An Exploration of the Effects of Primary and Secondary Trauma on Child Welfare Workers' Mental Health and Commitment to the Field

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AN EXPLORATION OF THE EFFECTS OF PRIMARY AND SECONDARY TRAUMA ON CHILD WELFARE WORKERS’ MENTAL HEALTH AND COMMITMENT TO THE FIELD

By

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A Dissertation submitted to the College of Social Work in partial fulfillment of the requirements for the degree of Doctor of Philosophy

2019
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This dissertation is dedicated first and foremost to God, and to Levi, Riley, and Evie. Without your love, patience, and support, this work would not have been possible.
ACKNOWLEDGMENTS

I would like to thank Dr. Dina Wilke, my dissertation chair and the primary investigator for the Florida Study of Professionals for Safe Families. Her mentorship and guidance throughout this process was invaluable. I would also like to thank each of my committee members, Stephen Tripodi, Karen Randolph, and Lenore McWey, for their participation in the dissertation process. I appreciate the time and effort you put into this work. Finally, I would like to acknowledge my part-time roommate, driving buddy, cohort member, and friend Carmella Miller. Thank you for walking through the past six years with me.
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ABSTRACT

The field of child welfare continues to suffer due to high rates of worker turnover. The child welfare workforce plays a crucial role in promoting child well-being and preventing abuse and neglect. When workers leave their jobs, sometimes after only a few months, at-risk children are negatively impacted. Work-related trauma exposure of workers is an understudied area. This study revealed three categories of trauma workers experience as a part of their jobs. Analyses examined the relationship between type of trauma exposure and personal and work-related outcomes of child welfare workers in the state of Florida.

This study examined workers’ exposure to trauma from a stress-response framework. Conservation of resources theory and identity theory informed the conceptual model for this study. This model examined how different typologies of trauma influence workers’ mental health and commitment to the field of child welfare. Mental health was examined as a potential mediator in the relationship between trauma and commitment to the field.

A sample of child welfare workers who had been employed in the field for 18-months (n=657) responded to items relating to their experiences of client perpetrated violence, deaths or injuries on their caseloads, and secondary trauma. They also completed scales measuring their current levels of depression, anxiety, PTSD (at 18 months), and their overall commitment to the field of child welfare (measured at 2 years post-hire). T-tests, ANOVA analyses, and structural equation modeling (consisting of confirmatory factor analysis and path analysis) were used to determine the prevalence, severity, and effects of trauma exposure on workers.

Three typologies of trauma emerged: primary trauma, caseload trauma, and secondary trauma. Threat emerged as the most reported form of primary trauma in this sample (78.4%), followed by non-physical violence (44.8%), and then assault (5.7%). Twenty-six percent (26%)
of workers met the criteria for moderate to severe secondary trauma symptomatology. Relating to caseload trauma, 7.7% (n=49) of workers reported death of a child on their caseload due to maltreatment, 16.7% (n=106) reported the death of a child due to accident/injury, and 29.4% (n=187) reported the severe illness/injury of a child on their caseload. Moderate to severe levels of anxiety and PTSD were found in 4.3% and 3.7% of these child welfare workers. Depression levels for workers were higher, with 16.6% reporting moderate levels of depression. Structural equation modeling (SEM) analysis indicated that primary trauma had a small, but positive relationship with commitment to the field (B=.17, p<.05). Caseload trauma predicted workers’ levels of secondary trauma (B=.14, p<.05), and secondary trauma had a strong, predictive relationship with worker mental health (B=.77, p<.001).

Each type of trauma contributed differentially to workers’ personal and organizational outcome. These findings contribute important information about the prevalence and effects of different types of trauma child welfare workers face as a part of their job. Results of this study have implications for administrative practice, training, and intervention development in child welfare.

Limitations of this study included participant attrition, a limited measurement period for mental health, and the use of dichotomous variables to measure primary and caseload trauma. Future research should focus on exploring these relationships between worker trauma exposure and personal/organization outcomes longitudinally and by using qualitative research methods to examine workers’ experiences in more depth.
CHAPTER 1

INTRODUCTION

Introduction

The field of child welfare continues to be plagued by high rates of worker turnover that further complicate the challenging work of protecting and enhancing child welfare in the United States. The child welfare workforce plays a crucial role in promoting child well-being and preventing abuse and neglect, but safety, permanence, and well-being outcomes of children are negatively impacted by high rates of workers leaving their jobs (Children’s Defense Fund, 2006; Flower et al., 2005; Human Services Workforce Initiative, 2006; Ryan et al., 2006; Williams & Glisson, 2013). While numerous organizational and individual factors have been explored in relation to turnover, research related to the effects of trauma exposure on worker mental health, well-being, and work-related outcomes is limited. In their roles, caseworkers are frequently exposed to trauma and violence within a family, but scant attention has been paid to how these different types of trauma exposure impact workers individually or their overall commitment to the field. Worker exposure to trauma is likely to influence worker well-being, and healthy, supported, well-trained, and competent workers are necessary for effective prevention and intervention services for at-risk children.

Context

In 2016, there were 3.5 million referrals alleging maltreatment involving 4.2 million children, a rate of 46.7 children per 1,000 in the population (U. S. Department of Health and Human Services, 2016). The number of children who received a child protective services (CPS) response increased by 9.5% from 2012 to 2016 (U. S. Department of Health and Human Services, 2016). After investigations or alternative responses, 676,000 victims of child abuse or
neglect were identified, and 1,700 of these were child fatalities (U. S. Department of Health and Human Services, 2016). In 2016, 14.8% of the children and families that received services had been involved with the child welfare system at least once during the past five years (U.S. Department of Health and Human Services, 2016).

Working with children and families in the child welfare system is difficult because of the vulnerability of the children being served, the necessity for immediate response, and family contexts that often involve substance abuse, mental illness, violence, incarcerated parent(s), homelessness, and poverty (Ellet, Ellis, Westbrook, & Dews, 2007). Child welfare workers are the backbone of the child welfare system, which serves to prevent and intervene in child abuse and neglect cases; however, the child welfare system faces numerous challenges. High turnover has been cited as a system-level factor linked with ineffectiveness within the child welfare system (Williams & Glisson, 2013). Next to funding, turnover and retention of qualified staff is the most severe issue facing child welfare systems (N.C. Division of Social Services, 1999).

**Importance of the Well-Being of Child Welfare Workers**

Workers who serve at-risk children are vital to the prevention of abuse and effective intervention with identified children and families. These workers are often the first professionals present when abuse is suspected, and their involvement influences the nature, amount, and quality of benefits and sanctions. They determine the eligibility of children for services, are responsible for helping children at risk of abuse, and assist families in navigating the complex child welfare system (Flower, McDonald, & Sumski, 2005; Ryan et al., 2006; Strolin-Goltzman, Kollar, & Trinkle, 2010).

When workers struggle with negative influences related to the work they do and the violence they are exposed to, they become vulnerable themselves and may be unable to
effectively work toward prevention of and intervention in child abuse (Human Services Workforce Initiative, 2006). Negative or traumatic experiences within their organization or with clients may influence workers’ level of commitment to the field and other work-related outcomes.

**Trauma Exposure of Child Welfare Workers**

Child welfare workers practice within an environment where exposure to trauma is commonplace. Two types of trauma exposure are discussed in the literature: client-perpetrated violence and secondary traumatic stress. Another, less discussed, stressful, and potentially traumatic experience related to this type of work is the severe injury or death of a child while on a worker’s caseload. These three kinds of trauma can be organized into two types: primary and secondary trauma. Primary trauma relates to traumatic events that occur directly to the worker, such as client perpetrated violence or the severe injury or death of a child on a worker’s caseload. Secondary trauma refers to the negative influence that exposure to the trauma of others (in this case, primarily children) has on workers physically and psychologically.

**Client perpetrated violence.** Client perpetrated violence (CPV) is any incident where a worker is verbally abused, threatened or assaulted in some way by a client or family member and that may or may not result in physical injury (Denny, 2010; Enosh et al., 2015; Green, 2003). CPV may consist of non-physical violence, such as yelling at or swearing at a worker; threats made toward the worker, the worker’s family, or the agency; and physical assaults such as punching, slapping, or throwing an object at a worker (Carroll, 2003; Enosh et al., 2015; NIOSH, 2006). Child welfare workers appear to be at a higher risk for incidents of CPV when compared to other human service workers, with some studies reporting nearly 100% of workers experiencing at least one incident during their career (Laird, 2014; Littlechild, 2005a; Littlechild,
CPV may cause physical injury, anxiety, stress, and reduced effectiveness and efficiency of workers (APNA, 2008; Enosh et al., 2015; Littlechild, 2005b).

**Severe injury/death of a child on caseload.** Child welfare workers are directly responsible for children on their caseloads. They are required to make difficult decisions and often face organizational and public criticism when a child on their caseload is severely injured or killed (Regehr, Hemsworth, Leslie, Hower, & Chau, 2004). This type of incident can cause high levels of stress, anxiety, and symptoms consistent with PTSD (i.e., hypervigilance at work, replaying decisions and events, and sleep disturbance) (Dagan et al., 2016; Geoffrion et al., 2016; Kim, 2011; Regehr, Hemsworth, Leslie, Hower, & Chau, 2004). It is not known how frequently this type of potential trauma occurs to workers nor how it affects workers' well-being and commitment to the field.

**Secondary traumatic stress.** When workers are exposed to the trauma and violence of others, they may experience various forms of psychological distress, a change in their perceptions of clients, the field, and sometimes their overall worldview (Bride et al., 2004; Figley, 2013; Geoffrion et al., 2016). Secondary traumatic stress (STS) refers specifically to the psychological symptoms associated with the exposure to others' trauma and can include increased arousal and hypervigilance, avoidance behaviors, intrusive imagery, and sleep disturbance (Bride et al., 2004; Figley, 2013; Salloum et al., 2015). The incidence of STS varies depending upon the study but ranges from between 15.2% to 50% in child welfare workers (Brady, 2017; Bride et al., 2004, Bride et al., 2007, Conrad & Kellar-Guenther, 2006).

**Turnover**

Trauma exposure of child welfare workers and its relationship to work-related outcomes such as commitment to the field and turnover are understudied. The average estimate for tenure in
an agency ranges from two to four years, with many workers leaving within the first year (Boyas, Wind, & Ruiz, 2013). Between 20% to 40% of child welfare workers leave their jobs every year, and 90% of child welfare agencies report difficulty in hiring and retaining qualified child welfare workers (Fostering Change for Children, n.d; Human Services Workforce Initiative, 2006).

Contributors to turnover. Reasons for leaving have been well studied in the child welfare literature and usually fall into two categories: organizational and individual factors. Organizational level factors include salary, opportunities for advancement, workload (caseload and number of hours required to do the job), the environment of the agency, and supervisor support (Augsberger et al., 2012; Kim & Kao, 2014; McFadden et al., 2015; Smith, 2005). Individual factors may include commitment to the field of child welfare, work/family balance, job satisfaction, mental health and well-being, high levels of job-related stress, and burnout (Augsberger et al., 2012; Boyas et al., 2013; Dombo & Bloom, 2016; Kim, 2011; McFadden et al., 2015; Salloum et al., 2015).

Costs of turnover. When workers leave, the agency must recruit and train new workers who will likely not have enough education or experience in the field to begin working independently (Kim, 2011). It is estimated that it costs an agency $10,000- $20,000 to recruit, hire, and train a new worker (Children's Defense Fund, 2006; Flower et al., 2005). When trained workers leave an agency or the field of child welfare as a whole, there is a loss of workers' accumulated expertise (Williams & Glisson, 2013).

An even more severe cost related to worker turnover is that it interferes with the effectiveness and timeliness of services related to the prevention of intervention in child abuse and neglect cases, including investigations, case management, foster care, and adoption services (Augsburger et al., 2012; Williams & Glisson, 2013). Turnover creates barriers for prompt
investigations, influences the timeliness of decisions related to safety and placement, and results in a lack of relationship with both the child and the family, all of which have implications for the prevention of future abuse (Bonach & Heckert, 2012; Boyas et al., 2013; Csiernok et al., 2010; GAO, 2003; Griffiths & Royce; 2017; Ryan et. al, 2006; Weaver et al., 2006). Worker turnover has been linked to children’s multiple placements while in foster care, receipt of fewer services by children and their families, longer lengths of time in foster care, and lower rates of permanency (Children’s Defense Fund, 2006; Flower, McDonald, & Sumski, 2005)

Commitment to the Field of Child Welfare

To get a more nuanced understanding of turnover, other concepts can be studied as proxies for actual turnover such as intent to leave, intent to remain, or commitment to the field of child welfare. Workers' intent to leave or to remain often has a significant relationship with actual turnover (Boyas et al., 2013; Middleton & Potter, 2015). Both intent to leave and intent to remain in the field of child welfare frequently precede employment decisions (Boyas et al., 2013; Claiborne, Auerbach, Zeitlin, & Lawrence, 2015; Middleton & Potter, 2015). Child welfare workers who report higher levels of intent to remain tend to have higher levels of commitment to the field, and are less likely to actually leave, while those who report higher levels of intent to leave, report lower levels of commitment (Faller et al., 2010; Hopkins et al., 2010; Madden, Scannapieco, & Painter, 2014; McFadden, Campbell, & Taylor, 2015).

Commitment to the field of child welfare is influenced by child-welfare specific problems such as chronic exposure to violence and abuse, potentially dangerous working conditions, high levels of responsibility related to the welfare of children, and complex cases with multidimensional family problems (Faller et al., 2010). Child welfare workers who are committed to the overall field of child welfare persist in the field because of a professional
purpose and mission, and a belief in the purpose of their work, making the concept of commitment to the field more meaningful to measure (Ellett, 2000; Faller et al., 2010; Kim, 2011). Examining commitment to the field can provide an understanding of how specific experiences or situations influence workers' overall perception of the work they do, as opposed to focusing on a particular job or agency. Measurement of commitment is a better representation of potential loss to the field of child welfare when compared to agency turnover, and is predictive of lower levels of productivity and higher levels of absenteeism while in a child welfare position (Boyas et al., 2013; Faller et al., 2010; Hopkins, Cohen-Callow, Kim, & Hwang, 2010; Shim, 2010).

**Conceptual Model**

The health and well-being of frontline workers is an individual factor that influences the quality and effectiveness of the services they deliver to at-risk children and families (Green et al., 2014; Human Services Workforce Initiative, 2006; Lizano & Mor Barak, 2012; Maslach & Leiter, 2008;). When workers struggle with negative experiences and consequences related to the work they do and the violence they are exposed to, they become vulnerable themselves and may be unable to effectively do their jobs (Human Services Workforce Initiative, 2006). Negative or traumatic experiences within their organization or with clients may make workers more vulnerable to negative outcomes such as a reduction in their level of commitment to the field, leaving their current job, or leaving the field altogether.

The proposed conceptual model views primary and secondary trauma exposure as specific forms of stress. The model being tested will provide insight into how the two different types of trauma differentially influence worker mental health and commitment to the field of
child welfare (Figure 1.1). Mental health will be explored as a potential mediator in the relationship between trauma exposure and commitment to the field.

**Theoretical Overview**

Research related to the effects of worker exposure to primary and secondary trauma is limited; therefore, an exploration of the prevalence, effects, and relationships between trauma exposure, mental health, and commitment to the field will provide new data related to this topic. To provide a framework with which to study these concepts, two theories contribute to a deeper understanding of the concepts of interest individually and interactionally: conservation of resources theory and identity theory.

**Conservation of Resources Theory**

Conservation of resources theory contributes to the proposed conceptual model in that it frames primary and secondary trauma within a stress-response framework. Both forms of trauma can be viewed as specific forms of stress that cause a depletion of workers' resources when the trauma exposure is either acute and severe or as a chronic part of workers' jobs. When workers experience trauma, whether primary or secondary, personal resources such as self-efficacy or positive coping strategies are tapped in order to buffer the negative effects of the trauma (Hobfoll, 1989; Hobfoll, 2001). Workers who have fewer resources to call upon when struggling with trauma exposure are more likely to experience psychological distress and to resort to withdrawal behaviors in order to attempt to reduce negative psychological symptomatology. This withdrawal can be partially measured by a lowering of the overall commitment to the field of child welfare, among other withdrawal behaviors (i.e. avoidance coping mechanisms).

**Identity theory**
Identity theory contributes to the framework for the proposed conceptual model in that it has the potential to help explain variation in individuals’ mental health and behavior when trauma exposure occurs. Identity theory posits that individuals do not respond to the actual trauma itself, but to the meaning they assign the experience(s). Workers who have a strong professional identity and/or do not personalize the trauma they experience are less likely to experience severe psychological reactions (Farmer et al., 2012; Geoffrion et al., 2016; Haines & Saba, 2012; Marcussen, Ritter, & Safron, 2004; Thoits, 1991). Workers who do experience psychological distress resulting from trauma exposure may cope by lessening the importance of that role in their lives (Geoffrion et al., 2016; Haines & Saba, 2012). The less salient a role, the less likely problems in a particular role are to affect the worker. Measuring overall commitment to the field is one way to measure the level of salience of the worker role to that individual.

**Study Purpose**

The purpose of this study is to fill a critical gap in the literature relating to trauma exposure of child welfare workers, their mental health, and how both trauma exposure and mental health status contribute to workers’ commitment to the field. This study will provide state-wide data relating to the prevalence of client-perpetrated violence, secondary traumatic stress, and the experience of severe injury or death of a client on a worker’s caseload. Analysis of these data will allow for a better understanding of the extent of these experiences for child welfare workers. An examination of the mental health status of child welfare workers in this sample will be included, an area not usually addressed in the literature. Trauma experiences will be conceptualized into two types of trauma, primary and secondary, in order to understand their influence on worker mental health and well-being as well as on workers’ commitment to the overall field of child welfare. The relationship of mental health as a mediating variable between
trauma exposure and commitment to the field of child welfare will be explored. The outcome variable of commitment to the field will be used in place of the more commonly examined variables of turnover or intent to leave or remain employed.

One limitation in using turnover as an outcome is that most studies do not distinguish between preventable, negative turnover (i.e., workers leaving due to high caseloads and low pay) vs. unpreventable or mobility-related turnover (i.e., the birth of a child, transition to a new position within the agency or the field). This study will take this into account by using overall commitment to the field of child welfare as a proxy for preventable turnover related to work-related problems, with the rationale that this is more likely to capture workers’ overall feelings about the field in general, as opposed to a particular job or agency.

**Importance of the Study**

This study is important for several reasons. Child welfare worker turnover is an ongoing problem for the field and can be tied to the amount and quality of child abuse and neglect prevention, assessment, intervention, and services provided for at-risk children and their families. Committed, qualified, competent, well-prepared, and caring front-line workers are needed to meet the needs of at-risk children and families (Zlotnick, Strand, & Anderson, 2009). Workers are often under high levels of stress, and more research is necessary to understand the types of stress workers are exposed to, the influence of this stress on workers’ physical and mental health, and how stress influences work-related outcomes. It is unknown how exposure to both primary trauma and secondary trauma influence workers’ views toward the field of child welfare. It is important to understand how this exposure to trauma may influence workers’ mental health because if exposure to these types of trauma causes harm to child welfare workers,
additional policies, procedures, and services need to be explored in order to mitigate workers’ likely exposure to trauma during the course of doing their jobs.

Findings from this study will add to the current knowledge base regarding contributors to child welfare workforce commitment and mental health. These findings may be used to influence policy and practice decisions related to training, preparation, and supervision of workers. Results may be used to aid justification and implementation of personal safety, risk reduction, and trauma-informed training and continuing education modules. Current training, preparation, and support of workers are very limited in the areas of primary and secondary trauma (Collins, Kim, & Amodeo, 2010). The results of this study can be used to inform agency policy and supervision practices to address workers’ exposure to trauma. Trauma-informed supervision is a key area to explore with regard to the incidence of trauma exposure of workers. Specific trauma exposure training, clear reporting procedures, and trauma-informed supervision practices will contribute to healthier, better-equipped workers who are more effective in providing prevention and intervention services to at-risk children. Understanding the link between work-related trauma exposure and turnover is critical for informing administrative practice, resource allocation, and development of prevention and intervention efforts to mitigate the effects of trauma exposure on workers (Williams & Glisson, 2013).

Given the critical responsibilities of the child welfare workforce in preventing and intervening in cases of child abuse, this study is important in that it will provide new data related to some of the individual factors potentially influencing the high rates of turnover. An examination of the influence of primary and secondary trauma on workers’ commitment to the field will address a gap in the knowledge base related to the relationship between trauma exposure and work-related outcomes in child welfare workers.
Figure 1.1 Conceptual Model
CHAPTER 2
LITERATURE REVIEW

Introduction

Within the context of high turnover rates of child welfare workers, it is necessary to delve deeper into the relationship of the high stress levels inherent in child welfare work, and workers’ responses to this stress. There is much research related to external, organizational antecedents to high stress levels, such as high caseloads, training deficiencies, and staffing shortages, however the role of stress related to trauma exposure and the psychological responses of workers is limited (Children’s Defense Fund, 2006; Flower et al., 2005; Geoffrion et al., 2016). The proposed study will hone in on the trauma exposure of workers as a specific form of stress and will explore two types of trauma: primary and secondary. Primary trauma consists of client-perpetrated violence and/or the experience of having a child on a worker’s caseload become severely injured or die, with the rationale for inclusion being on the potential perceived failure to protect the child and the scrutiny the worker faces when this occurs. Secondary trauma consists of secondary traumatic stress symptoms workers report due to frequent exposure to the consequences of child abuse/neglect on their vulnerable clients.

The concepts of primary and secondary trauma will be explored under a “stress-response” framework, meaning that trauma exposure will be viewed as a specific, work-related stressor that may contribute to specific outcomes for child welfare workers. Following a review of the relevant literature about trauma exposure of child welfare workers, the theoretical foundation for the proposed conceptual model will be explored along with a presentation of the primary research questions and associated hypotheses.
Trauma and Child Welfare Work

Trauma is generally defined as an experience or event that exceeds an individual’s ability to cope and evokes feelings of fear, terror, hopelessness, and/or despair (Randall & Haskell, 2013). There is often a sense of violation present and symptoms associated with trauma exposure may interfere with an individual’s functioning, whether through intrusive symptoms (memories, dreams, or flashbacks of the event), avoidance of stimuli associated with the event, negative mood or thoughts about the event, and/or symptoms of hyperarousal and reactivity [American Psychological Association (APA) 2013]. Any of these symptoms, whether experienced individually or simultaneously, may negatively affect one’s ability to engage in pro-social behaviors such as going to school or work or interacting with others (King, 2017).

Child Welfare Specific Trauma

Child welfare workers appear to be at a higher risk of experiencing direct violent events such as being assaulted or threatened when compared to those in other professions (Enosh et al., 2015; Littlechild, 2016). Workers can also find themselves “scapegoated” for severe negative outcomes on their caseloads (Geoffrion et al., 2016). This negative response from the agency, community, and/or the media can be experienced as traumatizing for some workers. Child welfare workers are also surrounded by the violent or traumatic experiences of the children on their caseloads and the families they work with (Brady, 2017; Bride et al., 2004, Bride et al., 2007, Conrad & Kellar-Guenther, 2006). Although this kind of violence is not targeted at the worker, workers can experience negative reactions to secondary trauma. Work-related trauma in child welfare is experienced in two ways: either directly as workers experience client violence or are faced with severe repercussions in their jobs when a child is severely injured or dies while on
their caseloads, or indirectly as they deal with violence and abuse within their caseloads. These two forms of violence can be conceptualized as primary and secondary trauma.

**Correlates of trauma exposure in child welfare workers.** Factors linked to increased exposure to trauma include age, race, gender, and the number of years in the field. These factors are important to explore when discussing worker exposure to trauma because differentially, each may play a different role in the experience of trauma itself, or how workers perceive the trauma and/or begin to process and recover from it.

**Age.** Age is an important variable to consider because experiences of both secondary trauma and client-perpetrated violence may be experienced at different rates and have different influences on mental health and turnover decisions depending on the age of the worker. Age usually has a negative relationship with experience of secondary trauma and CPV, with younger workers being more likely to experience an incident of CPV or struggle with symptoms of secondary trauma (Bonach & Heckert, 2012; Dagan, Ben-Porat, & Itzhaky, 2016; Enosh, 2013; Ivicic & Motta, 2017; Salloum et al., 2015).

**Race.** Race may play a role in the type of client violence experienced although it has not been linked as a significant factor in whether or not a worker experiences this form of trauma (Ringstad, 2009). In most studies of secondary trauma, race is not included as a significant variable predicting prevalence or outcomes (see Bonach & Heckert, 2012; Canfield, 2005; Figley, 2013; Robson et al., 2014).

**Gender.** Current literature indicates that male workers are more likely to experience physical assault than female workers (Rey, 1996). Dagan, Ben-Porat, & Itzhaky, 2016; Ivicic & Motta, 2017; Salloum et al., 2015. Additionally, women are more susceptible to higher levels to
secondary trauma (Dagan, Ben-Porat, & Itzhaky, 2016; Geoffrion et al., 2016; Ivicic & Motta, 2017; Salloum et al., 2015).

**Full-time work experience.** The amount of prior work experience may also affect workers' vulnerability to and knowledge of secondary trauma and CPV (Geoffrion et al., 2016). Rey (1996) notes that workers are more likely to experience CPV when they have less work experience, especially in the area of child welfare. Workers with higher levels of professional experience may report lower levels of trauma symptoms related to secondary trauma (Canfield, 2005).

