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Impact of employee-supervisor attachment styles on the prevalence and symptomatic expression of secondary traumatic stress in public child welfare workers.

Lisa Purdy
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IMPACT OF EMPLOYEE-SUPERVISOR ATTACHMENT STYLES ON THE
PREVALENCE AND SYMPTOMATIC EXPRESSION OF SECONDARY
TRAUMATIC STRESS IN PUBLIC CHILD WELFARE WORKERS

By

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Doctor of Philosophy in Social Work

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May 2023
DEDICATION

“You can’t always be a winner, sometimes you have to be a fighter.”
- Loretta Johnston

This dissertation is dedicated to my family and the village of supporters who remained in my corner throughout the fight.

To my mother, Ann Purdy,
Thank you for embodying strength, perseverance, love, and sacrifice. Without you none of this would be possible.

To my sister, Sara Hunt,
Thank you for your love and never-ending support and For bringing the gift of joy via Hayden and Holden into my life.

To my dad and stepmother, Steve & Kay Purdy,
Thank you for your eternal love and support. Your consistency and accountability have helped shape me into the woman I am today.

To my partner for life, Claire Elliott,
Your love, support, and willingness to sit silently online for hours at a time helped pull me through. You had confidence in me when I did not have it in myself, and I would not be here without you.

Finally, to my best friend, Maxine Purdy.
Though she crossed the rainbow bridge before completion Her unconditional love and devotion helped me push through to the end. My life is better for having had her in it.
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To my support network at Maryhurst, thank you. I cannot imagine a more encouraging workplace. Maryhurst created a culture that not only tolerated the missed time at work, but continued to encourage and support, to push and challenge me throughout the journey to ensure completion. The professional lessons I have learned paralleled my academic success and I am not ignorant enough to think that one would have happened without the other. Thank you.

To the Bean Coffee Shop and Pearl Neighborhood Bar – thank you for your open door, comfy seats, and depending on time of day your hot/cold beverages. The doctoral journey can be a lonely one, but having friendly staff and establishments like yours gave me a safe, welcoming place to go and write when I just couldn’t do it alone. Plus, my “writing juice” tasted pretty damn good.

Finally, thank you to my friends and family, whose support and encouragement kept me going through this epic journey. I am blessed in that there are too many to name individually, but would be remiss to not thank my parents, Ann Purdy, Steve & Kay Purdy, my partner, Claire Elliott, my sister, Sara Hunt, my brother-in-law, Dan Hunt, their children Hayden and Holden Hunt. Your love and support mean the world to me, no thanks or words will ever be enough, I hope I have made you proud.
ABSTRACT

IMPACT OF EMPLOYEE-SUPERVISOR ATTACHMENT STYLES ON THE PREVALENCE AND SYMPTOMATIC EXPRESSION OF SECONDARY TRAUMATIC STRESS IN PUBLIC CHILD WELFARE WORKERS

Lisa Purdy

March 27, 2023

Child welfare organizations throughout the nation grapple with turnover rates estimated to be as high as 65% (e.g., CWLA, 2016; Edwards & Wideman, 2018). Turnover contributes negatively to client outcomes, organizational financial shortages, and to perpetuating stressful conditions for the child welfare workforce. One factor found to contribute to turnover within child welfare is that of secondary traumatic stress (STS). Child welfare workers are known to experience higher rates of STS than any other helping professional (Brady, 2017). However, while many risk and protective factors for secondary traumatic stress have been evaluated, there remains a gap in the literature as to the mechanism through which these factors work. The present study addressed this gap through application of adult attachment theory as the theoretical foundation to view the impact of predictive variables as well as addition of a new predictive variable to the child welfare STS literature, that of attachment style. This secondary data analysis study utilized data from public child welfare workers and supervisors from Ohio. Results showed attachment style had a significant impact at the individual, interpersonal, and organizational levels. Individual worker attachment anxiety and attachment avoidance,
both general and supervisor-specific, were significantly positively correlated with secondary traumatic stress along with many predictor variables. Additionally, SEM analysis showed both a direct and indirect pathway to STS for a worker’s supervisor-specific attachment anxiety, and an indirect pathway for supervisor-specific attachment avoidance. A 2 (high or low supervisor’s anxious attachment) x 2 (high or low supervisor’s avoidant attachment) MANOVA analysis showed an interaction effect such that workers with a securely attached supervisor experienced lower rates of STS and work stress, and increased perceptions of supervisor support and work-life balance. Full results and description of the impact of these findings are described in the chapters below.
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CHAPTER I

Charged with caring for children involved with the child welfare system, the vast majority of which have experienced abuse and neglect, agencies within the child welfare system face a variety of challenges (Ellett, 2000; Middleton et al., 2019). One such challenge involves recruiting and retaining competent staff. The difficulty of this task has reached a crisis level nationally as external, voluntary turnover amongst child welfare workers continues to be high and persistent (Drake & Yadama, 1996; Edwards & Wildeman, 2018; Ellett et al., 2007; Zosky 2010). While annual turnover rates below 10-12 percent are considered optimal or healthy (Annie E. Casey Foundation, 2015; Gallant, 2013), for the past 20 years, child welfare turnover rates have been estimated at 20% to 40% (American Public Human Services Association, 2005; National Child Welfare Workforce Institute, 2011; U.S. GAO, 2003).

Another top child welfare organization, The Child Welfare League of America (CWLA) and others also estimate a national turnover rate of 20%-40%, with some states reporting annual turnover as high as 65% (CWLA, 2016; Collins-Camargo et al., 2012). The most recent study using NCANDs data showed an average rate of turnover of 21% for both front line workers and supervisors (Edwards & Wideman, 2018). However, turnover rates have escalated since COVID-19. Child welfare administrators across the nation report that turnover rates have risen even higher while the ability to recruit and hire new staff to fill vacancies has fallen (Children’s Bureau Workforce Workgroup, 2022). Such drastic turnover rates can have devastating impacts on both the agencies involved and the youth and families they serve.
In youth who have experienced trauma, turnover may lead to intensified feelings of neglect and abandonment, with children frequently externalizing these feelings into more aggressive, violent, and treatment resistant behaviors (U.S. GAO, 2003). In a study of youth involved in the child welfare system, Strolin-Goltzman et al. (2010) found that turnover disrupted continuity of service, depleted trust, and delayed permanency. The disruption in attachment and therapeutic rapport impacts not only the client’s relationship with the child welfare worker that left the agency but can inhibit the client’s ability to develop therapeutic rapport with other workers (Connor et al., 2003; Seti, 2007, USGAO, 2003).

With a decreased ability to develop healthy attachments and an increase in anti-therapeutic behaviors, the client may be at risk for greater lengths of stay in out of home care or possibly an increased number of placement disruptions (Flower et al., 2005). Furthermore, staffing issues lead to programmatic instability and inconsistency, which Courtney and Barth (1996) showed is directly correlated with an increased likelihood of an unsuccessful outcome at exit from care, or decreased chance to meet permanency goals.

In addition to the impact of turnover on the children and youth involved in the system, turnover has been shown to have a profound impact on child welfare agencies. The U.S. Government Accounting office (1995) cited staffing as one of the most significant issues faced by child welfare systems, second only to funding (as cited by Ellett, 2000, p. 2). In fact, every time a caseworker leaves, the cost to the child welfare agency is 30-200 percent of the exiting employee’s annual salary (CPS Human Resource Services, 2006). Rigorous studies of child welfare turnover costs indicate that the cost of replacing a single worker rises steadily as costs of living increase but depends somewhat
on how replacement costs are calculated. In 2000, the estimated cost of replacement of each worker in one study was $10,000 (Graef & Hill, 2000), while it was $49,000 in a 2008 study (Dorch et al., 2008) and $54,000 in 2017 in another study (Patel et al., 2017). In 2022 dollars, the Patel et al. (2017) estimate would rise to $62,640 (https://www.in2013dollars.com/us/inflation/2017?amount=1). For example, in a state like Kentucky which routinely loses 300 or more frontline child welfare workers annually, the cost could be as high as $18.8 million each year. For each position turned over, turnover significantly compounds the funding issues as well. For agencies that are already financially burdened, this prohibits money from being spent on other priorities including primary services aimed at helping families stay together and children realize safety and permanency.

When one considers that turnover often exhibits a snowball effect it is easy to see how the consequences can increase exponentially (Cahalane & Sites, 2008; Collins-Camargo et al., 2012). Those left behind are often forced to increase their workload including the number of cases they carry, or hours worked, which can increase frustration and lead to further turnover (Cahalane & Sites, 2008; Collins-Camargo et al., 2012). This turnover cycle can decrease stability within the agency and diminish the agencies’ ability to accomplish program objectives, which may put future funding at risk (Seti, 2007).

On top of the significant financial impact of turnover, the agency loses human capital, which includes organizational knowledge, skill, training, and experience (Boyas et al., 2013). Ellett (2000) reports that research has shown it can take approximately two years for new child welfare employees to acquire the knowledge and skills required to perform their role well. This time frame is of particular importance considering that the
average tenure of a child welfare worker is less than three years (Barbee et al., 2018; Boyas et al., 2013; Dickinson & Painter, 2009) and may be getting shorter as Edwards and Wildeman (2018) found the average tenure of employees who left agencies was 18 months. The loss of human capital directly impacts the quality of services provided to clients, as inexperienced staff fill the vacated position (Boyas et al., 2013; Colton & Roberts, 2007; Ewalt, 1991; Fakunmoju, et al., 2010).

Contributors to Child Welfare Employee Turnover

With the compounding impact of turnover on both system and agency health becoming more and more evident, child welfare systems and agencies across the country recognize the need to identify variables that impact workforce retention, well-being, and performance. One variable that has been identified as a significant contributor to intention to leave and turnover is that of stress (Mor Barak, Nissly, & Levin, 2001; Nissly et al., 2005). Stress occurs when an individual perceives that the demands being placed upon them are greater than their perceived ability to cope with the demands (Lazarus, 1966). Child welfare has been regarded as a high stress human service profession (Cherniss, 1980), as child welfare workers face many stressors within their role including, but not limited to, high caseloads, limited resources, public criticism, and high levels of bureaucracy (Boyas et al., 2013; Nelson-Gardell & Harris, 2003). Chronic work-place stress can impact the psychological capacities of the employee and increase risk for development of various psychiatric and psychological disorders (Marin et al., 2011). One such manifestation is indirect trauma, an umbrella term that refers to the various effects felt by those working with individuals who have experienced trauma (Knight, 2013).
Indirect Trauma

Indirect trauma encompasses a range of effects that impact helping professionals who work specifically with trauma survivors (Knight, 2013). Within this umbrella construct are several different forms of indirect trauma including vicarious traumatization, compassion fatigue, and secondary traumatic stress. Figley (1995) assumed burnout also fit under this umbrella, but the cause of burnout is not primarily or exclusively tied to exposure to traumatized individuals or groups (Maslach, et al., 2001). These are all described as occupational hazards for those in helping professions and have the potential to impact the personal and professional lives of those afflicted (Bride, 2007; Dagan et al., 2016; McCann & Pearlman, 1990; Molnar et al., 2017). However, while these constructs impact helping professionals differently, there often remains conceptual ambiguity and an inappropriate conflation between the terms within the literature (Baird & Kracen, 2006; Boscarino et al., 2010; Najjar et al., 2009; Newell et al., 2016; Walsh et al., 2017). This has led to obstacles in comparing information and differentiating research within the literature (Najjar et al., 2009; Walsh et al., 2017).

Vicarious Traumatization

For example, vicarious traumatization is a term often used to describe indirect trauma, even when the focus is on secondary traumatic stress (e.g., Mairean & Turliuc, 2013). But a close reading of the conceptualization of vicarious trauma indicates that it is another effect of indirect exposure to trauma. Pearlman & Mac Ian (1995) define vicarious trauma (VT) as changes in the “enduring ways of experiencing self and others and the world (p. 558)” with corresponding changes in cognitive schemas and relationships. Vicarious Traumatization originally was studied in therapists who have
long-term and highly empathetic relationships with clients. In that context, VT is presumed to develop over time as a function of such relationships. VT is believed to occur as an interaction effect among the therapist’s personal trauma history, personality, interpersonal style, current stressors and supports, as well as the nature of the clientele and the type and amount of information shared.

Pearlman’s measure of vicarious trauma, the Trauma and Attachment Belief Scale (TABS, Pearlman, 2003), utilizes 84 items to assess beliefs and cognitive schemas in five areas for both self and others, mostly aligned with attachment schemas (Bartholomew & Horowitz, 1991; Bowlby, 1969). The five schema areas include safety (the belief that one and one’s loved ones are secure and reasonably invulnerable to harm), trust (the belief that one can trust one’s own judgment and perceptions and the belief that one can rely on others), esteem (the belief that oneself and others are valuable), intimacy (the belief that one can feel connected to oneself and others), and control (the belief that one can control one’s own behavior and environment and the desire to be in control in social situations). There is some research to suggest that VT may change schemas permanently and disrupt identity, self-perception, and worldview (Aparico et al., 2013).

Because the TABS is long and proprietary, other measures of VT have been offered. The Vicarious Trauma Scale (VTS; Vrklevski & Franklin, 2008) measures feelings of distress and being overwhelmed by working with traumatized clients but does not measure changes in cognitive schemas (Vrklevski & Franklin, 2008). Further, even though study participants completed both the VTS and the TABS measure, no attempt was made to assess the convergent validity between the two measures, nor has convergent validity been assessed in subsequent studies (e.g., Benuto et al., 2018).
Another measure of vicarious traumatization (Middleton & Potter, 2015) was developed in 2011 (Middleton, 2011). One item assesses an aspect of trust of others included in the Pearlman measure (“Due to the nature of my work, I am less likely to trust others.”) but not the other areas of trust. Two items measure an outcome of VT (“My work negatively impacts how I function in my personal life.” “Due to the nature of my work, I am more irritable with my loved ones.”). The final item taps into one of the 17 symptoms of PTSD (“My work leaves me feeling emotionally numb.”). Neither of these measures is a sufficient substitute for the TABS and unfortunately may perpetrate the conflation of STS and vicarious traumatization in the literature (Branson, 2018; Molnar et al., 2017).

**Secondary Traumatic Stress**

First conceptualized by Figley (1986), secondary traumatic stress (STS) was originally explained as a form of emotional disruption and indirect trauma experienced by those who work with trauma survivors. Figley (1995) described STS as, “natural and consequential behaviors and emotions resulting from knowing about traumatizing events experienced by a significant other (or client) and the stress resulting from helping or wanting to help a traumatized or suffering person,” (p.7). This conceptualization has evolved over time as researchers begin to differentiate secondary traumatic stress from other forms of indirect and direct trauma based on its’ mimicry of the symptoms of post-traumatic stress disorder (PTSD) (Bride, 2007; Figley, 1999).

Distinguishing secondary traumatic stress from the original definition of PTSD found within the DSM-IV (American Psychiatric Association, 2000) is the fact that the helping professional did not experience the trauma themselves, but rather indirectly through the stress of hearing about or interacting with, and then empathizing with, the
suffering of someone else. Figley (1995) suggested that the clinician, or helping professional, in developing secondary traumatic stress, could experience the PTSD symptoms of their clients, including intrusive thoughts, as well as increased avoidance and arousal symptoms. As it often mirrors the symptoms of PTSD, the construct of secondary traumatic stress has evolved to be defined as a syndrome of symptoms including intrusive thoughts, avoidance symptoms, as well as increased arousal symptoms that are a result of the stress associated with an indirect exposure to traumatic material while wanting to help a client (Baird & Kracen, 2006; Baum et al., 2014; Bride, 2007; Bride et al., 2004).

It was noted in a recent paper by Boamah et al. (2022) that the most recent version of the American Psychiatric Association DSM-V (American Psychiatric Association, 2013) specifies as the first criterion for PTSD the experiencing of one of four situations, included within these is experiencing repeated or extreme exposure to aversive details of the traumatic events of others while in the role of a first responder or helper. Thus, within the new DSM-V, an occupational hazard of working with those who are traumatized, STS is included as one of the first criteria for a PTSD diagnosis. However, although the second criterion aligns with the three major sets of symptoms described above, the final two diagnostic criteria of PTSD are duration of symptoms and impairment due to symptoms. In workplace studies, only the criteria of exposure to trauma survivors and expressions of the three types of symptoms are routinely assessed. Therefore, while the STS construct is currently aligned with the experiences of PTSD symptoms, until symptom duration and impairment are assessed with increased regularity within the workplace, STS as studied to date does not fully capture PTSD by focusing
only on symptom presence resulting from exposure to traumatic material and traumatized people. Still the addition of STS as a potential way to acquire PTSD in the latest diagnostic manual is an advance in this field.

**Theoretical Derivation of Secondary Traumatic Stress.**

Figley first developed the concept of secondary trauma as emerging out of systems theory (Ludick & Figley, 2017; Sprang et al., 2018a). With this orientation Figley applied systems theory to view the worker as a professional within an ecological context (Sprang et al., 2018a). From this perspective, secondary traumatic stress is a byproduct of the interaction of the worker and those individuals they serve whom have experienced trauma. This would seemingly coincide with Bride’s (2007) assertion that secondary traumatic stress is an occupational hazard, a natural consequence of the difficult work social workers face. However, it is this very perception that has been seen as a limitation of systems theory, as Kihlström (2012) pointed out, contending that the individual is not merely a cog in the systemic wheel, but is, in fact, an individual. From this perspective one should not merely accept that an individual will develop secondary traumatic stress as a byproduct of these difficult interactions, but that development of STS may be the interaction between an individual and the situation in which they find themselves.

Outside of the limited mention of systems theory as the derivation of the construct, the literature surrounding secondary traumatic stress is relatively void of theoretical emphasis. There has been some mention of more micro level theories including stress theories (Bonach & Heckert, 2012; Craig & Sprang, 2010). For example, Craig and Sprang (2010) conceptualized secondary traumatic stress using Lazarus and
Folkman’s (1984) transactional theory of stress and coping. According to the theory, individuals are constantly appraising stimuli within their environment. The cognitive appraisal process generates emotions, and when triggers are appraised as threatening or harmful the distress initiates coping strategies to manage emotions or directly address the stressor itself (Folkman & Lazarus, 1985). The coping processes then produce an outcome, which is reappraised as either favorable, unfavorable, or unresolved. Depending on how the outcome is reappraised, the individual may either be satisfied, or dissatisfied and reinitiate the coping process.

As described briefly above, the key concepts of Transactional Stress Theory are that of cognitive appraisal and coping. Cognitive appraisal is, “the process through which meaning is ascribed to events/stimuli,” (Biggs et al., 2017, p352). Cognitive appraisal may be influenced by both an individual’s personal characteristics including their values or beliefs, as well as environmental impacts such as demands and resources. This complexity is what partially explains the differences in appraisal between individuals and emphasizes that it is the perception of an event that is stressful, rather than the event itself (Lazarus, 1991). In application of this to STS, secondary traumatic stress is seen as a consequence of an individual being overwhelmed, because their appraisal of the stress of being exposed to a traumatic event and their individual resources and coping skills are exceeded by the demands of the environment (Craig & Sprang, 2010). Bonach and Heckert (2012) utilized Lazarus and Folkman’s (1984) stress theory as a framework for their study examining risk, or predictive factors, for STS. Within this study they examined individual and organizational buffers/insulators to work stress and
placed thematic weight on stress management and coping skill utilization and development.

