welfare, this finding holds important implications for the development of interventions to decrease turnover and enhance the retention of a healthy, trained workforce. These implications are discussed in the following section.

The third structural equation model examined the relationship between vicarious traumatization and intent to leave, as mediated by professional satisfaction. The hypotheses tested include: higher rates of vicarious traumatization will be positively related to intention to leave (first hypothesis), as mediated by professional satisfaction (second hypothesis). Both hypotheses were supported in the present study, as vicarious traumatization was found to have a specific direct effect on intent to leave, and

professional satisfaction was found to partially mediate the relationship between vicarious traumatization and intent to leave.

As found with the previous structural equation model (Model 2), this finding suggests that child welfare professionals in the sample who reported experiencing higher levels of vicarious traumatization were more likely to report an intention to leave their job. Explanations for this finding are similar to those described for the previous model. Additionally, a significant, negative relationship was found between vicarious traumatization and professional satisfaction, indicating that child welfare professionals in the sample who reported higher levels of vicarious traumatization were less likely to report feeling professionally satisfied. This finding is congruent with the expectations set forth in the preceding literature review as vicarious trauma is proposed to impact job satisfaction and professional satisfaction outcomes, and is often thought of as one reason why professionals leave the field (Figley, 1999).

A significant, negative relationship was also found between professional satisfaction and intent to leave, indicating that child welfare professionals in the sample who reported higher levels of professional satisfaction were less likely to report an intention to leave their job. This finding is congruent with the literature as well, as professional satisfaction, much like job satisfaction, is often thought of as a proximal indicator of a professional's intent to leave (Harrison, 1995).

Importantly, professional satisfaction was also found to partially mediate the relationship between vicarious traumatization and intent to leave. However, while professional satisfaction partially mediates this relationship, it does not fully mediate the

relationship between the two variables. In fact, vicarious traumatization maintains a moderately strong specific direct effect on intent to leave. One explanation for these findings may be that, although professional satisfaction is impacted by vicarious trauma and is related to retention, it does not contribute enough as a protective factor to reduce the pervasive impact of vicarious trauma on the child welfare professional. Specifically, if a caseworker is experiencing vicarious trauma, whether or not he is feeling satisfied with his work with clients, has little impact on his decision to leave his job. This finding highlights the pervasive impact of vicarious traumatization on the retention of child welfare professionals in the sample, regardless of their level of professional satisfaction.

The fourth structural equation model examined the relationship between vicarious traumatization and intent to leave, as mediated by professional efficacy. The hypotheses tested include: higher rates of vicarious traumatization will be positively related to intention to leave (first hypothesis), as mediated by professional efficacy (second hypothesis). Both hypotheses were supported in the present study, as vicarious traumatization was found to have a specific direct effect on intent to leave, and professional efficacy was found to partially mediate the relationship between vicarious traumatization.

As found with the previous two structural equation models (Models 2 and 3), this finding suggests that child welfare professionals in the sample who reported experiencing higher levels of vicarious traumatization were more likely to report an intention to leave their job. Explanations for this finding are similar to those described for the previous model. Additionally, a significant, negative relationship was found between vicarious

traumatization and professional efficacy, indicating that child welfare professionals in the sample who reported higher levels of vicarious traumatization were less likely to report feeling efficacious about their ability to do their jobs. This finding is also congruent with the expectations set forth in the preceding literature review as vicarious trauma is proposed to impact professional efficacy. Specifically, the effects of vicarious traumatization are believed to impair the ability of professionals to effectively help those seeking their services (Figley, 1999). Further, professionals experiencing vicarious trauma are potentially at higher risk to make poor professional judgments such as misdiagnosis, abuse of clients, or poor treatment planning (Rudolph et al., 1997).

A significant, negative relationship was also found between professional efficacy and intent to leave, indicating that child welfare professionals in the sample who reported higher levels of professional efficacy were less likely to report an intention to leave their job. This finding is congruent with the literature as well, as professional efficacy is often thought of as a proximal indicator of a professional's intent to leave.

Importantly, professional efficacy was also found to partially mediate the relationship between vicarious traumatization and intent to leave. However, much like professional satisfaction (Model 3), while professional efficacy partially mediates this relationship, vicarious traumatization maintains a moderately strong specific direct effect on intent to leave. One explanation for these findings may be that, although professional efficacy is impacted by vicarious trauma and is related to retention, it does not contribute enough as a protective factor to reduce the pervasive impact of vicarious trauma on the child welfare professional. Specifically, if a caseworker is experiencing vicarious

trauma, whether or not he is feeling efficacious in regards to his work with clients, has little impact on his decision to leave his job. In other words, this finding highlights the pervasive impact of vicarious traumatization on the retention of child welfare professionals in the sample, regardless of their level of professional efficacy. Implications for the study's findings in relation to constructivist self development theory, organizational theory, and empirical research are discussed below.