**Importance of Trauma Research in Child Welfare**

Trauma exposure is inherent in child welfare work, and workers may experience depression, anxiety, and fear which can interfere with their ability to do their jobs (Hunt et al., 2016; Littlechild, 2016; Newhill, 1997). The reduction in worker effectiveness can result in high costs to both the agency (i.e. hiring and training of new/more workers) as well as the families who are receiving services (delays in investigations, reduced quality of services provided) (Augsburger et al., 2012; Griffiths & Royce, 2017). Workers exposed to trauma may experience a reduced commitment to the field, develop more negative perceptions of clients, or be more likely to leave the agency or field altogether (Chen, Park, & Park, 2012; Ellet, 2000; McFadden et al., 2015). The consequences of trauma exposure of child welfare workers can be severe and have significant costs for all involved. Within the context of high turnover rates and the negative implications of this turnover, both primary and secondary trauma exposure are important concepts to explore in relation to work-related outcomes in the field of child welfare.
Primary Trauma

Client Perpetrated Violence

**Definition.** Client-perpetrated violence (CPV) is a form of workplace violence.

Workplace violence is categorized as falling into four categories:

1) Type I: External violence in the workplace with criminal intent by an unknown assailant.
2) Type II: Consumer-related violence where customers/clients and family members use violence against staff.
3) Type III: Relationship violence such as worker on worker violence (i.e., bullying, sexual harassment, etc.).
4) Type IV: Organizational violence against staff/clients/consumers or other organizations (Strolin-Goltzman et al., 2016).

Type II workplace violence can include verbal threats, verbal abuse, sexual harassment, physical intimidation, assault, racial discrimination, and property damage (Chapman et al., 2010). This type of workplace violence is essential to study, because, regardless of the kind of event, it can have a substantial impact on workers both physically and psychologically, can disrupt the quality of care provided to children and families, and can influence worker turnover.

For this study, client-perpetrated violence (CPV) is defined as an incident in which a worker is abused, threatened, or assaulted in some way by a client or family member of a client as a result of carrying out their job responsibilities, and that can result in explicit or implicit threat to their safety, well-being, or health (Enosh et al., 2015; Green, 2003). CPV may or may not result in physical injury and may cause psychological distress (Denny, 2010; Green, 2003).
Types of client perpetrated violence. For this study, CPV is broken into three types for the purpose of analysis. It is important to acknowledge that, in reality, there is much diversity in the experiences workers face while providing services to children and families, as well as in their perception of these events.

Non-physical violence. Non-physical violence is defined as yelling, swearing, intimidating, demeaning, public scolding, or sexually harassing a worker using words (Carroll, 2003; Enosh et al., 2015).

Threats. Threats include expressions of intent to cause harm, verbal, threatening body language, or written threats toward the worker, the worker's family, or the agency where the worker is employed (Enosh et al., 2015; NIOSH, 2006). These threats may or may not include a weapon (i.e., guns, knives, a heavy object, etc.). Threats can be verbal, written, or implied using body language.

Physical assault: Physical assault is unwanted physical contact by a client, whether or not the intent is to harm the worker. A physical assault may or may not result in an injury. These types of assault can include slapping, punching, kicking, spitting, or throwing objects at a worker (Enosh et al., 2015)

Measurement. Client-perpetrated violence does not have a standardized operational definition in the literature as exposure to, and types of violence differ between studies (Beaver, 1999; Denney, 2010). There are also no uniform reporting procedures, making reporting and data collection difficult (Rey, 1996). Additionally, there is a low reporting rate because of assumptions related to the role of the child welfare worker and their competence in avoiding potentially violent situations (Rey, 1996; Denney, 2010). Types of CPV are operationalized differently depending on way data is collected, with some studies only documenting a
dichotomous response to different types of CPV, and others attempting to capture severity or quantity of incidents.

Most studies related to CPV are descriptive, involve mostly prevalence data, and focus on type and number of CPV events that have occurred during a specific time frame (Kim, 2013). There is not much research on individual and organizational factors contributing to perceptions of risk or related to the role of community characteristics related to CPV. More research is needed to understand the causes and consequences of CPV on micro and macro levels, especially in relation to its influence on worker commitment to the field, turnover, and quality of services offered to children and families.

**Reporting of client perpetrated violence.** CPV is often underreported, especially with regard to incidents that do not result in a physical injury. Often, only violent acts that result in injury are officially reported. Other acts of violence, both physical and non-physical, are usually not reported (APNA, 2008; Hunt et al., 2016; MacDonald & Sirotich, 2001). There are quite a few reasons cited in the literature for underreporting including peer pressure, excusing the behavior of “sick” clients, a perception that violence is part of the job, organizational culture, stigma of victimization or fear of blame for the incident, and difficult or ineffective reporting procedures (APNR, 2008).

Workers sometimes view CPV as just “part of the job” and therefore do not report it. They may deny the seriousness of the threats or assaults or rationalize the behavior of the parents (Hunt et al., 2016). Workers may neglect reporting incidents of CPV because they perceive a lack of support or are unaware of the protocol for reporting an incident of CPV. MacDonald & Sirotich (2001) summarized several reasons social workers did not report an incident of violence on the job: nothing would be done in the organization, perceived lack of supervisory support,
reporting the incident may reflect on their competence, or that violence is a part of the job. In one study, workers noted that reporting procedure and support for workers who were not physically assaulted and/or injured were less clear, and workers were not sure whether to report or how to report the incidents (Littlechild, 2005a). Perception of others may also be a factor. Workers may believe that others will perceive them as risk-taking, confrontational with clients, or incompetent in their jobs (MacDonald & Sirotich, 2001).

Littlechild’s (2005b) study provides additional examples of why workers may not report incidents of CPV. In an initial quantitative survey, the number of situations of violence was underreported. However, they were reported during qualitative interviews (i.e., dog attack, table was thrown in court). Twenty-one workers reported experiences of violence; however, only ten reported completing an incident report form. Most respondents did not report incidents that were non-physical because the incidents were not a concrete behavior or action. One participant noted that while procedures to address CPV were available, non-physical CPV was so common, it was not recorded as an incident of workplace violence (Littlechild, 2005b).

Prevalence. While CPV is reported at some level in all of the helping professions, child welfare workers appear to be at a higher risk for these incidents (Enosh, 2015; Kim, 2013). Laird (2014) notes that nearly 100% of child welfare workers are subjected to verbal abuse by a client and/or family member (see also Littlechild, 2005a; Littlechild, 2016). Child welfare workers in Enosh et al.’s (2015) qualitative study reported verbal aggression (71.3%) as the most common form of CPV, followed by threats (69.2%), property violence (10.7%), and then physical attack (3.7%). These findings are consistent with other studies. A study of 166 child protection workers examined CPV in the past 12 months, and while only one worker reported a physical injury over the past 12 months, 11% (n=18) reported a non-injurious physical assault (shoved, punched, or
hit) (Horejsi, 1994). Eight percent (n=13) of workers reported having "close calls" where a client or family member tried to injure the worker, but the worker was able to dodge the attempted assault. In this study, 97% (n=161) of workers reported verbal abuse (screaming or cursing), 26% experienced this frequently (once a week to three or more times per week), and 33% reported experiencing a verbal assault at least one time per month (Horejsi, 1994). Verbal threats included death threats, threatening to get a worker fired, or threatening to file a lawsuit. One-third of these workers were threatened with death in the past twelve months. Twenty-seven percent were threatened with physical injury, 9% had a family member threatened, and 6% were threatened with damage to property (Horejsi, 1994).

While the level of CPV child welfare workers report varies by study, most indicate that non-physical or verbal violence is the most common, followed by threats, and then assault (Littlechild 2005a; Littlechild, 2005b; Littlechild, 2016). Littlechild (2005a) reported that verbal abuse and threats were most common, but the least likely to be reported. Intimidation, harassment, and threats were the second most common. This study also found that racial abuse was a regular experience for workers from minority ethnic groups (Littlechild, 2005a). A more recent study of 590 child welfare workers found that 48% (n=285) received threats during the past 6 months, 42% (n=247) received threats to their person during the past 6 months, 61% (n=357) had been threatened by parents during the past 6 months, 16% (n=97) received threats to their families, and 48% (n=281) of them receiving multiple threats during the past six months (Hunt et al., 2016).

A study done in 2016 (n=590) found that 42% of child welfare workers received threats to their person, 61% were threatened by parents; 37% experienced extremely serious threats to themselves or their families including: 8% (n=46) received death threats, 1% (n=6) received
bomb threats, 2% (n=14) were threatened with firearms, an and 2% (n=14) were threatened with knives. 10% (n=57) reported being held captive in their clients' homes (Littlechild, 2016).

Another study of 590 child welfare workers (72% protective investigators) found that workers often dealt with hostile, demanding, and intimidating parents (Hunt et al., 2016). Fifty percent of these workers reported that working with hostile or intimidating parents occurred at least once a week. Sixty-one percent reported being threatened in the past six months, and 32% reported being threatened three or more times within the past six months. During their career, 8% had received death threats, 2% were threatened with a firearm, 2% were threatened with knives, and 1% reported being threatened with bombs. Eighteen percent (n=106) reported being physically assaulted, one of whom was permanently injured in a murder attempt. Ten percent (n=59) reported having been held captive by a client or family member in their homes (Hunt et al., 2016).

Context. Child welfare is prone to hostile interactions because of the context in which workers practice. They often face poverty, domestic violence, substance abuse, and mental disorders as well as the potentially emotional nature of the tasks at hand (removal of children, custody issues, etc.) (Beaver, 1999; Enosh, 2015; Rey, 1996). Workers often meet with clients in their homes, which is a personal and non-regulated environment (Green, 2003; Rey, 1996). Child welfare workers have the authority to provide access to or deny resources, and because of their role, may recommend temporary or permanent removal of a child (Enosh, 2015; Littlechild, 2016). Clients and their families also face high levels of frustration and many unmet needs, and workers can be viewed as the ones holding the power to access these services (Enosh, 2015).

Discussion of the power differential between the workers and their clients is necessary when considering the context in which CPV occurs (Littlechild, 2016). Compliance with the
intervention and services offered by child welfare professionals is mostly involuntary. Workers have daily interaction with involuntary clients who are often asked to discuss private and sensitive information. The risk of violence for workers may also result, at least in part, from clients feeling powerless and threatened, which may lead to violent behavior as a consequence of the oppression or lack of control parents perceive (Enosh, 2015; Green, 2003; Littlechild, 2016). Littlechild (2005b) described workers reporting that clients and/or family members were extremely resentful because of the perceived invasion of privacy and the threat to their family life. Incidents of CPV were seen as an attempt by the perpetrator to regain control by use of anger and aggression.

**Risk Factors.** There has been much effort to analyze the risk factors associated with CPV in several fields. Risk factors appear to fall into several categories: worker risk factors, client risk factors, setting, and event.

**Worker risk factors.** Certain characteristics appear to correlate with a higher risk of CPV for workers. Age usually has a negative relationship with incidents of CPV with younger workers and those with less experience being at higher risk (Bonach & Heckert, 2012; Dagan, Ben-Porat, & Itzhaky, 2016; Enosh, 2013; Ivicic & Motta, 2017; Salloum et al., 2015). Current literature indicates that male workers are more likely to experience a physical assault than female workers, however women are more likely to experience verbal abuse, sexual harassment, property damage, and theft (Dagan, Ben-Porat, & Itzhaky, 2016; Enosh, 2015; Ivicic & Motta, 2017; Rey, 1996; Salloum et al., 2015). Race has not been found to be a predictor of the prevalence of CPV, but may predict what type of incident occurs (Jayaratne et al., 2004; Newhill, 1996; Ringstad, 2009).
Client risk factors. While the type of risk factors related to clients does vary depending on the study, discussion of this component of risk requires the consideration of both static and dynamic client risk factors. Static risk factors are things that cannot be changed, such as a history of violence, a low IQ score, neurological impairment, or antisocial personality traits (APNA, 2008). Dynamic risk factors are those that can potentially be addressed, such as substance abuse, certain mental health disorders, some stressors related to financial, health, or environmental issues (APNA, 2008). A review of the literature identified other client-related risk factors for potentially violent behavior such as fear and anxiety, low self-esteem, a perceived loss of control or autonomy (Rew & Ferns, 2005). Major predictors of violence include a history of violence, fire setting, cruelty to animals, use of weapons, gang involvement, alcohol and drug use/addiction, head trauma, and diagnosis of certain mental disorders such as psychotic disorders or personality disorders (Rey, 1996). In general, women are often more physically violent than men, however, men are more likely to be threatening in less obvious ways (Littlechild, 2005a). Mothers are more likely to react to the threat of child removal or other stress in immediate physical ways (Littlechild, 2005b).

Setting. Home visits create specific risks for child welfare works and should have special guidelines and procedures (Rey, 1996). Home visits can be particularly risky if firearms are present in the home, there is ongoing violence (such as DV), if substance abuse, mental disorders, removal of children is possible, and/or dangerous neighborhood locations are involved (Rey, 1996). Because the home is considered a personal space and is non-neutral, clients may feel freer to express their anger than they might in an office setting.

Event. Certain events associated with worker contact with families appear to be associated with a higher risk of CPV. Workers in one study noted that incidents of CPV often
reflected the stage and nature of the intervention (Littlechild, 2005b). Higher risk is associated with volatile situations where judgments were being made about the family such as when removal is possible or actually taking place, during a court hearing or child protection conference, when contact with the child is being disputed, or when court recommendations are shared with parents (Horejsi, 1994; Littlechild, 2005b). Workers in Horejsi’s (1994) study reported the initial contact or first meeting related to child protection as a time of high risk. Intervention strategies that appeared to limit the family's ability to move forward or that left them feeling criticized instead of supported were also cited as risk factors (Littlechild, 2005b). Specifically related to assault, physical violence was most likely to occur during the removal of a child from the parents or when parents were informed of recommendations for care orders in a court case (Littlechild, 2005a).

Consequences of client perpetrated violence. The experience of client perpetrated violence (CPV) is associated with a range of negative outcomes for both workers, the organizations they work for, and for the children and families they serve. To provide a clear overview of the potential consequences of CPV, discussion related to the empirical evidence for the effects and associated outcomes of CPV will be broken into three categories: psychological, organizational, and the quality of care provided.

Psychological. Often, physical injury is used as the measure of how severe an incident is, however, because of the nature of workplace violence, the worker may experience intense emotional or psychological harm, even if a physical injury did not take place (APNA, 2008). Workers exposed to CPV may experience the event as traumatic because it evokes feelings of anger, shock, fear, and anxiety (Enosh, 2015; Littlechild 2005b). Child welfare workers have reported non-physical results of client-perpetrated violence including depression, anxiety, post-
traumatic stress symptoms, a loss of confidence or self-efficacy, as well as a challenge to beliefs about personal safety on the job and their safety in general (APNA, 2008; Enosh, 2013; Littlechild 2016). Experiencing an episode of CPV (or in some cases, multiple episodes) can cause, shock, physical pain, anger, and a perceived decrease in workers' abilities to protect the children on their caseload (i.e., work self-efficacy) (Enosh, 2013; Littlechild 2016). Emotional consequences may consist of feelings of stress and humiliation, mood changes, and emotional exhaustion (Enosh, 2013).

In a recent study by Littlechild (2016), child welfare workers reported the emotional impacts of CPV: 10% (n=60) reported anxiety, 14% (n=84) reported stress; 1% (n=4) reported panic attacks; 5% (n=29) reported depression or associated symptoms such as crying and feeling emotionally drained; 10% (n=49) reported disturbed sleep or sleeplessness. Additional reports included fear of seeing the client family (n=9%) and concerns that they were not adequately protecting the child because of it. Palpable physical fear of the parents was reported by 5% of participants. In Hunt’s (2016) study (n=590), 66% of participants reported that dealing with hostile parents influenced their work and/or families, and many reported suffering from negative impacts of their work including stress, anxiety, and sleep disturbance.

Responses to CPV are likely to vary depending on the type of work as well as the type of CPV experienced. In one study, workers who were threatened were more likely to report feelings of fearfulness or anxiety while those who had their property damaged were more likely to report feelings of anger (Newhill, 1997). Workers who experienced an attack reported emotions such as anger, fear, surprise, helplessness, frustration, and exhaustion (Newhill, 1997). It is often the non-physical types of aggression and violence that have the most serious effects on workers (Hunt, 2016). Results of Littlechild’s (2005a) study indicate that reports of physical violence are
fairly rare (n=6), but that non-physical violence and aggression were commonplace and reported by all respondents (n=21). Participants reported that these incidents did affect their practice and well-being considerably. Long-term effects and the severity of the effects may also relate to whether threats or abuse are directed to the individual worker personally, or are directed to the worker as an agency representative (Littlechild, 2005b). Littlechild (2005b) found that personal threats directed at the worker or his/her family appeared to take the largest emotional toll on workers. These threats were especially difficult for workers when they included knowledge about the worker or his/her family personally (i.e., where they lived, where they parked their car etc.) as opposed to a threat to the agency or their role as a child welfare worker (Littlechild, 2005a).

**Organizational.** There are numerous potential costs for the co-workers and the agency when workers experience CPV including increased turnover, absence from work, reduced efficiency and performance, decreased morale, a loss of experienced/trained workers, and a lack of confidence in the agency itself (APNA, 2008; Enosh et al., 2015). Each of these costs has significant implications for the functioning and effectiveness of an organization. When workers are less effective or are frequently absent, there are financial implications as well as a reliance on the remaining staff to provide the additional needed services. Turnover, a potential consequence of CPV, has multiple effects including negative outcomes for children and families, financial impacts on service providers, the child welfare system, and the community as a whole (Augsberger et al., 2012; Enosh et al., 2015; Flower et al., 2005; Kim, 2011). When workers leave, the agency must recruit and train new workers who will likely not have enough education or experience in the field to begin working independently (Kim, 2011). It is estimated that it
costs an agency $10,000-20,000 to recruit, hire, and train a new worker (Children's Defense Fund, 2006; Flower et al., 2005)

**Quality of care.** A potentially critical cost related to worker withdrawal behavior is that it interferes with the effectiveness and timeliness of services related to the prevention of child abuse and neglect, as well as investigations, foster care, and adoption services (Augsburger et al., 2012). More specifically, workers who struggle with the consequences of CPV may limit visits with children and/or cause a delay in abuse investigations (Griffiths & Royce, 2017). Behavioral changes resulting from exposure to CPV include burnout, lack of motivation, and increased absenteeism, all of which have direct implications for the quality of services workers can provide (Enosh, 2013). These behavioral changes translate to lower efficiency and effectiveness. In Enosh's (2013) study, workers who experienced CPV reported increased negative feelings toward clients, reluctance to complete home visits, and a desire to transfer the client to another worker. They also reported a decrease in daily performance. Long-term effects reported by workers included emotional burnout, increased fear of violence, helplessness, fatigue, nightmares, prolonged absenteeism, intent to leave and turnover, and frustration (Enosh, 2013).

In Littlechild’s study (2016), 66% (n=390) believed that dealing with hostile or aggressive parents had a negative impact on their work. Approximately 11% reported adverse effects on their confidence and effectiveness at work. Psychological consequences (i.e., inability to sleep, disturbing dreams, anxiety, panic attacks) were linked to behavioral changes such as increases in staff absenteeism and altered working practices (Littlechild, 2016). In Hunt's (2016) study of 590 child welfare workers who experienced CPV, 42% reported that the quality of care they could offer children was poorer, partially because of inadequate support and/or supervision related to the CPV. Some data that indicate that after an incident of CPV, child welfare workers
became avoidant because of safety concerns (quicker home visits, meetings in public places) (Kim, 2013). When workers feel unsafe, they are likely to increase job withdrawal behaviors (Kim, 2013). Some workers expressed feelings of inadequacy and incompetence and began "second-guessing" themselves (Hunt, 2016). Some research has indicated that workers who are subjected to violence or prolonged periods of threatened violence may exhibit behaviors similar to that of Stockholm Syndrome (Laird, 2014). Workers who experience CPV become intimidated by the family member(s) and "back off,” only discussing safe topics, avoiding questions they believe may trigger the person, or stopping an assessment when they feel the parent(s) are getting angry (Laird, 2014). This response to CPV has direct implications for the depth and quality of assessment of child safety.

It is difficult to ensure the child remains the focus of the assessment or service provided by the worker when the worker is concerned about personal safety (Hunt et al., 2016). Hostile interactions with clients/parents can have a substantial negative impact on workers' ability to do their jobs effectively. The stress of working with intimidating and, at times, violent parents leads to workers suffering both physically and mentally which results in children not receiving adequate protection. Workers who were intimidated or lacking confidence are less likely to come to a correct conclusion related to the assessment of abuse or neglect (Littlechild, 2005a).

**Severe Injury or Death of a Child on a Worker’s Caseload**

Compared to other human services workers, child welfare workers deal more directly with abuse and neglect. They are required to make difficult decisions and assume high levels of responsibility for the children on their caseload. The burden of responsibility, in addition to the public and media criticism that occurs when a particularly horrendous outcome occurs is likely to cause stress and even be experienced as a trauma by the worker (Dagan et al., 2016; Kim, 2011).
Regehr, Hemsworth, Leslie, Hower, & Chau (2004) note that knowledge of severe injury and child death to a child on a workers' caseload can lead to the development of post-traumatic stress symptoms. While being aware of the neglect and abuse children face may be categorized under secondary trauma, this study seeks to understand the primary trauma component of this experience by focusing on the fear, anxiety, and guilt a worker may experience when a child that he/she is responsible for is injured. This kind of event can lead to legal liability and have negative implications for the worker's personal and professional reputation and career (Ellet, Ellet, Westbrook, & Dews, 2007). When there is a child death or high-profile case where a child is severely abused, the worker may face punitive agency practices or feel that he/she is being made the scapegoat in the situation (Faller, Grabarek, & Ortega, 2010). The potential for high levels of stress and negative psychological reactions makes severe injury/death of a child on a worker's caseload important to consider as a part of the conceptualization of primary trauma.

**Secondary Trauma**

Child welfare workers are exposed to repeated incidences of abuse and violence, but because the trauma does not occur directly to the worker, issues of secondary trauma exposure may be overlooked or not taken seriously (Canfield, 2005). Child welfare workers are likely to come into contact with individuals who experienced violence and abuse and who often have traumatic histories. They are regularly exposed to traumatic material through their job (Peled-Avram, 2017). While workers may experience primary trauma as part of their jobs, they are also exposed to trauma indirectly by working with at-risk children and families. Child welfare workers become witnesses to the fact that humans can be intentionally cruel to children, sometimes their own children (Sabin-Farrell & Turpin, 2003). In some settings, struggling with the results of secondary trauma exposure may be considered a sign of weakness, which can lead
to underreporting of negative symptomatology related to secondary trauma, workers perceiving that they are not "cut out" for the job, or that they lack in some way (Osafsky et al., 2009).

Exposure to the violence and severe neglect of the children on their workloads influences some workers’ emotional reactions and psychological state, which may lead to depression, anxiety, an/or PTSD-like symptoms that interfere with workers’ ability to do their jobs and may influence thoughts about leaving the agency (Osafsky et al., 2009).

Being exposed to the trauma of clients has been hypothesized to be an important factor in the well-being of human services workers. However, some have argued that secondary trauma may be better conceptualized as a social construct as opposed to a psychological one (Osafsky et al., 2009; Peled-Avram, 2017). Labeling secondary trauma as a form of PTSD may medicalize normal distress that is a part of working with at-risk populations (Sabin-Farrell & Turpin, 2003). Secondary trauma is critical to address because workers who struggle with secondary traumatic stress (STS) symptomatology may experience impairment that can lead to early resignation, higher levels of staff turnover, decreased effectiveness in their work, as well as difficulty in interpersonal relationships both in the workplace and in their personal lives (Ellwood, 2011).

**Definition**

Bride et al. (2004) describe secondary trauma as an experience where workers, who come into continued, close contact with trauma survivors, experience considerable emotional disruption, although not directly victimized themselves. Severe child abuse and neglect, domestic violence, the aftermath of severe drug and alcohol addiction, and severe levels of poverty can negatively influence workers exposed to results of these circumstances and may cause a post-traumatic stress response in some. Workers who struggle to cope with secondary traumatic stress may experience other forms of psychological distress or turn to unhealthy use of substances to
mitigate the symptomatology related to STS (Canfield, 2005; Geoffrion et al., 2016). Secondary trauma can also result in changes in workers' perceptions of clients or their cognitive changes related to their work. (Geoffrion et al., 2016). Not all child welfare workers experience secondary trauma due to their daily encounters with abused children, but it is essential to assess factors and outcomes associated with this exposure.

**Conceptual Clarification**

One challenge in assessing the literature about secondary trauma is differentiating it from other closely related constructs. Several constructs are highly convergent with secondary trauma, and they are often defined differently depending on the study (Devilly, 2009). These closely related constructs should be differentiated to isolate the concept of secondary trauma (operationalized as secondary traumatic stress for this study) (Beck, 2011). Three of the constructs, vicarious trauma, compassion fatigue, and burnout will be compared to secondary traumatic stress, to clarify the conceptual definition of secondary trauma in this study.