**Measurement of Secondary Traumatic Stress.**

The ambiguity of the construct has also impacted the way in which the construct has been measured (Molnar et al., 2017). The most commonly utilized measure for STS is the Secondary Traumatic Stress Scale (STSS) developed by Bride and colleagues (Bride et al., 2004). The STSS is a 17-item instrument designed to measure frequency of intrusion (five items), avoidance (seven items), and arousal symptoms (five items) over the past 7 days, on a 5-point Likert scale, with one equaling “never” to five equaling “very often” (Bride et al., 2004). The STSS has shown strong psychometric properties with internal reliability .93 to .95 for the total scale (Kintzle et al., 2013) and each of the subscales: intrusion (α=.80), avoidance (α=.87), and arousal (α=.83) (Bride et al., 2004). It has also shown high convergent, discriminant, and factorial validity (Bride et al., 2004; Ting et al., 2005). In addition, Bride (2007) and subsequent researchers routinely assess whether staff experience clinical levels of PTSD symptoms due to exposure to traumatized clients by utilizing formulas to assess whether experience of symptoms exceed clinical symptomology cut off scores.

The Compassion Fatigue Self-Test (CFST; Figley, 1995) was designed to assess both compassion fatigue and burnout, two additional constructs that often fall under the indirect trauma umbrella. Reported internal consistency ranges from .86 to .94 (Figley, 1995; Figley & Stamm, 1996). Adams, Boscarino, and Figley (2006) questioned the factor validity of the CFST and created an updated version, the Compassion Fatigue-Short Scale (CF-Short Scale). This 30-item measure has shown good internal
consistency and positive correlation with the longer scale (Beck, 2011; Molnar et al., 2017). Although they purport to measure different constructs, the CFST and CF-Short Scale have been utilized in studies as measures of STS (e.g., Nelson-Gardell & Harris, 2003).

Another measure commonly utilized to for STS is the Professional Quality of Life Survey (ProQOL), developed by Stamm as a further revision to the CFST (ProQOL; Stamm, 2010). This is a 30-item scale measuring compassion satisfaction and compassion fatigue. Within the ProQOL, compassion fatigue is comprised of two subscales, burnout, and STS (Stamm, 2010). Stamm (2010) reports a shared variance of 34% between the two subscales, reflecting the distress that may be common to both constructs, but that the STS subscale measures fear experienced from work while the burnout subscale does not. The STS subscale has a reported reliability estimate of .80 (Bride et al., 2007) and Stamm (2005) reports convergent and discriminant validity. However, Ciselak et al. (2014) found that the estimated overlap between the STS and burnout constructs was 55%, suggesting that STS and burnout constructs as measured by the ProQOL instrument are largely indistinguishable. When the STSS or IES/IES-R, also a measure of symptoms, (Weiss & Marmar, 1997) scales were used to assess secondary trauma symptoms and the MBI (Maslach & Leiter, 2008) or a similar measure was used to assess burnout (e.g., Halbesleben & Demerouti, 2005), the shared variance was 34%. Burnout and STS in these studies were related but measured distinct constructs. Thus, when studying STS and/or burnout, it is recommended that stronger measures be utilized than the ProQOL since that measure does not distinguish between the two constructs very well. This conclusion is aligned with early research and narrative reviews of the
literature regarding STS and burnout (Jenkins & Baird, 2002; Sabo, 2011; Thomas & Wilson, 2004).

All of the above-mentioned measures require self-reporting from participants, which is a critique Ivicic and Motta (2017) levied in their study on STS. Within their study examining STS among mental health providers, they utilized the modified Stroop method, which they argue is more resistant to intentional response alteration than traditional self-report measures. Within the modified Stroop test, which has previously utilized to study PTSD, emotionally significant words and neutral words are printed in color and respondents are asked to name the color that the word is printed in. The emotionally significant word requires suppression or processing of the emotional response to the word if it has significance to the individual, and therefore takes more time to identify the printed color than the neutral words (Ivicic & Motta, 2017). While Ivicic and Motta (2017) found that the modified Stroop test was more sensitive than the STSS, more research should be done to assess reliability and validity of these results and to test use of such a measure in field settings.

**Prevalence Within Helping Professions**

Since its’ conceptualization secondary traumatic stress has been studied in a multitude of helping professions, such as nurses (Barr, 2017; Berger & Gelkopf, 2011; Dominguez-Gomez & Rutledge, 2009; Johansen et al., 2019; Kobayashi et al., 2020; Mairean, 2016; Mottaghi et al., 2020), teachers (Christian-Brandt et al., 2020), police officers (Brady, 2017; MacEachern et al., 2019; Tehrani, 2016; Turgoose et al., 2017), emergency dispatchers (Steinkopf et al., 2018), victim advocates (Benuto et al., 2018; Benuto et al., 2019), community mental health workers (Badger et al., 2008; Ben-Porat &
Itzhaky, 2009; Bride, 2007; Bride et al., 2009; Choi, 2011; Craig & Sprang, 2010; Dagan et al., 2015; Dagan et al., 2016; Ivicic & Motta, 2017; Jenkins & Baird, 2002; Jirek, 2020), those serving clients with intellectual and developmental disabilities (Boamah & Barbee, 2022; Boamah et al., 2022; Keesler, 2016), and child welfare workers (Barbee et al., 2018; Bolic, 2019; Bonach & Heckert, 2012; Caringi & Hardiman, 2012; Cornille & Meyers, 1999; Letson et al. 2020; Nelson-Gardell & Harris, 2003; Salloum et al., 2015; Strolin-Goltzman et al., 2020; Tullberg & Boothe, 2019). However, as Molnar et al. (2017) point out, cross-study comparisons are difficult for a multitude of reasons. Not only are there traditional difficulties in cross-study comparisons such as study design, sample sizes, or analytic techniques, but the conceptual and operational ambiguities that exist surrounding STS and other forms of indirect trauma, have increased the complexity of such comparisons.

Additionally, a gap within the literature is a focus on how to discriminate between the impact of direct versus indirect trauma. Both of these types of trauma may be experienced not only by first responders, such as police or fire fighters, but also child welfare workers. Failure to differentiate primary versus indirect trauma may skew prevalence estimates for these populations. Despite these difficulties, there are many studies that can paint a broad picture of rates of trauma symptoms across professions and enough has been learned to highlight not only the risk for all helping professionals, but more specifically for child welfare workers who have been found to have higher levels than other helping professionals (Barbee et al., 2019; Brady, 2017; Sprang et al., 2011).

Many studies on secondary traumatic stress have examined the experience within first responders including police officers (Turgoose et al., 2017), firefighters and rescue
workers (Berger et al., 2012), emergency management professionals and operators (LaFauci & Marotta, 2011; Taylor & Furlonger, 2011), and forensic interviewers (Perron & Hiltz, 2006; Bonach & Heckert, 2012). As mentioned above many of these studies failed to differentiate between direct and indirect trauma and utilized PTSD instruments to measure symptomology, however Molnar et al., (2017) contend that these studies remain useful as they likely encompass both primary and secondary trauma. One such study was a meta-analysis on PTSD in rescue workers completed by Berger et al., (2012) that encompassed a total of 28 studies with 20,424 first responders and calculated an estimated pooled prevalence rate of PTSD at 10%. The studies included in Berger et al.’s (2012) meta-analysis included both self-reported measures and interview assessments, however similar rates of 13-15% have been found with other emergency management personnel in studies utilizing the PTSD Checklist-Civilian version (LaFauci & Marotta, 2011; Steinkopf et al., 2018).

The field has also examined the prevalence of indirect trauma within the health care field including nurses (Barr, 2017; Dominguez-Gomez & Rutledge, 2009; Sinclair & Hamill, 2007), and a variety of other medical staff including physicians, residents, and nurses (e.g., Bocarino et al., 2010; Mairean & Turliuc, 2013). There has been a broader frequency range of 13-33% reported within these populations, but this may be related to differences in measurement with some studies utilizing the ProQOL (Barr, 2017), others the STSS (Dominguez-Gomez & Rutledge, 2009), and others the CSFT (Ortlepp & Friedman, 2002).

Perhaps the most substantial portion of the literature surrounding indirect trauma examines mental health providers, including counselors and social workers. Studies have
investigated indirect trauma within substance abuse counselors (Bride et al., 2009), workers treating victims of family violence and sexual assault (Choi, 2011, Ben-Porat & Itzhaky, 2009), and other licensed social workers and mental health professionals working in community mental health settings (Bride et al., 2007; Caringi et al., 2017; Ivicic & Motta, 2017; Rayner et al., 2020). Prevalence within these populations has been found to be higher than those of first responders or general rates of PTSD with studies reporting 15% to greater than 35% meeting criteria (Bride, 2007; Choi, 2011; Caringi et al., 2017; Ivicic & Motta, 2017).

Within his seminal study, Bride (2007) surveyed 282 social workers from various fields of practice, utilizing the Secondary Traumatic Stress Scale (Bride et al., 2004) and found that 55% met at least one diagnostic criteria for PTSD, approximately 20% met two diagnostic criteria, and 15.2% met all three diagnostic criteria (Bride, 2007). While this showed moderately high prevalence for social workers overall, child welfare workers only comprised 7.2% of the sample surveyed in this study. The small percentage of child welfare workers in the study is significant, because although secondary traumatic stress has been viewed as an occupational hazard for all of those in the helping profession, research has shown that those working with child maltreatment and abuse victims have a greater risk of developing indirect trauma than do others within helping professions (Brady, 2017; Bride, et al., 2007; Sprang et al., 2011).

Additional studies involving child welfare workers have shown rates of symptomology as high as 34%-50% (Bride et al., 2007; Conrad & Kellar-Guenther, 2006; Cornille & Meyers, 1999; Meyers & Cornille, 2002). However, despite the risk of STS to the child welfare workforce, it is uncertain how widespread clinical levels of STS
are among child welfare workforces across the nation. The child welfare studies assessing clinically significant levels of STS symptoms were mostly conducted in single states either across a state administered system (Bride et al., 2007; Cornille & Meyer, 1999) or across sites without attention to site specific differences within a county-administered system in one state (Conrad & Kellar-Guenther, 2006). At present there has not been a large-scale prevalence study published on national rates of STS in public child welfare workers. Preliminary results of an ongoing study being conducted by the Quality Improvement Center for Workforce Development (QIC-WD) have shown that in a survey of approximately 992 workers across ten counties in two states and two additional state administered child welfare systems, 88.5% met at least one diagnostic criteria for PTSD, approximately 18.9% met two of three diagnostic criteria, and 52% met all three diagnostic criteria (Barbee et al., 2019). The range across the jurisdictions was 25% to 75%. All of these studies were conducted pre-COVID-19. The trauma of living and working through a global pandemic may be driving up these rates, making the understanding of these issues even more urgent.

**Contributing Factors to Secondary Traumatic Stress within Child Welfare**

While research surrounding indirect trauma, especially secondary traumatic stress, within the child welfare workforce has increased within the last decade, the conceptual and operational ambiguity has made it difficult to find consensus both in terms of protective and risk factors (Bercier & Maynard, 2015; Ivicic & Motta, 2017). Additionally, some studies utilize the many constructs under the indirect trauma umbrella interchangeably, making it difficult to fully differentiate contributing factors that may impact one form of indirect trauma from another (Baird & Kracen, 2006; Boscarino et al.,
2010; Najjar et al., 2009). However, the current body of literature has highlighted many contributing factors, which are discussed below.

**Societal Level**

When exploring macro level causal factors for indirect trauma it becomes more difficult to differentiate causal factors specific to indirect trauma from causal factors that have also contributed to the increase in families, children, and youth within the child welfare system. In many ways, secondary traumatic stress within public child welfare workers is a social problem that is nested within the broader social problem of child maltreatment as it has been addressed over the past 60 years. Much of this relates to the evolution of the child welfare system through policies enacted at the state and federal level. Throughout the history of the United States there have been shifting ideologies about both the role of government in child welfare, as well as where on the spectrum of parental versus child rights the system should fall. These evolving ideologies have contributed to several policy changes throughout all levels of government which have led to funding inadequacies, deprofessionalization of the child welfare workforce, and an alteration of public perception of the child welfare workers. All of these factors relate to the impact of an overwhelmed child welfare system crippled by increasing numbers of children in out of home care.

**Child Welfare Policies.** A major narrative is that the child welfare system was originally designed to care for those orphaned or abandoned by their family which evolved and included a mission to protect and prevent child abuse and neglect. Through this evolution, there has necessarily been development of a series of state and federal laws and policies to govern the system. Over time there have historically been numerous
laws and policies influencing the number of children both entering and remaining in the child welfare system. These federal and state policies have not only impacted youth and families involved with the system but have impacted the overall functioning and funding of the system both of which inherently impact the workforce within the system. A timeline of policy change is depicted in Figure 1.

In the early history of the United States charitable programs were established to care for children who had been orphaned or parents who could not care for their children (Murray & Gesiriech, 2004). A move towards protection started in the late 1800’s with the founding of the New York Society for the Prevention of Cruelty to Children which in turn spurred the creation of additional nongovernmental child protection societies (Myers, 2008). Over the next quarter of a century, local juvenile courts began to appear, first in 1899 in Chicago and by 1919 they existed in all but three states (Myers, 2008). However, these were mostly local entities with limited resources and authority. It was not until 1935, with the passing of the Social Security Act, which included the Aid for Dependent Children program, a federal program that helped states provide financial assistance to children in need (Murray & Gesiriech, 2004; Myers, 2008).

While federal funds were supportive, there remained limited regulations and structural or systemic capacity at the state and federal level to fully implement child protective services (Myers, 2008). This changed significantly in 1962 following Dr. Henry Kempe’s publication of *The Battered Child Syndrome*. In this text and a publication in JAMA, Dr. Kempe insinuated that unless professionals were diligent in looking for signs of parental abuse, children would die. Thus, he called for mandatory reporting by physicians of child abuse and brought attention of the issue to mainstream
media. With the enhanced focus on protection and identification of children living in unsuitable situations came the passage of a series of state mandated reporting bills starting in 1962 in California so that by 1969 all states and territories had Mandated Reporting laws.

This was followed by a landmark piece of federal legislation, The Child Abuse Prevention and Treatment Act (CAPTA), which was passed in 1974 (Murray & Gesiriech, 2004). CAPTA also increased federal funds available to the states for response to abuse and neglect and federally required the establishment and expansion of existing child abuse reporting procedures and mandatory reporting laws to include more types of professionals mandated to report and more types of child maltreatment to be reported. This led to a significant increase in the number of reports requiring investigation (Ellett & Steib, 2005; Murray & Gesiriech, 2004). To help oversee CAPTA, the National Center on Child Abuse and Neglect was created, representing the first federal agency focused specifically on child protective services (Myers, 2008).

All of these laws and changes led to an increased number of calls to state child welfare hotlines, investigations, and children and youth entering out-of-home care. Caseloads for child welfare workers invariably increased as a result (Murray & Gesiriech, 2004). Following the passing of CAPTA, the population of children and youth involved in the child welfare system continued to grow, as did the length of stay of those within the system (Murray & Gesiriech, 2004). To address this, the Adoption Assistance and Child Welfare Act (AACWA) of 1980 was passed. This Act established federal procedural rules for management of child welfare cases, required more detailed plans from the states on their child welfare services, created an adoption assistance program,
and required states to make “reasonable efforts” to keep families together and for courts to review child welfare cases on a regular basis (Murray & Gesiriech, 2004; Myers, 2008). While the goal of AACWA was to increase family preservation, an unintended consequence was a shift back to the focus on parental rights, with a risk of an increased number of children being left in potentially dangerous homes (Myers, 2008).

Congress attempted to remedy this with the passing of the Adoption and Safe Families Act of 1997, which had an intended focus of preventing children in out of home care from languishing in care for too long. The Act also specified outcomes of safety, permanency, and well-being that states would be held accountable to meet. Since permanency was a key outcome, one goal of ASFA was to increase the number of adoptions as a mechanism for moving kids through the child welfare system at a faster pace (Myers, 2008; Whitt-Woosley & Sprang, 2015). At the same time ASFA was being passed, the Temporary Assistance for Needy Families (TANF) program was created in 1996, which created time limits for how long families in need could receive government assistance and increased work and/or training requirements for those receiving aid (Whitt-Woosley & Sprang, 2015). Unfortunately, guidelines surrounding reporting mandates in CAPTA, speeding up the ability of jurisdictions to terminate parental rights found in ASFA 1997, along with the increases in restrictions surrounding government assistance for families, led to an unintended consequence of actually increasing the number of children and youth in child welfare and in many cases the amount of time spent in the system (Whitt-Woosley & Sprang, 2015; Curtis & Denby, 2004).

An additional consequence of an overwhelmed child welfare system was an increase in the number of youth who were aging out of the child welfare system, that is,
turning 18 while remaining in out of home care. To support these youth, the Foster Care Independence Act of 1999 was passed, which included the John H. Chafee Foster Care Independence Program (CFCIP) (Murray & Gesiriech, 2004). The Chafee Program increased services and funding for youth up to age 21 including financial and housing assistance as well as counseling and other supportive services. This also stretched child welfare agencies, as there was now an expanded expectation to continue provision of services and new divisions to cover this population had to be developed.

Over time, these services have increased as the Promoting Safe and Stable Families Amendments of 2001 authorized new educational and vocational training opportunities for these young adults (Murray & Gesiriech, 2004) and The Fostering Connections to Success and Increasing Adoptions Act (The Fostering Connections to Success and Increasing Adoptions Act (H.R. 6893) (the FCA or Fostering Connections Act) was signed into law on October 7, 2008, as Public Law 110-351. FCA amended parts B and E of title IV of the Social Security Act to connect and support relative caregivers, improve outcomes for children in foster care, provide for Tribal foster care and adoption access, improve incentives for adoption and for other purposes such as tracking youth after they leave out of home care to assess outcomes regarding educational attainment, mental health, substance use issues, pregnancy, parenting and family formation, housing security, employment and incarceration due to interactions with the criminal justice system.

Since 2008 the most key piece of legislation has been the Family First Prevention Services Act of 2018. This act increases funding flexibility for states to use federal funding for prevention services and enhances incentives for adoptions, while at the same
time putting in greater restrictions on utilization of group and congregate care settings (Lindell et al., 2020). Prior to Family First, federal funding could only be utilized after a child had entered the child welfare system, with the passing of this act funding and services may now be utilized to prevent placement (Lindell et al., 2020). While passed in 2018, the law went into effect on October 1, 2019, however states had an option to delay implementation for up to two years (Lindell et al., 2020). As a result, implications for the impact of the Family First Act on both child welfare in general and more specifically on the workforce remain to be seen.

While the impact of the Family First Act remains to be seen, the evolution of the nation’s approach to child welfare and combination of state and federal laws and policies has contributed to a culture and work environment that has served to increase prevalence of indirect trauma within the child welfare workforce. Specifically, the impact of these child welfare policies has altered the prevalence of indirect trauma through three key mechanisms: deprofessionalization of the workforce, funding inadequacy, and alteration of public perception of child welfare workers.

**Deprofessionalization.** As mentioned above, CAPTA required the establishment and expansion of state child abuse reporting procedures and implemented mandatory reporting laws, which led to a significant increase in the number of reports requiring investigation as well as the number of youth entering out of home care (Ellett & Steib, 2005; Murray & Gesiriech, 2004). This increase in workload was not supplemented with an increase in funding, which led to an increase in demand for child welfare workers. To accommodate this, many states reduced or eliminated requirements for employment as a
child welfare staff, and as such began to erode the professional status of the child welfare worker (Ellett & Steib, 2005).

Deprofessionalization has contributed to the social problem of secondary traumatic stress through increasing workload demands and decreasing educational or certification requirements of the workforce. As the workload demands increased, child welfare’s reduced professional status made it a less attractive field for social workers (Ellett & Steib, 2005), especially those with a Master’s degree. This created role overload, as workers try to compensate for the rising demands and reduction in resources without the clinical, reflective and self-care skills social workers are taught as part of their professional education and training. Role overload has been found to increase risk of indirect trauma (Bonach & Heckert, 2012).