**Theoretical Implications**

High worker turnover has grave implications for the quality, consistency, and stability of services provided to children and families in the child welfare system. Descriptive statistics for the current study indicate a high rate of intention to leave among the child welfare participants surveyed. Notably, turnover costs can also include the loss of efficacy of child welfare workers before they actually leave the organization, which can reduce organizational effectiveness and employee productivity (Pryce et al., 2007). Results from structural equation modeling analyses indicate that professional efficacy and intent to leave are related. Participants with higher levels of professional efficacy indicate that they are less likely to intend to leave their jobs. In this way, decreased professional efficacy may serve as a risk factor of a professional's intention to leave, and is an important individual level construct to consider when assessing the health and effectiveness of an organization.

By the same token, an understanding of the causes and antecedents of turnover is an important step for taking action to reduce turnover rates. To effectively retain child welfare professionals, organizations must know what factors motivate their workers to

stay in the field and what factors cause them to leave. Facilitated by an extensive review of the empirical and theoretical literature, the current study focused on the occupational stress phenomenon of vicarious traumatization as a potential antecedent of turnover, and investigated the role that vicarious traumatization plays in influencing child welfare professionals' intent to leave their jobs.

Findings indicate that vicarious traumatization plays an important role in decreasing levels of professional efficacy and professional satisfaction among child welfare professionals in the sample. In this light, vicarious traumatization may play a part in diminishing employee productivity and organization effectiveness. Importantly, findings indicate that vicarious traumatization directly impacts retention of child welfare professionals in the sample, as higher levels of vicarious traumatization are significantly related to higher rates of intention to leave. This finding implicates vicarious traumatization as a worthwhile construct to target in an effort to decrease turnover among child welfare professionals.

Constructivist Self Development Theory notes the importance of considering individuals' coping strategies in predicting trauma responses, as coping strategies are perceived as a protective factor against trauma (Pearlman, 1999). In this regard, coping strategies was tested as a predictor of vicarious traumatization among professionals in the sample. Findings indicate that higher levels of coping strategies are significantly related to lower levels of vicarious traumatization. Therefore, coping strategies may act as a protective factor against the pervasive effects of working with traumatized clients. In this

way, intervention strategies that aim to enhance specific coping strategies among child welfare professionals could help to decrease vicarious traumatization.

Incidentally, Constructivist Self Development Theory perceives individuals' adaptations to trauma "as interactions between their own personalities (defensive styles, psychological needs, coping strategies) and salient aspects of the traumatic events, all in the context of social and cultural variables" that shape their responses (Pearlman & Mac Ian, 1995, p. 558). As previously stated, the context for the child welfare professional may include the culture and climate of the professional's child welfare unit and organization, emphasizing the importance of a child welfare professionals' immediate work environment. Descriptive statistics for this sample describe prevalence rates for vicarious trauma among child welfare professionals similar to those found in previous studies pertaining to occupational stress phenomena among social work professionals (Bride, 2007; Cornille & Meyers, 1999). However, when asked about the observed vicarious traumatization of their colleagues, nearly twice as many study participants report observing their colleagues being negatively impacted by the traumatic nature of their work, as those who report being negatively impacted themselves.

While this has implications for considering the reliability of self report, it perhaps most notably highlights the potential for contagion within an organization. Over half of the child welfare professionals in the sample report having been exposed to negatively impacted colleagues. From a theoretical standpoint, this type of exposure to others' vicarious traumatization may contribute to how child welfare professionals shape their own response to the stressful and traumatic nature of the work. In this way, interventions

that target peer support and peer mentoring interventions as a means of mitigating the impact of vicarious trauma are worth considering.

**Implications for Social Work Practice**

Key findings of the current study hold important implications for social work practice. First and foremost, social work presents an important arena for furthering intervention science, particularly in the field of child welfare. In this light, results of the current study may help to inform important intervention efforts which target child welfare workforce issues. Awareness of the prevalence of vicarious traumatization among child welfare professionals, and its potential impact on professional efficacy, professional satisfaction, and retention, can help to inform the development of workforce interventions. Specifically, this study highlights vicarious traumatization as one significant reason why child welfare workers may leave their jobs. Therefore, prevention and interventions approaches that target vicarious traumatization may help to enhance organizational climate and reduce turnover, thus positively impacting client outcomes. Findings of this study also promote the consideration of coping strategies as a potential protective factor against vicarious traumatization. Consequently, interventions should provide education and training to enhance coping strategies among child welfare professionals.