**Vicarious trauma.** Vicarious trauma is characterized by a focus on cognitive changes in areas related to safety, power, self-esteem, intimacy, and overall outlook that may lead to the development of PTSD-like symptoms (Ellwood, 2011; Hensel, 2015). Vicarious trauma (VT) tends to have an insidious onset and builds over time as workers are exposed to traumatic stories or effects of trauma in others (Devilly, 2009, Ellwood, 2011; Tabor, 2011). It occurs when a worker’s view of the self and others is changed because of working with clients who have experienced trauma. VT can disrupt cognitive, physical, emotional and/or psychological components of an individuals’ worldview and may cause disturbances in self-identity, spirituality, world view, and cognitive frame of reference (Beck, 2011; Canfield, 2005; Center for Advanced Studies School of Social Work in Child Welfare, 2012; Figley, 2013; Tabor,
Unlike other concepts such as burnout and STS, vicarious trauma cannot be measured directly, but rather indirectly, by studying trait-based tendencies of the worker (Center for Advanced Studies School of Social Work in Child Welfare, 2012).

**Compassion fatigue.** Compassion fatigue is a response to the cumulative experience of caring and personal perception of a large amount of suffering and pain despite the worker's attempts to lessen the influence of the trauma in clients' lives. Compassion fatigue results from the worker experiencing deep feelings of suffering, sorrow, or sympathy resulting from the worker's desire to help or relieve the suffering of others (Figley, 2013; Tabor, 2011). Tabor (2011) notes that compassion fatigue has a faster onset and recovery time when compared with vicarious trauma. In some studies, compassion fatigue and secondary traumatic stress have been used interchangeably; however, the definition of compassion fatigue also encompasses the reduction of a worker's capacity to empathetically engage with clients (Ellwood, 2011; Figley, 2013). This construct centers on reactions that result from exposure to the suffering of clients, is cumulative, and takes place over long periods of time (Berzoff & Kita, 2010; Geoffrion et al., 2016). Workers may take on the emotional weight of the client's trauma and this process results in a negative impact on both their professional and personal identities (Berzoff & Kita, 2010). It is characterized by emotional and physical exhaustion as well as a gradual desensitization to patients' needs, a decrease in quality of care, an increase in work-related errors, and higher rates of depression and anxiety (Geoffrion et al., 2016; Figley, 2013). Adams et al. (2006) described compassion fatigue as being made up of two components: secondary trauma and burnout.

**Burnout.** Burnout is not specific to work with traumatized populations and results in emotional exhaustion, feelings of cynicism or detachment from the job and/or a sense of ineffectiveness or lack of accomplishment (Center for Advanced Studies School of Social Work
in Child Welfare, 2012; Devilly, 2009; Ellwood, 2011). Burnout is related to the work environment and is often a result of a lack of organizational support (Hensel, 2015; Tabor, 2011). It occurs when workers experience prolonged exposure to a stressful or demanding work environment and often develops gradually. Burnout is essentially a state of physical, emotional, and mental exhaustion caused by long-term involvement in emotionally demanding work, as opposed to exposure to the trauma and suffering of others (Beck, 2011; Figley, 2013). It can result in psychological symptoms such as fatigue, irritability, and physical complaints and may be evidenced by reduced quality of work performance, absenteeism, or withdrawal behaviors (late arrival and/or leaving early) (Figley, 2013; Tabor, 2011). It can also lead to decreased work-self efficacy and accomplishment (Ellwood, 2011). Figley (2013) notes that burnout is a progressive loss of idealism, energy, and goals as a result of general occupational stress.

**Secondary traumatic stress.** Secondary traumatic stress (STS) is a form of occupational stress that can occur as a result of exposure to traumatic material over time or as a result of exposure to a particular client's trauma (Child Welfare Work and Secondary Traumatic Stress, 2012; Figley, 2013). The stressor is not the trauma itself, but the exposure to knowledge about a traumatic experience in another person. While some symptoms of STS may be normal consequences of exposure to client abuse and violence, secondary traumatic stress symptoms are similar to primary Post Traumatic Stress Disorder (PTSD) in that the individual may experience symptoms of intrusive imagery, avoidance of reminders or cues that remind the individual of the trauma, hyperarousal, distressing emotions, and functional impairment (APA, 2013; Devilly, 2009; Figley, 2013).

Secondary traumatic stress (STS), while conceptually different from burnout, often has a high correlation with burnout (weighted r=.69) (Cieslek et al., 2014 as cited in Hensel, 2015).
STS is a set of observable reactions resulting from work with traumatized clients, and symptoms can begin to occur immediately after exposure to the traumatized client or traumatic material (Beck, 2011; Center for Advanced Studies School of Social Work in Child Welfare, 2012; Ellwood, 2011; Figley, 2013).

Examples of incidents that may result in STS symptomatology for workers include: investigating a severe abuse/neglect report, chronic exposure to emotional and detailed accounts of trauma from children, photographic images of the results of child abuse/neglect, working with families where abuse, intimate partner violence, or sexual abuse is occurring or is thought to be occurring, and exposure/provision of services to family members where a child has died (Bonach & Heckert, 2012; Pryce, Shackelford, & Pryce; 2007). STS can result in self-destructive behaviors, decreased feelings of competence at work, a diminished sense of purpose, and lowered functioning in professional and personal realms (Beck, 2011). Workers may experience feelings of sadness, loneliness, hopelessness, and isolation (Menashe et al., 2014). STS is hypothesized to develop quickly and unexpectedly when the worker is exposed to the details of one or more traumatic events (Ellwood, 2011).

**Measurement**

Secondary trauma and related constructs have been well studied in the child welfare workforce literature, however, reported prevalence rates and severity have varied widely, partly due to differences in conceptualization and the diversity of measurements used. While other constructs, such as burnout, are certainly relevant when discussing the reactions of child welfare workers to occupational stress, these concepts are inadequate in describing the mental and emotional effects of working with traumatized children (Beck, 2011; Center for Advanced Studies School of Social Work in Child Welfare, 2012). Studies usually conceptualize a worker's
experience of secondary trauma in one of two ways: 1) by asking a worker to complete a tested measure of PTSD symptoms based on their work with clients, or 2) having the worker complete a measure that directly assesses the construct of secondary trauma (Ellwood, 2011).

There are some challenges associated with measurement of secondary trauma, including multiple conceptualizations of the construct, variations in instruments used to measure secondary trauma, as well as differentiating between closely related constructs such as vicarious trauma, compassion fatigue, and burnout (Ellwood, 2011). Measures used in prior studies to assess the level of secondary trauma in workers include the Impact of Events Scale (IES), the Traumatic Stress Institute Belief Scale (TSIBS), the Trauma Attachment and Belief Scale (TABS), and the Secondary Traumatic Stress Scale (STSS) (Elwood, 2011).

Measuring the amount and severity of secondary trauma exposure has proven difficult. Secondary trauma exposure can be measured as the number of hours per week the worker is exposed to child abuse/neglect cases or as a percentage of the overall caseload with child abuse and neglect cases (Dagan et al., 2016; Ellwood, 2011). Some workers may have more direct exposure to the trauma of their clients when specific and graphic details are disclosed, and the focus of the work is on the trauma for a particular length of time (e.g., 2 hours weekly) (Ellwood, 2011). Other workers may be aware of the trauma history of their clients and spend longer amounts of time with these clients (20 hours per week); however, the work may not focus specifically on the trauma. Workers may be exposed to client trauma immediately after it is experienced or see graphic results of severe neglect or violence perpetrated on children, whereas others may have a larger number of abuse cases, but may not be immediately exposed to the results of this trauma. Results of studies attempting to conceptualize secondary trauma exposure of workers have been mixed, and further research attempting to conceptualize and measure
trauma exposure is needed. Ivicic & Motta (2017) suggest using measures with cut-off scores to more effectively capture the concept of secondary trauma in workers.

While symptoms of STS may mimic some symptoms of PTSD, a diagnosis of PTSD requires a minimum duration of symptomatology to render the diagnosis (Ellwood, 2011). STS has not been associated with any specified duration of symptomatology or an expected course of the syndrome. This lack of specified duration or course of the syndrome may make it difficult to distinguish between a normal response to occupational stressors and STS (Ellwood, 2011). Most studies vary concerning the length of time since the exposure to trauma, and others do not specify any time frame for trauma exposure. This lack of specificity and the variation in length of time from exposure as well as length of time for symptomatology adds to the difficulty in measuring STS.

**Prevalence.** Prevalence rates of secondary trauma vary depending on the study but are believed to range between 15.2% to 50% in child welfare workers (Brady, 2017; Bride et al., 2004, Bride et al., 2007, Conrad & Kellar-Guenther, 2006). In a study of 88 mental health professionals from a social service agency in New York, the prevalence of secondary trauma established using the Secondary Trauma Scale, was 22.7% (Ivicic & Motta, 2017). Bride et al. (2007) surveyed 187 CPIs, and 92% of respondents reported experiencing at least one STS symptom "occasionally" in the past week, 59% reported experiencing one or more symptoms "often", and 33% met the criteria for work-related PTSD (i.e. secondary traumatic stress).

**Risk factors.** Several factors have been associated with experiencing higher levels of secondary trauma including younger age, fewer years of professional experience, a history of trauma, gender, and a perceived lack of supervision/support from the supervisor (Dagan, Ben-Porat, & Itzhaky, 2016; Elwood, 2011; Ivicic & Motta, 2017; Salloum et al., 2015). Dombo and
Blome (2016) note that workers at higher risk include those who are female, have high levels of empathy, lack professional training, and feel isolated from peers and other social supports (see also Sabin-Farrell & Turpin, 2003). An intense caseload may also be a risk factor for the development of STS symptomatology (Dombo & Blome, 2016).

Particularly of interest is workers' histories of child maltreatment, and the potential for this history to be a risk factor for experiencing secondary trauma (Canfield, 2005; McFadden et al., 2015; Middleton & Potter, 2015). Trauma history is a predictor of scores on measures of work-related trauma symptomatology (see Canfield, 2005; McFadden et al., 2015; Middleton & Potter, 2015; Pearlman and McIan, 1995). Pearlman and McIan (1995) separated professionals into two groups based on trauma history and found that those with a history of trauma consistently scoring higher on multiple measures associated with PTSD and secondary traumatic stress. Other studies have found minor correlations or no relationship at all. Dombo and Blome (2016) note that workers at higher risk include those who are female, have high levels of empathy, lack professional training, and feel isolated from peers and other social supports (see also Sabin-Farrell & Turpin, 2003).

Professionals who care for traumatized or suffering clients are at risk of experiencing secondary traumatic stress for one or more of the following reasons: 1) empathy is often used in order to connect with and help the traumatized client; 2) trauma workers may have a history of trauma in their own lives, 3) any unresolved trauma experienced by the worker may be triggered by reports of similar trauma; 4) the trauma of children is particularly provocative for caregivers and those in the helping profession (Beck, 2011; Dombo & Bloom, 2016). Not all workers who work with traumatized clients develop significant levels of STS (Ivicic & Motta, 2017). The risk for STS and the severity of STS symptomatology may be dependent on the level at which
workers empathetically connect with the abuse suffered by their clients (Dombo & Blome, 2016; Sabin-Farrell & Turpin, 2003; Salloum et al., 2015). Protective factors include compassion satisfaction (the experience of satisfaction resulting from the work of helping others), a higher level of expertise of the worker, and supportive supervision (Canfield, 2005; Ivicic & Motta, 2017).

Outcomes related to secondary traumatic stress. There are mixed findings on the prevalence of STS in child welfare, however, the literature does suggest that child welfare workers are particularly at-risk of secondary traumatic stress due to the level and frequency of the trauma they witness and because of the vulnerability of the clients they serve (McFadden et al., 2015; Osafsky et al., 2009). Two outcomes may be influenced by STS: 1) the psychological well-being of the worker; and 2) work-related outcomes.

Psychological. Exposure to secondary trauma may cause emotional disturbance and/or psychological distress in child welfare workers (McFadden et al., 2015). Psychological symptoms related to anxiety and depression as well as symptomatology similar to that of PTSD have been reported such as increased arousal, hypervigilance, avoidance behaviors, intrusive imagery, sleep disturbance, guilt, and feelings of fear (Bride et al., 2004; Figley, 2013; Salloum et al., 2015). Cornielle & Meyers (1999) noted that in a study of 183 child protective service workers, 37% were experiencing clinical levels of emotional distress associated with STS. Some workers reported that the symptoms they experienced were so severe that they were unable to adequately function in their work environment (Cornille & Meyers, 1999).

Being exposed to the trauma of others can result in decreased motivation, decreased work and personal self-efficacy, and decreased levels of empathy (Biard & Kracen, 2006). In a review of the literature, Geoffrion et al. (2016) found that workers exposed to trauma experienced changes
in the areas of cognition, emotion, and behavior. They also reported experiencing lowered concentration, decreased self-esteem, apathy, negativity, depersonalization, minimization, and thoughts of harm to self or others. Emotional impacts included feelings of powerlessness, guilt, rage, fear, guilt, and depression. Behaviorally, trauma exposure caused impatience, irritation, sadness, moodiness, sleep disturbances, nightmares, and hypervigilance (Dagan, Ben-Porat, & Itzhaky, 2016; Geoffrion et al., 2016).

**Work-related outcomes.** Secondary traumatic stress has been linked to an increase in work-related errors (Figley, 2013). STS symptomatology may impair workers' ability to provide timely and effective services to clients because of its link with decreased motivation, efficacy, and empathy (Baird & Kracen, 2006; Bonach & Heckert, 2012). Secondary trauma has also been linked with lower levels of professional self-efficacy, intent to leave and turnover of child welfare workers (Regehr, Hemsworth, Leslie, Howe, & Chau, 2004; Osafsky et al., 2009; Robson, Cossar, & Quayle, 2014). A systematic review by Middleton and Potter (2015), found that 50% of child welfare workers who were exposed to traumatic material were likely to report often thinking about leaving their job and said that they would leave the field of child welfare tomorrow if they were offered a job with less stress but the same salary. Twenty-five percent of these workers reported planning to leave their agency within 12 months and reported actively looking for alternative employment (Middleton & Potter, 2015). Bride et al. (2007) surveyed 187 CPIs and found a significant correlation between STS symptoms and lower intent to remain employed. This finding provides support for the hypothesis that STS symptoms resulting from trauma exposure are likely to influence workers' desire to leave the field of child welfare. The association between a shorter time providing services and higher levels of STS is likely
explained because workers who experience higher levels of distress due to STS are more likely to leave the field than those with lower levels of STS (Ellwood, 2011).

**Mental Health**

There is empirical support for the hypothesis that trauma exposure, whether primary or secondary, influences the psychological well-being of child welfare workers. The overall mental health of workers is not often directly addressed in the literature related to work-related outcomes in child welfare. As noted above, workers exposed to CPV have reported anxiety, depression, and PSTD related symptoms (Enosh, 2015; Littlechild, 2005b; Littlechild, 2016). Workers reporting secondary traumatic stress symptoms have also reported experiencing symptoms consistent with anxiety, depression, and sleep disturbance (Bride, Robinson, Yegidis, & Figley, 2004; Geoffrion et al., 2016; Middleton & Potter, 2015; Robson, Cossar, & Quayle, 2014). Inclusion of mental health is necessary to capture a complete picture of the relationships of primary and secondary trauma exposure on commitment to the field of child welfare.

Providing vital services within a context of violence to vulnerable clients can lead to high levels of anxiety in child welfare workers (Geoffrion et al., 2016). The high stress levels inherent in the job take a toll on workers, and prolonged stress often leads to psychological distress. Pottage and Huxley (1996) discuss how the person and environment interaction is mediated through psychological processes. Regular exposure to stress impacts both the physical and mental responses of the worker and leads to both chemical changes in the body (i.e. increase in stress hormones) as well as negative influences on workers' emotional states, most commonly, anxiety and depression (Pottage & Huxley, 1996). Being exposed to either primary or secondary trauma can lead to clinical levels of emotional distress, sometimes so severe that this distress interferes with workers' abilities to function in the workplace (Middleton & Potter, 2015).
Child welfare workers can show varying levels of psychological distress, as indicated in a national study of the relationship between compassion fatigue and psychological distress (Adams et al., 2006). The sampling frame was all social workers who were members of the National Association of Social Workers (NASW) (approximately 50% of practicing social workers are members). Six hundred participants were randomly selected to participate in the survey. The General Health Questionnaire (GHQ) was used to assess general levels of psychological distress (12-items, 4 point Likert). All four scales measuring compassion fatigue (both burnout and secondary traumatic stress) were significantly related to psychological distress. Ordinary least squares (OLS) regression analyses indicated that burnout and secondary trauma were separate contributors to psychological distress and the models explained about 40% of the variation in the GHQ (Adams et al., 2006).

Middleton and Potter (2015) found that 33% (336 out of 1192) of the child welfare workers in their sample reported negative impacts on their interpersonal function and ability to engage emotionally due to the influence of exposure to violence on the job. A recent meta-analysis indicates that both direct and indirect events inherent in child welfare work (i.e., primary and secondary trauma) were associated with psychological distress (Robson, Cossar, & Quayle, 2014). Griffiths, Royce, and Walker (2018) explored the role of stress in the lives of frontline child welfare workers (n=511) and how stress influenced unhealthy behavior in those workers. In addition to substance use and disturbed sleep, 54 participants reported significant levels of anxiety, 41 workers reported depression, 32 reported obsession, worry, or unrest related to their work, 22 reported isolation or withdrawal behaviors, and 65 reported mental health problems that did not fall under the other categories (Griffiths et al., 2018). Corniell and Meyers (1999) found that a significant number of child welfare workers who were exposed to CPV or reported STS
symptoms scored above psychiatric outpatient means on the Brief Symptom Inventory (BSI) with symptomatology including depression, phobic anxiety, paranoid ideation, and obsessive/compulsive distress. Each of these studies provides support for the rationale to include mental health as a key construct in the exploration of the effects of trauma exposure on child welfare workers.

Commitment to the Field of Child Welfare

Research surrounding work-related outcomes often focuses on the concepts of either turnover, intent to leave/remain, or overall commitment to the field of child welfare. There is a distinction between commitment to the agency and commitment to the field. Commitment to the agency is influenced by agency-specific problems such as inadequate supervision, high caseloads, punitive practices toward workers, and a lack of resources (Faller et al., 2010; McFadden et al., 2015). Commitment to the field of child welfare is influenced by child-welfare specific problems such as chronic exposure to violence and abuse, potentially dangerous working conditions, high levels of responsibility related to the protection of children, and complex cases with multidimensional family problems. Faller et al. (2010) found a significant relationship between leaving/staying and level of commitment both to the agency and the field (see also Anderson, 2000; Kim, 2011; Zlotnick et al., 2005). Higher levels of commitment to both were found in those who were still in the job (Faller et al., 2010).

The proposed study will use commitment to the field of child welfare as the outcome of interest because of its broader focus on the overall field, as opposed to a particular job or agency. Commitment to the field is defined as workers making a personal determination to stay in the field of child welfare despite the work-related challenges (Ellett, 2000). Workers with an intent to remain often persist in the field of child welfare because of a professional purpose and
mission, and a belief in the purpose of their work (Ellett, 2000; Faller et al., 2010; Kim, 2011). Professional commitment to the field of child welfare has also been found to be a strong predictor related to intentions to leave or remain with an agency (Kim & Kao, 2014; Lee, Rehner, & Forster, 2010). Workers who feel fulfilled in their career and believe they are contributing to the mission of child welfare have less intention to leave (Chen, Park, & Park, 2012).

McFadden et al. (2015) note that workers who choose to remain in child welfare are those who are committed to a profession in child welfare, believe the organization or agency cares about them, find personal meaning in the work, and believe that others (policymakers and the general public) care about them as well as the children and families they work with. Workers who value the chance to help children and families and improve services for these clients tend to have a higher level of commitment, which is related to a higher level of intent to remain in the field (Faller, Grabarek, & Ortega, 2010). Workers with lower levels of commitment to the field may be more likely to consider leaving their current jobs and to show job withdrawal behaviors such as arriving late to work, leaving early, being absent from work more frequently, and looking for other jobs outside of the field (Boyas et al., 2013; Hopkins, Cohen-Callow, Kim, & Hwang, 2010; Shim, 2010). A reduction in the level of commitment is likely to produce lower levels of productivity as well as absenteeism and turnover (Faller et al., 2010).

**Gaps in the Literature**

The concepts of primary and secondary trauma exposure have rarely been explored together, and consist mostly of prevalence reports. There are significant gaps in the literature related to 1) the impact of trauma exposure on child welfare workers’ mental health; and 2) an examination of the effects of trauma exposure on worker commitment to the field and other
work-related outcomes. Ellwood (2011) noted that research related to trauma exposure of workers thus far has relied on relatively basic statistical analyses and suggests the use of more sophisticated techniques such as structural equation modeling.

Specific to CPV, there is a lack of studies that go beyond reporting prevalence data to explore how CPV may influence worker well-being or how CPV may relate to outcomes such as turnover and retention. Alternatively, while much attention has been given to the concepts associated with STS in the helping fields, and specifically in child welfare, the findings have not been clear or consistent, leading to a need for further concept specification and further study on the prevalence and effects of STS (Ellwood, 2011). Increased clarification of STS, including differentiation between a normal stress response and clinically significant STS is necessary. Apart from a discussion of STS or brief mentions of psychological distress, research related to the mental health of child welfare workers is lacking. There have been no studies assessing the influence of primary and secondary trauma on worker mental health and level of commitment to the field. Study results will add to the knowledge base in the areas mentioned above. The results of this study can be used to inform further research related to the training and supporting of workers in these areas, which has implications for worker turnover, and thereby, the quality and amount of abuse prevention services (Children's Defense Fund, 2006; Williams & Glisson, 2013).

**Conceptual Model**

The purpose of this study is to explore the influence of the concepts of primary and secondary trauma on worker commitment to the field of child welfare. In the conceptual model being tested, primary and secondary trauma exposure are hypothesized to have a negative influence on both worker mental health and workers’ levels of commitment to the field of child
welfare. Worker mental health is hypothesized to be a partial mediator of the relationship between trauma exposure and commitment to the field (refer to Figure 1.1).

**Theoretical Foundation for Conceptual Model**

While there are numerous studies on the antecedents to child welfare workforce turnover and retention, most are atheoretical and few examine workers psychological responses and their influences on work-related outcomes other than retention (Kim, 2013; Kim & Kao, 2014; Lizano & Mor Barak, 2012; Mor Barak et al., 2001; Smith, 2005). Increased identification of theory relevant to child welfare research can advance the literature related to the well-being of child welfare workers, their commitment to the field, and ultimately, their decisions about turnover (Benton, 2016). In order to have a fuller understanding of the influence of trauma exposure on worker mental health and commitment, both environmental factors, as well as internal processes, should be explored. Two theories that allow for an exploration of the influence of trauma on workers' well-being and work-related outcomes include the conservation of resources (COR) theory and identity theory, with a specific focus on professional identity and role identity.

**Conservation of Resources Theory**

Conservation of resources (COR) theory provides a framework from which to view trauma exposure as a threat or perceived threat to individual worker resources, and provides an explanation for why workers who struggle with trauma exposure may be more likely to experience psychological distress and attempt to cope by reducing their level of commitment to the field of child welfare. Conservation of resources (COR) theory is an explanatory theory that can be used to study the mechanism and effects of stress on individuals (Hobfoll, 1989). While some conceptualizations of stress are vague and difficult to study empirically, COR provides a lens whereby the role of stress on child welfare workers can be measured and tested in relation to
potential influences, processes, and outcomes. In the literature related to general occupational stress, there are four types of stressors: acute, time-limited stressors (i.e. waiting on the results of a court hearing); stressor sequences (i.e. a job loss); chronic, intermittent stressors (i.e. incidents of CPV); and chronic stressors (i.e. regular exposure to the traumatic experiences of others) (Hobfoll, 1989). Much of the child welfare literature addresses trauma exposure of workers from an external, environmental perspective (i.e., the context of the job). Hobfoll (2001) encourages researchers to view the stress process as occurring within an individual, nested within a particular context. COR theory allows for a combination of the environmental and cognitive explanations of stress reactions in the child welfare workforce (Hobfoll, 1989; Hobfoll, 2001).

The primary tenant of COR theory is that individuals "strive to retain, protect, and build resources and that what is threatening to them is the potential or actual loss of these resources" (Hobfoll, 1989, p. 516). Hobfoll (1989) defines stress as a reaction to an environment where there is either a threat of net loss of resources, the actual net loss of resources, or a lack of gain of resources after one has invested resources. In other words, the loss (or threat of loss) of resources is the principle factor in the stress process, and workers who are "low' on resources are more likely to have adverse outcomes when stressors occur (Hobfoll, 2001). Some examples of resources include self-esteem, job status, or employment, and they can have instrumental value as well as symbolic value (Hobfoll, 1989). Individuals naturally seek to create and maintain resources in the physical, social, and psychological realms to facilitate the protection and enhancement of self.

COR theory posits that when confronted with a stressor, individuals will strive to minimize resource loss, and during times where stressors are not present or are minimal, individuals will attempt to build up a surplus of resources to offset future loss (Hobfoll, 1989).
When an individual has a surplus of resources, the individual will experience positive well-being, even when faced with a stressor because the individual has adequate resources from which to pull (Hobfoll, 1989). When they are not in a position to gain additional resources, individuals are particularly susceptible to loss and will strive to protect their remaining resources by acting defensively or in a self-protective manner. This idea provides some support for the proposed theory that trauma-related stress may cause child welfare workers to withdraw or decrease commitment to the field when they are facing trauma-related stress and do not have adequate resources to buffer the effects of that stress.