As child welfare agencies and states attempted to compensate for the increased workload, many eliminated social work or other higher education degree requirements (Ellett & Steib, 2005). Not only did this contribute to the diminishment of the status of child welfare work as a profession, but those that then entered the field were at increased risk for being less prepared for the work. Folaron and Hostetter (2007) found that the social work curriculum was the most comprehensive in meeting the skills and knowledge required for successful performance within child welfare. By removing degree requirements, more workers may enter the field without this level of preparation, which includes a lack of awareness of the risk of indirect trauma, both of which have been shown to increase vulnerability to secondary traumatic stress (Sprang et al., 2018). Further, with fewer social workers entering child welfare, fewer supervisors have social
work degrees compounding the lack of reflective supervision needed to prevent and mitigate secondary traumatic stress (Miller, 2018).

**Funding Inadequacies.** As described above, policies such as CAPTA, ASFA, and TANF have all impacted both the number of children involved in the child welfare system and the availability of resources to serve them. While CAPTA has been re-authorized and additional acts such as the Foster Care Independence Act and Promoting Safe and Stable Families Act have been passed allocating funds, the child welfare system, as a whole, continues to operate on inadequate operating budgets which are linked to outdated poverty rates and out of home care placement statistics (Collins-Camargo, 2016). These funding inadequacies not only impact workforce recruitment and retention efforts as they limit the ability to hire additional workers and pay competitive wages, but they are impactful at the organizational level as organizations may be less financially prepared to afford supplemental trainings for skill or capacity building. Increasing a worker’s knowledge base or self-efficacy related to job skills, as well as information regarding indirect trauma and healthy coping skills has been shown to serve as a protective factor against secondary traumatic stress (Ludick & Figley, 2017).

**Public Perception of Child Welfare.** As policies such as CAPTA and ASFA have gone into place, public perception of the child welfare system has shifted towards an often-negative view of child welfare workers (Ayre, 2001; Ellett et al., 2007). The result of many well-intentioned policies has frequently been an increase in the number of children and youth in out-of-home-care (Whitt-Woosley & Sprang, 2015) and a process that often seems to pit families and authorities on opposing teams rather than encouraging cooperation (Ayre, 2001). This has created a culture of mistrust in which workers are
frequently mis-characterized as having all of the power, taking children from parents, without recognition that only the court has the authority to authorize removal (Nelson-Gardell & Harris, 2003). Additionally, within child welfare there is often a culture of fear and blame, created by well publicized child abuse incidents and questions surrounding the actions of child welfare workers (Ayer, 2001; Collins-Camargo & Antle, 2018). Within this context, workers face heightened pressure to ensure the safety of children, not only for the sake of the child, but to avoid both public and organizational blame should something happen to a child. The stress and public perception associated with a work environment such as the one described above can lead to internalized stigma. This stigma may then relate to development of feelings of shame as the worker begins to experience symptoms of indirect trauma, which may result in the worker decreasing utilization of supports or supervision which have been shown to be protective factors against secondary traumatic stress (Bride & Jones, 2006; Collins-Camargo & Antle, 2018; Miller 2018).

**Organizational Level**

At the organizational level, dimensions of organizational culture and climate have been found to be related to development of secondary traumatic stress (Bride et al., 2007; Dagan et al., 2016). Organizational climate is derived from the psychological climate of each work unit, which refers to an individual’s “perception of the psychological impact of the work environment on his or her own well-being,” (Glisson & James, 2002, p.769). Glisson (2007) has measured organizational climate by aggregating employees’ psychological climates and others refer to, employee’s shared perceptions of the values, interests, and beliefs of an organization (Shim, 2010). Differentiated within the literature
from organizational culture, organizational climate is frequently more surface level than organizational culture and is often described as the lens through which to view the organization.

Role conflict is a specific dimension of organizational climate that has been identified within the literature as significantly related to secondary traumatic stress. Role conflict occurs when there is a lack of clarity about an employee’s role and expectations, related to conflicting demands within their environment (Dagan et al., 2016). Dagan et al., (2016) and Baugerud et al. (2018) both examined the impact of role conflict and found significant relationships between increased role conflict and increased risk for STS. If there is a high level of role conflict within an organization, it is unlikely that workers will feel they have the resources or skills required to perform their jobs in an adequate way. If workers feel overwhelmed or have little to no self-efficacy, workers may not feel they are able to meet or cope with the demands that result from working with clients who have experienced trauma which may increase risk for development of STS (Cieslak et al., 2013).

Role overload is another dimension of organizational climate, which occurs when an employee feels that the demands of the job are too much. Bonach and Heckert (2012) found that increased work stress and demands were related to increased risk of secondary traumatic stress. Several studies have found that having a large caseload was significantly correlated with increased symptoms of secondary traumatic stress (Bride et al., 2007; Dagan et al., 2016; Quinn et al., 2019) and incidence of secondary traumatic stress (Dagan et al., 2016; Strolin-Goltzman et al., 2020).
Furthermore, while research has noted the possible importance of the organizational context of child welfare agencies on the formation and severity of STS (Barbee et al., 2018; Salloum et al., 2015; Sprang, 2018; Sprang et al., 2018b; Tullberg & Boothe, 2019), no studies have quantitatively assessed all aspects of organizational culture and climate along with STS. Some studies have attempted to measure some organizational level variables (Bonach & Heckert, 2012; Bride, Jones & Macmaster, 2007; Caringi & Hardiman, 2012; Handran, 2015; Jirek, 2020; Strolin-Golzman et al., 2020). For example, the Bonach & Heckert (2012) study focused on forensic interviewers who work at child advocacy centers across the nation, so did not focus on public child welfare agency culture and climate and only utilized a five-item satisfaction with organization scale which did not significantly correlate with STS. A similar study examining a related workforce (domestic violence workers) utilizing a qualitative design interviewing 29 people and thus included no empirical assessment of organizational culture and climate, found that workers perceived that the organization’s approach to dealing with STS was overly individualistic, that employees needed additional resources and education to engage in effective self-care, and that the organizational culture undermined workers’ well-being (Jirek, 2020). The Caringi and Hardiman (2012) study did take place in a child welfare agency but only assessed organizational factors that could impact STS in the qualitative portion of the study with 12 workers finding that these workers perceived that having a high-profile case with media attention and lack of organizational acknowledgement of STS contributed to high STS.

Bride, Jones & Macmaster (2007) did assess both STS and organizational factors with child welfare workers using the professional organizational culture questionnaire...
(POCQ-SW) and found that having high caseloads and lower peer support correlated with STS. Strolin-Golzman et al. (2020) administered an STS measure and parts of the COHA (comprehensive organizational health assessment, Potter et al., 2016) to both child welfare and mental health professionals and found that transformational leadership was more likely to be found in mental health settings and to be associated with less STS among those in the mental health workforces.

The Handran (2015) study assessed STS and administered a self-created trauma informed organizational culture survey to workers in the fields of child and family services, animal control and homelessness. She found that both perceived organizational support and trauma-informed caregiver development predicted lower levels of STS. Similarly, other studies have shown perceived organizational support predicts lower STS (Badger, Royse, & Craig, 2008; Choi, 2011; Dagan, Ben-Porat, & Itzhaky, 2016; Hensel et al., 2015).

**Training.** Ludick and Figley (2017) found that workers are more vulnerable to development of STS when they receive no training. In their meta-analysis Hensel et al. (2015) found that workers who received specific training on how to work with traumatized individuals were at a significantly lower risk of developing secondary traumatic stress. The literature has shown that trainings focused on information about the etiology, symptoms, and impact of secondary traumatic stress, as well as coping skills, job task specific skills and evidence-based practices all serve to empower the worker, increase self-efficacy through knowledge attainment, and decrease risk of secondary traumatic stress (Bell et al., 2003; Sprang et al., 2018).
Individual Factors

The body of literature surrounding secondary traumatic stress has increased significantly within the last decade as researchers work to identify risk and protective factors at the individual and organizational level. Also as described above, a challenge found within the literature has been the continued conflation of terms and variability in measurement tools. While the confounding of variables has made the process more challenging, there have been several variables that have been shown to have a significant relationship with secondary traumatic stress, and still others that have shown conflicting results. The variables that have been studied have been demographic variables including gender, age, and level of professional experience, as well as other variables such as, personal history of trauma, perceptions of support, the amount of exposure to trauma at work, and role conflict have all been shown to have a significant relationship with secondary traumatic stress at the individual level.

Demographics. Within studies that have examined demographic characteristics as predictors or risk factors for secondary traumatic stress there have been mixed results. Demographics that have been examined include age, professional experience, and gender. Age has been a demographic variable that has shown significant variation in terms of a relationship with secondary traumatic stress. Several studies have found evidence that younger clinicians are at an increased risk for STS (Bride et al., 2007; Craig & Sprang, 2010; Bonach & Heckert, 2012). However, these results have also been challenged, with questions surrounding if they may relate more to an individual’s developed coping skills or level of professional experience than age, with older workers having developed
healthier coping skills and increased levels of experience (Bride et al., 2007; Bonach & Heckert, 2012).

As mentioned though, age has not been consistently found to be a significant variable related to STS as sixteen studies, including several with social work or child welfare samples, have shown little to no relationship between the variables (e.g., Brady, 2017; Baugeraud, et al., 2018; Caringi et al., 2017; Choi, 2017; Diehm et al., 2019; Galek et al., 2011; Hopwood et al., 2019; Nelson-Gardell & Harris, 2003). Thus, it is not surprising that Turgoose and Maddox (2019) found no clear relationship between age and STS in their literature review. A more recent study by Letson et al. (2020), found a curvilinear relationship between age and STS in that younger professional experienced less STS which increased with age but then decreased again for those over 40. This curvilinear relationship might explain why no significant relationship between age and STS was found in so many studies.

As with age, professional experience has been a predictor that has exhibited conflicting results within the literature. In their respective studies, neither Brady (2017), Bride et al. (2007), nor Nelson-Gardell and Harris (2003) found a significant relationship between professional experience and scores on the secondary traumatic stress scale. However, some have suggested that these results may be a false negative as workers who develop STS may have already left the field at a younger age (Nelson-Gardell and Harris, 2003; Salloum, et al., 2015). This line of thought is somewhat supported by Hensel et al., (2015) who within their meta-analysis found a significant inverse relationship between years of experience and risk of STS development. However, others still have found the inverse of this. Turgoose et al., (2017) found that staff who had been in their role for a
year or more had higher STS scores than those in their role for less than a year. While Letson et al., (2020) found length of employment was significant at the extremes (a curvilinear relationship), with less than a year or twenty years or more, associated with less STS.

A meta-analysis on the effects of gender found females were more likely to report symptoms of STS (Baum et al., 2014), however, subsequent studies find mixed results with females (Letson, et al., 2020; Tehrani, 2016; Quinn, Ji, & Nickerud, 2019) or males (Johansen et al., 2019; Padmanabhanunni, 2020) being more prone to STS or no gender effects at all. (Hensel et al., 2015; Hopwood et al., 2019; MacEachern et al., 2019).

**Personal History of Trauma.** One of the most consistent risk factors associated with secondary traumatic stress is that of a personal history of trauma (Brady, 2017; Bride et al., 2007; Hensel et al., 2015, Nelson-Gardell & Harris, 2003; MacRitchie & Leibowitz, 2010; Turgoose & Maddox, 2017). In their study, Bride et al. (2007) found a significant relationship between having a personal history of trauma and an increased score on the secondary traumatic stress scale. Similarly, Nelson-Gardell and Harris (2003) found that personal experience of child abuse and neglect increased a child welfare worker’s risk of STS. MacRitchie & Leibowitz (2010) found that those with a history of exposure to violent crime had significantly higher STS scores. This has been supported by others (e.g., Brady, 2017; Choi, 2011; Craig and Sprang, 2010; Killian, 2008; Jenkins & Baird, 2002). Additionally, within their meta-analysis of 38 studies, Hensel et al. (2015) found a significant positive relationship between history of personal trauma and STS.
Contrary to these many findings of a relationship between having a personal trauma history and secondary traumatic stress in one’s job, it has been argued that it may be the presence of unresolved trauma that is a risk factor and that individuals who have resolved previous symptoms of PTSD may in fact be at decreased risk of secondary traumatic stress (Sprang et al., 2018a). This fits with the theoretical application of Lazarus and Folkman’s (1984) Transactional Stress and Coping Theory, in which some initial coping strategies resolve the trauma, while others are deemed ineffective or unresolved. In a study with volunteer crisis workers Hargrave, Scott, and McDowall (2006) found a significant difference in those with resolved versus unresolved trauma histories, with those with an unresolved trauma history reporting higher levels of STS, and those with resolved trauma reporting lower levels of STS than their sample as a whole. Although it should be noted that participants were asked to self-report their current feelings toward resolution of their previous trauma as unresolved, partially resolved, or resolved. This type of self-report may be at risk of response bias as the participant may over-estimate their level of resolution, or under-estimate potential triggers.

One explanation that requires further evaluation may be development of positive coping skills. Maladaptive and emotion-focused coping styles have been associated with increased risk for indirect trauma (Turgoose & Maddox, 2017), while problem or task focused coping have been weakly associated with lower levels of indirect trauma (Turgoose & Maddox, 2017; Zeidner et al., 2013). It may be that the personal trauma history of an individual is a risk factor for secondary traumatic stress if it is either unresolved, or resolved through development of maladaptive coping measures, while it
serves as a protective factor if it is resolved through problem or task focused coping measures. More research on these variables is needed.

Self-Efficacy. Self-efficacy relates to the individual’s perceived ability to exercise control over their own functioning and impact the events that affect an individual’s life (Bandura, 2004). Perceived self-efficacy can impact an individual’s decision making with high levels of self-efficacy correlated with increased resiliency and decreased vulnerability to stress (Bandura, 1998). Self-efficacy can be increased through mastery of experiences, vicarious observation, and an increase in understanding of emotional and physical states (Bandura, 2004).

Ludick and Figley (2017) found that workers are more vulnerable to development of secondary traumatic stress when they receive no training or informed supervision and believed lack of training may lead to a decrease in perceived self-efficacy. Sprang et al. (2018) echoed this as they contended training, whether of general job skills, knowledge related to trauma informed care, or knowledge related to evidence-based practices, was a work-related protective factor against development of STS. They argue that those staff exposed to increased levels of training feel more confident and have higher levels of self-efficacy and are therefore less impacted by stressful events because they have a perceived ability to manage their functioning and environmental demands. This assertion has been directly tested by Ortlepp and Friedman (2002) who found high levels of self-efficacy were positively correlated to lower levels of STS in trauma counselors; Finklestein et al., (2015) who found that self-efficacy was negatively correlated with trauma symptoms in mental health professionals, and Virga et al., (2020) who found that increased levels of self-efficacy serve as a protective factor against STS in social workers.
**Empathy.** Empathy, has been defined as the ability to correctly perceive the troubles of others and in doing so, establish an emotional connection with another and respond to their suffering or troubles in an emotional manner (Regeher et al., 2002). Utilizing the interpersonal reactivity index (Davis, 1983), empathy was positively related to increased scores on the ProQOL (Thomas & Otis, 2010), the CFST (Robins et al., 2009), and the Traumatic Institute Belief Scale (TSD-BLS; MacRitchie & Leibowitz, 2010). The strongest relationship was seen with the subscale of personal distress (Thomas & Otis, 2010), which measures feelings or personal anxiety or unease in interpersonal settings (Davis, 1983).

**Perception of Support.** Another factor at the individual level that has been consistently found to serve as a protective factor to secondary traumatic stress is the presence of a perceived supportive network (Baugerud et al., 2018; Bonach & Heckert, 2012; Brady, 2017; Choi, 2011; Dagan et al., 2016; Hensel et al., 2015, MacRitchie & Leibowiz, 2010). This is considered an individual or interpersonal level variable because support can either be related to the actual utilization of support (interpersonal), or the perception of its’ availability (perceived social support; individual), but both utilization and perception generally occur at an individual level. Additionally, perceptions of support develop at an individual level through a person’s lifetime of experiences, as well as the types of relationships they develop and the actual behaviors of members of their network.

Within the literature, support is sometimes differentiated between peer support, external support, supervisor support, and/or administrative support, however there are times where simply perceptions of generalized organizational support are measured.
Bride et al. (2007) found a significant inverse relationship between level of perceived peer support as measured by the professional organizational culture questionnaire-social work version and score on the secondary traumatic stress scale, with higher levels of peer support resulting in decreased STS symptomology. Killian (2008) utilized the Social Support Index (McCubbin, Patterson, & Glynn, 1982) and found that social support was a strong predictor of compassion satisfaction, which has been found to be a protective factor for the negative impact of secondary traumatic stress (Turgoose & Maddox, 2017).

**Perception of Supportive Supervision.** Within a subset of support is the discussion surrounding supervision. Depending on the measurement utilized by researchers, it is at times difficult to differentiate between the two roles, because as Dagan et al., (2016) stated that one goal of supervision should be to provide emotional support to the staff member that enhances coping. In organizations that normalize the effect of working with trauma survivors, supervisors can be intentional in their approach to identifying, educating, and addressing signs and symptoms of secondary traumatic stress (Collins-Camargo & Antle, 2018; Miller, 2018). This trauma informed approach to supervision can promote early intervention as well as reduction of shame or internalized stigma, both of which, as noted above, may prevent workers from utilizing available supports or resources within the agency.

Additional studies support the importance of supervision as a protective or mediating factor (Bride, 2007; Bride & Kintzle, 2011; Quinn et al., 2019; Slattery & Goodman, 2009). For example, within their study, Killian (2008) found that increased access to supervision was related to decreased risk for STS, and Collins-Camargo and Royse (2010) found that effective supervision within child welfare can increase worker
self-efficacy, which, as noted above, has been correlated with reduced levels of indirect trauma (Ortlepp & Friedman, 2002). Additionally, Quinn et al., (2019) studied predictors of STS in social workers and found a highly significant relationship between supervision and STS, with improvement in quality of supervisory relationships resulting in lowering of STS scores as measured by the Secondary Traumatic Stress Scale (Bride et al., 2004).

The results surrounding supervision have not been without conflict, however, Ivicic and Motta (2017) did not find a significant relationship between supervision and STS within their study. However, their study utilized a modified Stroop procedure as a new measure of STS, it is possible that as this measure had not previously been validated for STS it may have affected the results. Additionally, within their meta-analysis, Hensel et al. (2015) did not find significance for supervision quality as a risk/protective factor but did find significance for perception of positive work environment, with increased support related to a decreased risk of STS. This relates back to the question by Dagan et al. (2016) regarding if it is possible to differentiate the nature of support, differentiating between support and quality, and/or supervision as a protective/risk factor.

**On the Job Trauma Exposure.** Within the literature examining trauma exposure as a risk factor for secondary traumatic stress there has been some debate as to which of these three variables contribute to STS, caseload size, (MacRitchie & Leibowitz, 2010; Deighton et al., 2007), percentage of trauma cases an individual works with (Hensel et al., 2015), or the number of hours per week spent with trauma clients (Killian, 2008; Creamer & Liddle, 2005; Tosone et al., 2010). Hensel et al., (2015) examined three measures of caseload to capture occupational exposure: caseload volume, caseload frequency and caseload ratio and found caseload ratio was the strongest factor. This
finding means that the proportion of traumatized clients or proportion of time spent working with trauma survivors may matter more than the actual number of traumatized individuals on one’s caseload or frequency of support given to them. While the operationalization and measures change throughout the literature, there has been consistency in that increased exposure to trauma victims increases risk for STS (Baird & Kracen, 2006; Baugerud et al., 2018; Hensel et al., 2015; Turgoose & Maddox, 2017).