Further, as the effects of vicarious trauma are believed to impair the ability of professionals to effectively help those seeking their services (Figley, 1999; Rudolph et al., 1997), child welfare organizations have an *ethical imperative* to address vicarious traumatization. Findings of the current study indicate that vicarious traumatization is

prevalent among the child welfare professionals in the sample and support the importance of mitigating the impact of vicarious traumatization on those who work in the field. Once professionals enter the field of child welfare and are engaged in the culture and climate of child welfare organizations, ethical implications for social work practice are important to consider. First, the ethical considerations typically applied to social work clients should also be extended to child welfare workers. Primarily, child welfare organizations have a *duty to inform* potential workers of the potentially traumatic nature of child welfare work experiences, a duty to *do no harm*, thus, adequately prepare professionals prior to entering the workforce, and a specific obligation to *adequately educate and train* child welfare workers to become *competent* social work professionals (NASW Code of Ethics, 2008). "Social workers should not engage in any relationships in which there is a risk of…potential harm" (NASW Code of Ethics, 2008).

Further, from an ethical standpoint, impaired professionals should not continue to practice as part of the professional standard regarding *duty to clients* (NASW Code of Ethics, 2008). The NASW Code of Ethics (2008) clearly states that impaired professionals should not allow their own personal problems, psychosocial stress, and mental health difficulties interfere with their professional work. By the same token, social workers who have knowledge of a social work colleague's impairment are encouraged to take action as well (NASW Code of Ethics, 2008).

"Self care is an ethical imperative. We have an obligation to our clients, as well as to ourselves, our colleagues, and our loved ones, not to be damaged by the work we do" (Saakvitne & Pearlman, 1996, p. 156). As outlined in the literature review, higher

turnover rates significantly decrease the chance of permanency achievement for children and worsen overall client outcomes (APHSA, 2005; Flower et al., 2005). Due to the negative impact turnover has on client outcomes (APHSA, 2005; Flower et al., 2005), child welfare organizations have an ethical obligation to intervene with the vicarious traumatization of child welfare professionals.

In light of the ethical imperative for social work professionals to address vicarious trauma, child welfare organizations present an ideal setting for such prevention and intervention strategies to occur. While much work must be done to empirically validate vicarious traumatization prevention and mitigation strategies among child welfare organizations, several strategies are recommended within the social work education and practice literature (Bell et al, 2003; Cunningham, 2004; Dane, 2000; Gillis & Lewis, 2004; Huber, 1999; Sommer, 2008). These strategies are supported by the key findings of the current study and are discussed below.

Prevention and intervention approaches should encourage child welfare organizations to describe the work realistically to new child welfare recruits. Along these lines, intervention approaches should require that new worker training curricula include the provision of educational components that directly address vicarious traumatization, and aim to enhance professionals' awareness and identification of the negative indicators of vicarious trauma. As evidenced in the current study, training and education that encourages the development of specific coping strategies that can be used to mitigate the impact of vicarious traumatization are important to consider.

In addition, child welfare supervisors should be screened and hired in regards to their ability to provide a safe environment and support for vicarious trauma integration and management. By the same token, organizations should provide ongoing training opportunities to caseworkers and supervisors regarding trauma-sensitive supervision and/or collaborative supervision strategies. In particular, intervention approaches that encourage the use of peer mentoring should be considered. The results of the current study support the need for peer mentoring models to help combat the impact that such high percentages of negatively impacted colleagues may have on professionals' abilities to respond to the traumatic nature of their work. As the results indicate, contagion may be a significant issue for child welfare organizations. Due to the high risk of contagion within child welfare organizations, peer mentoring programs that focus on strengths-based feedback and structured debriefing may have the most potential to positively impact workers. Specifically, training should teach child welfare professionals to change their vocabulary and the way that they characterize the cases they are exposed to on the job. In this way, workers will not simply "vent" to their peer, which promotes contagion, but they can apply intentional debriefing skills to make meaning of their experiences in a healthy fashion.

Lastly, while often controversial, growing research indicates that vicarious traumatization is an occupational hazard. As such, interventions should prepare child welfare organizations to support caseworkers and other frontline staff in addressing personal traumatic stress and unresolved trauma, and provide opportunities and/or referrals for counseling and support. In this regard, it is important for social workers to

be a part of important policy making efforts to clarify the child welfare organization's responsibilities to the caseworker regarding vicarious traumatization as an occupational hazard, and to clarify the child welfare professional's responsibility for intentional self care.

**Implications for Future Research**

Key findings of the current study hold important implications for future research. First, further testing of the models depicted in the present study should occur with additional samples. While the sample included five diverse child welfare sites, it is not necessarily representative of all child welfare organizations, nationally. Replicating the study with additional child welfare sites will help to confirm the conceptual model and findings of the study, and will strengthen the overall generalizability of the results.