Principles of COR theory that are relevant to the proposed study are as follows:

1) Resource loss is disproportionally more salient than resource gain.

2) Those who lack resources are more vulnerable to further resource loss (loss begets future loss).

3) Those who possess resources are more capable of gain.

4) Those who lack resources are more likely to adopt a defensive posture to conserve remaining resources.

5) Contrary to a natural disaster or accident, occupational stress exposure may be gradual and lead to incremental increases in psychological distress which have been linked to decreased productivity, withdrawal, and burnout. This provides a perspective which provides some potential explanation for why workers' trauma exposure may lead to psychological distress and then to a lowered level of commitment to their agency and the overall field of child welfare (Hobfoll, 1989; Hobfoll, 2001).

**Relevance to child welfare workforce.** Using the lens of COR theory, trauma exposure of child welfare workers (either primary or secondary) may be viewed as a threat to the resources
of the worker. These resources may include self-esteem, work efficacy, the job or position itself, or coping mechanisms. Workers who have more of these resources are less likely to experience the severity of negative consequences from trauma exposure than those workers who have fewer of these resources. Under COR theory, workers who experience the threat of loss or actual loss of resources are more prone to psychological distress, especially when they do not have a surplus of resources from which to draw, such as support, self-esteem, coping skills, etc. (Hobfoll, 2001). The loss or threat of loss leads workers to become more protective of their remaining resources, and they will withdraw from the source of the stress (i.e., their job or contact with clients). Hobfoll (2001) notes that as costs of resource investment in the job begin to outweigh benefits, the worker will use accommodative coping (i.e., withdrawal behaviors, lowering of the level of priority given to work). The worker may lower expectations or performance goals and invest less in work. Resource depleted individuals will use defensive strategies and are less likely to attempt to actively cope with the stressor to conserve what resources they do have left (Hobfoll, 2001). Child welfare workers who are overwhelmed by exposure to violence, high levels of scrutiny, or exposure to the traumatic experiences of clients are likely to adopt a defensive position to stop the negative psychological trajectory. Part of this defensive strategy is less investment in the job or, potentially, a reduction in their commitment to the field.

In a qualitative study of child welfare workers, participants described "crisis" as a constant state in their work that is considered "normal" (Tavormina, 2017). They reported feeling overloaded by work, having low morale, and being frustrated by the lack of resources with which to do their jobs. This constant state of stress resulted in workers reporting worry about their cases, anxiety, and feelings of powerlessness and frustration. A relevant theme identified by the author was a noted imbalance of worker energy and resource flow, resulting in the negative
emotional states described by workers (Tavormina, 2017). Using COR theory, workers who are in a constant state of crisis or stress have no opportunity with which to build up their "resources" and will therefore not be able to maintain the same level of energy and commitment to their positions. When their resources reach a critical point, workers may begin to experience symptoms of psychological distress.

COR theory, although considered a general stress theory, can be used to describe the specifics of traumatic stress, whether primary or secondary. In most studies of traumatic stress, researchers use levels of symptomatology and/or the efficacy of treatment of the trauma as opposed to looking at the mechanisms by which trauma affects individuals' psychological distress and subsequent behavior (Schumm et al., 2005; Freedy & Hobfoll, 1997). Three limitations of current models of stress include: 1) an emphasis on outcomes without providing insight into why these outcomes occur, 2) factors that mediate the event-distress relationship are rarely considered, and 3) there is not a developmental view of the stress process. COR does allow for discussion of mediating factors and provides insight into the development of psychological distress and behaviors as well as provides possible reasons for specific work-related outcomes (Freedy & Hobfoll, 1997).

Trauma exposure is a form of stress that depletes psychological resources and overwhelms the individual, resulting in higher rates of negative symptomatology (Westman, Hobfoll, Chen, Davidson, & Laski, 2005). Workers who are more sensitive to workplace stress are more likely to experience resource loss and an inability for resource gain or replenishment (Hobfoll, 2001; Westman et al., 2005). While looking strictly at outcomes may be clinically helpful in some ways, this viewpoint does not consider why responses to trauma vary based on individual factors and cannot be used to specify a priori hypotheses about how individuals will
respond based on specific characteristics or factors (Westman et al., 2005). Traumatic stress reactions differ from other kinds of stressors in that they often result in visceral responses (i.e., hypervigilance, flashbacks, and greater sensitivity to future threat) (Freedy & Hobfoll, 1997). Individuals who rank high on measures of self-esteem and a sense of mastery tend to do well in a variety of stressful situations, indicating that personal, internal/psychological resources can have a robust influence on the effects of stress on individuals (Freedy & Hobfoll, 1997).

Dagan et al. (2016) used COR theory to examine how personal, social, and organizational resources might protect against the development of secondary trauma in a sample of social workers. Some of the variables associated with STS in this study include years of work experience (related to the development of professional identity), confidence in abilities, and the ability to regulate one's emotions. COR offers an explanation as to why some research indicates that those who have previously experienced trauma (whether as a child or an adult), may be more likely to be susceptible to secondary trauma (Dagan et al., 2016). Zeidner et al. (2013) posit that the level of an individual's resources will determine their coping strategy. Individuals with higher levels of psychological resources can engage in mood-regulating strategies that allow them to remain engaged in their work despite demanding or stressful circumstances. Individuals who lack psychological resources are more likely to use avoidance strategies that result in fatigue and further resource depletion. Because negative emotions are a part of a therapist's work experience, effective coping with these traumatic events can potentially mitigate both adverse psychological outcomes and/or deleterious work-related outcomes (Zeidner et al., 2013). COR theory allows for an exploration of the "why?" behind workers' lowered commitment to the field.
Identity Theory

Identity theory contributes to the conceptualization of this study because of its potential to explain variation in individuals' responses to trauma exposure and the effects of trauma on individuals' mental health and behavior. Most of the literature related to identity theory and trauma exposure is theoretical as opposed to empirical. However, identity theory provides a framework through which to view both the influence of trauma exposure on the worker as well as to provide some support for the hypothesis that exposure to trauma will influence workers’ mental health and level of commitment to the field.

Identity theory is based on symbolic interactionism and uses the concepts of "self" and "society" to explore human behavior (Stryker & Burke, 2000). Three premises of identity theory include: 1) individuals respond to people and things based on the meanings attributed to them; 2) meanings are derived out of social interactions; and 3) the meanings are dynamic and can be modified as individuals interpret and make sense of a particular event or situation (Geoffrion et al., 2016). This theory provides a way to view how events or situations and individuals' personal traits interact, which provides a potential explanation for why individuals respond the way they do. There is a particular focus on how the meaning an individual assigns to an event/situation is more significant than the actual event.

Identity theory is especially applicable to situations where individuals struggle with the strain of conflicting roles or the inability to follow social expectations for behavior. This relates to the idea that workers who struggle with the consequences of trauma exposure and suffer negative psychological responses are more unlikely to meet the expectations of their jobs. This theory assumes that individuals actively create and negotiate their sense of self as they interact with others (Hunter & Greer, 2011). Other people play a key part in identity theory because they
reinforce the expectations society holds for how an individual in a particular role should behave (Siebert & Siebert, 2007; Thoits, 1991). Individuals evaluate themselves based on the feedback of others, which often comes from society's definition of how a person with a specific role should act. Identity has a direct link to behaviors and actions because people act in accordance with their identity or their role.

Individuals have multiple identities, and these are ordered hierarchically, depending on the importance the individual places on a particular role, and these roles guide behavior in the associated position (Geoffrion et al., 2016; Siebert & Siebert, 2007). When there is a threat to a particular identity, individuals may reduce the level of importance of that particular identity to lessen the psychological impact of the strain in that role (Geoffrion et al., 2016).

**Relevance for the child welfare workforce.** Identity theory is useful for an exploration of the experiences of child welfare workers as they negotiate challenging roles and difficult situations. This theory provides a framework through which to explore the internal processes and subsequent behaviors that result from trauma exposure in the workplace. The concepts of role identity and professional identity are especially relevant components of general identity theory (Dadich et al., 2015; Haines & Saba, 2012; Mlostshwa et al., 2015).

For most individuals, professional or occupational identity is one of primary importance (a central identity). Geoffrion et al. (2016) posit that a strong occupational identity contributes to healthy psychosocial adjustment and overall well-being (see also Christianson, 1999; Dadich et al., 2015. Individuals who have a strong professional identity often have a positive view of their role in society and believe in the importance of their profession for societal well-being. Role identities give individuals a sense of meaning and purpose and provide behavioral guidance for individuals in specific roles (i.e. worker, parent) (Christiansen, 1999; Dadich et al., 2015; Haines
Role identity is formed around role expectations, or normative expectations or standards to which individuals compare themselves. For example, when workers meet or exceed the role identity standard of what a child welfare worker should be, positive results such as high self-esteem are likely. When workers cannot meet this standard, psychological distress may occur (Haines & Saba, 2012).

The more salient the identity, the more meaning and purpose an individual will derive from it. Trauma experienced within a prominent role identity will likely influence psychological well-being (Farmer et al., 2012; Geoffrion et al., 2016; Haines & Saba, 2012; Marcussen, Ritter, & Safron, 2004; Thoits, 1991). The more salient the identity, the stronger or more intense emotional reactions will be, and the stronger the effect on mental well-being. There is empirical support for the relationship between a strong occupational identity as a predictor of lower levels of depression and anxiety, and higher levels of life satisfaction (Farmer et al., 2012; Geoffrion et al., 2016; Haines & Saba, 2012; Marcussen, Ritter, & Safron, 2004; Thoits, 1991). The psychological influence of stressors depends on the meaning given to the situations and how the worker frames the stressor dependent on his/her identity as a worker. Stressors that damage or threaten identities (self-conceptions) are likely to cause emotional problems since identity or self-conception are closely linked to psychological state (Berman, 2016; Geoffrion et al., 2016; Handbook of Sociology of Mental Health). The effect of the stressor will depend on the importance of the threatened identity (Geoffrion et al., 2016).

The way workers view themselves (i.e., professional identity) may moderate the impact of trauma exposure on their psychological well-being (Geoffrion et al., 2016; Handbook of Sociology of Mental Health). Trauma can result in a negative transformation of self-perception, the perception of others, and the environment (Geoffrion et al., 2016; Handbook of Sociology of Mental Health).
Mental Health). Identity theory would assume that workers are not automatically traumatized by their work with abused children; instead, workers give meaning to the trauma or abuse they see or experience and then change their behavior based on the meaning assigned to the event or situation (Chaptman et al., 2010). This means individuals can potentially frame or re-frame their interpretation of events to maintain psychological well-being (Geoffrion et al., 2016; Thoits, 1999).

Workers’ identities are formed both by their understanding of the role of a child welfare worker as well as the feedback they receive from their clients, fellow workers, supervisors, and their organizations (Kern, 2014). Exposure to the violence and trauma inherent in child welfare work has implications for the way workers view themselves and their value and purpose in their jobs, as well as how they view the world in general (i.e., safe vs. unsafe, just vs. unjust) (Geoffrion et al., 2016; Mlostshwa et al., 2015). Using the framework of professional identity allows for a discussion of job responsibility and accountability, as well as the potential loss of effectiveness when child welfare workers experience primary and secondary trauma (Christianson, 1999; Dadich et al., 2015; Geoffrion et al., 2016). A worker's professional identity requires them to act ethically and competently and to be accountable for the children on their caseload (Dadich et al., 2015; Geoffrion et al., 2016; Kern, 2014). When trauma exposure influences their ability to do their jobs at their full potential, workers may struggle with the conflict between needing to address their own struggles and managing the responsibility of the children assigned to them (Dadich et al., 2015; Geoffrion et al., 2016). When severe injury or death occurs to a child on their caseload, workers may suffer criticism from the public, the media, and the organization and will most likely suffer guilt and shame themselves (Geoffrion et al., 2016). This is reflective of identity theory in that severe injury or death of a child is likely to
result in an assault on an individual's identity in the form of criticism from self and others. A re-evaluation of the workers' efficacy and value is likely to result from the lack of ability to prevent harm to a child on the worker's caseload. An understanding of professional identity, and its associated roles and expectations allows for an exploration of the potential trauma workers experience when there is a severe injury or death of a child on the worker's caseload. Geoffrion et al. (2016) discuss these kinds of occurrences as causing accountability stress, a form of primary trauma.

If a worker's' evaluations themselves indicates that they are not successfully negotiating their job roles, psychological distress is likely to occur (Geoffrion et al., 2016; Handbook of Sociology of Mental Health). The use of identity theory adds a subjective component to the general stress model by allowing for an understanding of how stress, or more specifically, in this case, trauma exposure, influences a person's sense of self and their understanding of the world (Berman, 2016; Geoffrion et al., 2016). How workers perceive themselves can have a negative or positive influence on their mental health (Berman, 2016; Geoffrion et al., 2016; Haines & Saba, 2012). Their psychological state, in turn, influences how they perceive the environment or specific situations, which can make them more vulnerable or resistant to problems such as secondary traumatic stress or psychological distress (Berman, 2016; Canfield, 2005; Geoffrion et al., 2016). When workers experience psychological distress or perceive that they are not meeting a set of standards for their job, they may "pull back" from their job and put less emphasis on their role as a child welfare worker in order to focus on another role where they do feel they are performing up to the normative standard (i.e. parent, student, etc.) (Geoffrion et al., 2016). This alteration in focus may be measured by assessing levels of their overall commitment to the field of child welfare.
Purpose and Direction of Study

Purpose

The purpose of this study is to examine the role of primary and secondary trauma exposure in the level of child welfare workers' commitment to the field of child welfare and to examine mental health as a mediator in this relationship. This study will also report the prevalence and severity of both of these types of trauma as well as the mental health variables included. The proposed analyses will allow for a more nuanced look at how trauma-related stressors influence worker mental health and commitment, which is associated with turnover and retention decisions of early-career child welfare workers.

Research Questions

This research aimed to answer the following research questions:

1. What influence do primary and secondary trauma have on worker mental health?
   1.1: Primary trauma has a direct, negative influence on workers’ mental health.
   1.2: Secondary trauma has a direct, negative influence on workers’ mental health.

2. What influence do primary and secondary trauma have on workers’ overall commitment to the field of child welfare?
   2.1: Primary trauma has a direct, negative effect on workers’ commitment to the field of child welfare.
   2.2: Secondary trauma has a direct, negative effect on workers' commitment to the field of child welfare.

3. Does mental health mediate the relationship between primary and secondary trauma?
3.1 Mental health is a partial mediator of the relationship between primary trauma and commitment to the field of child welfare.

3.2 Mental health is a partial mediator of the relationship between secondary trauma and commitment to the field of child welfare.

The proposed analyses will also:

1. Provide information on the prevalence and severity levels of primary and secondary trauma, and the levels of depression, anxiety, and PTSD levels of child welfare workers in this sample.

2. Test the reliability and construct validity of each scale used in the measurement model to determine what level of explanation of variance is associated with the tests of the above hypotheses.
CHAPTER 3

METHODS

Study Design

This study examined how job-related trauma exposure affected workers' commitment to the field of child welfare and examined mental health as a mediator in this relationship. Child welfare workers' trauma exposure was initially categorized into two types: primary and secondary trauma. Considering the prevalence and severity of both of these types of trauma allowed for a more nuanced look at how trauma-related stressors influence worker commitment to the field, which is often associated with turnover and retention decisions of early-career child welfare workers.

This study used data from several waves of the Florida Study of Professionals for Safe Families (FSPSF). The FSPSF is an ongoing, five-year longitudinal study of newly-hired child protective investigators (CPIs) and case managers (CMs) in Florida examining individual, organizational, and community level factors contributing to the retention/turnover decisions of child welfare workers. This study was a secondary analysis using data from waves 1, 4, and 5, which included data collected from pre-service training, at 18 months post-hire, and at 2 years post-hire. The first two years of employment is a crucial timeframe for retention and turnover decisions because workers become acclimated to their jobs, develop their practice skills, and develop coping strategies (Augsberger et al., 2012; Boyas et al., 2013; Csiernik et al., 2010; GAO, 2003; Griffiths & Royce, 2017).

Procedures

The secondary data for this study come from the Florida Study of Professionals for Safe Families (FSPSF). The FSPSF Institutional Review Board (IRB) application was submitted and
approved for the FSPSF study before collecting any data (2015). Written informed consent was collected for every participant in the original study. The signed informed consent forms are stored in a locked cabinet within an office that is locked when the primary investigator (PI) is not present. The FSPSF study is ongoing, and amendments to the original IRB application are submitted and approved for any subsequent waves of data, as a few items may change, and the substantive module content changes depending upon the wave. Substantive modules are an additional component added to each core survey with topics that change each wave (i.e., supervision, mental health). Variables from the wave 4 substantive module, related to workers’ experience of personal trauma, mental health, and well-being, were used in this secondary analysis, in addition to demographic variables from wave 1 and core survey items in waves 4 and 5. Each participant in the FSPSF study was assigned a five-digit unique identifier that is stored separately from the data file containing the names and ID codes for each participant. A separate IRB application was submitted for the current study using secondary data from the FSPSF and approved on 11/28/2018 (Appendix A).

**Recruitment.** Face to face recruitment was done across the state of Florida with 100% of Department of Children and Families (DCF) and regional community-based care agencies (CBCs) allowing for face-to-face data collection done during a total 152 pre-service trainings. Members of the research team attended each new pre-service training to present the study and to explain the informed consent process to all potential participants. This recruitment process took place between September 1, 2015-December 31, 2016. During the presentation, informed consent was collected and those choosing to participate in the study completed a baseline questionnaire which provided data relating to demographics, contact information, and agency information.
**Sampling.** The initial sample size included 1501 participants out of the 1725 workers who were invited to participate (87% initial recruitment). Surveys are sent to the initial 1,501 participants at each wave, even if they do not participate in previous waves unless a participant requests to be removed from the study. In wave 2, 1,306 participants (87%) completed the wave 2 survey, 1,278 (85%) participants completed the wave 3 survey, 1,205 (80%) completed the wave 4 survey, and 1,178 (78%) completed the wave 5 survey.

**Data collection.** Data for the current study come from the baseline survey (wave 1; during pre-service training), and the wave 4 (18-months post-hire) and wave 5 (2 years post-hire). Data were collected using an electronic survey created within Qualtrics, an online program that facilitates survey research. Every six to seven months, beginning at six-months post-hire, participants receive an email to their personal email address with a survey link (see Wilke, Radey, & Langenderfer-Magruder, 2017).

The following procedures were used for each wave of data collection:

1) Participants received an email with the survey link every six to seven months. This link took the participants to the survey within Qualtrics, where they completed the core FSPSF instrument and the corresponding substantive module instrument.

2) Reminder emails and text messages were sent to participants who filled out an informed consent form and completed the pre-survey questionnaire. Text messages were sent to all participants who had not yet accessed the survey link on day 20 after the initial link was sent out. Text messages were sent to those who opened but did not complete the survey on day 27 and indicated the percentage of the survey completed (i.e. “you are about 75% finished with the survey”). Those who had not completed the
survey were also emailed on day 44 and invited to request another link to the survey (see Wilke et al., 2017).

3) For each wave of data, participants who completed the survey received electronic gift cards (to Amazon.com, Target, or, in later waves, a more general gift card that could be redeemed at various places). The dollar amounts of the gift cards increase as participants continue in the FSPSF study (e.g., wave 2 completion: $25; wave 10 completion: $75).

**Concepts of Interest**

The relationship between primary trauma, secondary trauma, and mental health was explored to determine the relationships between them and how they influenced workers’ commitment to the field of child welfare. Below is a description of the concepts of interest for this study. Table 3.1 provides information about the main constructs and the variables used to operationalize these constructs.

**Primary Trauma**

The conceptual definition of primary trauma was any caseload-related violent event experienced by the worker. Primary trauma was initially operationalized as any client-perpetrated violence (CPV) event and/or the death or severe injury of a child on the worker’s caseload. CPV was operationalized as having three types: non-verbal abuse, threats, and assault. An additional type of primary trauma explored in this study was the death or severe injury of a child on a worker’s caseload.

**Client-perpetrated violence.** Client-perpetrated violence (CPV) is a form of workplace aggression broadly defined as intentional harm to a worker, worker's family, or personal property using physical assault, threatening behavior, or verbal abuse that occurs in a work-related setting
(APNA, 2008; Beaver 1999). CPV was measured using the Home Visit Risk Assessment
(HVRA) scale, a 9-item instrument that asked participants whether or not they had experienced a
particular action as perpetrated by a client/patient, within the past six months (McPhaul,
Lipscomb, & Johnson, 2010) (Appendix B). This instrument was administered within the core
FSPSF survey and is administered at every wave of data collection. In its original form, the
HVRA was a four-point Likert scale (ranging from Frequently to Rarely/Never) and resulted in a
sum score ranging from between 0-27. The Cronbach’s alpha for the original scale was .77. In
the current study, the same nine items were used but as dichotomized variables, with the
respondent answering only "yes" or "no" when asked if they had experienced any of the acts of
violence over the past six months. To more fully understand what types of workplace violence
were experienced by workers, the nine items of the HVRA were broken into types of violence:
non-physical abuse, threats, and physical assault. Positive responses to any items indicated
experience of CPV over the past six months and these were examined by type of violence for the
descriptive and bivariate analyses. The three types of CPV in the univariate and bivariate
analysis were used as individual indicators of primary trauma for the SEM analyses.

**Non-physical abuse.** Non-physical abuse was measured by two items asking whether
workers had experienced: 1) being yelled at, shouted at, or sworn at by a client or other
household member, or 2) damage to personal and/or workplace property.

**Threats.** Threat was measured by three items asking whether workers had experienced
one or more of the following during the past six months: 1) being threatened without physical
contact, 2) threatened with damage or theft of personal or workplace property, or 3) threatened
with a weapon.
**Physical assault.** Physical assault was measured by four items asking whether workers experienced one or more of the following over the past six months: 1) physical assault without physical injury; 2) assault resulting in mild soreness or injury; 3) assault that led to pain or soreness overnight, but did not result in a physical or hospital visit; and 4) assault that did require a visit to a physician or emergency room.

**Severe injury or death of a child on a worker’s caseload.** An important consideration in the conceptualization of primary trauma included the death or severe injury of a child on a worker’s caseload. Because of the potential for feelings of guilt and shame and the organizational, community, media, and societal scrutiny and pressure placed on the worker when a severe injury or death of a child occurs, this type of work-related stressor was explored as a form of primary trauma (Geoffrion et al., 2016). In the wave 4 (18-month) survey, workers were asked whether they have experienced the death of a child on their caseload due to accident/injury or maltreatment in the time since the survey began. They were also asked if they had experienced severe injury to a child on their caseload since they began. These items were answered with a dichotomous response and the date that this occurred (month/year). These three items were used as dichotomous variables that measured the presence or absence of the primary trauma of experiencing the death or severe injury of a child on their caseload in the past 18-months.

**Secondary Trauma**

Secondary trauma refers to workers’ negative psychological responses resulting from exposure to abuse, neglect, and other forms of suffering their clients experience. Secondary exposure to trauma may cause behavioral changes and symptomatology that closely mirror primary post-traumatic stress disorder (PTSD) such as: intrusive imagery (related to the client's description of trauma or abuse or witnessing the after-effects of the trauma or abuse), avoidant
responses, physiological arousal, distressing emotions, and functional impairment (Bride et al., 2004).

**Secondary traumatic stress.** Secondary trauma was operationalized using the Secondary Traumatic Stress Scale (STSS), a 17-item instrument designed to assess the frequency of intrusion, avoidance, and arousal symptoms associated with secondary traumatic stress (Bride et al., 2004) (Appendix C). The STSS measured how often, within the past seven days, a worker experienced specific secondary traumatic stress symptoms. The items were designed to measure current, as opposed to cumulative, exposure to traumatized clients. Examples of items include: "reminders of my work with clients upset me," "I had disturbing dreams about my work with clients," and "it seemed as if I was reliving the trauma experienced by my clients." The STSS was used to measure overall secondary traumatic stress symptoms and was broken down into the three factors measured as a part of secondary traumatic stress: intrusion, avoidance, and arousal. Workers responded to each of the items on a 5-point Likert scale ranging from “not at all” (0) to “very often” (4). Both the global and the subscales were summed to provide overall scores.

Recommended scoring for the STSS is as follows: 0-27 (little to no STS), 28-37 (mild STS), 38-43 (moderate STS), 44-48 (high STS), and 49 and above (severe STS) (Bride, 2007). The recommended scoring was used for the descriptive component of the analysis. Another approach is to use a cutoff score of 38, as suggested by Bride (2007), which provided a sensitivity of .93 and a specificity of .91 in his study. Internal consistency was sufficient, with the coefficient alpha for the global scale being .94, and subscale coefficient alphas were .83 for the Intrusion subscale, .89 for the Avoidance subscale, and .85 for the Arousal subscale. Bride et al. (2004) also tested the convergent validity and found significant correlations between the STSS and measures testing convergent validity, including the frequency with which the
participants worked with traumatized clients, their level of depression over the past week, and their level of anxiety over the past week (Bride et al., 2004). For the univariate and bivariate analysis, the STSS item scores were summed for each subscale and used as continuous variables where higher scores indicated higher levels of STS symptomatology. For the structural equation modeling (SEM) analysis, each item served as an individual observed indicator for the assigned subscale, and subscale sums were used as first-order factors that loaded onto the second-order factor of secondary trauma in the structural model.