**Additional Work-Related Perceptions.** Job satisfaction and organizational commitment are two work-related perception factors that have been studied on a limited basis in relation to secondary traumatic stress, especially within the child welfare workforce (Ivicic & Motta, 2017). Perron & Hiltz (2006) found a significant inverse relationship between development of STS and organizational satisfaction in forensic interviewers. While job satisfaction was studied in substance abuse counselors by Bride and Kintzle (2011) who found a significant inverse relationship between STS and job satisfaction.

**Impact on Workforce and Client Outcomes**

The impact of secondary traumatic stress can be felt across all levels of the child welfare system. The consequences of this indirect trauma impact not only the child welfare worker but the organizations they work for and clients they serve as well. These consequences can be felt at a societal, organizational, and an individual level as individuals, families, and systems work to cope with the consequences of indirect trauma.
Societal level

Perhaps one of the most significant impacts of secondary traumatic stress is the fiscal burden placed on the child welfare system as well as the inherent loss of resources by other social service systems. As mentioned above, costs of child welfare turnover continue to rise steadily, from $10,000 in 2000 (Graef & Hill, 2000), to $49,000 in 2008 (Dorch et al., 2008), to $54,000 in 2017 (Patel et al., 2017). Sprang, Ross, and Miller (2018b) report that some economists estimate yearly costs of over $40 billion in the United States due to occupational stress. The cost of continuously recruiting, training, and replacing new staff takes valuable resources away from this system that could otherwise be spent on preventative services or other resources aimed at improving the lives of not only the children and families being served but also members of the workforce serving them. Additionally, with high levels of stress and turnover there is a possibility of driving individuals out of the human services field all together, which impacts the availability of resources for all populations.

Organizational & Community Level

Secondary traumatic stress can have far reaching impact at the organizational level. As noted above, turnover is one of the most pressing issues within the field of child welfare, and secondary traumatic stress has been found positively correlated directly with intention to leave employment (Barbee et al., 2018; Bride et al., 2007) and actual job exit (Barbee et al., 2018). In youth who have experienced trauma, turnover can lead to intensified feelings of neglect and abandonment, with children frequently externalizing these feelings into more aggressive, violent, and treatment resistant behaviors (USGAO, 2003; Colton & Roberts, 2007). The disruption in attachment and
therapeutic rapport impacts not only the client’s relationship with the child welfare worker that left the agency but can inhibit the client’s ability to develop therapeutic rapport with other workers (Connor et al., 2003; Seti, 2007). This can contribute to increased lengths of stay in out of home care or number of placement disruptions as casework timeliness and continuity is disturbed (Connor et al., 2003; Flower, et al., 2005). Furthermore, staffing issues lead to programmatic instability and inconsistency, which Courtney and Barth (1996) showed is directly correlated with an increased likelihood of an unsuccessful outcome at exit from care, or decreased chance to meet permanency goals.

Additional impacts of turnover at the organizational level related to turnover were described above including tremendous financial costs for already financially burdened agencies (Dorch et al., 2008; Graef & Hill, 2000), perpetuation of the turnover cycle (Cahalane & Sites, 2008; Collins-Camargo et al., 2012), and loss of human capital further impacting service provision (Boyas et al., 2013). Child welfare workers left behind are often forced to increase their workload including the number of cases they carry, or hours worked, both of which, as described above, serve as additional risk factors for development of secondary traumatic stress.

Impact on Individual Level Well-Being

For the individual experiencing secondary traumatic stress the impact can be severe. Figley (1999) found that the negative impact of secondary traumatic stress can be nearly identical to that of primary trauma exposure. Symptoms for secondary traumatic stress generally fall into three categories, intrusive, avoidant, and/or arousal (Bride et al., 2007). Common symptoms may include imagery related to a client’s trauma, startle
responses, sleep disturbances, difficulty concentrating, hypervigilance, or increased irritability (Bride, 2007). Bride (2007) conducted a study examining prevalence of STS symptoms in social workers, and greater than 40% reported experiencing intrusive thoughts, over 30% reported avoiding clients, while others reported emotional numbing, detachment from others, and concentration difficulties.

Furthermore, secondary traumatic stress can increase the likelihood of experiencing professional functional impairment, which may inhibit the ability of the worker to provide effective services including developing poor treatment plans, misdiagnosing, or misjudging a situation, as well as other forms of professional misjudgment (Bride et al., 2007; Rudolph, et al., 1997; Thoits, 1995). This may have significant impacts not only on the personal and professional life of the child welfare worker, but also on the youth and families they serve. Additionally, studies have found that social workers in general, have an increased risk for alcohol and other drug problems, a risk which can be enhanced by trauma or stress (Strozier & Evans, 1998; Pooler, 2008; Straussner et al., 2018).

Summary

As described throughout the chapter, secondary traumatic stress is an occupational hazard of which frontline child welfare workers are at a heightened level of risk. Secondary traumatic stress can lead to impacts on individual health and well-being, increased rates of turnover, organizational fiscal impairments, and increased risks of poor outcomes for the youth and families served within the child welfare system. With such potential ramifications, it is not surprising then, that the literature has explored and identified many potential risk and protective factors, as described above. However, while
individual factors have been identified, there remains a gap in the literature in identification of the mechanism through which these factors impact development of secondary traumatic stress. The following chapter will explore one such mechanism, that of attachment style, as the construct that has a significant mediating and moderating impact on many of the aforementioned risk factors. The theoretical foundation of attachment style and implications of adult attachment style will be discussed as they apply to the child welfare workforce and secondary traumatic stress.
CHAPTER II

Import of the Worker-Supervisor Relationship

While secondary traumatic stress has been shown to be a significant occupational hazard for child welfare workers, as described above there are potential protective factors that can help to mitigate either the development or impact of secondary traumatic stress. One such influence, is that of the worker-supervisor relationship. Positive perceptions of work support and supervision have been shown to be protective factors (Bride, 2007; Bride & Kintzle, 2011; Henzel et al., 2015), however, the mechanism through which this occurs remains unclear. As the field continues to evolve its’ understanding of indirect trauma and move towards developing interventions to both prevent and treat secondary traumatic stress, it is important to maintain consideration for the theoretical perspective through which this work is done. Theoretical assumptions can be thought of as the lens through which a researcher is analyzing a problem and can provide insight into how not only the issue is perceived, but also how causal factors and consequences are determined. This can not only increase understanding but can provide a guide for future work regarding the issue. To this end, the following section will examine the importance of the worker-supervisor relationship as it relates to secondary traumatic stress.

As described in the previous chapter, secondary traumatic stress has theoretical derivation from Lazarus and Folkman’s (1984) transactional theory of stress. A key concept within this theory is that of cognitive appraisal, or an individual’s assessment of a
stressor or trigger. Cognitive appraisal is influenced by both environmental factors, such as demands and resources, as well as individual factors, such as personal values, beliefs, and previous experiences. With this in mind, the current study will utilize adult attachment theory, as the theoretical lens through which to view the mechanism of impact for the worker-supervisor relationship. Specifically, adult attachment theory will be utilized to examine how the worker-supervisor relationship contributes to either reducing stress within the child welfare worker or hindering their ability to do so.

**Adult Attachment Theory**

Attachment theory was originally developed by Bowlby (1969, 1973) as an explanatory framework for the infant-caregiver relationship, describing how early experiences with caregivers influence interpersonal relationships. Bowlby hypothesized that the attachment system is comprised of predictable behavior responses developed through interactions with an attachment figure as a protective mechanism for the infant (Bretherton, 1992). Ainsworth and colleagues (1978) expanded upon Bowlby’s work and operationalized what it looks like when the attachment figure serves as a secure base. Through rigorous observational, laboratory studies, three styles of attachment, secure, anxious/ambivalent, and avoidant were discovered (Ainsworth et al., 1978; Bretherton, 1992). Ainsworth et al. (1978) contended that these attachment styles develop based on the infant’s expectations of the caregiver’s accessibility, consistency, and responsiveness.

Over time, the attachment patterns develop into working models, also known as mental models, which shape an individual’s view of self and others as well as how they perceive and cope with stress (Bowlby, 1978; Bartholemew, 1990; Ogle et al., 2015). According to Bowlby (1978) working models determine behavior patterns, which may
persist throughout a person’s life through interpersonal relationships, in what he referred to as continuity. It is thought that once these develop, they operate largely outside of conscious awareness (Collins & Feeney, 2004), though there has been evidence to show that through priming or shaping, individuals can develop more awareness and create new state attachments (Carnelley & Rowe, 2007; Mikulincer & Shaver, 2007).

It is the concept of continuity that led Hazan and Shaver (1987) to translate the infant attachment patterns into adult attachment patterns, first as they related to romantic relationships (1987) and then within the work environment (1990). In both studies, Hazan and Shaver (1987; 1990) assessed participants attachment style and found that the frequency of attachment styles in adults was similar to that seen in children, with just over half (56%) secure, 25% avoidant, and 19% anxious, which gave credence to the notion that responses were nonrandom and were, in fact, following the same attachment styles as seen in children. Adult attachment styles refer to, “systematic patterns of expectations, beliefs, and emotions concerning the availability and responsiveness of close others during times of distress,” (Ogle et al., 2015, p. 325).

Attachment systems are activated in times of stressful or threatening events with each having its’ own behavior tendencies (Collins & Feeney, 2004). Just as with the initial conceptualization of attachment, adult attachment systems are designed to fulfill two functions, provide a safe haven in times of stress and secure base of support to explore the world (Yip et al., 2018). These adult mental models reflect beliefs and expectations of self and others: the self may be perceived as more or less deserving of care and attention while others may be perceived as more or less worthy of trust (Bartholemew 1990; Falvo et al., 2012).
**Adult Attachment styles.**

Adult attachment styles have been measured in many ways since 1978, at times via three categories (Ainsworth et al., 1978; Hazan & Shaver, 1987), sometimes via four categories (Bartholemew, 1990), and most recently along two dimensions, anxious and avoidant (Fraley et al., 2015). The anxiety dimension measures the degree to which individuals are concerned with being abandoned or rejected by others, while avoidance measures degree to which an individual limits intimacy or interdependence with others (Collins & Feeney, 2004). Hazan and Shaver (1987) continued Ainsworth’s original three category typology of anxious, avoidant, and secure, with secure being low anxiety and low avoidance. Often this is represented as a dichotomous variable of secure and insecure attachment, with both anxious and avoidant categorized as insecure.

Bartholomew (1990) extended this typology to a four-group model, splitting avoidance into fearful or dismissing. Dismissing-avoidant has high-avoidance and low anxiety, while fearful-avoidant has both high anxiety and avoidance (Bartholomew, 1990). Today within the literature, there is a mixture of the utilization of dichotomous classification, while others use the three-model method, others represent attachment through Bartholomew’s four-category typology, while still others represent it as a continuously distributed spectrum along the anxious and avoidant axes (Fraley et al., 2015).

As mentioned, each attachment style has its’ own behavioral tendencies and beliefs, although individuals may represent these to varying degrees. Those with secure attachment, or low anxiety and avoidance, tend to feel valued by others, worthy of affection, and perceive attachment figures as responsive and reliable. Individuals with a secure attachment are generally comfortable depending on others when needed (Collins
Those with a preoccupied attachment style, also known as anxious-ambivalent, on the other hand, are high in anxiety and low in avoidance (Bartholomew, 1990). These individuals desire closeness with others but lack the confidence that others will be available or responsive to their needs. Individuals within this category greatly desire the approval of others and have an increased fear of being rejected or abandoned.

Avoidance attachment is separated into dismissive- and fearful-avoidant attachment (Bartholomew, 1990). Dismissive-avoidant individuals have low anxiety and high avoidance. These individuals are typically confident and may view themselves as invulnerable to negative feelings (Bartholomew, 1990; Collins & Feeney, 2004). Bowlby classified this group as having turned off, or deactivated, the attachment system. These individuals typically view attachment figures as unreliable or unresponsive to their needs. When faced with potential rejection, these individuals will distance themselves from others, maintain a positive self-image, and limit emotional expression (Collins & Feeney, 2004). Those who are fearful-avoidant in their attachment style, on the other hand, are characterized by both high anxiety and high avoidance. These individuals desire relationships with attachment figures but are so distrustful and fearful of rejection that they often disengage before such rejection can occur. Individuals within this category feel uncomfortable with intimacy and may seek close relationships initially but ultimately reject them for fear if people get too close, they may be rejected (Collins & Feeney, 2004).

Application to import of worker-supervisor relationship.

In viewing the worker-supervisor relationship through the theoretical perspective of adult attachment theory, the supervisor represents the attachment figure. However, as
this relationship is not a unidirectional entity, the attachment style of both the employee and the supervisor come into play in influencing behaviors of the employee and supervisor, and in turn, the ways in which this relationship alleviates or intensifies stress levels and risk of indirect trauma within the employee.

**Impact of employee’s attachment style.**

Within the adult attachment literature an individual’s attachment style has been studied in terms of its’ impact on the individual within the workplace. This impact can be seen at three levels, within the individual themselves, within interpersonal relationships and behaviors, and within the individuals’ interaction with the organization.

**Individual impact of employee’s attachment style.** Within the literature exploring adult attachment within the workplace, a significant portion focuses on the impact of attachment style of the employee-on-employee outcomes. This includes the impact of employee attachment style on 1) an employees’ ability to effectively manage stress within the workplace (Harms et al., 2016; Johnston & Feeney, 2015; Lahev et al., 2016; Marmaras et al., 2003; Rahimnia & Sharifirad, 2015; Ronan & Baldwin, 2010; Schirmer & Lopez, 2001; Shorey & Chaffin, 2018; Woodhouse et al., 2015), 2) burnout (Chopik, 2015; Falvo et al., 2012; Jiang et al., 2019; Littman-Ovadia et al., 2013; Pines, 2004; Ronen & Baldwin, 2010; Virga et al., 2019; West, 2015) 3) use of coping skills (Beauchamp et al., 2015; Halpern et al., 2011; Johnstone & Feeney, 2015; Landen & Wang, 2010; Ognibene & Collins, 1998; Raskin et al., 1998), 4) their sense of self-esteem and self-efficacy (Berson et al., 2006; Carnelley & Rowe, 2007; Johnstone & Feeney, 2015; Kogut, 2016; Leenders et al., 2019; Neustadt et al., 2006; Neustadt et al., 2011; Popper & Amit, 2009; Tzinier & Tanami, 2013; Wright et al., 2017), and 5)
personal wellness (Landen & Wang, 2010; Little et al., 2011; Littman-Ovadia et al., 2013; Maunder et al., 2011; Richards & Schat, 2011).

**Stress Management.** As described above, working within the child welfare system frequently exposes child welfare staff to stressful and traumatic situations. It is therefore important to consider how an individual employee’s attachment style may impact their ability to react and respond to these stressful conditions. Attachment style has been studied both directly and indirectly in terms of its’ relationship to stress management. Directly, those with high levels of anxious and avoidant attachment have been found to have significantly higher levels of perceived stress (Johnston & Feeney, 2015; Rahimnia & Sharifirad, 2015; Ronan & Baldwin, 2010; Schirmer & Lopez, 2001; Woodhouse et al., 2015) and stress symptoms (Halpern et al., 2011; Rahimnia & Sharifirad, 2015; Lahev et al., 2016; Schirmer & Lopez, 2001; Woodhouse et al., 2015) than those with lower levels of anxious and avoidant attachment.

Maramas et al., (2013) studied the relationship between attachment styles, vicarious traumatization, and post-traumatic stress in female therapists. They found that those with fearful or preoccupied attachment styles had increased levels of cognitive schema disruptions, while those with secure attachment styles had minimal cognitive disruptions. Additionally, Maramas et al. (2013) found that those with preoccupied and dismissive-avoidant attachment styles had significantly more symptoms of intrusion, avoidance, and hyperarousal than those with secure attachment styles. As described above, these are the key symptomatic components of secondary traumatic stress. Similarly, Pardess et al. (2013) studied the relationship between attachment style and
compassion fatigue, finding that those with anxious or avoidant attachment styles experienced higher rates of compassion fatigue than those with secure attachment styles.

Indirectly, those with a secure attachment style have been found to have an increased capacity to regulate emotions more than both avoidant and anxiously attached individuals (Cooper et al., 1998). More specifically, those with anxious attachment have shown difficulty with self-other boundaries (Bartholomew & Horowitz, 1991), which may make it difficult to separate the work-life boundary and lead to an increase negative stress response.

**Burnout.** Different from secondary traumatic stress, burnout stems from exposure to all types of stressors in the workplace and is defined by exhaustion, cynicism, and a feeling of inefficacy (Maslach et al., 2001). While some symptoms of burnout may overlap with secondary traumatic stress, they are two distinct constructs both with different causal factors and symptom expression (Cieslak et al., 2014). Within their systematic review, West (2015) examined the relationship between attachment style and burnout, finding anxious attachment was positively correlated with higher levels of burnout, while secure attachment was correlated with lower levels of burnout. After controlling for demographic and situational variables, West (2015) also found that avoidant attachment predicted higher levels of burnout. Additional studies not included within the systematic review have supported this, including Ronan and Baldwin (2010) who utilized a longitudinal study, and found that within their model, attachment anxiety was a significant predictor of burnout. These findings have been supported throughout a variety of fields, with studies involving nurses (Pines, 2004), security guards (Vanheule et al., 2008), and firefighters (Landen & Wang, 2010), all supporting the findings within
West’s (2015) systematic review of health and human service professionals showing that secure attachment was correlated with lower burnout rates and anxious or insecure preoccupied attachment was linked with higher burnout. Additionally, as described above, individuals with anxious attachment styles have also been shown to struggle with self-other boundaries, including an inability to separate a client’s pain from one’s own, or to leave work at work (Bartholomew & Horowitz, 1991). This over-empathizing and inhibited work life balance may lead to negative stress responses enhancing levels of exhaustion and a sense of inefficacy.

**Coping Skills and Resilience.** Coping skills are generally defined as a set of skills or behaviors that are purposeful responses to stress, with coping defined as “constantly changing efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of a person,” (Lazarus & Folkman, 1984, p.141). It should come as no surprise then, that an employee’s coping skillset has an impact on their ability to directly manage stress and trauma as well as development of indirect trauma symptoms. Johnston and Feeney (2015) found attachment anxiety was positively correlated with emotion-focused coping and negatively with problem-focused coping. Though both types of coping can be useful, problem-focused coping has generally been regarded as more advantageous (Abraham et al., 2008; Lazarus, 1999). Mikulincer and Florian (1995) found that those with anxious attachment reported more emotion-focused coping, while those with avoidant reported more distancing coping, as compared to those with secure attachment who reported more problem-focused coping. Several additional studies have demonstrated a significant relationship between secure attachment and increased utilization of effective coping skills, including studies involving firefighters.
Secure attachment style has been positively, significantly correlated with resilience (Halpern et al., 2011; Lopez et al., 2001; Marriner et al., 2014). Resilience is defined as the ability to overcome adversity and function normally in the face of risk (Bender & Ingram, 2018). As such, there is a direct relationship between secure attachment and increased utilization of coping skills (Marriner et al., 2014) and an indirect relationship as resilience has also been directly correlated with greater use of effective coping strategies and negative perception of stress (Marriner et al., 2014).