Second, utilizing the tenets of Constructivist Self Development Theory, the structural equation models utilized in the current study should be expanded to test other potential mediators such as supervisor support and peer support. Theoretically, a child welfare professional's work environment is important in helping to shape his or her response to indirect trauma exposure. Further, literature pertaining to organizational theory and research indicates that supportive supervision may play an important role in preventing child welfare worker turnover. If found to be mediators of the relationship between vicarious traumatization and intent to leave, these important unit-level constructs may be important considerations for interventions within child welfare organizations. By the same token, coping strategies could be tested as a moderator of the relationship between vicarious traumatization and intent to leave. Significant findings would

strengthen the proposition to include coping strategies as a key component of intervention approaches.

Third, interventions intended to mitigate vicarious traumatization among child welfare professionals should be developed and rigorously tested. From a constructivist self development perspective, vicarious traumatization must be considered within the context of the individual, as well as the existing climate of the organization. By the same token, organizational theory suggests that interventions with child welfare professionals are more likely to be effective when they occur at multiple levels of the organization. Interventions such as those implicated in the previous practice section should be considered for rigorous testing.

Fourth, while findings of this study indicate that vicarious traumatization is an important contributor to workforce turnover, it is important to investigate other factors contributing to intent to leave. In doing so, additional constructs can be targeted by intervention approaches, allowing for an informed approach to retaining a healthy and competent child welfare workforce.

**Study Limitations**

Several limitations exist in the present study. First, the study utilized a self-administered survey to collect the data. Despite the fact that survey participation was anonymous, participants' varying comfort levels with reporting about their perceptions of their organizations most likely impacted some of the data collected. In fact, concern regarding anonymity was apparent at one of the study sites, as participants at the site refrained from answering all of the demographic questions.

Second, the cross-sectional design used in this study only provides a point-in-time examination of complex constructs and does not allow for a comprehensive understanding of the impact of vicarious traumatization on retention among child welfare professionals. Longitudinal designs are necessary to fully understand the relationship between vicarious traumatization and intent to leave within child welfare organizational settings. Additionally, the use of cross-sectional data and the lack of random sampling limit the generalizability of the study's findings. This study utilized a convenience sample of five child welfare sites that were willing to participate in the study due to their involvement and/or association with a larger child welfare project. The five sites were not randomly selected.

Further, while the study utilized census sampling in an effort to involve professionals at every level of the organization, not everyone participated in the study. In this manner, sampling bias most likely occurred. Thus, while the results of this study offer some evidence that the vicarious traumatization of the child welfare workforce may be important to consider in the context of retention and turnover, these findings must be verified by additional empirical research that includes longitudinal data collection with other samples of child welfare professionals.

Additionally, this mediation study focused on factors that potentially mediate the relationship between vicarious traumatization and intent to leave. Further, because this is the first study of its kind, the study utilized fairly simple models to examine these relationships. However, it is also important to investigate potential moderating factors of the relationship between vicarious traumatization and retention among child welfare

professionals. Therefore, lack of inclusion of potential moderating variables in this study is a limitation of this study and is an area for future research.

The most significant methodological limitation of this study likely concerns the measurement model results for the coping strategies scale. The coping strategies scale, even after removing low loading items, barely achieved adequate fit based on the fit statistics. As discussed previously, this instrument might be better utilized as an index rather than a scale. Further, in regards to the existing scales that had previously been validated (e.g., Professional Quality of Life Scale, Psychological Capital Scale), the original factor structure of these scales could not be verified, bringing the scales' validity into question. A potential explanation for these measurement issues is the unique features of the study's samples. Perhaps, the items on these measures are not relevant for this diverse sample of child welfare professionals. Alternatively, a general concern may exist regarding the validity of some of the original factor structures and the clarity of some of the indicators. Regardless, future studies should pay close attention to these measurement issues.

**Conclusion**

This study contributes to the empirical literature connecting occupational stress phenomena with workforce outcomes in the field of child welfare. Findings of this study provide some support to suggest that Constructivist Self Development Theory is an important contextual consideration for understanding the relationship between vicarious traumatization and intent to leave, as it plays out within child welfare organizations. Notably, the current study highlights the importance of considering vicarious

traumatization as a significant organizational climate construct related to the retention of a healthy, competent workforce. Importantly, child welfare organizations have an ethical imperative to retain healthy workers in order to achieve better case outcomes for the children and families they serve. As such, this study provides a promising new direction for the development and testing of interventions that target vicarious traumatization, in an effort to directly impact retention rates among child welfare professionals.

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