Mental Health

The conceptual definition of mental health was the level of subjective well-being workers report. Mental health relates to individuals' perceptions and evaluation of their own lives in terms of their psychological and social functioning (Keyes, 2002). To gain a more nuanced look at the mental health of child welfare workers in this sample, several instruments were used to detect the presence or absence of particular symptoms that are indicative of specific mental health diagnoses: depression, anxiety, and post-traumatic stress disorder (PTSD), at wave 4.

**Depression.** The conceptual definition of depression is consistent with the language used in the DSM-V. Depression was defined as having feelings of being “intensely sad, miserable, and/or hopeless” which may also be accompanied by pessimism about the future, feelings of shame or guilt, low self-worth, and/or suicidal ideation or behavior (American Psychiatric Association, 2013, p. 820). The Patient Health Questionnaire 9-item (PHQ-9) was used to assess the level of depression in participants and was administered in wave 4 as a part of the mental health module (Appendix D). The PHQ-9 has 9-items where each item response ranges from 0 (not at all) to 3 (nearly every day). When used as a severity measure, it provides a summed score of 0-27. Major depression is diagnosed if 5 or more of the 9 depressive symptoms
are present “more than half the days” in the past two weeks when depressed mood or anhedonia are present. Depression, other than major depression, is present if the respondent reports 2-4 depressive symptoms in the past two weeks “at least more than half the days” and reports depressed mood or anhedonia. The ninth item on the PHQ-9 asks whether the respondent has experienced “thoughts that you would be better off dead or of hurting yourself in some way” (Kroenke, Spitzer, & Williams, 2001, p. 607). This item counts toward a diagnosis of depression if present at all, regardless of how often or the duration. Suggested cutoff scores for the PHQ-9 are 5 (mild), 10 (moderate), 15 (moderately severe), and 20 (severe) levels of depression. The PHQ-9 had a Cronbach’s alpha of .89 and .86 in the two studies reported by Kroenke et al. (2001). Test-retest reliability was also high (.84 when administered in person and again by phone within 48 hours). Receiver operating characteristic (ROC) analysis was used to assess criterion validity and indicated that the PHQ-9 discriminated well between individuals with and without major depression (.95 specificity, .68 sensitivity). ROC analysis is used to assess the sensitivity and specificity of a particular scale. For univariate and bivariate analyses, the PHQ-9 items were summed and used as a measure of the overall level of depression. Each item served as an individual observed indicator of the factor of depression for the measurement model analysis. Parceled items were used as indicators for the first-order factor of depression which loaded onto the second-order factor of mental health in the structural model.

Anxiety. The conceptual definition of anxiety was feeling nervous or tense in multiple situations or settings, frequent worry, feeling fearful or apprehensive, and/or expecting the worst to happen (APA, 2013). To measure anxiety, the Beck Anxiety Inventory (BAI) was administered in wave 4 (18 months) as a part of the mental health module. The BAI is a 21-item self-report inventory for measuring the severity of anxiety symptoms during the past month.
where each item response ranges from 0 (not at all) to 3 (severe) (Appendix E). Two aspects of anxiety are measured with the BAI, somatic symptoms and subjective feelings of anxiety and panic. Cut off scores are: 0-13 (minimal), 14-19 (mild), 20-28 (moderate), and 30-63 (severe). This inventory has high internal consistency with a Cronbach’s alpha of .92 and is also reported to have good test-retest reliability (Beck et al., 1988). The BAI was initially constructed to avoid confounding the construct of anxiety with that of depression and does provide a measure that appears to discriminate between the two constructs better than others when tested against several depression scales. For the univariate and bivariate analyses, the scores on the BAI were summed for an overall measure of the level of anxiety. For the structural equation modeling (SEM) analysis, each item served as an individual observed indicator of anxiety for the measurement model analysis. Parceled items were used as indicators for the first-order factor of anxiety, which loaded onto the second-order factor of mental health in the structural model.

**PTSD.** The conceptual definition of Post-Traumatic Stress Disorder (PTSD) was a mental health condition triggered by work-related traumatic events where the individual has difficulty coping and adjusting after exposure to the event (Mayo Clinic, 2018). The Diagnostic and Statistical Manual of Mental Disorders (5th edition) (DSM-V) defines PTSD as an individual experiencing one or more of the following: intrusive memories related to work or a work experience, recurrent distressing dreams related to workplace trauma, experiencing dissociative reactions (e.g. flashbacks), intense or prolonged psychological distress because of work-related trauma, and/or severe physiological distress when exposed to something associated to the trauma (American Psychiatric Association, 2013). This definition of PTSD also includes avoidance of stimuli associated with the workplace trauma, negative alterations in thoughts and/or mood associated with the trauma, increased reactivity related to the trauma, and changes psychological
arousal or reactivity level (e.g., exaggerated response, hypervigilance, sleep disturbance). To measure the severity of traumatic stress symptoms, the Post-Traumatic Checklist-Civilian (PTCC) (short form) was administered in wave 4 (18 months) as part of the mental health module (Appendix F). The PTCC (short form) consists of six items with Likert scale responses ranging from 0 (not at all) to 5 (extremely). Sample items from the PTCC include: having “repeated, disturbing memories, thoughts or images of a stressful experience from the past” and having “physical reactions (e.g. heart pounding, trouble breathing, or sweating) when something reminded you of a stressful experience from the past” (Lang et al., 2005).

Researchers tested interrater reliability of this measure and found perfect reliability ($k=1.0$) when co-rating the audiotapes of the interviews administering the PTCC and when assessing for presence or absence of the PTSD diagnosis (Lang et al., 2005). No Cronbach’s alpha was reported for this measure. ROC analysis indicated that the PTCC has adequate sensitivity (.80) and specificity (.76) when using a cutoff score of 14 in the first study by Lang et al. (2005). In the second study by these authors (2005), the PTCC had a sensitivity of .95 and a specificity of .69. For the univariate and bivariate analyses, the items on the PTCC will be summed for an overall measure of PTSD symptomatology. Each item served as an individual observed indicator of the factor of PTSD for the measurement model analysis. Parceled items were used as indicators for the first-order factor of PTSD, which loaded onto the second-order factor of mental health in the structural model.

**Commitment to the Field of Child Welfare**

Worker commitment to the field of child welfare was the dependent variable in this analysis and was conceptually defined as workers making a personal determination to stay in the field of child welfare despite some of the work-related challenges (Ellett, 2000). The concept of
commitment to the field was operationalized using a modified version of Ellett’s Intent to Remain in Child Welfare (ITR-CW) measure administered during the wave 5 (2 years post-hire) survey (Appendix G). The ITR-CW is a 7-item measure that uses a 4-point Likert scale (1=Strongly Disagree; 4=Strongly Agree). In the FSPSF, the rating scale was changed to a 6-point scale using 0 to 5 as the anchor points. The scaling was changed from the original 4-point scale to the 6-point scale to add a "neither agree nor disagree” and a “not applicable” rating for each item. The alternative scoring comes from an adapted version of the ITR-CW scale used in the Comprehensive Organizational Health Assessment (COHA) study, a battery of instruments used for the assessment of child welfare organizational climate assessments. Two items are negatively worded, “I plan to leave child welfare as soon as possible” and “I have too much time invested in child welfare to leave” and were reverse coded.

Cronbach's alpha internal consistency coefficient for the ITR-CW scale was .86 in Ellett's (2009) study but is unknown for the modified version. A discriminant function analysis (DFA) determined how well this measure could discriminate between groups on each end of the continuum (highest and lowest scores). Ellett (2009) found that the two groups were differentiated statistically (Wilks' Lambda=.67, F=7.28, df=6, 90, p<.0001), indicating good discriminate validity for the original scale. Currently, there is no published reliability or validity information available for the adapted version of this scale; however, a Cronbach's alpha is reported in the results chapter of this study. For the univariate and bivariate analyses, this scale was summed to produce an overall score of workers' intent to remain in child welfare. Each item served as an individual observed indicator for the factor of commitment to the field of child welfare for the measurement model analysis. Parceled items were used as indicators for the first-order factor of commitment to the field in the structural model.
Demographics/Correlates

Several variables related to the concepts of trauma exposure and commitment to the field were included in the analysis to control for their influence on the relationships being examined. The demographic variables included in this study were: age, race, and gender. The number of years in the full-time workforce was included as a work-related control variable. Experience of personal trauma within the past year was a final, potentially confounding variable included in the analysis to separate the effects of personal trauma from work-related trauma.

Age. Age was an important variable to control for because experiences of both secondary trauma and client-perpetrated violence may be experienced at different rates and have different influences on mental health and work-related outcomes depending on the age of the worker. Age usually has a negative relationship with the experience of secondary trauma and CPV (Bonach & Heckert, 2012; Dagan, Ben-Porat, & Itzhaky, 2016; Enosh, 2013; Ivicic & Motta, 2017; Salloum et al., 2015). Workers' age, in years, at wave 1 was a continuous control variable included in the SEM analysis.

Race. Race is discussed in the literature as a demographic variable that may influence the experience of CPV and secondary trauma (Bonach & Heckert, 2012; Canfield, 2005; Figley, 2013; Jayaratne & Faller, 2009; Ringstad, 2009; Robson et al., 2014). Most studies that have included race as a potential predictor of CPV or STS have not found it to be a significant factor in their analyses (Jayaratne & Faller, 2009; Ringstad, 2009; Robson et al., 2014). Race was assessed using univariate analyses as well as ANOVA analysis. Race was included as a control variable in the structural equation analysis (SEM) after the ANOVA analyses indicated race as a significant variable in some of the initial analyses. It was included as a categorical variable created by using dummy variables to test the influence of the following races: non-Hispanic
White, non-Hispanic Black, Hispanic, or “other” ethnic group. Using wave 1 data, 647 participants reported being non-Hispanic White, 532 reported being non-Hispanic Black, 235 reported being Hispanic, and 14, 2, and 40 reported being non-Hispanic Asian, American Indian, or non-Hispanic other respectively (n=56). Due to the low number of participants reporting being non-Hispanic Asian, American Indian, or non-Hispanic other, these categories were collapsed for purposes of the SEM analysis.

**Gender.** Gender is another demographic characteristic that can influence the prevalence or experience of both secondary trauma and client-perpetrated violence. Current literature indicates that male workers are more likely to experience physical assault than female workers (Rey, 1996). Dagan, Ben-Porat, & Itzhaky, 2016; Ivicic & Motta, 2017; Salloum et al., 2015. Additionally, women are more susceptible to higher levels to secondary trauma (Dagan, Ben-Porat, & Itzhaky, 2016; Ivicic & Motta, 2017; Salloum et al., 2015). Based on initial descriptive analysis, only two categories were necessary for these data, so there was one dichotomous variable for gender (male=0 and female=1) included in the SEM analyses.

**The number of years in the full-time workforce.** Amount of work experience may affect workers' vulnerability to and experience of secondary trauma and CPV. Rey (1996) notes that workers are more likely to experience CPV when they have less work experience, particularly if that experience has been in the field of child welfare. To control for the influence of workers' job experience on their commitment to the field, the tested model used an item from wave 1 asking “How many years of full-time experience do you have in any field?” This was included in the SEM analysis as a continuous control variable (Canfield, 2005; Dagan, Ben-Porat, & Itzhaky, 2016; Ivicic & Motta, 2017; Salloum et al., 2015).
Personal trauma. Because the concept of primary trauma for this study only relates to the workplace, it was essential to rule out the influence of other, personal trauma in this sample. To isolate the influence of primary trauma associated with the workplace, personal trauma was measured by the dichotomous item “In the past year have you experienced a traumatic event in your personal life? For example, have you experienced a natural disaster, serious illness or injury to you or someone important to you, or death/other significant loss of someone important to you?” asked during wave 4 (18-months post-hire). Workers may have experienced both work-related trauma exposure, as well as personal trauma. This variable was included as a control variable in the SEM analysis where no=0 (not reporting personal trauma in the past year) and yes=1 (reporting at least one personal trauma in the past year). Inclusion of this variable allowed for an examination of the specific effects of workplace trauma on workers’ mental health and commitment to the field.

Analytic Plan

Data Cleaning and Preparation

Survey response data were exported from Qualtrics and analyzed using SPSS (version 25) and MPlus (version 8.1). Data were cleaned before running any analyses. Missing data were addressed using a three-step imputation method for scale scores where at least 50% of the items have been completed.

Univariate Analyses

Descriptive statistics for each continuous variable and frequencies for any dichotomous or categorical variables were examined. The mean, standard deviation, skewness and kurtosis statistics of all continuous variables were assessed and variables having skewness statistics with
absolute values above 1.96 or kurtosis statistics with absolute values above 3.29 were investigated further (Randolph & Meyers, 2013).

**Bivariate Analysis**

Bivariate relationships between control variables (gender, age, race, number of years of full-time work experiences, and personal trauma), each of the scale scores, and the dichotomous variables were examined. Chi-square statistics were used to test for independence between categorical variables. Appropriate t-test or ANOVA analyses were conducted to test for independence between variables or differences between groups. Correlations between the scale scores were examined to determine the strength of the relationships between them.

**The Rationale for the Use of Structural Equation Modeling**

The research questions dealt with the relationships between constructs (i.e., factors), as opposed to the relationships between observed variables; therefore, structural equation modeling was the appropriate approach to test the hypothesized model. Structural equation modeling (SEM) is not a single statistical technique, but employs several related procedures to specify the model to be tested, and is used to assess the fit of a theoretically derived predicted model to the data (Geiser, 2013; Kline, 2011).

M-Plus (version 8.1) was used for the SEM analysis, and required a-priori specification of variables (i.e. single item indicators and standardized instruments) associated with specific factors (i.e. primary trauma, secondary trauma, mental health, and commitment), which factors were assumed to affect other factors, and the direction of these relationships (Kline, 2011).

**Power analysis.** Necessary sample size can vary depending on the number of factors, the number of indicators, the strength of loadings and regressive paths, as well as the degree of missing data and the type of model proposed (Wolf, Harrington, Clark, & Miller, 2013). To
calculate the necessary sample size for the measurement and structural models, the following formula was used to calculate the number of parameters to be estimated \( u \): 
\[
u = \frac{p(p+1)}{2}
\]
where \( p \) equals the number of observed variables in the model (Mueller & Hancock, 2008). There were a total of 75 observed variables in the entire model when all scale items and dichotomous indicators were counted. Using this number, a total of 2,850 parameters would have been needed for the entire measurement and structural model to be run simultaneously.

Because of the large number of observed variables in this model, the measurement and structural models could not be run concurrently. Instead, a confirmatory factor analysis (CFA) was conducted for each factor to assess the fit of the scale(s). For example, to determine how well the ITR-CW scale performed with these data, a CFA was conducted to determine the factor loadings for each item on the scale. These loadings are interpreted as how closely related the individual item is to the underlying factor (i.e. commitment to the field of child welfare) (Kline, 2011). In order to have sufficient power to conduct individual CFA analysis for each scale, the minimum number of observations necessary was 231. The total number of parameters to be estimated for the structural model were calculated after the CFAs were conducted. At wave 4, 657 of participants met the inclusion criteria for this study, and in wave 5, 560 participants met the inclusion criteria. These sample sizes were adequate for both the measurement and structural analyses.

The assessment of the model included looking at both overall fit as well as the associations between each factor and its associated variables, but because of the large number of parameters to be estimated and the sample size of the available data, the assessment of model fit was done in several steps. The goal of the analyses was to test a model that examines a theory of how the factors of primary and secondary trauma, partially mediated by mental health, influences
workers’ commitment to the field of child welfare. There were three components needed for an assessment of this model: scale reliability analysis, analysis of the measurement model, and analysis of the structural model.

**Reliability Analysis**

Internal consistency is an important measure of the reliability of a scale because it indicates the homogeneity of the items in a scale, and how well individual items the scale (or subscale) reflect the underlying latent construct (DeVellis, 1991; Spector, 1992). Coefficient alpha is the statistic most often reported to assess unidimensional internal consistency (Spector, 1992). To test the internal consistency of the following scales, reliability analyses for each scale (the K-6 psychological distress scale, the STSS, the PHQ-9, the BAI, the PTCC (short form), and the Intent to Remain Scale-Child Welfare) were conducted, and the coefficient alphas reported. While some reports differ on the acceptable level of alpha (ranges between .7 to.95), an alpha level of at least .80 is usually considered sufficient for most purposes and indicates that the correlations are weakened very little by measurement error (Nunnally & Bernstein, 1994; Tavakol & Dennick, 2011). Alpha levels higher than .9 may not actually represent higher item reliability and could be due to lengthy scales, parallel items, or narrow coverage of the construct being studied (Panayides, 2013).

**Assessing Model Fit: Measurement and Structural Models**

To fully test the proposed model, a two-phase structural equation model was specified that consisted of both measurement models and a structural model. Confirmatory factor analyses (CFAs) related to the indicators used for the measurement component were integrated with a path model that depicted relationships between latent factors and the observed indicators (a structural regression model) (Applegate, 2014). The structural model was the component that
tested the relationships between the latent constructs themselves. SEM relies on an assessment of several statistical tests to determine whether the proposed model is an adequate fit to the data (Suhr, n.d.).

Assumptions that were met before running either measurement or structural models included multivariate normality and linear relationships between variables. The full structural model was specified a priori, and the number of degrees of freedom available was assessed before running the model. The number of parameters to be estimated includes covariances, path coefficients, and variances, and is important both for the specification of the model as well as for the power analysis. It was important that the number of data points exceeded the number of parameters estimated, otherwise a “just-identified” model would indicate a perfect fit, regardless of actual fit (Kline, 2011). An “under-identified” model would have fewer data points than parameters, and the analysis could not proceed (Kline, 2011). There were sufficient degrees of freedom to estimate all free parameters for the measurement models and structural model.

**Step 1: measurement model.** The initial measurement model was tested using confirmatory factor analysis which is a multivariate regression model that describes the relationships between a set of observed dependent variables and continuous latent factors (i.e., each construct included in the model). The measurement model included all individual items from each scale and any single-item indicators associated with a factor. This allowed for an analysis of how each item loaded onto the associated latent factor, the type of relationship, the variances, and the associated error. One variable in each scale was fixed to "1" to estimate the parameters of the other indicators and the variance of the factor. This process is called unit loading identification (ULI) and uses a reference variable, one that is hypothesized to relate the most strongly to the associated factor, to estimate the factor loadings of other indicators as well.
as the variance of the factor. The factor loadings were interpreted as regression coefficients and used to estimate the direct effects of the factor on each indicator (Kline, 2011). Standardized factor loadings were interpreted as correlations between the indicator and its factor and were squared to determine the proportion of variance explained by the associated factor (similar to $R^2$ in multiple regression (Kline, 2011). Chi-square, SRMR, RMSEA, and CFI fit indices were assessed for the CFA models, and Lagrange multiplier statistics were examined for empirically based modification suggestions (Mueller & Hancock, 2008). CFAs were conducted on all five factors in the model.

**Step 2: structural model.** Once the measurement model was assessed, the second phase of the proposed analysis involved an assessment of the covariances among the latent factors of interest and reanalyzing the data as a structural model (Kline, 2011). The purpose of assessing the structural model was to describe the relationships between all factors of interest in one set of multivariate regression equations: the relationships between factors (i.e., constructs of interest), the relationships between the observed variables (i.e., items from scales, single item indicators), and the relationship between the factors and observed variables not related to the factors (i.e., control variables) (Muthen, 2002). The structural model consisted of two first-order factors (primary trauma and commitment to child welfare) and two second-order factors (mental health by depression, anxiety, and PTSD; and secondary trauma by intrusion, arousal, and avoidance) (Figure 3.1).

**Parceling.** Due to the complexity of the model, after the separate CFA analyses for each factor, items from the scales were parceled to run the full structural model. Parceling is used in multivariate approaches for latent-variable analysis and is essentially an aggregate-level indicator that is created by using the sum of two or more items in a scale (Little, Cunningham, Shahar, &
This technique allows for previously assessed indicators to be grouped together for further assessment of the structural model and is useful when a model is comprised of a large number of indicators, such as in the model for this study (Little et al., 2002; Little, Rhemtulla, Gibsob, & Schoemann, 2013). Yang et al. (2009), tested three approaches to using longer scales in structural equation modeling and found that even-odd parceling was most effective when using categorical indicators with five response categories, and when parcels were further used as indicators of the latent constructs, as was done for this analysis.

Primary trauma items were parceled based on CPV type (non-physical violence, threats, and assault). For the first-order factors of depression, anxiety, PTSD, and commitment to the field, items were parceled by even-odd indicators (Yang, Nay, & Hoyle, 2009). Even indicators were summed to create one parcel and odd numbers to create another. The factors of depression, anxiety, and PTSD then loaded onto the second-order factor of mental health. Items for the STSS were parceled by subscale (intrusion, avoidance, and arousal) and then loaded onto the second-order factor of secondary trauma. Parceling reduced the number of parameters to be estimated in the final model and allowed for an assessment of the model with the available sample size.

In some cases, parceling is preferable for SEM analysis because, when specified correctly, it can reduce the amount of Type II (false negative) error in the model (Little et al., 2013; Yang et al., 2009). Additionally, each parcel will have higher reliability than any single item used to measure a construct. This results in a more significant proportion of true-score variance as compared to individual-item variance because the parcel reflects the multidimensionality of the construct of interest (Little et al., 2013). Parceling also minimizes the likelihood of a violation of the assumption of normality (Little et al., 2013; Yang et al., 2009).
Further advantages to parceling include reduced sampling error, a reduction in the possibility of dual loadings, and the potential for improved model fit and convergence.

**Bootstrapping.** The use of mediating variables in SEM provides additional data regarding the relationships between factors and can make SEM models less vulnerable to error (Lau & Cheung, 2010). Mediating variables are hypothesized to transmit the effect of an independent variable to a dependent one (Valente, Gonzalez, Miocevic, & MacKinnon, 2016). The model examined tests mental health as a mediator in the relationships between primary and secondary trauma (exogenous factors) and commitment to the field of child welfare (endogenous factor). There was more than one structural path from the predictor variables to the outcome variable, which provides values for the direct effects and mediation (indirect) effects of the model. Mental health was included as a mediator in this model to determine whether the effects of primary and secondary trauma influence commitment through workers' mental health status. To address the potential for non-normality in the mediation models, a bias-corrected (BC) bootstrap method was used to simulate 1000 different samples resulting in confidence intervals for distributions of parameter estimates for the indirect paths in the mediating effects (Hoffman, 2012; Valente et al., 2016). Bootstrapping can help overcome limitations of tests of significance for mediated effects that require a normal distribution. This approach resulted in confidence intervals from the sampling distribution of the mediated effects (Valente et al., 2016). The confidence intervals (CI) provided with a BC bootstrap shift the CI so that the median is the sample estimate (Hoffman, 2012).

**Assessment of the model.** Examining the fit indices (Chi-square, SRMR, RMSEA, and CFI statistics) of the structural model allowed for an assessment of how well the specified model fits the data. If the fit indices did not indicate a good fit, then the structural model was not
specified correctly, and the hypothesized conceptual model is rejected. Both direct and indirect effects were reported for the final structural model. Direct effects were indicated by the weight in the structural path model. Indirect effects were calculated by multiplying the direct effects when there is a mediating relationship between the endogenous and exogenous factors (in this case mental health). Standardized solutions were reported in order to compare the relative importance of the effects between constructs.

Assessment of Overall Model Fit

In addition to the evaluation of the individual relationships between concepts, an overall assessment of the proposed model was conducted. This included an evaluation and interpretation of the following fit indices for the complete structural model: the chi-square model test statistic, the Root mean square error of approximation (RMSEA), the Goodness of Fit index, the Standardized root mean square residual (SRMR), and the Comparative fit index (CFI).

Model chi-square test statistic. The first step in assessing SEM model fit was to look at the overall fit of the proposed model to the sample data by examining the model chi-square statistics, an assessment of the overall fit of the model to the data. A chi-square statistic that equals 0 indicates a perfect fit between the matrices of the sample compared to the proposed model. If this statistic is not significant, then the model is likely consistent with the covariance matrix of the data, but the researcher may not know if it is correctly specified. Ideally, the model should closely approximate the sample's covariance matrix; however, a perfect match is unlikely. A statistically non-significant value indicates that the differences in the two matrices may be due to sampling error. A statistically significant result (p.= or less than .05) indicates that the two matrices are significantly different. The higher the test statistic, the worse the proposed model's fit with the data making the model test statistic a "badness of fit" statistic (Hooper et al., 2008).
**Root mean square error of approximation (RMSEA).** The RMSEA is also considered a “badness of fit” statistic, where a value of zero indicates the best fit. This statistic does allow for some discrepancy between the model and the sample covariance matrices. The RMSEA is sensitive to the number of parameters in the model, and the model with the most parsimony is usually indicated (Hooper et al., 2008). The value of RMSEA decreases as the number of degrees of freedom increases, but that does not mean that the model is a better fit if the sample size increases. A RMSEA of equal to or less than .05 may indicate a good fit, whereas a value of equal to or greater than .10 can indicate a serious problem. For this analysis, a value of less than .08 will indicate a good fit (Hooper et al., 2008; Kline 2011).