**Self-Esteem & Self-Efficacy.** As described in earlier sections, having higher levels of self-esteem and self-efficacy can be a protective factor for indirect trauma. Additionally, as described above, attachment patterns develop into mental models which shape an individual’s view of self and others (Bowlby, 1978). Those with secure attachment styles have a stronger sense of self. Several studies have found that anxious (Johnston & Feeney, 2015; Kogut, 2016; Popper & Amit, 2009; Wright et al., 2017) and avoidant attachment (Johnston & Feeney, 2015; Leenders et al., 2019; Wright et al., 2017) styles were both negatively correlated with self-efficacy, which may then translate to an increased risk for indirect trauma or secondary traumatic stress. Measuring attachment utilizing secure versus insecure, Neustadt et al. (2006) found a significant positive correlation between secure attachment at work and self-esteem and a significant negative correlation between insecure attachment at work and self-esteem. Neustadt et al. (2011) further explored this relationship in a later study, with similar results confirming the relationship between secure attachment and positive self-esteem.
Berson et al. (2006) found that those with a secure attachment style rated themselves significantly higher in terms of self-worth as well as perceiving themselves as having greater leadership performance, inclusive of those who were not formally in leadership positions. In their study, Carnelley and Rowe (2007) not only supported the findings that those with secure attachment had a greater sense of self, but they found that in utilizing priming techniques, those who were repeatedly primed with attachment security increased their positive self-views. Tziner and Tanami (2013) found a significant positive correlation between secure attachment and maladaptive perfectionism, and a significant negative correlation between insecure attachment and maladaptive perfectionism, which they defined as a fear of making mistakes rooted in a distorted self-perception of worth.

**Personal Wellness.** Stress activation can lead to physical and emotional health disturbances which can have lasting impact. As described above, an individual’s attachment style significantly relates to their stress response system which in turn can have an impact on their physical and emotional health and well-being. The impact on personal wellness has been studied both directly, and indirectly. Several studies have found that attachment anxiety and avoidance are significantly related to emotional distress (Halpern et al., 2011; Littman-Ovadia et al., 2013; Richards & Schat, 2011). Halpern et al., (2011) found a significant association between fearful-avoidant attachment and depression. Similarly, in their study involving fire-fighters, Landen and Wang (2010) found a direct relationship demonstrating that those with lower levels of attachment anxiety and avoidance experience higher levels of psychological well-being. Joplin et al. (1999) found that both a counter-dependent (avoidant) and overdependent
(anxious) attachment style were significantly related to higher levels of psychological, physiological, and somatic health symptoms, while those with higher levels of secure attachment exhibited better health overall.

Indirectly, Regeher et al. (2012) found that an over-reliance on emotion-focused coping within the workplace leads to poor physical health and emotional well-being, and as described above, those with anxious attachment styles were found to utilize primarily emotion-focused coping when faced with workplace stress (Johnston & Feeney, 2015). Maunder et al., (2011) studied the relationship between attachment and sleep disturbance and sick days in hospital-based health care workers and found that both attachment anxiety and avoidance were significantly associated with impaired sleep quality, additional physical symptoms, as well as depressive symptoms. These in turn correlated significantly with increased time off work due to illness.

Others, including Sumer and Knight (2001) and Strelec and Seitl (2017) have explored how attachment style impacts an individual’s work-life balance, which is another measure of personal wellness. Work-life imbalance can have significant implications including low family and life satisfaction (Delecta, 2011) as well as increased risk of drug or alcohol use (Lowe, 2005). Individuals with anxious attachment styles were more likely to experience a negative impact on their work-life balance, while those with secure attachment styles were better able to separate their work and prevent negative spillover (Strelec & Seitl, 2017; Sumer & Knight, 2001).
Impact of employee’s attachment style on interpersonal relationships and behaviors.

An employee’s attachment style impacts how they behave towards and respond to other individuals. Within the literature studies have examined a number of ways an employees’ attachment style impacts their interpersonal relationships at work, both with peers/co-workers and with their supervisor. These studies have found attachment style has significant impact as it relates to 1) support perceptions and support seeking behaviors (Collins & Feeney, 2000; Collins & Feeney 2004; Halpern et al., 2011; Johnstone & Feeney, 2015; Joplin et al., 1999; Menefee et al., 2014; Ognibene & Collins, 1998; Schirmer & Lopez, 2001), 2) the relationship with and perception of their supervisor (Boatwrite et al., 2010; Camgoz & Karapinar, 2016; Davidovitz et al., 2007; Frazier et al., 2015; Hansbrough, 2012; Maslyn et al., 2017; Popper & Amit, 2009; Richards & Hackett, 2012; Rogers et al., 2018; Towler & Stuhlmacher, 2018; Wrape et al., 2017), 3) trust (Camgoz & Karapinar, 2016; Frazier et al., 2015; Harms et al., 2016), 4) organizational citizenship behaviors (Adams, 2004; Berson et al., 2006; Falvo et al., 2012; Harms et al., 2016; Little et al., 2011; Menefee et al., 2014; Mikulincer & Nachschon, 1991; Neustadt et al., 2006; Neustadt et al., 2011; Reizer, 2019; Richards & Schat, 2011), and 5) team cohesion (Baker & Carson, 2011; Berson et al., 2006; Landen & Wang, 2010; Rom & Mikulincer, 2003).

Support Perceptions & Support Seeking Behaviors. Attachment style can impact an employee’s level of support in multiple ways, including both the individual’s support seeking behaviors as well as their perception of support when provided. Support seeking behaviors are those behaviors in which an individual seeks out support from
others, whether a peer or supervisor. Studies have shown that those with secure attachment in general display greater levels of support seeking behaviors whereas those with anxious or avoidant attachment styles have either reduced or ineffective support seeking behaviors (Collins & Feeney, 2000; Florian et al., 1995; Mikulincer & Florian, 1995; Ognibene & Collins, 1998). In particular, those with more avoidant attachment are much less likely to seek support and are more likely to distance themselves from others (Mikulincer et al., 1993; Ognibene & Collins, 1998). As described above, those with secure attachment styles display more direct, problem-focused coping skills, which Menefee et al. (2014) found was predictive of increased support seeking behaviors.

In terms of perception of support, those with high levels of anxious and avoidant attachment showed strong correlations with negative perceptions of social support (Collins & Feeney, 2000; Collins & Feeney, 2004; Halpern et al., 2011; Johnston & Feeney, 2015; Joplin et al., 1999; Schirmer & Lopez, 2001), while those with secure attachment are more likely to perceive positive social support (Ognibene & Collins, 1998). Landen and Wang’s (2010) study supported this, finding a significant negative correlation between attachment anxiety and attachment avoidance and perception of support from peers. Menefee et al., (2014) found a significant negative relationship between avoidant attachment and perception of supportive supervision, though they did not find the same to be true for those with anxious attachment styles. However, this study was conducted with a new measure, the Supervisee Attachment Strategies Scale (SASS), with the study being used for preliminary development and validation of the scale.
**Relationship with Supervisor.** While much of what was described above in terms of perception of support and support seeking behavior is inclusive of the supervisor, there are additional components of the employee-supervisor relationship that go beyond support provision, such as leadership style or behaviors. That said, studies have specifically examined relation of the employee to the supervisor in terms of support, for example, Schirmer and Lopez (2001), found that both employees with anxious and avoidant attachment styles indicated lower levels of supervisor support than those with secure attachment styles. Attachment style can also impact the trust an employee has in their supervisor, with a secure attachment style being associated with increased levels of trust (Frazier et al., 2015; Simmons et al., 2009; Wohrle et al., 2015).

Boatwright et al. (2010) explored how attachment style influenced an employee’s preferences for leadership behaviors. Within their study they found that those with preoccupied and secure attachment styles preferred relational leadership behaviors to a significant degree more than their co-workers with either dismissive or fearful attachment styles. Davidovitz et al. (2007), also found that those with higher levels of avoidant attachment had more negative perceptions of their supervisor both in terms of their leadership and as a view of them as a secure base. Of course, the employee’s attachment style may also skew their perspective of a leader in a positive sense, with Hansbrough (2012) finding that those with high anxiety attachment reported perceptions of transformational leadership, even when those elements were objectively absent, as they assumed that leaders could fulfill their need even if the behaviors demonstrating that were absent. This may be related to Richards and Hackett’s (2012) findings that those
with anxious attachment styles may not seek independence, but prefer to depend on their managers, so they may perceive leadership even when it is not present.

**Organizational Citizenship Behaviors.** Organizational citizenship behaviors are those that are directed at helping others in the organization or are aimed at improving the functioning of the organization (Little et al., 2011). It is important to consider the impact of these behaviors, because they impact the employee experience as a whole, their perception of others in the workplace, their contribution to creating a positive environment in the workplace, and overall workplace culture which has been shown to contribute to development of secondary traumatic stress and other forms of indirect trauma. Organizational citizenship behaviors can be directed towards individuals within the organization or towards the organization as a whole (Frazier et al., 2015).

Berson et al., (2006) found that a secure attachment style was significantly related to increased display of positive organizational behaviors including consideration and sociability. Little et al. (2011) also found a significant positive correlation between secure attachment and organizational citizenship behaviors, as well as a significant negative correlation with anxious attachment and organizational citizenship behaviors. Additional studies have found a significant negative correlation between those with an avoidant attachment style and organizational citizenship behaviors directed towards both individuals and the organization (Frazier et al., 2015; Harms et al., 2016). In the Frazier et al. (2015) study, anxious attachment style was significantly, negatively correlated to organizational citizenship behaviors towards the organization, but was not significant as it related to those directed towards an individual. Another organizational citizenship behavior that has been studied is altruism or helping behaviors. Specifically, a significant
relationship between secure attachment style and increased levels of altruism have been found (Desivilya et al., 2006; Falvo et al., 2012).

While measured separately from other organizational citizenship behaviors, Chopik (2015) found that attachment avoidance was associated with an increase in unethical decision making within the workplace. This has the potential to not only impact interpersonal relationships within the organization, but client relationships and outcomes, and as such relates to an individual’s overall citizenship towards the organization. Frazier et al. (2015) had a similar finding as it related to integrity, with secure attachment significantly correlated to increased integrity, and both anxious and avoidant attachment styles significantly, negatively related to integrity.

Trust. Interpersonal trust can be defined as an individual’s beliefs in and/or willingness to act on the basis of the words, actions, and decisions of another (McAllister, 1995). An employee’s attachment style impacts an employee’s ability or willingness to provide trust in others, with Harms (2011) suggesting that “trust in both supervisor and coworkers is almost by definition an outcome of attachment styles,” (p.289). As such, Shalit et al. (2010) found that secure individuals trust others and themselves more. Specific to an employee’s supervisor, studies have shown that a secure attachment style is significantly related to increased trust (Frazier et al., 2015; Harms et al., 2016; Simmons et al., 2009; Wohrle et al., 2015). Frazier et al. (2015) found that a secure attachment was positively correlated with trust, while both an anxious and avoidant attachment style were significantly, negatively correlated to trust.

Team Cohesion. Team, or work cohesion, is generally described as an individual’s emotional connection with and perceived support from coworkers in the
organization, it defines the ability of an employee to work and thrive within the team or organizational setting (Whitlock, 2007). Having a high level of team cohesion can serve as a protective factor against secondary traumatic stress. Landen and Wang (2010) found a significant negative correlation between both attachment anxiety and avoidance and work cohesion. Rom and Mikulincer (2003) also found that attachment anxiety and attachment avoidance were associated with negative group-related cognitions and emotions, as well as impaired performance in group tasks. Similarly, Baker and Carson (2011) found that those with secure attachment have higher levels of attachment to the work group, while those with avoidant attachment styles has significantly lower levels of attachment within their workgroups. Jahanzeb et al. (2022) found that those with attachment anxiety perceived significantly more levels of workplace ostracism and workplace deviance than those with secure attachment styles. This perception of feeling ignored or avoided impacts team cohesion and development.

Berson et al. (2006) found that those with secure attachment styles both perceived themselves, and were perceived by others, as more effective team members, than were coworkers with insecure attachment styles. As described above, secure individuals often perceive others are more trustworthy and that they can depend on others (Fraley & Shaver, 2008), this creates the foundation for a greater level of team cohesion.

**Impact of employee’s attachment style in interaction within the organization.**

Just as an employee’s attachment style can impact how they engage with others at an individual or team level, attachment style can impact how the employee interacts with, and performs within, the organization as a whole. Specifically, the literature has shown that attachment style can influence an employee’s 1) level of job satisfaction within the
organization (Berlanda et al., 2019; Dahling & Librizzi, 2015; Lanciano et al., 2014; Rahimnia & Sharifirad, 2015), 2) organizational commitment and turnover intentions (Camgoz & Karapinar, 2016; Chopik, 2015; Dahling & Librizzi, 2015; Falvo et al., 2012; Littman-Ovadia et al., 2013; Meredith et al., 2011; Reizer, 2019; Richards & Schat, 2011; Schmidt, 2016, Scrima et al., 2015; Scrima et al., 2017), and 3) job performance (Frazier et al., 2015; Jiang et al., 2019; Krpalek et al., 2014; Neustadt et al., 2011; Reizer, 2019; Virga et al., 2019).

**Job Satisfaction.** The literature has shown that those with secure attachment styles exhibited significantly higher levels of work or job satisfaction (Berlanda et al., 2019; Krausz et al., 2001; Sumer & Knight, 2001), and those with anxious or avoidant attachment styles were significantly more likely to report lower levels of job satisfaction (Berlanda et al., 2019; Dahling & Librizzi, 2015; Lanciano & Zammuner, 2014; Rahimnia & Sharifirad, 2015; Sumer & Knight, 2001). While they did not find a direct correlation, Schirmer & Lopez (2001), found that those with increased levels of attachment anxiety perceived a greater level of work stress, and that those who perceived higher levels of work stress had significantly lower levels of job satisfaction. It is important that further research be done exploring this relationship as previous studies have shown that high levels of job satisfaction may serve as a protective factor, or at least are inversely correlated with rates of secondary traumatic stress (Bride & Kintzle, 2011).

**Organizational Commitment.** Organizational commitment is often defined as the degree to which an individual invests time and energy into their organization (Chopik, 2015). Within the literature, some separate organizational commitment into three dimensions, including affective, normative, and continuance (Camgoz & Karapinar,
Affective commitment is an employee’s emotional commitment to the organization, normative commitment relates to the social norms of the organization and the employee’s sense of moral obligation to remain with the organization, while continuance commitment relates to the perception of the employee that they’ve invested too much time in the organization or that the costs of leaving the organization may be too high (Grego-Planer, 2020). Attachment style may have an impact along any of these dimensions, although much of the work has been centered around affective commitment (Camgoz & Karapinar, 2016).

Studies have demonstrated that a secure attachment style is associated with increased organizational commitment (Camgoz & Karapinar, 2016; Falvo et al., 2012; Mikulincer & Shaver, 2007; Richards & Schat, 2011; Scrima et al., 2015; Scrima et al., 2017), while insecure attachments are significantly related to lower levels of organizational commitment (Richards & Schat, 2011; Schmidt, 2016; Scrima et al., 2015; Scrima et al., 2017). This is significant, as increased levels of organizational commitment are significantly related to lower turnover intentions (Falvo et al., 2012; Richards & Schat, 2011). Interestingly, continuance commitment has been found to be higher in those with anxious attachment styles versus secure or avoidant, which aligns with the mental models of anxious attachment that may fear leaving the perceived secure base of a supervisor or an organization (Scrima et al., 2015).

Falvo et al., (2012) explored the impact of attachment style within hospital workers and found that attachment security was associated with significantly lower levels of intention to quit. This has been replicated with other populations with additional studies also finding that those with secure attachment styles have higher intentions to
remain at the organization (Camgoz & Karapinar, 2016; Neustadt & Furnham, 2006), while those with avoidant attachment (Dahling & Librizzi, 2015) or anxious attachment (Reizer, 2019; Tziner et al., 2014) have significantly higher levels of turnover intention. Others within the literature have found that attachment avoidance demonstrates a stronger negative correlation with organizational or career commitment (Chopik, 2015; Littman-Ovadia et al., 2013).

Attachment insecurities are not just related to an employee’s commitment to the organization but can also impact the employee’s perception of the organization’s commitment to them. Jiang et al., (2019) found that those with high anxious and avoidant attachment levels and an increased sense of job insecurity. Similarly, Meredith et al. (2011) found that those with insecure attachment styles perceived lower levels of recognition from the organization, while those with secure attachment style perceived higher rates of recognition and prestige for their work.

An employee’s commitment to the organization, and their perception of the organization’s commitment to them can both impact the level of work engagement by the employee. Lanciano and Zammuner (2014) found a significant positive relationship between secure attachment and level of job engagement, as well as a significant negative relationship between avoidant attachment and level of job engagement. When completing a hierarchical regression analysis, they found that higher levels of attachment security, and lower levels of attachment anxiety predicted greater engagement in an employee’s job. These results were similar to those of Littman-Ovadia et al. (2013) who also found a significant negative relationship between levels of avoidant attachment and work engagement. Again, this area requires more study, as while neither of the
aforementioned studies found a relationship between anxious attachment and work engagement, Carluccio et al. (2020) found a significant negative association of work engagement and attachment anxiety.

**Job Performance.** As described above, a perception of efficacy and competence in one’s role can serve as a protective factor against secondary traumatic stress (Ortlepp & Friedman, 2002; Sprang et al., 2018). It is therefore important to examine how attachment style may impact job performance and indirectly potentially impact development of secondary traumatic stress. Hazan and Shaver (1990) were one of the first to study this, finding that those with anxious attachment styles reported being unable to complete assignments and evaluated themselves lower on a self-ranking scale, while those with avoidant attachment were less satisfied with their work and coworkers, and rated themselves low on job performance. Neustadt et al. (2011) found that secure attachment style was not only positively correlated to job performance, but within their study secure attachment was statistically predictive of job performance. Similarly, Jiang et al., (2019) found a significant negative correlation for both anxious and avoidant attachment with job performance. However, further research is required as additional studies have found a significant negative correlation only for those with avoidant attachment (Frazier et al., 2015; Reizer, 2019), while others have found low performance only for those with anxious attachment (Virga et al., 2019).

Kraplek et al. (2014) explored the relationship between attachment style, absenteeism and presenteeism, which is defined as decreased on the job performance due to illness or other conditions, which may include individual characteristics. Within their study they found that a secure attachment style was significantly negatively correlated
with presenteeism, while both attachment avoidance and anxiety were significantly positively correlated with presenteeism, meaning that those with insecure attachment styles were more likely to have decreased job performance when while attendance patterns were the same.

**Impact of supervisor’s attachment style.**

As stated above, the impact of attachment theory is dyadic in nature and includes both the attachment style of the worker as well as the supervisor. As described in earlier sections, child welfare is a stressful field with high rates of turnover and the staff involved require high levels of support to mitigate risks of secondary traumatic stress, some argue that this support is fully effective only when the supervisor themselves has a secure attachment style (Popper & Amit, 2009). In fact, it has been contended that effective leadership requires the ability to be available and responsive to the needs of others, provide emotional support, and increase both team and self-efficacy, and that these traits are best seen in those with secure attachments (Davidovitz et al., 2007; Keller & Cacioppe, 2001; Popper & Mayseless, 2003; Popper & Amit, 2009). Some of this may be related to the fact that leaders with secure attachment styles themselves have been found to have increased levels of job satisfaction and ability to manage their own work stress (Lopez & Ramos, 2016).

A review of the literature by Harms (2011) supported much of this thought process and found empirical associations between secure attachment and increased leadership emergence and effectiveness, increased levels of trust, low perceived stress, positive coping, improved work-family balance, and enhanced job performance among leaders (Harms, 2011). Three primary ways in which supervisors with insecure
attachment negatively impact the ability of the worker to manage stress include provision of support, ability to develop team cohesion, and overall perception of leadership by employees.