**Standardized root mean square residual (SRMR).** The SRMR is a standardized version of the Root Mean Square Residual (RMR) which assess the residuals of the covariances between the observed and predicted models. In this analysis, a threshold value of less than or equal to .08 will indicate an acceptable fit, while a value of .05 or less will indicate a good fit (Hooper et al., 2008; Kline, 2011).

**Comparative fit index (CFI).** The CFI measures the improvement in fit for the proposed model when compared to the baseline model (usually the independence model) with values ranging from 0 to 1, with higher values indicating a better model fit to the data (Hooper et al., 2008). A value of 1.0 indicates only that the researchers model is a better fit than the baseline model, not that there is a perfect fit. For this analysis, a value of .95 or more will be used to indicate a good fit (Hooper et al., 2008).

**Results reporting and model respecification.** The Wald statistic was also examined to consider model trimming, due to its ability to predict the increase of the model chi-square if a particular parameter is trimmed (fixed to 0). When interpreting the results of the proposed SEM
analyses, it is important to understand that even if a particular model is specified, it is possible that several other models may also explain relationships within the data. The proposed model may be respecified if the indicated recommendations are supported by theory and knowledge of the constructs (Hooper et al., 2008).

**Hypothesis Testing**

The tested model explored the relationships between primary and secondary trauma, mental health (wave 4), and commitment to the field (wave 5). Syntax specifying relationships between observed indicators, first-order factors, and second-order factors was entered into MPlus to test each of the following hypotheses simultaneously.

**Hypothesis 1.1 Primary trauma has a direct, negative influence on workers’ mental health.** Initially, the indicators for primary trauma consisted of 9-items from the Home Visit Risk Assessment (HVRA) scale that measured the number of incidents of client-perpetrated violence over the past six months, and three single-item indicators that asked whether workers' had experienced the death or severe injury of a child on their caseload. After examining the CFA analyses, primary trauma was respecified to include only the CPV indicators. The three items measuring death or severe injury were removed from the primary trauma factor due to poor performance in the CFA, indicating those items did not have a strong relationship with commitment in this sample. These three items were later tested as the caseload trauma factor.

The first-order mental health factors consisted of 9 items from the PHQ-9 (depression), 21 items from the Beck Anxiety Inventory (BAI; anxiety), and six items from the Post-Traumatic Checklist (PTCC). Each of these factors loaded onto the second-order factor of mental health. The direct effect from primary trauma to worker mental health was examined for strength and direction to test this hypothesis.
Hypothesis 1.2 Secondary trauma has a direct, negative influence on workers’ mental health. Secondary trauma was specified as three first-order factors (intrusion, avoidance, arousal) that loaded onto secondary trauma, a second order factor. To test this hypothesis, the direct effect from secondary trauma and worker mental health (see specifications from above) were examined for direction and strength.

Hypothesis 2.1: Primary trauma has a direct, negative influence on workers’ commitment to the field of child welfare. The indicators for the construct of commitment to the field of child welfare came from the Intent to Remain in Child Welfare (ITR-CW) measure and initially consisted of 7-items. Two were removed due to poor performance in the CFA, indicating those items did not have a strong relationship with commitment in this sample. The direct effect from primary trauma to commitment was examined for strength and direction in order to test this hypothesis.

Hypothesis 2.2: Secondary trauma has a direct, negative influence on workers’ commitment to the field of child welfare. A direct relationship between the constructs of secondary trauma and worker commitment to the field was specified. The direct effect from secondary trauma to commitment to the field was examined for both direction and strength to test this hypothesis.

Hypothesis 3.1: Mental health is a partial mediator of the relationship between primary trauma and commitment to the field of child welfare. The construct of mental health consisted of indicators from three separate scales from wave 4: the PHQ-9, the Beck Anxiety Inventory (BAI), and the PTSD checklist-civilian short form (PTCC), totaling 36 items. Items from each scale loaded onto their respective first-order factors (depression, anxiety, and PTSD). These first-order factors then loaded onto a second-order factor of mental health. In order test the
hypothesis of mental health as a partial mediator between primary trauma and commitment to the field, the paths between primary trauma to mental health and then from mental health to commitment to the field were examined for the direct effects as well as the indirect effects testing the mediation relationship.

**Hypothesis 3.2: Mental health is a partial mediator of the relationship between secondary trauma and commitment to the field of child welfare.** To test the hypothesis of mental health as a mediator between secondary trauma and commitment to the field, direct paths from secondary trauma to mental health and from mental health to commitment to the field were examined. Both the direct and indirect effects were examined to determine where there was a mediating relationship present.

Table 3.1 *Operationalization of Main Concepts*

<table>
<thead>
<tr>
<th>Concept</th>
<th>Operationalization</th>
<th>Instrumentation</th>
<th>Number of Items</th>
<th>Location in Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Trauma</strong></td>
<td>Client Perpetrated Violence</td>
<td>Home Visit Risk Assessment Scale (HVRA)</td>
<td>9 items</td>
<td>Core Survey</td>
</tr>
<tr>
<td></td>
<td>(3 types: non-physical, threats, physical assault)</td>
<td>(dichotomized; altered from original Likert scale)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Severe Injury of Child on Caseload</td>
<td>Single Item Indicator</td>
<td>1 item (dichotomous)</td>
<td></td>
<td>Wave 4 substantive module</td>
</tr>
<tr>
<td>Death of Child on Caseload</td>
<td>Single Item Indicator</td>
<td>1 item (dichotomous)</td>
<td></td>
<td>Wave 4 substantive module</td>
</tr>
<tr>
<td>Concept</td>
<td>Operationalization</td>
<td>Instrumentation</td>
<td>Number of Items</td>
<td>Location in Survey</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>---------------------------------------------------------------</td>
<td>-----------------------------------------------------</td>
<td>----------------</td>
<td>--------------------</td>
</tr>
<tr>
<td><strong>Secondary Trauma</strong></td>
<td>Secondary Traumatic Stress symptoms</td>
<td>Secondary Traumatic Stress Scale (STSS) (3 subscales: intrusion, avoidance, arousal)</td>
<td>17 items (5-point Likert scale)</td>
<td>Core Survey</td>
</tr>
<tr>
<td><strong>Mental Health</strong></td>
<td>Depression</td>
<td>PHQ-9</td>
<td>9 items (4-point Likert scale)</td>
<td>Wave 4 substantive module</td>
</tr>
<tr>
<td></td>
<td>Anxiety</td>
<td>Beck Anxiety Inventory</td>
<td>21 items (4-point Likert scale)</td>
<td>Wave 4 substantive module</td>
</tr>
<tr>
<td></td>
<td>PTSD</td>
<td>Post-Traumatic Checklist-Civilian (short form)</td>
<td>6 items (6-point Likert scale)</td>
<td>Wave 4 substantive module</td>
</tr>
<tr>
<td><strong>Commitment to the Field</strong></td>
<td>Intent to Remain Employed in Child Welfare Field</td>
<td>Intent to Remain-Child Welfare</td>
<td>9 items (6-point Likert scale)</td>
<td>Core Survey</td>
</tr>
<tr>
<td><strong>Controlled</strong></td>
<td>Gender</td>
<td>Single Item Indicator</td>
<td>1 item</td>
<td>Wave 1</td>
</tr>
<tr>
<td></td>
<td>Race</td>
<td>Single Item Indicator</td>
<td>1 item</td>
<td>Wave 1</td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td>Single Item Indicator</td>
<td>1 item</td>
<td>Wave 1</td>
</tr>
<tr>
<td></td>
<td>Years of Full-Time Employment</td>
<td>Single Item Indicator</td>
<td>1 item</td>
<td>Wave 1</td>
</tr>
<tr>
<td></td>
<td>Experience of Personal Trauma</td>
<td>Single Item Indicator</td>
<td>1 item</td>
<td>Wave 4</td>
</tr>
</tbody>
</table>
Figure 3.1 Proposed Measurement and Structural Model
CHAPTER 4

RESULTS

Data Preparation

Data Cleaning and Preparation

Survey response data was exported from Qualtrics and analyzed using SPSS (version 25) and MPlus (version 8.1). Before cleaning the data sets needed for analysis with the respective software, missing data were assessed and accounted for using three-step imputation method. First, a summed scale score was imputed, where respondents had answered at least 50% of the items. Mean scores were computed for each scale and then multiplied by the number of items for an overall imputed sum score (Wilke, Rakes, & Randolph, 2018). If participants answered fewer than 50% of the items in a scale, the imputed score was left missing.

Dichotomous variables were created for the experience of each type of CPV included in the conceptualization of primary trauma (i.e., non-physical, threat, assault). Additional variables were created to assess severity levels in the mental health scales and to create odd-even parcels for use in the final structural assessment in the SEM model being tested.

Scale Reliabilities

The internal consistency for each scale and respective subscale used in this study was assessed and resulted in Cronbach’s alphas ranging from .75-.94. The concept of secondary trauma was measured using the Secondary Traumatic Stress Scale with alphas ranging from .80-.94 for the global scale and subscales indicating overall good internal consistency (Table 4.1). The concept of mental health consisted of three scales measuring depression (Patient Health Questionnaire-9), PTSD (Post-Traumatic Checklist-Civilian), and anxiety (Beck Anxiety Inventory). Cronbach’s alpha for each of these ranged from .87-.93 indicating excellent internal
Consistency (Table #). Commitment to the field of child welfare was measured using the Intent to Remain in Child Welfare scale (ITR-CW) at wave 5 and was found to have an alpha of .72 (n=395), indicating fair internal consistency. While some reports differ on the acceptable level of alpha (ranges between .70 to .95), an alpha level of .70 or higher is usually considered acceptable for most purposes and indicates that the correlations are weakened very little by measurement error (Nunnally & Bernstein, 1994; Tavakol & Dennick, 2011) (Table 4.1).

**Skewness and Kurtosis**

Skewness and kurtosis statistics were well within the range of normal for all scales, except for the BAI, which had a skewness statistic of 2.1, just over the recommended value of 1.96 (Randolph & Meyers, 2013). The kurtosis statistic for the BAI was 4.9, which is over the recommended value of 3.29 or below. Further analysis indicated that the reason for the negative skewness and kurtosis was a result of a large number of participants reporting no or mild levels of anxiety. The assessment of the remaining variables indicated that all other variables were well within an acceptable range of skewness and kurtosis.

**Univariate Analysis**

Frequencies were run for each categorical variable used in the initial, proposed SEM analysis including gender, race, whether or not a worker had experienced a personal trauma in the past year, whether or not a worker had experienced a death or severe injury of at least one child on their caseload, and whether or not a worker had experienced a personal trauma within the past year. Descriptive statistics for each continuous variable used in the SEM analysis were run to determine the mean, standard deviation, and skewness and kurtosis. These statistics are reported for age, the number of years in the full-time workforce before the current job, the STS scale and subscales, the PHQ-9, the BAI, the PTCC, and the ITR-CW scale.
**Demographic/Control Variables**

In wave 4, 657 participants were currently employed as child welfare workers in FL with 87.5% (n=575) of this sample being female and having the following racial/ethnic breakdown: 15.2% Hispanic (n=98), 35% (n=226) non-Hispanic Black, 45.6% (n=294) non-Hispanic White. The remainder of participants (n=27) reported race/ethnicity falling into either non-Hispanic Asian (.6%), non-Hispanic Native American (.3%), or non-Hispanic “other” (3.5%). The mean age for child welfare participants was 31.0 years (SD=8.9), and workers reported having an average of 8.3 years (SD=8.1) experience of full-time work before accepting their current job. Almost half of this sample, 47.5% (n=301), reported experiencing a traumatic event in their personal life over the past year (Table 4.2).

**Primary Trauma**

**Client-perpetrated violence.** Participants reported whether or not they experienced each type of client-perpetrated violence (CPV). During the past six months, 44.8% (n=282) had experienced at least one incident of non-physical violence, 78.4% (n=494) reported experiencing at least one threat, and 5.7% (n=35) reported experiencing at least one assault (Table 4.3).

**Caseload trauma.** During the past 18-months, 16.7% (n=106) of workers reported the death of a child on their caseload due to accident or illness; 7.7%, (n=49) reported the death of a child on their caseload due to maltreatment; and 29.4% (n=187) reported that at least one child on their caseload experienced a severe illness or injury (Table 4.3).

**Secondary Trauma**

The mean score for the STSS Global scale was 26.5 (SD= 15.4), and 7.9 (SD=4.6) for the Intrusion, 10.4 (SD=6.7) for the Avoidance, 8.2 (SD=5.0) for the Arousal subscales respectively. These results indicate relatively low levels of secondary traumatic stress (STS) overall using the
cutoff score of 28 for mild STS. Using suggested cutoff scores, 26.1% (n=152) of this sample met the criteria for moderate to severe STS; therefore, a majority of the sample reported either no STS symptomatology or minor STS symptomatology (See Bride, 2007. 38 is cutoff score for moderate.

**Mental Health**

**Depression.** The mean score for the PHQ-9 Scale measuring depression was 2.3 (SD=3.3) indicating generally mild levels of depression overall in this sample. When cases were categorized using suggested cutoff scores, 16.6% (n=103) of participants met the criteria for moderate to severe depression.

**Anxiety.** The mean score for the BAI was 4.5 (SD=6.4) indicating overall mild levels of anxiety in this sample. Using suggested cutoff scores, 4.3% (n=27) of this sample indicated moderate to severe levels of anxiety. The low percentage of workers reporting anxiety symptomatology is likely the reason for the positive kurtosis noted above.

**PTSD.** The mean score on the PTCC was 2.9 (SD=3.9) indicating overall low levels of PTSD symptomatology. Using the suggested cut score of 14, 3.7% (n=13) met the criteria for PTSD, indicating a relatively low number of individuals reporting problematic PTSD symptomatology (Tables 4.4)

**Commitment to the field.** Commitment to the field of child welfare was assessed using the score on the ITR_CW scale data in wave 5. The mean for this scale was 17.1 (SD=7.2). The author of this scale did not provide any information relative to cutoff scores or what levels may be interpreted as high or low levels of intent to remain in the field of child welfare, although the possible range in scores is 0-30 in this study. A mean of 17.1 appears to indicate an overall moderate level of commitment to the field in this sample.
Bivariate Analysis

Correlations

Correlations were run between all continuous variables measured in this study to determine the strengths of the relationships between them (Table 4.5).

STSS. The global score and subscale scores on the STSS correlated positively with the PHQ-9 measuring depression, the BAI measuring anxiety, and the PTCC_CC measuring PTSD symptomatology (Table 4.5). These results indicate a fairly strong positive relationship between the concept of secondary trauma and each of the mental health scales. Age and number of years of full-time work experience had a minimal and negative correlation with the global and subscale scores on the STSS, possibly indicating that maturity and/or work experience act as a small but statistically significant protective factor for secondary trauma.

Mental health. As noted above, scores on the PHQ-9, BAI, and PTCC correlated positively with STSS, as well as with each other. The correlation coefficients for the mental health scales indicated positive and moderate to strong relationships between each of the scales (r ranging from .57-.63). Again, age and number of years of full-time work were minimally and negatively correlated with each of the mental health scale scores, indicating a small but statistically significant relationship.

Commitment to the field. Commitment to the field, measured by using the sum score of the ITR_CW (Wave 5) was significantly correlated with age (r=.12, p=.01) and years of full-time work experience (r=.10, p=.05). While statistically significant, the amount of association was relatively low, as indicated by the low correlation coefficient.
T-tests

Control variables. T-tests were run to test for mean differences on the scales measuring each of the mental health variables, the global scale and subscales for the STSS, and the ITR-CW based on the categorical control variables of gender and experiencing a personal trauma in the past year. Women reported significantly higher anxiety scores compared to the men (t(205.7)= -2.4, p<.05). Gender was not a significant factor in the levels of depression, PTSD, secondary trauma, or commitment to the field in this sample. Workers who experienced a personal trauma in the past year scored significantly higher on measures of depression t(633.1)= -2.2, p<.05], PTSD [t(622.4)= -3.5, p<.05] scores, secondary trauma [t(639)= -2.8, p<.05](Tables 4.6 & 4.7).

Client perpetrated violence. T-tests were run for type of CPV (non-physical, threats, and assault) to explore differences in the mean scores of workers who experienced these kinds of primary trauma and those who did not. Workers who experienced CPV of any kind reported significantly higher levels of depression, anxiety, and PTSD when compared to workers who did not experience CPV (Tables 4.6 & 4.7). Workers who experienced non-physical violence during the past six months scored higher on the measures of depression [t(480.26)= -4.8, p<.001], anxiety[t(470)= -4.3; p<.001], and PTSD [t(470.78)= -4.8, p<.001] when compared to workers who did not. Workers who experienced threats in the past six months scored higher on the measures of depression [t(296.1)= -4.8, p<.001], anxiety [t(614)= -2.6; p<.001], and PTSD [t(257.2)= -4.6, p<.001)] when compared to those who did not. Workers reporting at least one incident of assault in the past six months scored higher on the measures of depression [t(35.5)= -2.9, p<.001], anxiety [t(34.2)= -2.4; p<.001], and PTSD [t(604)= -2.3, p<.001)] when compared to workers who did not. Experiencing client-perpetrated violence did not result in significant differences in the mean scores on the measure of commitment to the field.
**Caseload trauma.** T-tests were run for each variable representing the concept of caseload trauma to explore differences in the mean scores of workers who experienced these events and those who did not. Workers with children on their caseload that had experienced severe illness or injury scored significantly higher on the measures of depression \([t(137.7)=-2.3, p<.05]\), anxiety \([t(54.5)=-2.7, p=.01]\), and PTSD \([t(678)=-2.2, p<.05]\) when compared to the scores of workers who did not. Those with children on their caseload who had died due to maltreatment scored significantly higher on the measures of depression \([t(676)=-2.4, p<.05]\), \([t(54.5)=-2.7, p=.01]\), anxiety \([t(54.5)=-2.7, p=.01]\), and PTSD \([t(678)=-2.2, p<.05]\) when compared to the scores of workers who did not. Workers who experienced the death of a child on their caseload due to illness or injury reported significantly higher scores on the measures of depression \([t(137.7)=-2.3, p<.01]\) and anxiety \([t(679)=-2.0, p<.05]\), but not PTSD when compared to those who had not. Caseload trauma events did not result in significant differences in the mean scores on the measure of commitment to the field (Tables 4.6 & 4.7).

**ANOVA**s

One-way ANOVAS were conducted to test mean differences between scores on each of the mental health scales and the global and subscales of the STSS based on race, the only variable in this analysis with multiple categories (Table 4.9). Significant differences between the means were found based on race for the ITR-CW \((F=5.1; \text{df}=3, 257.6; p<.01)\), the STSS Global score \((F=4.1; \text{df}=3, 740; p<.01)\), the STSS Intrusion subscale \((F=3.4; \text{df}=3, 740; p<.05)\), the STSS Arousal subscale \((F=7.4; \text{df}=3, 740; p<.001)\), PTSD-CC \((F=5.9; \text{df}=3, 987; p=.001)\), and the BAI \((F=3.2; \text{df}=3, 988, 595; p<.05)\). There were not significant differences in the mean for the STSS Avoidance subscale or the PHQ-9 based on race. Post hoc analyses, specifically the
Tukey HSD test, was used to determine the statistically significant differences by race (Table 4.8).

Results indicated that White participants scored significantly higher than Black participants on the STSS global score and the scores on the intrusion and arousal subscales (Table 4.8). White participants also scored higher than Black participants on the measure of anxiety. There were no significant mean differences on the measure of depression due to race. There were significant differences on the scores for the measure of commitment to the field based on race/ethnicity ($F=3.9; df=5; p<.01$). Specifically, non-Hispanic White workers scored significantly lower on this measure than Hispanic or Black workers (Table 4.8).

**Structural Equation Modeling Analysis**

**Measurement Model**

Before testing the structural model, an assessment of the measurement model was necessary to determine how well the individual items represented the latent factors (primary trauma, secondary trauma, mental health, and commitment to the field) in the proposed model. To assess these relationships, confirmatory factor analysis (CFA) was run for each of the constructs proposed for the structural model. In order to determine model fit, the Chi-square, SRMR, RMSEA, and CFI were assessed for each construct (see Chapter 3 pp. 80-81 for a summary of fit indices).

**Primary Trauma**

**Model 1.** The concept of primary trauma was initially represented by nine CPV items and three caseload-related items related to the severe injury, illness, or death of a child due to severe injury/illness or maltreatment (all indicators are dichotomous). The results of the CFA for model 1 indicated an overall bad fit as the Chi-square test was significant ($x^2=548.32$, $p<.001$). The fit
indices for the other tests of model fit were as follows: SRMR=.09; RMSEA=.12; and CFI=.67. All three of these fit statistics indicate that the initial model did not adequately represent the concept of primary trauma. When looking at individual items, the nine CPV items were all significantly related to the concept of primary trauma, but the three caseload-related items were not.

**Model 2.** Model 2 was specified using only the nine CPV variables since the caseload related variables were not significantly related to primary trauma. The results of the CFA for model 2 also indicated an overall bad fit as the Chi-square test was significant (χ²=328.1, p<.001). The fit indices for the other tests of model fit were as follows: SRMR=.09; RMSEA=.13; and CFI=.78. While these fit statistics also indicate a fit that is not acceptable, the Chi-square statistic was reduced by 220.22, and the CFI increased by .11, indicating that this model improved the fit between the proposed model and the data. The SRMR remained the same, and the RMSEA increased by .01, which indicates a minimal change to these statistics. All nine CPV variables were significantly related to the concept of primary trauma.

**Model 3.** For the final model, the CPV variables were parceled by the type of CPV (i.e., verbal abuse, threat, or assault). In Model 3, while the Chi-square statistic was still significant, the actual statistic of 126.21 indicated a better fit when compared to the two higher Chi-square statistics from Models 1 and 2. The fit indices for the other tests of model fit were as follows: SRMR=.05; RMSEA=.08; and CFI=.92, indicating an overall good fit between the proposed model and sample data. All individual items were significantly related to their CPV type and each type was significantly related to the concept of primary trauma. Model 3 was retained to represent primary trauma for the structural analysis because of the improved fit from the other models and to parcel items for the assessment of the overall structural model (Figure 4.1).
Secondary Trauma

**Model 1.** The concept of secondary trauma is represented by 17 items from the Secondary Traumatic Stress Scale (STSS). The first model tested is a one-factor model where all 17 items load on the factor of secondary trauma. The Chi-square test of model fit is significant \( (p<.001) \) with a value of 526.62. The fit indices for the other tests of model fit were as follows: \( \text{SRMR}=.04; \text{RMSEA}=.08; \text{CFI}=.92 \). These fit indices indicate that the one-factor model is an acceptable fit to the data. All items are load significantly on the secondary trauma factor \( (p<.001) \).

**Model 2.** In Model 2, secondary trauma is modeled as a higher order factor measurement structure with the 17 items loading onto their respective subscales (arousal, intrusion, and avoidance) and those subscales loading onto the higher order factor of secondary trauma (see Figure #). The Chi-square test of model fit decreased by 12.34 \( (x^2=514.28, p<.001) \), indicating an improvement in fit. The fit indices for the other tests of model fit were as follows: \( \text{SRMR}=.04; \text{RMSEA}=.08; \text{CFI}=.92 \), which remained the same from the initial model, and also indicate an acceptable fit. Model 2 was retained to represent secondary trauma for the assessment of the overall structural model due to the decrease in Chi-square value and to parcel the items from the subscales to test the structural model (Figure 4.2).

**Caseload Trauma**

Because the three death/severe injury variables were not significantly related to the concept of primary trauma, they were removed from that measurement model; however, the loss of those variables limited their potential ability to determine the contribution of those variables to the concepts of mental health and commitment to the field. Because they did not appear to be related to primary trauma, they were tested two ways: as being a component of secondary trauma
or as another, as yet unidentified type of trauma. Adding these caseload variables to STSS did not significantly improve the overall model fit for the STSS CFA, and each of the variables had a much smaller factor loading when compared to the other components of STSS. These variables were conceptualized as caseload-related trauma and loaded as follows on this first order factor: death by illness/accident (B=.73, p<.001); death by maltreatment (B=.58, p<.001); and severe injury/illness (B=.30; p<.001). Caseload-related trauma's path coefficient was .16 (p<.01). Compared to the much higher path coefficients of the subscales of STSS: arousal (.97), intrusion (.98); and avoidance (1.0) (all p<.001). Because of the large difference in path coefficients, a separate measurement model was run for a stand-alone factor of caseload-trauma. These loadings were higher with death by accident/injury loading at .81 (p<.001), death by maltreatment loading at .53 (p<.001), and severe injury/illness loading at .29 (p<.001). This stand-alone, one-factor model, conceptualized as caseload-related trauma, was retained for testing in the final structural model (Figure 4.3).

**Mental Health**

**Model 1.** For the initial CFA for mental health, the most parsimonious model was used, a single factor with 36 indicators from the PHQ-9, the Beck Anxiety Inventory, and the Post Traumatic Checklist-Civilian (PTCC, short form) all loading on one factor hypothesized to measure mental health. In Model 1, the Chi-square statistic was significant with a value of $\chi^2=5122.4$ (p<.001). The fit indices for the other tests of model fit were as follows: SRMR=.08; RMSEA=.11; and CFI=.63. While the fit statistics for the SRMR was acceptable, the RMSEA was .02 higher than is acceptable, and the CFI was much lower than .95, which indicates a problem with the model fit. While all indicators loaded positively and with statistical
significance (p<.001 for all indicators), an overall assessment of model fit shows that Model 1 is not a good fit to the data.