**Provision of support.** Research has shown that individuals with insecure attachments are less likely to provide support (Collins & Feeney, 2000; Simpson et al., 1992; Fraley & Shaver, 1998; Feeney et al., 2013), and when they do, individuals with insecure attachment styles are less likely to provide effective support or elicit disclosures from other people (Collins & Feeney, 2000; Feeney et al., 2013; Mikulincer & Shaver, 2007; Davidovitz et al., 2007). In terms of supervision, an employee of a supervisor with avoidant attachment may not feel comfortable or able to disclose symptoms of indirect trauma or stress. Cassidy and Shaver (2008) similarly found that adult caregivers with insecure attachment had a more limited ability to show empathy or take the perspective of others as compared to those with secure attachment. While some studies contended that leaders with more anxious attachment styles may exaggerate the needs of others or may intrude on or coerce followers even when those employees require no assistance (Davidovitz et al., 2007; Feeney & Collins, 2003; Keller, 2003). Conversely, secure attachment figures have been found to provide more sensitive, responsive care towards others (Collins & Feeney, 2000). Showing sensitivity, support, and being responsive to needs are characteristics that have been shown to be important in effective leaders (Mayseless & Popper, 2007).

The provision of support inherently relates to the core mental model of attachment style as provision of a secure base. Lavy (2014) studied the relationship between attachment style in supervisors and supervisor security provision. They found a
significant inverse relationship between avoidant attachment and supervisor security provision. Additionally, they found a significant relationship between supervisor security provision and employee goal achievement and positive work-related outcomes. Kafetsios et al. (2014) also found that a supervisor’s attachment style can impact work-related outcomes, including job satisfaction. Kafetsios et al. (2014) found that a supervisor with anxious attachment was significantly, inversely correlated with employee’s levels of positive affect and job satisfaction.

Provision of support also requires that efforts are made to engage the employee. Maslyn et al. (2017) explored the leader-member exchange (LMX) and found that those with a secure attachment style put forth significantly more effort towards relationship development, while those with an anxious attachment style had a negative relationship with effort towards relationship development. They did not find a significant relationship between avoidant attachment and relationship effort, but did find a direct, negative relationship with LMX indicating, a poorer relationship between the leader and employee which has shown to be negatively correlated with job attitudes, trust and communication (Maslyn et al., 2017). Richards and Hackett (2012) also found that anxiety attachment and avoidant attachment styles negatively predicted LMX quality.

Interestingly, Feeney et al., (2013) also found that when those with insecure attachment do provide support, it was frequently based on meeting their own needs, not the needs of those they were supporting. While when asked why they did not provide support, those with insecure attachments frequently reported they refrained from doing so because they perceived that the support would not be appreciated or received. This finding was supported by Davidovitz et al., (2007) who found that leaders’ attachment
anxiety was associated with self-serving leadership motives. If insecurely attached supervisors fail to create an environment where an employee feels understood, appreciated, or supported by their supervisor the employee may feel less securely attached to their supervisor and experience more stress within the workplace or possibly leave employment. This is supported within child welfare by Yankeelov et al. (2009), who found that child welfare workers who remained employed reported feeling more securely attached to their supervisor than those who left the agency.

**Development of team cohesion.** The attachment style of the supervisor also has the potential to significantly impact organizational culture and climate as well as team cohesion, which as described in sections above can impact risk of indirect trauma. Davidovitz et al., (2007) found that leaders with anxious attachment styles were perceived as having low task efficacy while those with avoidant styles were seen as having lower emotional efficacy and had decreased levels of team cohesion. Davidovitz et al., (2007) also found that members of teams led by individuals with insecure attachment style showed decreases in mental health. Subsequent studies have found that team cohesion can mediate the relationship of adult attachment and burnout (Ronen & Mikulincer, 2009). While a leader with secure attachment may be able to develop higher levels of team cohesion, this mediating effect may not be present in teams led by avoidant leaders. Johnston (2000) also found that insecurely attached leaders were more likely to create centralized authority structures, with decreased level of team cohesion, as these leaders were less likely to delegate responsibility or power to others impacting the group. Leaders with anxious attachment are also less likely to address conflict or other obstacles
that may be impacting team development as they fear existing relationships may be harmed (Keller & Cacioppe, 2001).

Developing team cohesion also requires engagement with employees about both the individual and group level. As mentioned above, those with secure attachment styles put forth more effort in building relationships (Maslyn et al., 2017). Some of this may relate to a leader’s inherent beliefs about their employees. Thompson et al. (2018) explore a leader’s implicit followership theories, finding that attachment anxiety and attachment avoidance were significantly, inversely related to implicit followership theories, including those involving beliefs about an employee’s level of industry, enthusiasm, and their stance as a good citizen. They found a positive relationship related to beliefs about their employee’s level of insubordination and incompetence.

**Perception of leadership capabilities.** Employee outcomes are often impacted by their trust in or perception of the leadership capabilities of their supervisor (Davidovitz et al., 2007). The literature has shown that a supervisor’s attachment style impacts how they are perceived by their employees (Berson et al., 2006; Davidovitz et al., 2007; Mikulincer & Florian, 1995; Popper & Amit, 2009). More specifically, those with secure attachment styles are more often perceived as emerging leaders and have their leadership skills ranked higher than those with insecure attachment styles (Berson et al., 2006; Mikulincer & Florian, 1995; Popper et al., 2000; Popper & Amit, 2009). Neustadt et al., (2011) found that managers with secure attachment style had job performance ratings that were significantly higher than managers with insecure attachment styles.

Mikulincer and Florian (1995) found that those with secure attachment styles were rated as having more leadership qualities, while those with anxious attachment
styles were perceived as non-leaders. Riggs and Bretz (2006) also found that those reporting supervisors with secure attachment styles rated a higher bond with and confidence in their supervisors than participants with insecurely attached supervisors, this was independent of the participants own attachment style. Davidovitz et al. (2007), argue that anxiously attached leaders struggle to be perceived as leaders because they often present themselves as vulnerable, seeking closeness to their employee, which in turn impacts the employee’s perception. Whether due to vulnerability or other characteristics, Game (2008) also found that leaders with anxious or avoidant attachment styles were perceived in a more negative manner. Specifically, Game (2008) found that leaders with high levels of avoidant and anxious attachment styles were more often perceived with negative relationship attributions such as blame, anger, or overall negative emotions.

Of course, often perception is rooted in reality, and many contend that those with secure attachment styles are inherently capable of greater levels of leadership due to their increased ability to provide a secure base of support for their employees (Davidovitz et al., 2007; Mayeless & Popper, 2007; Popper, 2000). Additionally, while the previous section described the individual impact of attachment style on the employee, these impacts are also true for the supervisor themselves, and can even be magnified when one is intended to be a secure base for others. This means, that just as at an individual employee level, the attachment style of the supervisor will impact their ability to manage stress, utilize coping skills, their sense of self-efficacy, and personal wellness along with their ability to engage in organizational citizenship behaviors, trust, and engage in team dynamics.
**Impact of supervisor-employee dyad.**

Within the literature, far more research has been done on the impact of an employee’s attachment style versus that of a supervisor. An even more significant gap within the literature are studies exploring the dyadic nature of this relationship, that is, studies taking into consideration the pairing of the supervisor and employee attachment styles (Harms et al., 2016). As described above, the vast majority assess attachment orientation of either the supervisor or employee, but very few have accounted for both, and none within child welfare.

Schirmer and Lopez (2001) studied university workers and found that secure leaders with high anxious attached workers reported similar levels of stress and satisfaction as those with low anxious attachment. However, when supervisor support was low, high anxious workers reported significantly more stress and lower job satisfaction than low anxious workers. Another finding was that individuals high on avoidance reported significantly higher job satisfaction when supervisor support was low (Schirmer & Lopez, 2001). Within their study of Israeli soldiers, Davidovitz et al. (2007) found that changes in the mental health of soldiers was a function of both the soldiers’ and the leaders’ avoidant attachment levels. Harms et al., (2016) explored the interaction of leader-follower attachment styles and found that when an employee with anxious attachment has a leader with avoidant attachment there was a significant, inverse relationship with trust. This dyadic impact was over and above what is seen from the impact of anxious attachment alone on trust and shows how the attachment style of both the leader and follower play a significant role.
Problem Statement

While much work has been completed studying the impact of adult attachment within the workplace, much of this has been completed at an individual level, exploring either the attachment style of the employee or that of the leader. There remains a significant gap within the literature exploring the dyadic nature of this relationship. This is especially true within child welfare, where to date there are no studies that explore the impact of this relationship. Bowman (2019) wrote a theoretical piece adding an attachment lens to enhance the understanding of supervisor support and its relationship to staff turnover, but thus far no known studies have been conducted.

Meanwhile, the child welfare workforce continues to be traumatized as turnover rates continue to increase, workers are asked to carry higher caseloads, and are exposed to additional traumatic materials compounding the risk of development of secondary traumatic stress. Support has the potential to mitigate the impact and perception of these work-related stressors (Schirmer & Lopez, 2001), however, as described above this is dependent not only on the supervisor providing support, but also the ability of the employee to perceive the efforts as supportive. As described above, both the provision and perception of support are influenced by an individual’s attachment style.

In an attempt to examine variables relating to both STS and attachment and to fill the gap in the literature examining attachment and STS among dyads of workers and supervisors in child welfare settings, the following six questions were asked:
RQ1. What is the relationship between the frontline worker’s general and supervisor-specific attachment anxiety and attachment avoidance with their own levels of overall STS and each of the three subscales of STS symptom.

H1: It is hypothesized that frontline worker’s attachment anxiety and attachment avoidance, both global and supervisor-specific, will have a significant positive correlation with worker STS. Further, it is hypothesized that attachment anxiety will be associated with higher levels of STS arousal and intrusive symptoms and attachment avoidance will be associated with higher levels of STS avoidance symptoms.

RQ2. What is the relationship between front-line worker general and supervisor-specific attachment anxiety and attachment avoidance and: perception of supervisor support, co-worker support, organizational support, perceived stress, personal coping, work-life balance, and resilience?

H2: It is hypothesized that frontline worker attachment anxiety and attachment avoidance, both global and supervisor-specific, will have a significant negative correlation with perception of supervisor support, co-worker support, organizational support, personal coping, work-life balance, and resilience. It is hypothesized that frontline worker attachment anxiety and attachment avoidance will have a significant positive correlation with perceived stress.

RQ3. What is the relationship between frontline worker STS and: perception of supervisor support, co-worker support, organizational support, perceived stress, personal coping, work-life balance, resilience, and worker attachment style?
H3: It is hypothesized that there will be a significant negative correlation between STS and perception of supervisor, co-worker, and organizational support, as well as personal coping, work-life balance, and resilience. It is hypothesized that there will be a significant positive correlation with STS and perceived stress, and both work attachment anxiety and attachment avoidance.

RQ4. How do perception of supervisor, co-worker, and organizational support, as well as personal coping, work-life balance, and resilience mediate between supervisor-specific anxious and avoidant attachment and STS?

H4: It is hypothesized that there will be a direct relationship between attachment and STS and all the variables will mediate between attachment and STS as well.

RQ5. What is the relationship between the supervisor’s attachment style and the worker’s level of STS, perception of supervisor support, perceived stress, work-life balance, and resilience?

H5: It is hypothesized that there will be a significant negative association between higher levels of supervisor attachment anxiety and avoidance and a worker’s perception of support, work-life balance, and resilience. There will be a significant positive association between levels of supervisor attachment anxiety and avoidance and a worker’s level of perceived stress.

RQ6. What is the nested effect of worker attachment and supervisor attachment on the worker’s perception of supervisor support, co-worker support, organizational support, perception of stress, personal coping, work-life balance, and resilience?
H6: The worker’s attachment style will have a significant direct and indirect effect on their development of STS as well as a direct effect on the worker’s perception of support, perception of stress, personal coping, work-life balance, and level of resilience. The supervisor’s attachment style will indirectly impact development of worker STS through a moderating effect on the worker’s perception of support, perception of stress, personal coping, work-life balance, and level of resilience.

**Conceptual Model**

A conceptual model depicting risk of secondary traumatic stress in frontline workers based on known risk factors and attachment style, based on the extant literature and the theoretical perspectives applied is represented in Figure 2. The conceptual model depicts that frontline worker attachment style has both a direct and indirect pathway to frontline worker development of secondary traumatic stress. As described earlier in the section, the attachment style of the frontline worker may directly increase their risk of development of STS. As depicted, their attachment style may also indirectly impact development of STS through interaction with known STS risk factors including perception of supervisor, co-worker, and organizational support along with perceived level of stress, work-life balance, personal coping skills, and level of resilience. The model also depicts a potential moderating effect of the supervisor’s attachment style.
CHAPTER III

METHODOLOGY

Research Design

This study is a secondary data analysis study. This study utilizes baseline data from a larger funded study on workforce development in child welfare. In 2016 a team led by the University of Nebraska-Lincoln was awarded a $15 million cooperative agreement to form the Quality Improvement Center for Workforce Development (QIC-WD). As part of this larger study to understand the efficacy of a workforce intervention to reduce staff turnover in nine counties in Ohio, a baseline survey was administered in 2019 to front-line child welfare workers and front-line supervisors. Data from the Ohio baseline survey was utilized for this dissertation study. This study received Institutional Review Board approval from the University of Louisville (IRB #17.0851). Each survey participant was provided a copy of an IRB Preamble, which is attached in Appendix A.

Participants

Participants were frontline child welfare workers and front-line supervisors from eight counties in Ohio. Ohio has 88 counties, ranging in size from greater than 1.3 million (Franklin County) to 12,800 (Vinton County), encompassing a total state population of approximately 11.8 million people (U.S. Census Bureau, 2020). Five counties have a population greater than 500,000, 21 counties have a population ranging
from 100,000-500,000, 21 counties range from 50,000-100,000, and 38 counties have a population less than 50,000. In this sample, two counties were large counties (>500,000): Hamilton (Cincinnati is in Hamilton County) and Summit (Akron is in Summit County). Two counties ranged from 100,000-500,000: Trumbull and Wayne. Knox and Huron counties are in the 50,000-100,000 range, and both Champaign and Crawford counties are less than 50,000. Figure 3 shows the location of the eight counties across the state of Ohio. Table 1 shows the number of workers and supervisors working in each county at the time of the baseline survey and the number that completed the baseline survey. The response rate exceeded 80% in every site and samples from each county were representative of the workforce at that time and fairly representative of the child welfare workforce in Ohio.

**Data Collection and Cleaning**

The survey was administered in person on site at each agency in February 2019 and some participants who were unable to complete the survey in person in February took the survey on-line in March 2019. Data from the surveys administered in person were entered into SPSS by myself along with two research managers. Then 10% of the cases were checked for accuracy by one of the research managers. Data was then cleaned at two levels: first by a team at UCLA who ensured that all item responses fit within the parameters of the scales on the surveys and then by researchers at the University of Louisville to make sure duplicate data from participants were dropped. The most complete data were retained and in some cases part of the data was collected in person then completed on-line and those lines of data were merged. UCLA also renamed the variables to fit the naming convention created by the larger QIC-WD evaluation team. A
clean dataset for frontline workers in Ohio ended up with 467 participants. A clean dataset for frontline supervisors ended up with 105 participants. The worker and supervisor datasets were merged for HLM analyses.

**Measures**

*Worker Version of the Baseline Survey.*

Please see Appendix B for a depiction of the full survey components administered to frontline workers relative to this study.

**Demographics.** Education type and level, race, ethnicity, gender, age, length of work in child welfare and in current position, workload type and amount, and perceived workload all characterized the workforce.

**Perception of Support.**

*Perceived Supervisor Support.* Was measured using two scales, the Perception of Supervisor Support and the Affective Support Scale. The Perception of Supervisor Support scale was originally utilized in the University of Denver COHA measure (Potter et al., 2016). Year after year the Cronbach Alpha is .97. Participants rate the items on a 5-point scale: 1(strongly disagree) to 5(strongly agree). The scale includes six items: My supervisor genuinely cares about me. My supervisor gives me help when I need it. My supervisor supports me in difficult case situations. My supervisor helps me learn and improve. My supervisor values and seriously considers my opinions in case decision making. My supervisor helps me prevent and address burnout.

The Affective Support Scale was developed by Alexander (2008). This is a 13-item measure on a 1(strongly disagree) to 5(strongly agree) rating scale. The *Affective*
Support Scale has demonstrated a Cronbach Alpha of .95 including 13 items. Sample items include: My supervisor is available within 24 hours after a traumatic event, encourages me to share thoughts and feelings of emotional impact of work, provides information about expected effects of trauma, identifies activities and resources to help cope with client stories of pain, and encourages me to express pent up feelings and emotions of anger and pain.

Perceived Co-Worker Support. This scale was developed by Ellett (2009), Cronbach Alpha is routinely .95. Respondents react to a 1(strongly disagree) to 5(strongly agree) scale on five items: Co-workers in my unit professionally share and learn from one another. Co-workers in my unit share work experiences with each other to improve the effectiveness of client services. Co-workers in my unit encourage each other to exercise professional judgment when making decisions. Co-workers in my unit are willing to provide support and assist each other when problems arise. Co-workers in my unit accept support from their colleagues.

Organizational Support. An additional Organizational Support scale was added to get at a general sense of feeling supported by the agency. These 9 items are largely drawn from the original 36-item measure created by Eisenberger, et a. (1986) and shortened by Eisenberger et al, (1990) with a Cronbach Alpha ranging from .74 to .80. It includes these items: The organization shows very little concern for me I. The organization really cares about my well-being. The organization cares about my general satisfaction at work. The organization cares about my opinions. The organization is willing to extend itself in order to help me perform my job to the best of my ability. Even if I did the best job possible, the organization would fail to notice (R). The organization
takes pride in my accomplishments at work. The organization strongly considers my
goals and values. Help is available from the organization when I have a problem.

**Cohen Global Measure of Perceived Stress (short-work related items).**
Developed by Cohen et al., (1983) the scale has been successfully tested for all forms of
validity and reliability with Cronbach Alphas ranging from .78 to .91. Participants are to
think about the past three months how often have you been the following using a
1(never), 2(almost never), 3(sometimes), 4(fairly often) to 5(very often) scale. The six
items include: been upset because of something that happened unexpectedly, felt nervous
and stressed, found that you could not cope with the things you had to do, been angered
because of things that happened that were outside your control, found yourself thinking
about things that you had to accomplish and felt difficulties were piling up so high that
you could not overcome them.

**Secondary Traumatic Stress Scale.** The scale was developed by Bride et al.
(2004) using the criteria for PTSD in the DSM-IVR. There are three sub-scales to assess
the frequency of intrusion, avoidance and arousal symptoms associated with secondary
trauma resulting from working with traumatized populations. Each item on the STSS
corresponds to one of the 17 posttraumatic stress disorder symptoms as delineated in the
Diagnostic and Statistical Manual of Mental Disorders (4th ed., text revision; DSM-IVTR;
APA, 2000). The Cronbach Alpha is routinely high, averaging .93. The scale uses a
1(never), 2(rarely), 3(occasionally), 4(frequently) to 5(always) rating scale. Respondents
are asked to think about the past 7 days and how often they had these experiences. The
scale includes 17 items including: I feel emotionally numb. My heart starts pounding
when I think about my work with clients. It seems as if I am reliving the trauma
experienced by my client(s). I have trouble sleeping. I feel discouraged about the future. Reminders of my work with clients upset me. I have little interest in being around others. I feel jumpy. I am less active than usual. I thought about my work with clients when I didn’t intend to. I have trouble concentrating. I avoid people, places, or things that remind me of my work with clients. I have disturbing dreams about my work with clients. I want to avoid working with some clients. I am easily annoyed. I expect something bad to happen.

**Coping.** The Personal Coping Scale (Hamby et al., 2015) is adapted from two longer coping measures to assess appraisal and behavior coping. The *Appraisal Coping* subscale Alpha is .88 and the *Behavioral Coping* subscale Alpha is .91. The rating is 1(not true about me) to 4(mostly true about me) for 13 items that begin with the phrase: When dealing with a problem. The first items assess *Appraisal Coping*: I spent time trying to understand what happened. I try to see the positive side of the situation. I try to step back from the problem and think about it from a different point of view. I consider several alternatives for handling it. I try to see the humor in it. I often wait it out and see if it doesn’t take care of itself. I often try to remember that the problem is not as serious as it seems. The last items assess *Behavior Coping*: I think about what it might say about bigger lifestyle changes I need to make. I often use exercise, hobbies, or meditation to help me get through a tough time. I make jokes about it or try to make light of it. I make compromises. I take steps to take better care of myself and my family for the future. I work on making things better for the future by changing my habits such as diet, exercise, budgeting, or staying in closer touch with people I care about.
Attachment. Attachment was measured utilizing the nine-item short form of the Experience in Close Relationships Structures questionnaire (ECR-RS; Fraley et al., 2011). Attachment-related anxiety reflects individual differences in the way in which people monitor and appraise the availability and accessibility of attachment figures. Attachment-related avoidance reflects variation in the way in which people regulate attachment-related thoughts, feelings, and behavior. Cronbach Alphas tend to be .93 for the anxiety scale and .95 for the avoidance scale. The test-retest reliability (over 30 days) of the individual scales are approximately .65 for the domain of romantic relationships (including individuals who experienced breakups during the 30-day period) and .80 in the parental domain. Moreover, research from Fraley’s lab (2011) indicates that the scales are meaningfully related to various relational outcomes (e.g., relationship satisfaction, likelihood of experiencing a breakup, the perception of emotional expressions), as well as to one another.

The ERC-RS attachment has two scores, one for attachment-related avoidance and the other for attachment-related anxiety and should be computed for each interpersonal target- in this case a supervisor. The avoidance score can be computed by averaging items 1 - 6, while reverse keying items 1, 2, 3, and 4. The anxiety score can be computed by averaging items 7 - 9. These two scores should be computed separately for each relationship target. The scale used is a 1(strongly disagree) to 7(strongly agree).

The general attachment items include: 1. It helps to turn to people in times of need. 2. I usually discuss my problems and concerns with others. 3. I talk things over with people. 4. I find it easy to depend on others. 5.’I don't feel comfortable opening up to others. 6. I prefer not to show others how I feel deep down. 7. I often worry that other people do not
really care for me.’ 8. I'm afraid that other people may abandon me. 9. I worry that others won't care about me as much as I care about them. The relationship specific scale asks them to think about their supervisor when answering the nine questions.

**Work-life Balance.** Work life balance was measured utilizing a scale devised by Brough and colleagues (Brough et al., 2014). This is a brief scale to assess work-life balance. Cronbach Alphas range from .84 to .94. It uses a 1(strongly disagree) to 5(strongly agree) scale on four items: I currently have a good balance between the time I spend at work and the time I have available for non-work activities. I have difficulty balancing my work and non-work activities (R). I feel that the balance between my work demands, and non-work activities is currently about right. Overall, I believe that my work and non-work life are balance.

**Resilience.** Resilience was measured utilizing the Connor Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003). The scale has demonstrated good reliability with a Cronbach alpha of .89. The CD-RISC contains ten items, on a scale of 0(not true at all) to 4(true nearly all of the time), the items scores are added with the higher the score indicating the higher the level of resilience of the individual. Sample questions include: how often are you able to adapt to change; do you think of yourself as a strong person and can handle unpleasant feelings; do you tend to bounce back after illness or hardship.
**Supervisor Version of the Baseline Survey.**

As with their employees, supervisors completed the following surveys described above: demographic data, Secondary Traumatic Stress Scale, personal coping scale, global attachment, work-life balance, and perceived co-worker support.

**Data Analysis Strategy**

All data was analyzed using IBM SPSS Statistics software version 29, structural equation modeling was conducted using LISREL version 11, and HLM analyses were conducted utilizing the HLM software (Hierarchical linear and nonlinear models) version 8. Items and scales were examined for outliers, out-of-range values and missing data.

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Hypothesis</th>
<th>Analytic Strategy</th>
</tr>
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<tbody>
<tr>
<td>RQ1. What is the relationship between the frontline worker’s attachment anxiety and attachment avoidance with their own levels of STS and each overall STS symptom.</td>
<td>H1. It is hypothesized that frontline worker’s attachment anxiety and attachment avoidance will have a significant positive correlation with worker STS. Further, it is hypothesized that attachment anxiety will be associated with higher levels of STS arousal and intrusive symptoms and attachment avoidance will be associated with higher levels of STS avoidance symptoms.</td>
<td>1. Correlation matrix. 2. Structural equation modeling for all variables found significant.</td>
</tr>
<tr>
<td>RQ2. What is the relationship between frontline worker attachment anxiety and attachment avoidance and: perception of supervisor support, co-worker support, organizational support, perceived stress, personal</td>
<td>H2: It is hypothesized that frontline worker attachment anxiety and attachment avoidance will have a significant negative correlation with perception of supervisor support, co-worker support, organizational support, perceived stress, personal</td>
<td>1. Correlation Matrix 2. Structural equation modeling for all variables found significant.</td>
</tr>
<tr>
<td>RQ1. What is the relationship between personal coping, work-life balance, and resilience?</td>
<td>personal coping, work-life balance, and resilience. It is hypothesized that frontline worker attachment anxiety and attachment avoidance will have a significant positive correlation with perceived stress.</td>
<td>1. Correlation Matrix</td>
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<td>RQ3. What is the relationship between frontline worker STS and: perception of supervisor support, co-worker support, organizational support, perceived stress, personal coping, work-life balance, resilience, and worker attachment style?</td>
<td>H3: It is hypothesized that there will be a significant negative correlation between STS and perception of supervisor, co-worker, and organizational support, as well as personal coping, work-life balance, and resilience. It is hypothesized that there will be a significant positive correlation with STS and perceived stress, and both work attachment anxiety and attachment avoidance.</td>
<td>1. Correlation Matrix</td>
</tr>
<tr>
<td>RQ4. How do perception of supervisor, co-worker, and organizational support, as well as personal coping, work-life balance, and resilience mediate between supervisor-specific anxious and avoidant attachment and STS?</td>
<td>H4: It is hypothesized that there will be a direct relationship between attachment and STS and all the variables will mediate between attachment and STS.</td>
<td>1. Structural Equation Modeling for those variables found significant through the correlation matrix.</td>
</tr>
<tr>
<td>RQ5. What is the relationship between the supervisor’s attachment style and the worker’s level of STS, perception of supervisor support, perceived stress, work-life balance, and resilience?</td>
<td>H5: It is hypothesized that there will be a significant negative association between higher levels of supervisor attachment anxiety and avoidance and a worker’s perception of support, work-life balance, and resilience. There will be a significant positive</td>
<td>1. Correlation Matrix 2. Structural Equation Modeling for those variables found significant. 3. MANOVA to assess for potential interaction effects.</td>
</tr>
<tr>
<td>RQ6. What is the interaction of worker attachment and supervisor attachment on the worker’s perception of supervisor support, co-worker support, organizational support, perception of stress, personal coping, work-life balance, and resilience?</td>
<td>H6: The worker’s attachment style will have a significant direct and indirect effect on their development of STS as well as a direct effect on the worker’s perception of support, perception of stress, personal coping, work-life balance, and level of resilience. The supervisor’s attachment style will indirectly impact development of STS through a moderating effect on the worker’s perception of support, perception of stress, personal coping, work-life balance, and level of resilience.</td>
<td>1. Hierarchical Linear Modeling.</td>
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</table>
CHAPTER IV

RESULTS

Sample Description

A total of 530 frontline child welfare workers and 115 front-line supervisors in eight counties in Ohio were surveyed. Four hundred sixty-seven worker surveys (88%), and 105 supervisor surveys (91%) were completed. This resulted in a greater than an 88% response rate and samples from each county were representative of the workforce at the time and fairly representative of the child welfare workforce in Ohio.

Demographics of the Sample

Sample demographics including gender, sexual identity, race/ethnicity, age, and years of service are displayed in Table 2. For frontline workers the sample was predominantly female (85%), Non-Hispanic Caucasian (69%), and did not identify as a member of the LGBTQ community (95.35%). Black frontline workers constituted 25%, Latino 2%, those identifying as mixed race 4%, and both those identifying as Asian and Native American were less than 1%. Frontline workers ranged in age from 20-68, with a mean of 38.34 (SD= 11.34), on average they had 10.22 (SD=9.66) years in child welfare, with a range of 0-37 years. Of frontline workers, 116 (30%) had less than two years in child welfare, 52 (14%) had 3–4 years, 49 (13%) had 5-9 years, 83 (22%) had 10-19 years, and 83 (22%) had greater than 20 years within the child welfare system. This
distribution can be found in Table 3. Additional demographics related to the hours worked per week by frontline case worker can be found in Table 4 with the majority (69.5%) working 40-49 hours.

Frontline supervisors sample demographics are displayed in Table 2. Frontline supervisors were predominantly female (84%), Non-Hispanic Caucasian (74%), and did not identify as a member of the LGBTQ community (98%). Black frontline supervisors encompassed 20%, those identifying as mixed race 5%, and Asian 1%. Frontline supervisors ranged in age from 25-67, with a mean of 41.99 (SD= 8.65), and on average they had 14.08 (SD=8.09) years in child welfare with a range of 0-33 years. Specific to years as a supervisor, the sample ranged from 0-22 years, with an average of 8.22 (SD=6.49) years.

**Descriptive Analysis of Key Variables**

**Worker Variables**

**Secondary Traumatic Stress.** The Secondary Traumatic Stress (STS) scale is comprised of 17 items using a 1 (Never) to 7 (Always) scale (Bride et al., 2004). The items are congruent with the DSM-5 (APA, 2013) criteria for PTSD. The scale is made up of three subscales: Avoidance Symptoms, Intrusive Symptoms and Arousal Symptoms. The composite STS and the subscales were computed using the sum function of the specified items. Table 5 represents the statistical information about the variable. The mean of the composite STS scale was 33.39 (SD = 10.23) and scores ranged from 16 to 73, indicating moderate levels of secondary traumatic stress in this group. The mean scores of the three cluster of symptoms were: Avoidance Symptoms Mean = 13.32 (SD =
5.40), and the score ranged from 7 to 31; Intrusive Symptoms Mean = 9.90 (SD = 3.96), and the scores ranged from 2 to 23; and Arousal Symptoms Mean = 10.20 (SD = 3.79), and the scores ranged from 5 to 25. Utilizing the Bride (2007) categorization of STS, 40.7% had little to no STS (score of <28), 26.3% mild STS (28-37), 12.1% moderate STS (38-43), 8.3% high STS (44-48), and 12.6% severe STS (49 and above).

Internal consistency of total scores of the STS scale was calculated using the current data set and the Cronbach’s alpha coefficient was .93, demonstrating excellent reliability. Also, internal consistency was computed for the three subscales. The Cronbach’s alpha reports for Avoidance Subscale was .84, the Intrusion Subscale was .81 and Arousal Subscale was .77, demonstrating good reliability.

**Interpersonal Support.** Interpersonal levels of support were measured utilizing three measures, Perceived Supervisor Support Scale, Affective Support Scale, and the Perceived Co-Worker Support Scale.

**Perceived Supervisor Support.** The Perceived Supervisor Support scale is a subscale from the Comprehensive Organizational Health Assessment (COHA; Potter et al., 2016). It consists of six items, with a 1(strongly disagree) to 5 (strongly agree) rating scale. It is an additive scale, with the higher the score the higher the perceived supervisor support. The mean score was 23.6 (SD= 5.2), with a range of 6 to 30. Internal consistency was calculated utilizing this data set, finding a Cronbach’s alpha of .93 indicating excellent reliability.

**Affective Support Scale.** The Affective Support Scale (Alexander, 2008) is comprised of 13 items using a 1(strongly disagree) to 5 (strongly agree) scale. Table 6
includes the statistical information regarding the scale. The mean score was 43.35 (SD= 11.94), with a range of scores from 13 to 65, with a high score indicating greater levels of support. Internal consistency was calculated finding a Cronbach’s alpha of .95, indicating excellent reliability.

**Perceived Co-Worker Support.** The Perceived Co-Worker Support scale was developed by Ellett (2009) and consists of five questions on a 1 (strongly disagree) to 5 (strongly agree) scale. Statistical information related to the scale can be found in Table 6. The higher the score the higher the perceived support from co-workers. The average score was 20.65 (SD= 3.67) with a minimum of 5 and maximum of 25. The Cronbach alpha was calculated as .92 indicating excellent reliability of the scale within this sample.

**Organizational Support.** Organizational support was also assessed utilizing the General Organizational Support Scale (Eisenberger et al., 1990). This scale contains nine items, and also assesses on a 1 (strongly disagree) to 5 (strongly agree) scale. The average was 31.54 (SD = 12.65), with a range of 5 to 59. The higher the score the higher the perception of organizational support. The scale demonstrated excellent reliability, with the Cronbach alpha calculated at .95. Full statistical information on the scale can be found in Table 6.

**Perceived Work Stress.** Frontline worker perception of work stress was measured utilizing the Cohen Global Measure of Perceived Stress, short work-related items (Cohen et al., 1983). This measure has six items, on a scale from 1 (never) to 5 (very often). Statistical information on the scale can be found in Table 6. The average for the scale was 16.97 (SD= 4.46), with a range of 4 to 30. Cronbach alpha was calculated at .82 demonstrating good internal reliability.
**Personal Coping.** Personal coping was measured utilizing the Personal Coping Scale (Hamby et al., 2015). This is a 13-item measure with Appraisal and Behavioral Coping Subscales. Each item is measured on a 1 (not true about me) to 4 (mostly true about me) scale, with higher scores indicating greater levels of coping in each of the subscale realms. Full statistical information can be found in Table 6. For this sample, the Appraisal coping subscale had an average of 21.4 (SD=2.64), with a minimum of 13 and maximum of 28, while the Behavioral coping subscale had an average of 16.38 (SD=2.98) with a range of 8 to 24. However, while previous studies have reported a Cronbach alpha of .88 for the Appraisal coping scale and .91 for the Behavioral coping scale, for this sample Cronbach alphas were calculated to be much lower, with Appraisal at .47 and Behavioral at .41, both of which are considered unacceptable levels of reliability (George & Mallery, 2003). While the subscale reliability was low, Cronbach alpha was calculated for the full scale at .663, which, while higher, is still considered questionable level of reliability. As a result of the unacceptable levels of reliability within this sample, the personal coping measure was not included in further analysis.

**Work-Life Balance.** Work-life balance Scale (Brough et al., 2014) consists of four items on a 1 (strongly disagree) to 5 (strongly agree) scale. The scale showed good reliability with a Cronbach alpha of .87. Full measure statistics can be found in Table 6. The average for the sample was 12.49 (SD=4.03), with a range of 4 to 20. Higher scores indicate a greater level of work-life balance for the frontline worker.

**Resilience.** Resilience was measured utilizing the Connor Davidson Resilience Scale (Connor & Davidson, 2003). This measure contains ten items, on a scale of 0(not true at all) to 4(true nearly all of the time), the items scores are added with the higher the
score indicating the higher the level of resilience of the individual. Full statistical information for the measure can be found in Table 6. The average score for this sample was 29.29 (SD=5.84), with a range of 6 to 40. The measure showed very good reliability with a Cronbach alpha of .87.

**Attachment.** Attachment was measured with the Experiences in Close Relationships – Relationship Structures Questionnaire (ECR-RS; Fraley et al., 2011). This nine-item measure was administered twice, once to assess for the frontline workers general attachment style, and secondly to assess their attachment style specific to their supervisor. However, one of the items was removed for the supervisor-specific attachment, as it was deemed inappropriate for a workplace setting. Fraley et al. (2011) have demonstrated that the ECR-RS has a strong ability to identify and differentiate relationship-specific attachment. The ECR-RS measures attachment across two domains, anxiety and avoidance. Each item is assessed using a 1 (strongly disagree) to 7 (strongly agree) scale, with the sum for each domain calculated separately indicating an individual’s level of both attachment anxiety and attachment avoidance with higher scores indicating a greater level. Full statistical information regarding administration for both general and supervisor-specific attachment can be found in Table 7 and described below.

**General Attachment.** When the focus was on attachment in personal relationships the mean of the ECR-RS avoidance subscale was 18.29 (SD= 6.48) with a minimum of 6 and a maximum of 42. The subscale showed good reliability, with a Cronbach alpha of .82. The ECR-RS anxious subscale average was 9.15 (SD=4.99) with a minimum of 3 and a maximum of 21. This subscale showed excellent reliability with a
Cronbach alpha of 0.90. Frontline worker general attachment was the converted from scale to the four-category attachment style configuration. This was completed by recoding attachment anxiety and attachment avoidance to either low (1) or high (2) based on frequency distribution, then running a crosstabs analyses. As a result, there were 147 (33.9%) frontline workers with secure general attachment, n=68 (15.7%) with preoccupied general attachment, n=86 (19.8%) with dismissive general attachment, and n= 133 (30.6%) with fearful attachment. Table 8 depicts the four-category attachment style distribution.

**Attachment towards supervisor.** With administration of the supervisor-specific attachment style, the average of the ECR-RS avoidance subscale was 18.02 (SD = 8.51) with a range of 1 to 42. The subscale showed acceptable reliability with a Cronbach alpha of 0.70. The supervisor-specific attachment anxiety subscale average was 4.68 (SD = 2.61), with a range of 2 to 14. This subscale also showed an acceptable range of reliability with a Cronbach alpha of .73. As with general attachment, supervisor-specific attachment was converted to the four category attachment styles with n=177 (40.9%) showing secure attachment towards their supervisor, n=33 (7.6%) preoccupied attachment, n=91 (21%) with dismissive attachment, and n=133 (30.5%) with fearful attachment towards their supervisor. Table 9 depicts the four-category attachment style distribution.

**Supervisor Variables**

**Secondary Traumatic Stress.** As with the workers, frontline supervisor secondary traumatic stress was measured with the Secondary Traumatic Stress Scale (Bride et al., 2004), with the same characteristics noted above. Table 12 represents the
statistical information about the variable. The mean of the composite STS scale was 25.87 (SD=9.26), with a minimum of 17 and maximum of 67. The Cronbach alpha for the full scale was .92 showing excellent reliability. The mean scores of the three cluster of symptoms were: Avoidance Symptoms Mean = 10.13 (SD = 4.01), and the score ranged from 6 to 29; Intrusive Symptoms Mean = 7.43 (SD = 2.92), and the scores ranged from 5 to 20; and Arousal Symptoms Mean = 8.31 (SD = 2.99), and the scores ranged from 5 to 18.