**Model 2.** In order to test the factor of mental health as a second-order factor, Model 2 was run with each indicator loading onto a first-order factor represented by the scale the indicators were originally a part of (9 indicators from the PHQ-9 loading on the factor of depression, 21 indicators from the BAI loading on anxiety, and 6 indicators from the PTSD-CC loading on PTSD). Each of these first-order factors (depression, anxiety, and PTSD) then loaded onto the second-order factor of mental health. For Model 2, the Chi-square test of model fit decreased by 1432.5 (x²=3689.9, p<.001), indicating an overall improvement in fit. The fit indices for the other tests of model fit were as follows: SRMR=.07; RMSEA=.09; and CFI=.75. The SRMR and RMSEA for Model 2 indicate an acceptable fit to the data, and while the CFI statistic still does not indicate a good fit, it did improve by .12. All indicators loading positively and significantly (p<.001) on each of the first order factors (depression, anxiety, and PTSD), and each of the first order factors loaded positively and significantly on the second-order factor of mental health (Figure 4.4)

**Commitment to the Field of Child Welfare**

**Model 1.** The concept of commitment to the field of child welfare is represented by seven items from the Intent to Remain Employed in Child Welfare Scale (ITR_CW). Model 1 was run with all seven items loading onto the factor of commitment to the field. The Chi-square fit statistic was significant (x²=169.5, p<.001), potentially indicating a significant difference between the covariance structures of the proposed model and the actual data. The fit indices for the other tests of model fit were as follows: SRMR=.06; RMSEA=.14; and CFI=.9, indicating Model 1 is not a good model for the concept of commitment to the field. Items 2 and 6 did not
load significantly on the factor of commitment and had very low factor loadings. Item 2 only had a factor loading of .06 (p=.32), and item 6 had a factor loading of -.01 (p=.81).

**Model 2.** In order to more fully capture the concept of commitment, items 2 and 6 were removed for Model 2 (Item 2: “I would have a hard time finding a job outside child welfare”; Item 6: “My professional goals include working with children and families, but not necessarily in child welfare”). In Model 2, the remaining five items were run as the indicators for commitment to the field. The Chi-square fit statistic was significant ($x^2=74.5$, $p<.001$) and reduced the chi-square statistic value by 95. The fit indices for the other tests of model fit were as follows: SRMR=.04; RMSEA=.16; and CFI=.95, indicating Model 2 is an overall better fit to the data. Although the RMSEA increased minimally (.02), the SRMR and CFI both indicate a good fit. All indicators were significantly related to the factor of commitment ($p<.001$). Model 2 will be retained for the structural assessment of the full model (Figure 4.5).

**Structural Model**

CFA was used to determine that the instruments and variables used to measure each construct were a moderately good or very good fit for these data. The second step of the overall model assessment requires the testing of the structural model. This allows for an analysis of the overall covariances among the latent factors of interest and how well the proposed model fits the data (Kline, 2009). In this step, path analysis is used to describe different types of relationships in one set of multivariate regression equations: the relationships between factors (i.e., constructs of interest), the relationships between the observed variables (i.e. items from scales, single item indicators), and the relationship between the factors and observed variables not related to the factors (i.e. control variables) (Muthen, 2002). The original hypothesized structural model consisted of two first-order factors (primary trauma and commitment to child welfare) and two
second-order factors (mental health by depression, anxiety, and PTSD; and secondary trauma by
intrusion, arousal, and avoidance). After testing each component of the measurement model with
CFA, an additional first-order factor, caseload trauma, was added to the original model, because
it did not perform well as part of the concept of primary trauma. The final structural model tests
the direct relationships between primary and secondary trauma on mental health and
commitment to the field. It also tests caseload trauma as a type of trauma potentially influencing
mental health and commitment to the field, and also as a predictor of STSS. Mental health was
tested as a mediator for the relationships between primary and secondary trauma and
commitment to the field. The correlation between primary and secondary trauma was constrained
to 0 due to a lack of theoretical or empirical support that those two factors are related.

Results of Structural Model Analysis

Overall Fit

All indicators and parcels loaded significantly on their assigned construct at p<.001
(primary trauma, caseload trauma, secondary trauma, depression, anxiety, PTSD, mental health)
or p<.01 (commitment to the field). In other words, variables making up each factor were
significantly related to the appropriate factor. These results indicate that the items used to
measure variance in the concepts of interest are significantly related to their associated factors
(Tables 4.9 & 4.10).

The overall model tested the relationships of primary, secondary, and caseload trauma on
mental health and commitment to the field of child welfare, the relationship of caseload trauma
with secondary trauma, and the mediational relationship of mental health between primary and
secondary trauma and commitment. Variables controlled for with each factor included gender,
age, race, years of full-time work experience, and whether or not the worker had experienced
personal trauma in the past year. The overall model fit was assessed using the fit indices of the chi-square statistic, the SRMR, the RMSEA, and the CFI. The chi-square statistic for the model was $x^2=412.99$ (df=192; $p<.001$). The fit indices for the other tests of model fit were as follows: SRMR=.05; RMSEA=.04; and CFI=.96. The chi-square statistic is relatively low, compared to the baseline model of $x^2= 5500$ (df=189; $p<.001$), which indicates a much better fit of the tested model to the data, when compared to the baseline model. Because the chi-square statistic is sensitive to sample size, a normed chi-square test was performed to account for the large sample size. In this test, the chi-square statistic is divided by the degrees of freedom, and the suggested ratio is between two and five, depending on author recommendation (Hooper et al., 2008). In this case, the normed chi-square statistic is 2.2, which is very close to the most conservative recommendation for this test. This provides additional evidence of a good model fit. The SRMR of .05 indicates a good model fit, as does the RMSEA of .04 and the CFI at .96. Based on the examination of all fit indices, the proposed model is an overall good fit to these data (Table 4.11)

**Influence of Control Variables**

The control variables examined in the structural model included age, race, gender, years of full-time work, and whether or not a personal trauma was reported by workers in the past year. Only age (B=-.02; $p<.05$), race (B=-.3; $p<.05$), and experiencing a personal trauma in the past year (B=.13; $p<.05$), were significantly associated with the factor of primary trauma. Being younger, White or Hispanic, and experiencing a personal trauma in the past year resulted in higher levels of reporting of primary trauma. Age (B=-.06; $p<.05$), race [Hispanic (B=-2.43, $p<.05$); non-Hispanic Black (B=-2.43; $p<.05$)], and the experiencing a personal trauma (B=.1.02; $p<.01$), had a significant relationship with secondary trauma. Being younger, non-Hispanic White, and experiencing a personal trauma resulted in higher levels of reporting of secondary
trauma. None of the control variables had statistically significant relationships with the factors of caseload trauma, mental health, or commitment to the field in this sample (Table 4.12).

**Hypothesis Testing** (see Table 4.10; Figures 4.6 & 4.7)

**Hypothesis 1.1** Primary trauma has a direct, negative influence on workers’ mental health (Note: Post measurement model testing (i.e., CFA analysis), primary trauma consisted of the three types of CPV. The caseload variables load on the factor of caseload trauma in the final structural analysis).

The path between the exogenous factor of primary trauma (consisting of the three CPV types) and the endogenous factor of mental health was non-significant with a standardized path coefficient of .05 (p=.25). In this case, the null hypothesis cannot be rejected. While the relationship direction supports the hypothesis of the negative influence of primary trauma on mental health, this is not a statistically significant finding and could have occurred by chance in this sample (Table 4.10).

**Hypothesis 1.2** Secondary trauma has a direct, negative influence on workers’ mental health. The path between the exogenous factor of secondary trauma and the endogenous factor of mental health is significant with a path coefficient of .77 (p<.01). The null hypothesis is rejected and results indicate that secondary trauma has a statistically significant relationship with workers' mental health. Workers experiencing higher levels of secondary trauma experienced higher levels of mental health symptomatology in this sample (Table 4.10).

**Hypothesis 2.1:** Primary trauma has a direct, negative influence on workers’ commitment to the field of child welfare. The path between primary trauma (CPV) and commitment was significant at .17 (p<.05); however, the relationship is positive. These results
indicate that while the null hypothesis is rejected, the relationship between these two factors appears to be a positive one, and not inverse, as initially thought (Table 4.10).

**Hypothesis 2.2: Secondary trauma has a direct, negative influence on workers’ commitment to the field of child welfare.** Secondary trauma was not found to have a statistically significant relationship with workers’ commitment to the field of child welfare as indicated by a non-significant path coefficient of .03 (p=.82). In this relationship, the null hypothesis cannot be rejected (Table 4.10).

**Hypothesis 3.1: Mental health is a partial mediator of the relationship between primary trauma and commitment to the field of child welfare.** To test a mediating relationship, there needs to be a direct statistically significant relationship between primary trauma and commitment to the field of child welfare initially, so that there is a statistically significant relationship to determine a partial or complete mediation effect (Kenny, 2018). In the proposed model, results indicate that there is not a statistically significant relationship between primary trauma and commitment to be tested, therefore, the null hypothesis of no mediational relationship cannot be rejected. Additionally, mental health did not have a statistically significant direct relationship with commitment to the field as indicated by a non-significant path coefficient of -.17 (p=.30). As expected, the mediational relationship between primary trauma and commitment was not significant (B=-.01; p=.48) (Table 4.10).

**Hypothesis 3.2: Mental health is a partial mediator of the relationship between secondary trauma and commitment to the field of child welfare.** In the proposed model, results indicate that there is not a statistically significant relationship between secondary trauma and commitment to be tested (B=.03; p=.83), therefore, the null hypothesis of no mediational relationship cannot be rejected. Because there was not a significant direct relationship between
secondary trauma and commitment, mental health would not be a mediator. As expected, the mediational relationship between secondary trauma and commitment was not significant (B=-.13; p=.30) (Table 4.10).

Additional Analysis

Caseload trauma. Results from the structural analysis indicate that each of the caseload variables loaded significantly onto the factor of caseload trauma: death of a child due to accident/illness (.72, p<.001); death due to maltreatment (.60, p<.001), and severe injury/illness (.31, p<.001). Additionally, while caseload-related trauma did not appear to have any significant relationship with mental health or commitment in this model, it did significantly predict secondary trauma (B=.14, p=.01). Because caseload trauma did not have a statistically significant relationship with either mental health or commitment, additional mediational analyses were not warranted (Table 4.10).
Table 4.1 *Scale Reliabilities*

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<td>Beck Anxiety Inventory (BAI)</td>
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Table 4.2 Demographic and Control Variables

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<td></td>
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</tbody>
</table>
### Table 4.3 Primary and Caseload Trauma Frequencies

<table>
<thead>
<tr>
<th>Event</th>
<th>Percentage Experienced Event</th>
<th>Number of Participants who Experienced Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Physical Violence</td>
<td>44.8%</td>
<td>n=282</td>
</tr>
<tr>
<td>Threatened</td>
<td>78.4%</td>
<td>n=494</td>
</tr>
<tr>
<td>Assaulted</td>
<td>5.7%</td>
<td>n=35</td>
</tr>
<tr>
<td>Child-Injury/Illness</td>
<td>29.4%</td>
<td>n=187</td>
</tr>
<tr>
<td>Death of Child-Accident/Illness</td>
<td>16.7%</td>
<td>n=106</td>
</tr>
<tr>
<td>Death of Child-Maltreatment</td>
<td>7.7%</td>
<td>n=49</td>
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</table>

### Table 4.4 Workers’ Mental Health Symptomatology Using Cutoff Scores

<table>
<thead>
<tr>
<th>Type of Measure</th>
<th>Percentage Reporting any Symptomatology</th>
<th>Percentage Rated Moderate to Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>50.6% (n=315)</td>
<td>16.6% (n=103)</td>
</tr>
<tr>
<td>Anxiety</td>
<td>60.5% (n=378)</td>
<td>4.3% (n=27)</td>
</tr>
<tr>
<td>PTSD</td>
<td>56.7% (n=354)</td>
<td>3.7% (n=13) *</td>
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</table>

*using the recommended cut score of 14, 3.7% met criteria for PTSD*
Table 4.5 *Significant Correlations*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Age</th>
<th>Years FT</th>
<th>PHQ-9</th>
<th>BAI</th>
<th>PTCC</th>
<th>STS- Global</th>
<th>STS- Intrusion</th>
<th>STS- Avoidance</th>
<th>STS- Arousal</th>
<th>ITR-CW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
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<td>-0.22*</td>
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<td>.54**</td>
<td>.58**</td>
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<td>.63**</td>
<td>.64**</td>
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<td>STS- Global</td>
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<td>-</td>
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<td>.59**</td>
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<td>.96**</td>
<td>.94**</td>
<td>-0.19**</td>
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<td>Global</td>
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Table 4.5 *Continued*

<table>
<thead>
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<th>Variable</th>
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<th>Years</th>
<th>PHQ-9</th>
<th>BAI</th>
<th>PTCC</th>
<th>STS-Global</th>
<th>STS-Intrusion</th>
<th>STS-Avoidance</th>
<th>STS-Arousal</th>
<th>ITR-CW</th>
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<tr>
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<td>-</td>
<td>.51**</td>
<td>.58**</td>
<td>.62**</td>
<td>.92**</td>
<td>.82**</td>
<td>.83**</td>
<td>-.18**</td>
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<tr>
<td>STS-Avoidance</td>
<td>-.18**</td>
<td>-</td>
<td>.56**</td>
<td>.54**</td>
<td>.63**</td>
<td>.96**</td>
<td>.82**</td>
<td>.85**</td>
<td>-.19**</td>
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<tr>
<td></td>
<td>.16**</td>
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<tr>
<td>STS-Arousal</td>
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<td>-</td>
<td>.54**</td>
<td>.58**</td>
<td>.64**</td>
<td>.94**</td>
<td>.83**</td>
<td>.85**</td>
<td>-.16**</td>
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<td></td>
</tr>
<tr>
<td>ITR-CW</td>
<td>.07</td>
<td>.06</td>
<td>-.01</td>
<td>-.09*</td>
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<td>-.19**</td>
<td>-.18**</td>
<td>-.19**</td>
<td>-.16**</td>
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</tr>
</tbody>
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110
Table 4.6 *Independent T-tests for Scales by Type of Primary/Caseload Trauma*

<table>
<thead>
<tr>
<th>Scale Scores by Event</th>
<th>Non-Physical Threat</th>
<th>Assault Severe Injury/Illness-Child on Caseload</th>
<th>Death of Child-Accident/Illness</th>
<th>Death of Child-Maltreatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHQ-9</td>
<td>t(480.26)=-4.8**</td>
<td>t(296.1)=-4.8**</td>
<td>t(137.7)=-2.3*</td>
<td>t(676)=2.4*</td>
</tr>
<tr>
<td>BAI</td>
<td>t(470)=-4.3**</td>
<td>t(614)=-2.6**</td>
<td>t(679)=-2.0*</td>
<td>t(54.5)=-2.7**</td>
</tr>
<tr>
<td>PTCC</td>
<td>t(470.78)=-4.8**</td>
<td>t(257.2)=-4.6**</td>
<td>t(678)=-1.9*</td>
<td>t(678)=-2.2*</td>
</tr>
</tbody>
</table>

*Note: **p < 0.01, *p < 0.05, Not significant.*
Table 4.7 Mean Differences on Mental Health Scales by Primary Trauma/Caseload Trauma
(Note: Mean difference is between those who experienced the event compared to those who did not)

<table>
<thead>
<tr>
<th>Event</th>
<th>Depression</th>
<th>Anxiety</th>
<th>PTSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Physical</td>
<td>1.0***</td>
<td>2.3***</td>
<td>1.5***</td>
</tr>
<tr>
<td>Threats</td>
<td>1.3***</td>
<td>Not Significant</td>
<td>1.5***</td>
</tr>
<tr>
<td>Assault</td>
<td>2.6**</td>
<td>4.5*</td>
<td>1.6*</td>
</tr>
<tr>
<td>Child-Severe Injury/Illness</td>
<td>.8*</td>
<td>Not Significant</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Death of Child-Accident/Illness</td>
<td>.8*</td>
<td>1.5*</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Death of Child-Maltreatment</td>
<td>1.3*</td>
<td>3.3*</td>
<td>Not Significant</td>
</tr>
</tbody>
</table>

* p<.05
** p<.01
*** p<.001
Table 4.8 ANOVA Comparisons of Scale Scores by Race

NOTE: (Depression and STSS-Avoidance not included due to non-significant findings)

ANOVA Comparisons of Anxiety Scores by Race

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>NH White</th>
<th>NH Black</th>
<th>Hispanic</th>
<th>Other Race</th>
</tr>
</thead>
<tbody>
<tr>
<td>NH White</td>
<td>273</td>
<td>5.4</td>
<td>6.3</td>
<td></td>
<td>p&lt;.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NH Black</td>
<td>214</td>
<td>3.7</td>
<td>6.8</td>
<td></td>
<td>p&lt;.05</td>
<td></td>
<td></td>
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<tr>
<td>Hispanic</td>
<td>89</td>
<td>4.4</td>
<td>6.1</td>
<td></td>
<td></td>
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<tr>
<td>Other Race</td>
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<td>6.7</td>
<td>8.5</td>
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</table>

ANOVA Comparisons of PTSD Scores by Race

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<th>Group</th>
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<th>Mean</th>
<th>SD</th>
<th>NH White</th>
<th>NH Black</th>
<th>Hispanic</th>
<th>Other Race</th>
</tr>
</thead>
<tbody>
<tr>
<td>NH White</td>
<td>273</td>
<td>3.4</td>
<td>4.0</td>
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<td>p&lt;.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NH Black</td>
<td>212</td>
<td>2.3</td>
<td>3.4</td>
<td>p&lt;.05</td>
<td></td>
<td></td>
<td>p&lt;.01</td>
</tr>
<tr>
<td>Hispanic</td>
<td>89</td>
<td>2.8</td>
<td>3.6</td>
<td>p&lt;.05</td>
<td></td>
<td></td>
<td>p&lt;.05</td>
</tr>
<tr>
<td>Other Race</td>
<td>26</td>
<td>5.3</td>
<td>5.9</td>
<td>p&lt;.01</td>
<td>p&lt;.05</td>
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<td></td>
</tr>
</tbody>
</table>
Table 4.8 Continued

ANOVA Comparisons of *STSS-Global* Scores by Race

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>NH White</th>
<th>NH Black</th>
<th>Hispanic</th>
<th>Other Race</th>
</tr>
</thead>
<tbody>
<tr>
<td>NH White</td>
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<td>28.8</td>
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<td>85</td>
<td>25.4</td>
<td>14.9</td>
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<tr>
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</tbody>
</table>

ANOVA Comparisons of *STSS-Intrusion* Scores by Race

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<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>NH White</th>
<th>NH Black</th>
<th>Hispanic</th>
<th>Other Race</th>
</tr>
</thead>
<tbody>
<tr>
<td>NH White</td>
<td>259</td>
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<td>4.6</td>
<td></td>
<td></td>
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<td>p&lt;.01</td>
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<tr>
<td>NH Black</td>
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<td>7.2</td>
<td>4.7</td>
<td></td>
<td></td>
<td></td>
<td>p&lt;.01</td>
</tr>
<tr>
<td>Hispanic</td>
<td>85</td>
<td>7.7</td>
<td>4.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Race</td>
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<td>9.3</td>
<td>5.6</td>
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</table>
Table 4.8 Continued

ANOVA Comparisons of *STSS-Arousal* Scores by Race

<table>
<thead>
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<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Tukey’s HSD Comparisons</th>
</tr>
</thead>
<tbody>
<tr>
<td>NH White</td>
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<td>10.9</td>
<td>6.8</td>
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<tr>
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<td>10.0</td>
<td>7.0</td>
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<tr>
<td>Hispanic</td>
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<td>10.0</td>
<td>6.5</td>
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</tr>
<tr>
<td>Other Race</td>
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<td>7.3</td>
<td>p&lt;.05</td>
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</table>

ANOVA Comparisons of *ITR-CW Scores* by Race

<table>
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<tr>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Tukey’s HSD Comparisons</th>
</tr>
</thead>
<tbody>
<tr>
<td>NH White</td>
<td>270</td>
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<td>p&lt;.01</td>
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<tr>
<td>NH Black</td>
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<td>7.3</td>
<td>p&lt;.01</td>
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<td>7.1</td>
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</table>
Table 4.9 *Factor Loadings for Final Structural Model*

<table>
<thead>
<tr>
<th>Latent Variables</th>
<th>Indicators</th>
<th>Parameter Estimates</th>
<th>SE</th>
<th>p value</th>
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<tr>
<td><strong>FACTOR</strong></td>
<td><strong>LOADINGS ($\lambda$)</strong></td>
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<td>Caseload Trauma</td>
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<td>Death-Maltreatment</td>
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<td>.06</td>
<td>&lt;.001</td>
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Table 4.9 *Continued*

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<th>Indicators</th>
<th>Parameter Estimates</th>
<th>SE</th>
<th>p value</th>
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<td>.01</td>
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<td>BAI_Odd Parcel</td>
<td>.92</td>
<td>.01</td>
<td>&lt;.001</td>
</tr>
<tr>
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<td>.01</td>
<td>&lt;.001</td>
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<tr>
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<td>PTCC_Odd Parcel</td>
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<td>.01</td>
<td>&lt;.001</td>
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<td><strong>Mental Health</strong></td>
<td>Depression</td>
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<td>.02</td>
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</table>
Table 4.9 *Continued*

<table>
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<tr>
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<th>Indicators</th>
<th>Parameter Estimates</th>
<th>SE</th>
<th>p value</th>
</tr>
</thead>
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<td>.09</td>
<td>.02</td>
<td>&lt;.001</td>
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<td>Commitment</td>
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<td>ITR-CW Odd Parcel</td>
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Table 4.10 *Path Coefficients between Factors in Final Structural Model*

<table>
<thead>
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<th>PATH COEFFICIENTS (γ)</th>
<th>Parameter Estimates</th>
<th>SE</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caseload Trauma → Commitment</td>
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<td>.10</td>
<td>.13</td>
</tr>
<tr>
<td><em>Primary Trauma → Commitment</em></td>
<td>.17</td>
<td>.10</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Secondary Trauma → Commitment</td>
<td>.03</td>
<td>.12</td>
<td>.82</td>
</tr>
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Table 4.11 *Structural Model Fit Indices*

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Table 4.12 *Influence of Significant Control Variables on Factors*

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Table 4.12 *Continued*

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**Mental Health**

No significant relationships
Figure 4.1 Primary Trauma Measurement Model
Figure 4.2 Secondary Trauma Measurement Model
Figure 4.3 Caseload Trauma Measurement Model
Figure 4.4 Mental Health Measurement Model
Figure 4.5 Commitment to the Field Measurement Model
Figure 4.6 *MPlus Final Structural Model*
Figure 4.7 Path Analysis Results
CHAPTER 5

DISCUSSION

Overview of Results

This study yielded important information about the prevalence and effects of different types of trauma that frontline child welfare workers face as a part of their job. Initially conceptualized as primary and secondary trauma, a third trauma construct emerged: caseload trauma. Caseload trauma consisted of events related to the death or severe injury of a child on a worker’s caseload. Structural equation modeling (SEM) analysis results indicated that only primary trauma (consisting of three types of client-perpetrated violence) had a statistically significant relationship with commitment to the field of child welfare. Secondary trauma had a strong, statistically significant relationship with mental health, and was predicted by caseload trauma. Mental health did not have a significant influence on commitment to the field. The model tested was based on conservation of resources theory and identity theory and provided a comprehensive look at the trauma exposure of child welfare workers and its effects on personal and work-related outcomes. These results may be used to inform agency policy and practice related to the training, preparation, and support of frontline child welfare workers.

Primary Trauma

Primary trauma was conceptualized as three types of client perpetrated violence (CPV) and experienced at varying levels in this sample that was somewhat consistent with existing prevalence data relating to CPV in child welfare work. Threat emerged as the most reported form of CPV in this sample (78.4%), followed by non-physical violence (44.8%), and then assault (5.7%). Study results differ from previous research in that non-physical violence is usually reported to be the most commonly experienced type of CPV, followed by threats, and then
assault (Enosh, 2015; Kim, 2013; Littlechild, 2016). The amount of reported non-physical abuse is lower, and the number of threats in this study is higher when compared to past studies (Horejsi, 1994; Hunt et al., 2016; Littlechild, 2005a). These results may differ from earlier studies because workers in this sample had all remained employed for 18 months. Workers who stay until this point may interpret experiences of CPV differently than those who have already left. It is possible they frame these experiences as an occupational hazard instead of a personal attack. This explanation is supported by identity theory which posits that the meaning of an event is more influential than the event itself. Workers who remain employed in the field may have integrated the non-physical violence events as a “part of the job” or a result of the context and power differential inherent in the worker/client relationship.

Threats were reported more frequently and had a larger mean difference on the measure of anxiety when compared to the other types of CPV. This finding is likely due to threats being more specific and include intent to commit an act, when compared to non-physical violence, such as swearing at the worker. Threats are inherently different from non-physical violence in that they often contain a specific action to be taken against the worker, the worker’s family, or the agency. Threats are more likely to be specifically remembered than non-physical violence, which can be vague and do not express intent to harm.

Workers who experienced assault in the past six months reported larger mean differences on the measures of depression, anxiety, and PTSD when compared to workers who had not experienced an assault. The effect of threat on anxiety levels, and assault on depression, anxiety, and PTSD, influenced worker mental health almost twice as much as non-physical violence when looking at overall mean differences between groups. This indicates that threat and assault
have more serious implications for worker mental health when compared to non-physical violence.

Primary trauma did not have a statistically significant relationship with worker mental health in the structural model but did have a small, but statistically significant relationship with workers’ commitment to the field of child welfare (B=.17, p<.05). Contrary to the hypothesized relationship, experiencing primary trauma predicted higher levels of commitment in this sample. This finding could be explained by the emphasis on meaning found in the influence of identity theory on this model. Commitment to the field was measured at wave 5 (2 years post-hire). Workers who remain employed in child welfare at two years may ascribe different meanings to primary trauma or incorporate those incidents into their work experience differently when compared to those who left the field earlier on or had higher levels of commitment to the field overall. This finding does not conform to the original stress-response framework of this study. Due to the relatively small influence of primary trauma on commitment, it is likely there are several other variables that should be factored into future examinations of this relationship (i.e., organizational support, individual coping style, etc.).

Secondary Trauma

In this sample, 26% of workers met the criteria for moderate to severe secondary trauma symptomatology. This result is in the mid-range for secondary trauma prevalence in other studies which has been reported to range between 15%-50% (Brady, 2017; Bride et al., 2004, Bride et al., 2007, Conrad & Kellar-Guenther, 2006). The mean score of 26.5 was just below the suggested cutoff score of 28. On average, workers did not fully meet the score necessary for clinically significant secondary trauma symptoms, but that the mean score was very close to that level. These results indicate that secondary trauma is a concern early on in a worker’s career.
Scores on the STSS correlated fairly strongly with the measures of mental health, with the correlation coefficients ranging from .57-.67. Preliminary analyses suggested a moderately strong relationship between workers experiences of secondary trauma and their mental health status. There are not many studies that look directly at the link between secondary trauma and mental health, and those that do often use general psychological distress as the dependent variable as opposed to examining specific diagnoses (e.g., Corneill & Meyers, 1999; McFadden et al., 2015). The current study’s focus on specific diagnoses allowed for a more nuanced look at how secondary trauma influences mental health when compared to previous studies.

The confirmatory factor analysis (CFA) supported the same factor structure as the originally tested STSS, with a global construct of secondary trauma being comprised of three types of symptomatology: arousal, avoidance, and intrusion symptoms. The avoidance type of secondary trauma symptoms was the most commonly reported followed by arousal and then intrusion. Secondary trauma was significantly predicted by caseload trauma events and significantly predicted workers’ mental health. There are not any previous studies that examine these relationships simultaneously; however, these results provide support for earlier theories behind secondary trauma which posit that exposure to the trauma of clients is associated with secondary trauma, and that secondary trauma influences workers’ mental health (Bride et al., 2004; Figley, 2013; McFadden et al., 2015; Salloum et al., 2015). Early studies did not use a specific measure of secondary trauma but used measures for PTSD related to work in order to assess secondary trauma levels. Current study results indicate a moderately strong association between secondary trauma and PTSD, but not much more than the relationships between secondary trauma and depression or anxiety. This provides support for the theory that secondary trauma, while similar to PTSD, is in fact, a separate concept. Workers who remained employed
in the field for 18-months may perceive secondary trauma differently or use different coping methods when compared to those who left earlier on in their careers. Secondary trauma was a strong predictor of worker mental health (B=.77, p<.01), but did not have a significant influence on commitment to the field.

While secondary trauma did not reduce workers’ commitment to the field as hypothesized, there was some evidence to support conservation of resources (COR) theory. Specifically, the idea that certain events workers’ experience in their jobs are likely to tax whatever resources they have available. These resources (i.e., self-efficacy, positive coping abilities) are likely to be depleted as workers are exposed to the trauma of the children on their caseloads. When these resources run low, workers are more likely to experience psychological distress and begin exhibiting withdrawal behaviors (Hobfoll, 1989; Hobfoll, 2001). The results of this study support COR theory because avoidance symptoms were the most commonly reported of the three types (intrusion, avoidance, and arousal). Instead of influencing commitment to the field, these withdrawal behaviors may have manifested as avoidance behaviors that are a component of secondary trauma.

**Caseload Trauma**

Caseload trauma is not often addressed in the literature. Instead, secondary trauma, the potential result of caseload trauma, is discussed. Caseload trauma emerged in this study as a unique form of trauma contributing to workers' levels of secondary trauma symptoms. It was assessed by asking three dichotomous questions related to the death, injury, or severe illness of a child on the worker’s caseload during the past 18 months. These events occurred for a considerable number of workers [7.7% (n=49) death due to maltreatment; 16.7% (n=106) death due to accident/injury; 29.4% (n=187) severe illness/injury]. It is possible that some workers
reported both severe injury/illness and death as distinct events although part of the same case, which may have resulted in some measurement error. In order to provide some external validation for these findings, records of the annual child death rate in Florida for 2017 and 2018 (the timeframe for this wave of data collection) were examined. Annual child death reports for Florida indicate that there were 461 child deaths in 2017 and 438 in 2018 (Florida Department of Children and Families, 2019). This represents all child deaths in the state of Florida, whether or not the child was involved in the child welfare system. These data are not reported in a way that allowed for a more precise examination of child deaths within the child welfare system, however, 383 child deaths occurred during the data collection period for wave 4 (5/2017-2/2018). Based on these numbers, the prevalence data for child deaths in this study does appear to be reasonable.

Current study results provide some idea of the potential frequency of these events, which are not often discussed specifically in the child welfare literature, especially concerning the effects on workers' mental health and well-being. These events are likely to cause stress in several ways including exposure to the child/family's injury and trauma, and the scrutiny and blame that often accompanies the severe injury or death of a child while on a worker’s caseload. Results of this study indicate caseload trauma events are critical to examine in the context of workers’ personal and occupational outcomes.

Caseload trauma was a significant predictor of workers’ reported levels of secondary trauma symptomatology (B=.14, p=.01), indicating that these experiences are the kind of events that cause secondary traumatic stress symptoms. In this model caseload trauma is represented by three items related to child injury/death. Future research should explore a wider range of events/situations common in child welfare work to see what kind of events are associated with
caseload trauma and predict workers' levels of secondary trauma. Caseload trauma did not have a direct or indirect relationship with commitment to the field.

**Mental Health**

Moderate to severe levels of anxiety and PTSD were found in 4.3% and 3.7% of these child welfare workers. Depression levels for workers were higher, with 16.6% reporting moderate levels of depression. This is still significant number of current workers who report levels of depression that are likely to influence their well-being and effectiveness both on and off the job. The prevalence of moderate to severe depression was twice as high when compared to Griffiths et al.’s (2018) study of psychological distress where only 8% of workers reported depression; however, anxiety levels in this sample are lower than in the 2018 study.

Structural model results revealed a significant relationship between secondary trauma and mental health (B=.77, p<.01), which indicates a large predictive relationship. These findings support the hypothesis that secondary trauma negatively influences workers’ mental health. This is consistent with both theoretical supposition and empirical evidence that exposure to the trauma of others is likely to have a negative influence on workers’ mental health. It is important to acknowledge that there were no baseline mental health scores with which to compare the wave 4 data; therefore, the results only provide an indication of mental health at 18-months post-hire, and not evidence for increased or decreased mental health symptomatology of the workers over time. Mental health did not have a statistically significant relationship to commitment to the field, directly, or indirectly as a mediator between primary and/or secondary trauma and commitment.
Commitment to the Field

Wave 5 data were used to assess workers’ level of commitment to the field and to provide a way to test mental health as a mediating factor in this model. Workers’ mean scores fell into a mid-range for this concept, indicating an overall moderate level of commitment to the field for workers still employed in child welfare at two years post-hire. The only significant predictor of commitment to the field was primary trauma (B=.17, p<.05). Interestingly, the relationship between these two constructs was the opposite of the original hypothesis. It is possible that workers who remain in child welfare at two years post-hire have a high enough level of commitment to the field that experiences of primary trauma do not negatively influence it. The effect size for this relationship is relatively small and warrants further exploration, perhaps at different time points to determine whether there is a change over time.

Influence of Demographic Factors

Workers in this sample were primarily female and non-Hispanic Black or non-Hispanic White. The mean age for workers was 31 years, with approximately eight years of prior full-time work experience. Bivariate results indicate that age and number of years of full-time work experience had a significant association with secondary trauma, mental health, and commitment to the field. Gender was only significantly associated with anxiety in this sample, while race was significantly associated with secondary trauma (specifically the intrusion and arousal subscales), anxiety, PTSD, and commitment to the field. White participants scored significantly higher than Black participants on secondary trauma and anxiety, but significantly lower than Black or Hispanic participants on commitment to the field. There may be racial or ethnic differences in the way certain events are perceived or different coping strategies used in response to trauma exposure. It is also possible these findings are a result of the measures used. The BAI and STSS
may be more sensitive to symptoms White respondents are likely to report and neglect to capture symptoms or experiences of Black and Hispanic workers. These results indicate a need to test and to use culturally sensitive measures that represent the experiences of different races/ethnicities equally well.

**Contribution of This Study**

This research contributes three unique advances in the understanding of trauma exposure and its influence on child welfare workers. First, primary trauma was examined as a predictive factor for mental health and commitment to the field of child welfare. Most of the research related to primary trauma or client-perpetrated violence is prevalence data. Rarely has it been examined for its impact on workers’ mental health or commitment to the field of child welfare. This research has taken the exploration of work-related violence a step further by examining how it impacts workers across individual- and work-related outcomes. Secondly, most child welfare research on secondary trauma only addresses prevalence and severity. Current study results identify specific types of caseload-related events associated with the death or injury of a child that predict secondary trauma and examine the influence of secondary trauma on specific mental health diagnoses.

Finally, mental health is rarely examined in child welfare workers and the few studies that do address it discuss general psychological distress. Current study results provide prevalence and severity data for three diagnoses (depression, anxiety, and PTSD), and explore trauma-related antecedents for workers’ development of these diagnoses. Commitment to the field of child welfare was explored as an exogenous factor related to mental health, and while this particular relationship was found to be non-significant, other work-related outcomes should be explored. This study provides insight into the mental health status of child welfare workers and
highlights the need to consider mental health as an important factor in child welfare workforce studies moving forward.

**Implications for Social Work Policy and Practice**

Results of this study have implications for administrative practice, resource expenditures, training, and intervention development in the field of social work generally and child welfare practice specifically. Many social work positions have the potential to expose workers to trauma, but those in child welfare will inevitably face trauma as a part of their jobs.

Examining work-related trauma exposure and its effects on workers’ well-being and effectiveness are important within the context of high rates of child welfare worker turnover. Agencies should recognize and address work-related trauma exposure and its influence on personal and professional outcomes such as commitment to the field, intent to leave, and turnover. While agency administrators and supervisors may not be able to intervene when workers leave for personal reasons, they can respond to issues related to trauma-exposure on the job.

An implication of understanding the role of primary, secondary, and caseload trauma in workers' turnover decisions is that intervention is possible. Factors related to trauma exposure and, ultimately, turnover lend themselves to intervention. Interventions that decrease or mitigate the effects of trauma exposure and increase job satisfaction, (i.e., stress management training, more job autonomy, and provision of more instrumental and social support), should be explored in future research. Previous research indicates that intent to leave predicts job turnover, so there is a period between when workers consider leaving and when they actually leave, providing a timeframe during which intervention may positively influence their job decisions. Additionally,
an increase in training and in discussion and supervision related to these challenges may increase worker knowledge and self-efficacy before trauma exposure negatively influences workers.

There are very few clear policies and protocols related to workers’ experiences of STS and CPV. Creation and implementation of policies that specifically address these issues can provide additional recognition of and support for these challenges. Some suggestions of training and policies related to CPV include specific training on home visits with clients, how to assess for and diffuse threatening situations, and implementation of a "buddy system" when risk is documented previously. There are apparent gaps in worker preparation for dealing with CPV. Rey (1996) argued that a comprehensive program should include discussion of the following areas:

- theory of cases of CPV
- prevalence of the problem
- how to assess for the likelihood of client violence
- awareness of self-reactions and self-control
- techniques for de-escalation of client violence
- physical control
- discussion of a safe office space
- procedures for working with unknown or potentially volatile clients
- safety procedures for home visits
- debriefing and support of workers struggling with repercussions exposure to trauma
- clear agency policy for preventing, reporting, managing trauma exposure
- follow-up related to trauma exposure
Trauma exposure is inevitable in the field of child welfare; however, there is much room for improvement and the addition of increased education, training, policy, and support. By contributing to the support and well-being of child welfare workers, social workers can potentially influence outcomes related to worker turnover and retention, and therefore, outcomes related to at-risk children and their families.

**Limitations**

This study examined three waves of data from a larger, longitudinal study. One limitation, common in longitudinal studies, was the attrition or potential for missed measurement for some participants. Overall, response rates were high, but there was attrition between wave 1 and wave 4, and then from wave 4 to wave 5 which limited the total number of participants included in the final SEM analysis. Additionally, these data come from 18-months and two years post-hire, which may bias the sample toward workers with higher levels of commitment to the field. Workers with lower levels of commitment may have already left. This limitation also applies to the examination of mental health and secondary trauma. Workers with higher levels of depression, anxiety, PTSD, and/or secondary trauma may have already left their child welfare jobs, therefore biasing this sample toward workers with lower levels of mental health symptomatology and secondary trauma.

The operationalization of trauma typologies was also limited. Each item contributing to the concepts of primary trauma and caseload trauma was a dichotomous variable. Therefore, there was no way to determine how many times in the past six months a worker experienced each type of client-perpetrated violence or the severe injury or death of a child on his/her caseload. This conceptualization limits the ability to assess for level of severity or number of times an event occurred for each worker.
In order to control the influence of workers’ experiences of personal trauma, one item measuring whether or not workers had experienced a personal trauma in the last year was asked at wave 4. This item was used as a control variable in the SEM analysis to attempt to separate the effects of personal trauma from work-related trauma. However, the use of a single dichotomous variable limits the ability to determine the number or perceived severity of the personal trauma(s), or what specific effects personal trauma may have had on the worker that may have influenced mental health or commitment to the field. There are also potential measurement limitations associated with the variable asking about whether a worker had a child on their case that had experienced either severe illness or injury. This item does not specify whether or not the illness/injury was associated with maltreatment or neglect, therefore workers reporting this kind of caseload trauma may or may not be reporting a kind of maltreatment on their caseloads. Because of this potential for measurement error, the rate of reported illness/injury relating to caseload trauma may be inflated.

Another limitation is that worker mental health was measured at only one time point, 18-months post-hire. Therefore, there was no baseline measure of mental health and it is unknown whether or not mental health changed over time or whether any changes were due to being employed in the field. This makes it difficult to further explore the relationship between secondary trauma and mental health. Future research should prioritize longitudinal examination of worker mental health.

**Future Directions**

Additional research is needed to move forward with some of the findings of this study. The results related to correlates of secondary trauma, anxiety, and commitment to the field
indicate that race and ethnicity should be examined more closely to determine their role in these relationships. Longitudinal research examining how trauma exposure influences commitment to the field over time may help explain the slight, positive relationship found in this study between primary trauma and commitment.

Exploring the differences between constructs closely related to secondary trauma (i.e., vicarious trauma, compassion fatigue) and their relation to mental health is another area for future examination. Previous findings related to secondary trauma are not clear or consistent and indicate a need for more research that clearly conceptualizes the construct and explores how secondary trauma influences worker outcomes. It is difficult to advocate for the implementation of prevention and treatment of secondary trauma in the workplace without a clear understanding of the concept. Future research could focus on the different events that contribute to secondary trauma and the types of secondary traumatic stress symptoms workers experience.

A longitudinal view of mental health in the turnover and retention decisions of child welfare workers is an additional area for exploration. While results indicate that mental health does not play a significant role in commitment to the field, it is important to continue to explore workers’ mental health over time and how mental health may influence other work-related outcomes. Workers who struggle with secondary traumatic stress symptoms or other mental health problems may not be able to provide the same level of services to the children and families on their caseload, but this relationship has not been examined in the literature. Further examination of the characteristics of workers who leave or stay by examining mental health symptomatology and coping strategies by comparing different waves of data (i.e., comparing wave 4 with wave 7) is necessary for a better understanding of protective and risk factors relating to trauma exposure of child welfare workers.
Conclusion

This study provided a comprehensive view of child welfare workers’ exposure to trauma as a part of their jobs. Creating typologies to distinguish different kinds of trauma allowed for a nuanced look at workers’ experiences and how they influence outcomes related to the mental health of workers and commitment to the field. Future research should focus on exploring these relationships longitudinally and using qualitative research methods to explore workers’ experiences in more depth. Special attention to cultural and ethnic differences in workers' perceptions and experiences of trauma at work and related outcomes is necessary for future research.
APPENDIX A

FSU INSTITUTIONAL REVIEW BOARD APPROVAL FOR RESEARCH

Florida State University
Office of the Vice President For Research
Institutional Review Board
Human Subjects Office
humansubjects@fsu.edu/850-644-8673

APPROVAL MEMORANDUM

Date: 11/28/2018

To: Erin King
Address: 10160 Candlestick Lane, Pensacola, FL 32514
Department: SOCIAL WORK

From: Florida State University Institutional Review Board (IRB)
Re: Use of Human Subjects in Research

An Exploration of the Effects of Primary and Secondary Trauma on Child Welfare Workers™ Mental Health and Commitment to the Field

The application that you submitted to this office regarding the use of human subjects in the proposal referenced above has been reviewed by the Florida State University Institutional Review Board. Your project is determined to be Expedited per 45 CFR § 46.110(6) and has been approved by an expedited review process.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals that may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 11/27/2019 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.
You are advised that any change in protocol for this project must be reviewed and approved by the IRB prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the IRB. In addition, federal regulations require that the Principal Investigator promptly report, in writing any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chair of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to ensure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protections. The Assurance Number is FWA00000168/IRB number IRB00000446.

Cc: Dina Wilke, Advisor
HSC No. 2018.25954
APPENDIX B

EXPOSURE TO CLIENT PERPETRATED VIOLENCE CHECKLIST

We are interested in learning more about any violence or threats of violence you may have experienced by a client or a member of the client's household. Please consider the following examples of workplace violence and indicate if you had this experience **in the past 6 months**.

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yelled at, shouted at, or sworn at by a client or other household member.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Threatened by a client without physical contact.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Threatened with damage or theft of your personal or workplace property.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Threatened with a weapon.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Personal property or workplace property damaged.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Physically assaulted by a client or other household member without physical injury.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Assaulted by a client or other household member resulting in mild soreness or minor injury.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Assault that led to pain or soreness that lasted overnight, but no visit to a physician or the ER.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Assault that required an emergency room or physician visit.</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
APPENDIX C

SECONDARY TRAUMATIC STRESS SCALE

The following is a list of statements made by persons who have been impacted by their work with traumatized clients. Read each statement and indicate how frequently the statement was true for you in the past seven (7) days by circling the corresponding number next to the statement.

NOW: “Client” is used to indicate persons with whom you have been engaged in a helping relationship. You may substitute another noun that better represents your work, such as consumer, patient, recipient, etc.

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Occasionally</th>
<th>Often</th>
<th>Very Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I felt emotionally numb...............................</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. My heart started pounding when I thought about my work with clients...............................</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. It seemed as if I was reliving the trauma(s) experienced by my client(s)...............................</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. I had trouble sleeping...............................</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. I felt discouraged about the future...............................</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. Reminders of my work with clients upset me...............................</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. I had little interest in being around others...............................</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. I felt jumpy...............................</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. I was less active than usual...............................</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. I thought about my work with clients when I didn’t intend to...............................</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. I had trouble concentrating...............................</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. I avoided people, places, or things that reminded me of my work with clients...............................</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13. I had disturbing dreams about my work with clients...............................</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14. I wanted to avoid working with some clients...............................</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15. I was easily annoyed...............................</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>16. I expected something bad to happen...............................</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>17. I noticed gaps in my memory about client sessions...............................</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

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Intrusion Subscale (add items 2, 3, 6, 10, 13) In Intrusion Score
Avoidance Subscale (add items 1, 5, 7, 9, 12, 14, 17) In Avoidance Score
Arousal Subscale (add items 4, 8, 11, 15, 16) In Arousal Score
TOTAL (add Intrusion, Arousal, and Avoidance Scores) In Total Score

APPENDIX D

PATIENT HEALTH QUESTIONNAIRE-9
# APPENDIX E

## BECK ANXIETY INVENTORY

**Beck Anxiety Inventory**

Below is a list of common symptoms of anxiety. Please carefully read each item in the list. Indicate how much you have been bothered by that symptom during the past month, including today, by circling the number in the corresponding space in the column next to each symptom:

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Not At All</th>
<th>Mildly but it didn’t bother me much</th>
<th>Moderately – it wasn’t pleasant at times</th>
<th>Severely – it bothered me a lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numbness or tingling</td>
<td>0</td>
<td>1</td>
<td>?</td>
<td>3</td>
</tr>
<tr>
<td>Feeling hot</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Wobbliness in legs</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Unable to relax</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Fear of worst happening</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Dizzy or lightheaded</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Heart pounding/racing</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Unsteady</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Terrified or afraid</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Nervous</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Feeling of choking</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Hands trembling</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Shaky / unsteady</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Fear of losing control</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Difficulty in breathing</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Fear of dying</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Scared</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Indigestion</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Dizzy or lightheaded</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Face flushed</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Hot/cold sweats</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

| Column Sum                    |            |                                     |                                          |                                |

**Scoring** - Sum each column. Then sum the column totals to achieve a grand score. Write that score here ________.

**Interpretation**

A grand sum between 0 – 21 indicates very low anxiety. That is usually a good thing. However, it is possible that you might be unrealistic in either your assessment which would be denial or that you have learned to “mask” the symptoms commonly associated with anxiety. Too little “anxiety” could indicate that you are detached from yourself, others, or your environment.

A grand sum between 22 – 35 indicates moderate anxiety. Your body is trying to tell you something. Look for patterns as to when and why you experience the symptoms described above. For example, if it occurs prior to public speaking and your job requires a lot of presentations you may want to find ways to calm yourself before speaking or let others do some of the presentations. You may have some conflict issues that need to be resolved. Clearly, it is not “parac” time but you want to find ways to manage the stress you feel.

A grand sum that exceeds 35 is a potential cause for concern. Again, look for patterns or times when you tend to feel the symptoms you have circled. Persistent and high anxiety is not a sign of personal weakness or failure. It is, however, something that needs to be proactively treated or there could be significant impacts to you mentally and physically. You may want to consult a counselor if the feelings persist.
APPENDIX F

THE POST-TRAUMATIC CHECKLIST-CIVILIAN

The Abbreviated PCL-C

The Post-Traumatic Checklist – 6-item Civilian Version

These questions are about problems and complaints that people sometimes have in response to stressful life experiences. Please indicate (by circling) how much you have been bothered by each problem in the past month.

For these questions, the response options are:

1. Repeated, disturbing memories, thoughts, or images of a stressful experience from the past?
2. Feeling very upset when something reminded you of a stressful experience from the past?
3. Avoided activities or situations because they reminded you of a stressful experience from the past?
4. Feeling irritable or having angry outbursts?
5. Difficulty concentrating?
6. Feeling jumpy or easily startled?

Notes: .................................................................

.................................................................

.................................................................

.................................................................

A score of 14 or more is suggestive of difficulties with post-traumatic stress and further assessment and possibly referral for treatment is indicated.


APPENDIX G

INTENT TO REMAIN IN CHILD WELFARE SCALE

INTENT TO REMAIN EMPLOYED—CHILD WELFARE

**Directions**
This section of the survey asks you to make a series of judgements about your personal attitudes and beliefs. The best answer is the one that most accurately reflects your personal views and opinions. Please respond to each statement using the scale provided below. Fill in one number for each item that best corresponds to the strength of your disagreement or agreement using a # 2 pencil.

**SCALE:** 1 = Strongly Disagree (SD)  2 = Disagree (D)  3 = Agree (A)  4 = Strongly Agree (SA)

<table>
<thead>
<tr>
<th></th>
<th>Intend to remain in child welfare as my long-term professional career.</th>
<th>SD</th>
<th>D</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I intend to remain in child welfare as my long-term professional career.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2.</td>
<td>I will remain in child welfare even though I might be offered a position outside of child welfare with a higher salary.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3.</td>
<td>I would leave child welfare work tomorrow if I was offered a job for the same salary but with less stress.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4.</td>
<td>The personal and professional benefits outweigh the difficulties and frustrations of working in child welfare.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5.</td>
<td>I am actively seeking other employment.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6.</td>
<td>I feel the personal and professional gratification of working in child welfare to be greater than those in other professions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7.</td>
<td>I frequently think about quitting my job.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8.</td>
<td>I am committed to working in child welfare even though it can be quite stressful at times.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9.</td>
<td>My intention to remain employed in child welfare is stronger than that of most of my colleagues.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
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