**Attachment.** Attachment was measured with the Experiences in Close Relationships – Relationship Structures Questionnaire (ECR-RS; Fraley et al., 2011). While front-line workers were assessed for both their global attachment style and their attachment style towards their supervisor, frontline supervisors were only assessed for their global attachment style. The ECR-RS measures attachment across two domains, anxiety and avoidance. Each item is assessed using a 1 (strongly disagree) to 7 (strongly agree) scale, with the sum for each domain calculated separately indicating an individual’s level of both attachment anxiety and attachment avoidance with higher scores indicating a greater level. Full statistical information can be found in Table 12. The average for the avoidant subscale was 18.7 (SD= 6.76), with a range of 6 to 42. This subscale showed good reliability with a Cronbach alpha calculated at .82. The attachment anxiety subscale average was 7.74 (SD=4.17), with a range of 2 to 18. This subscale showed excellent reliability with a calculated Cronbach alpha of .90.

Just as with front-line workers, supervisor anxious attachment and supervisor avoidant attachment were re-coded to either low or high. This was completed based on an evaluation of the frequency data, then running a crosstab analysis. Analyses showed
that there were 17.8% (n=18) supervisors with a secure attachment style, 30.7% (n=37) with a preoccupied attachment style, 9.9% (n=10) with a dismissive attachment style, and 41.60% (n=42) supervisors with a fearful attachment style. Distribution of supervisors across the four-categories is depicted in table 10.

Once the supervisors were matched with their frontline workers, there were 58 (20%) frontline workers with a securely attached supervisor, 94 (31%) with a preoccupied supervisor, 30 (10%) with a dismissive supervisor, and 115 (39%) with a supervisor with fearful attachment style.

**Correlational Analysis between Worker STS, Attachment, & Potential Predictor Variables**

In order to address research question one and two, a Pearson’s correlation matrix was calculated for both global and supervisor-specific attachment and the coefficients are displayed in Table 13. Global attachment avoidance showed a significant negative relationship with perception of general organizational support (r(432)= -.148, p<.01), perceived social support (r(430)= -.112, p<.01), affective social support (r(430)= -.147, p<.01), perception of co-worker support (r(431)= -.153, p<.01), and work-life balance (r(430)= -.107, p<.01). It showed no statistical relationship with resilience (r(432)= -.027) or work stress (r(429)= -.026). Global attachment anxiety showed a significant negative correlation to perception of general organizational support (r(432)= -.180, p<.01), perceived social support (r(430)= -.131, p<.01), affective social support (r(430)= -.103, p<.05), perception of co-worker support (r(431)= -.191, p<.01), resilience (r(432)= -.205, p<.01), and work-life balance (r(430)= -.205, p<.01). It showed a positive significant relationship to work stress (r(429)= .258, p<.01).
Attachment avoidance with the supervisor had a significant negative correlation with perception of general organizational support ($r(433) = -0.322, p < 0.01$), perceived social support ($r(431) = -0.685, p < 0.01$), affective social support ($r(431) = -0.631, p < 0.01$), and perception of co-worker support ($r(432) = -0.312, p < 0.01$). Attachment avoidance with the supervisor did not have a statistical relationship with resilience ($r(433) = -0.087$), work life balance ($r(431) = -0.054$), or work stress ($r(430) = 0.070$). Attachment anxiety towards the supervisor however, had a significant negative correlation with perception of general organizational support ($r(431) = -0.282, p < 0.01$), perceived social support ($r(429) = -0.541, p < 0.01$), affective social support ($r(429) = -0.492, p < 0.01$), perception of co-worker support ($r(430) = -0.263, p < 0.01$), resilience ($r(431) = -0.186, p < 0.01$), and work life balance ($r(429) = -0.136, p < 0.01$). Anxiety with the supervisor also had a significant positive correlation with level of perceived work stress ($r(428) = 0.197, p < 0.01$).

Overall, supervisor-specific and general attachment had similar patterns of significance. However, the strength of the correlations for general organizational support, perceived social support, affective social support, and perceived co-worker support were all much stronger for both supervisor-specific anxious and avoidant attachment. This trend did not hold true with resilience, where general attachment anxiety had a stronger correlation than supervisor-specific attachment anxiety. Additionally, general attachment avoidance was significantly correlated to work-life balance, but supervisor-specific attachment avoidance was not significant.

For research question three, a Pearson’s $r$ coefficient was also calculated to determine the relationships between STS and each of the potential predictor variables. The result of the correlation matrix is represented in Table 13. The results suggest a
positive relationship between STS and the following variables: general avoidance 
\(r(428)= .143, p<.01\), general anxiety \(r(428)= .281, p<.01\), anxious attachment with 
supervisor \(r(427)= .253, p<.01\), avoidance attachment with supervisor \(r(429)= .135, 
p<.01\), and work stress \(r(429)= .635, p<.01\). Also, there was a statistically significant 
negative relationship between STS and: general organizational support \(r(429)= -.324, 
p<.01\), perception of social support \(r(427)= -.164, p<.01\), affective social support 
\(r(427)= -.202, p<.01\), perception of co-worker support \(r(427)= -.100, p<.05\), 
resilience \(r(428)= -.493, p<.01\), and work-life balance \(r(427)= -.475, p<.01\).

Following an examination of the correlation of attachment and overall STS, a 
Pearson’s \(r\) coefficient was also calculated for each STS symptom sub-type and 
attachment style. These results can be found in Table 14. Results showed that there were 
significant correlations between general attachment anxiety and frontline worker 
attachment anxiety towards their supervisor with all three STS symptom subtypes 
including avoidant symptoms \(r(429)=.276, p<.01; r(427)=.244, p<.01\); intrusive 
symptoms \(r(427)=.193, p<.01; r(426)=.194, p<.01\); and arousal symptoms 
\(r(428)=.315, p<.01; r(427)=.255, p<.01\). General attachment avoidance and avoidant 
attachment towards the supervisor were both significant for avoidant symptoms 
\(r(428)=.175, p<.01; r(429)=.166, p<.01\), and arousal symptoms \(r(428)=.162, p<.01; 
\(r(429)=.128, p<.01\), but neither was significantly related to intrusive symptoms 
\(r(427)=.037, p=.444; r(428)=.059, p=.225\).
Structural Equation Model of Attachment, STS, and Potential Predictive Variables

Based upon the preceding analysis, and to answer research question four, a structural equation model (SEM) was specified to examine the significant pathways through which frontline worker anxious and avoidant attachment styles related to the predictor variables and secondary traumatic stress. The hypothesized model can be found in Figure 4. The rectangles represent measured variables and the line connecting variables implies a proposed pathway with the direction of the arrow indicative of the hypothesized direction of the path. The model is based on the theoretical perspective of both attachment and stress theory, the literature search described in earlier chapters, as well as initial results through the correlational analysis described above.

The hypothesized model required modification as perceived supervisor support, perceived co-worker support, and work-life balance were not significant predictors. These were removed leading to a model with an acceptable fit $\chi^2 (3, N = 450) = 0.67, p = 0.88$, RMSEA=0.000. The results of the modified model are represented in Figure 5.

The results from the structural equation model showed a significant direct pathway from a worker’s anxious attachment towards their supervisor and the worker’s overall level of STS ($\beta = 0.42$). A worker’s anxious attachment towards their supervisor also indirectly impacted their STS. Specifically, an increased level of anxious attachment towards the supervisor had a negative relationship with perceived organizational support ($\beta = -0.75$) and resilience ($\beta = -0.42$), and a positive relationship with perceived level of work stress ($\beta = 0.33$). Frontline worker avoidant attachment to their supervisor was not directly related to level of STS, but it was indirectly related through an inverse relationship with organizational support ($\beta = -0.37$). Organizational support ($\beta = -0.081$),
resilience (β= -.470), and perceived level of work stress (β=1.322) also had a direct effect on frontline worker secondary traumatic stress.

**Correlational Analysis between Supervisor STS, Attachment, & Worker Variables**

To address research question five, Pearson’s correlation coefficients were calculated for supervisor STS, supervisor attachment avoidance, and supervisor attachment anxiety with frontline worker STS, attachment, perception of supervisor, co-worker, and organizational support, along with worker resilience, work-life balance, and perception of work stress. Supervisor level of STS did not show a significant relationship to any of the worker variables, but showed a positive, significant relationship with the supervisor’s own level of attachment avoidance (r(357)= .173, p<.01) and attachment anxiety (r(357)= .441, p<.01). Supervisor attachment avoidance and attachment anxiety both showed a significant negative relationship to the worker’s level of resilience (r(303)= -.119, p<.05; r(303)= -.114, p<.05). The supervisor’s attachment was not significant to worker STS, perception of support, work-life balance, or work stress. Full correlation results can be viewed in Table 15.

**Two (Supervisor’s Anxious Attachment) by Two (Supervisor’s Avoidant Attachment) MANOVA Analysis between Supervisor Attachment and Worker Dependent Variables**

The literature has previously shown that the interaction between attachment avoidance and attachment anxiety, described above as the four-quadrant style, may have a more robust effect than when attachment is simply measured along the two continuous variables separately. For this reason, even though there were no significant correlational
results, a two (high vs. low supervisor’s anxious attachment) x two (high vs. low supervisor’s avoidant attachment) MANOVA was run to determine if there were interaction effects between the supervisor’s attachment style and worker STS, perceptions of support, resilience, work-life balance, and work stress.

The overall MANOVA was significant, $F(6,288)=3.756$, $p<.001$; Pillai’s Trace= .073, $\eta^2=.073$. There were several significant multivariate interaction effects including attachment interaction effects on STS, work-life balance, perceived supervisor support, and work stress. These can be found in Table 16.

In an AVOVA analysis, the interaction effect of supervisor’s anxiety and avoidance on STS was significant $F(1,647)=4.575$, $p=.033$, $\eta^2=.015$. Results for this interaction can be viewed in Table 17. T-test comparisons show a significant difference for those with a supervisor with a more secure attachment style and those with a supervisor with a preoccupied attachment style ($t(151)=-2.521$, $p=.037$). Those with a securely attached supervisor, have a significantly lower overall STS score ($\bar{X}=30.53$, SD=9.81). Those with an anxiously attached, or a supervisor with preoccupied attachment style (high anxious, low avoidance), have the highest overall STS score ($\bar{X}=35.31$, SD=12.76).

In another ANOVA analysis, the interaction effect with work-life balance as the DV was also significant, $F(1, 57.469)=3.455$, $p=.012$, $\eta^2=.012$. T-test analysis showed a significant difference between those with a securely attached supervisor versus those with a dismissively attached supervisor ($t(86)=1.279$, $p=.017$). Those with a supervisor with a secure attachment style had a significantly higher level of work-life balance ($\bar{X}=12.78$, SD=3.78), and those with a dismissively attached supervisor had the lowest perceived
work-life balance ($\bar{X}=11.57, \text{SD}=4.93$). Full results can be found in Table 18. An ANOVA showed that perceived supervisor support was also significant, $F(1, 127.713)=4.660, p=.032, \eta^2=.016$. Interestingly, for perceived supervisor support, those with a securely attached supervisor perceived the least amount of support ($\bar{X}=21.93, \text{SD}=6.11$), while those with a preoccupied supervisor perceived the most support ($\bar{X}=24.22, \text{SD}=4.73$). These groups were found to be significantly different ($t(153)=-2.438, p=.026$). The categorical break down can be found in Table 19.

Finally, another ANOVA analysis showed that there was also a significant interaction effect for frontline worker level of work stress as the DV, $F(1, 130.310)=6.844, p=.009, \eta^2=.023$. There was a significant difference between those with a securely attached supervisor and those with a dismissively attached supervisor ($t(86)=-2.316, p=.002$). Workers with a securely attached supervisor perceived the least amount of stress ($\bar{X}=16.16, \text{SD}=3.44$), while workers with a dismissively attached supervisor perceived the most stress ($\bar{X}=18.27, \text{SD}=5.05$). Full results can be found in Table 20.

Additionally, a significant univariate main effect was found between supervisor avoidant attachment and perception of co-worker support as the DV, $F(1,19.170)=4.014, p=.046, \eta^2=.014$. Workers who had a supervisor with high levels of avoidance perceived a greater level of co-worker support ($\bar{X}=12.61, \text{SD}=2.22$), than workers whose supervisor had low levels of avoidance ($\bar{X}=12.59, \text{SD}=2.14$).

**Hierarchical Linear Modeling**

To address research question six, hierarchical linear modeling (HLM) was utilized to statistically analyze a data structure where frontline worker variables including
employee attachment styles, worker perception of supervisor support, co-worker support, perception of organizational support, work-life balance, resilience, and perception of work stress were defined as level-1. Those variables were nested within teams that were affected by the characteristic of their supervisor, with supervisor attachment style being the primary predictor variable of interest (level-2). The level 1 variables of perception of co-worker support, perception of organizational support, resilience, and perception of work stress were not significant and were therefore removed.

Level-2 supervisor attachment anxiety was a significant predictor of Level-1 frontline worker general attachment anxiety ($b = .017$, t-ratio = 2.399, $p = .010$) and supervisor attachment avoidance was a significant predictor of frontliner worker general attachment avoidance ($b = .013$, t-ratio = 2.144, $p = .030$). Predictors of frontline worker supervisor-specific avoidant attachment included workers with higher levels of general avoidance ($b = .350$, t-ratio = 5.81, $p = .000$), workers who reported less affective supervisor support ($b = -.181$, t-ratio = -4.44, $p = .000$), workers who perceived less overall supervisor support ($b = -.690$, t-ratio = -6.44, $p = .000$), and workers who reported higher levels of work life balance ($b = .255$, t-ratio = 2.73, $p = .007$).

Predictors of frontline worker supervisor-specific anxious attachment included those with higher levels of general attachment anxiety ($b = .141$, t-ratio = 4.30, $p = .000$) and those who reported higher levels of supervisor-specific attachment avoidance ($b = .139$, t-ratio = 7.79, $p = .000$). Finally, frontline worker supervisor-specific attachment anxiety was a significant predictor of worker secondary traumatic stress ($b = .938$, t-ratio = 3.21, $p = .002$). Figure 6 depicts the predictive pathways described above.
CHAPTER V
DISCUSSION

Summary of Findings

Recall that the first research question asked what was the relationship between the frontline worker’s general and supervisor-specific attachment anxiety and attachment avoidance with their own levels of overall STS and each of the three subscales of STS symptoms? Based on the literature and theoretical foundation of adult attachment theory, it was hypothesized that frontline worker’s attachment anxiety and attachment avoidance, both global and supervisor-specific, would have a significant positive correlation with worker STS. Further, it was hypothesized that attachment anxiety would be associated with higher levels of STS arousal and intrusive symptoms and attachment avoidance would be associated with higher levels of STS avoidance symptoms.

Results showed that this hypothesis was supported. Frontline worker general attachment anxiety and attachment avoidance were both significantly positively correlated with frontline worker level of overall secondary traumatic stress. The same was true for the attachment of the frontline worker towards the supervisor, with both attachment anxiety and attachment avoidance. Additionally, the notion that attachment anxiety would be associated with higher levels of STS arousal and intrusive symptoms was supported for both general and supervisor specific attachment anxiety. Furthermore,
secondary traumatic stress avoidance symptoms were significantly related to both general attachment avoidance and supervisor-specific avoidant attachment.

The second research question focused on the relationship between front-line worker general and supervisor-specific attachment anxiety and attachment avoidance and: perception of supervisor support, co-worker support, organizational support, perceived stress, personal coping, work-life balance, and resilience. It was hypothesized that frontline worker attachment anxiety and attachment avoidance, both global and supervisor-specific, would have a significant negative correlation with perception of supervisor support, co-worker support, organizational support, personal coping, work-life balance, and resilience. It was also hypothesized that frontline worker attachment anxiety and attachment avoidance would have a significant positive correlation with perceived work stress.

Through a Pearson’s correlational analysis, the hypothesis was partially supported. Due to an unacceptable Cronbach alpha, personal coping was not included in the analysis, so the relationship between both general and supervisor-specific attachment and behavioral and appraisal coping styles could not be assessed. The hypothesis was predominantly confirmed for worker general attachment anxiety and avoidance, as both were significantly negatively correlated to perception of supervisor support, affective social support, perceived co-worker support, organizational support, and work-life balance. However, while general attachment anxiety was significantly correlated to resilience, general avoidance was not. This distinction also played out with level of work stress, as general attachment anxiety was significantly related to work stress while general attachment avoidance was not. As described earlier, those with an avoidant
attachment style are known to utilize more distance or avoidant coping (Mikulincer & Florian, 1995). With this in mind, those with an avoidant attachment may simply be denying or tuning out work stressors, and therefore report a lower perception of work stress and resilience.

The hypothesis was only partially supported for frontline worker supervisor-specific attachment levels. Supervisor-specific attachment anxiety was in-line with the hypothesis, with significant negative correlations to perception of supervisor support, affective social support, perceived co-worker support, organizational support, work-life balance, and resilience. While it was positively correlated to work stress. Supervisor-specific attachment avoidance however did not meet all hypothesized relationships. Frontline worker supervisor-specific attachment avoidance was significantly related to perception of supervisor support, affective social support, perceived co-worker support, and general organizational support. Supervisor-specific attachment avoidance was not however significantly related to resilience, work-life balance, or work stress.

The third research question asked what was the relationship between frontline worker STS and: perception of supervisor support, co-worker support, organizational support, perceived stress, personal coping, work-life balance, resilience and worker attachment style? It was hypothesized that there would be a significant negative correlation between STS and perception of supervisor, co-worker, and organizational support, as well as personal coping, work-life balance, and resilience. It was also hypothesized that there would be a significant positive correlation with STS and perceived stress, and both worker attachment anxiety and attachment avoidance.
Other than the aforementioned issue with coping style, results confirmed the hypothesis that there would be a significant negative correlation between STS and perception of supervisor support, affective social support, co-worker support, organizational support, work-life, and resilience. There was a significant positive correlation between overall level of secondary traumatic stress and level of perceived work stress. There was also a positive correlation between overall level of frontline worker secondary traumatic stress and general attachment anxiety, general attachment avoidance, and worker’s supervisor-specific attachment anxiety, and avoidance.

Research question four notes: How do perception of supervisor, co-worker, and organizational support, as well as personal coping, work-life balance, and resilience mediate between supervisor-specific anxious and avoidant attachment and STS? It was hypothesized that there would be a direct relationship between attachment and STS and all the variables would mediate between attachment and STS. This hypothesis was only partially supported through the structural equation model. While the proposed model had a direct effect for both supervisor-specific anxious and avoidant attachment with STS, only supervisor-specific anxious attachment proved to have a direct effect. Additionally, perception of supervisor support, co-worker support, and work-life balance proved insignificant and were removed from the model. After this, the model fit the data well. Within this model, worker supervisor-specific attachment anxiety not only directly impacted the outcome of worker secondary traumatic stress, but indirectly through the mediators of organizational support, resilience, and perceived level of work stress. Supervisor-specific attachment avoidance impacted worker secondary traumatic stress through the mediator organizational support such that more attachment avoidance was
associated with less perceived organizational support. There were also direct effects for perceived general organizational support, resilience, and level of work stress on secondary traumatic stress. Increased perception of organizational support and resilience and decreased perception of work stress were associated with lower levels of secondary traumatic stress.

The fifth research question wondered what was the relationship between the supervisor’s attachment style and the worker’s level of STS, perception of supervisor support, perceived stress, work-life balance, and resilience? It was hypothesized that there would be a significant negative association between higher levels of supervisor attachment anxiety and avoidance and a worker’s perception of support, work-life balance, and resilience. Additionally, that there would be a significant positive association between levels of supervisor attachment anxiety and avoidance and a worker’s level of perceived stress.

This hypothesis was partially supported through the analysis. Initially a Pearson’s correlation analysis was conducted examining the supervisor’s level attachment avoidance and attachment anxiety to the frontline worker predictive variables and secondary traumatic stress. As seen in Table 21, there was only one significant correlation, both supervisor attachment avoidance and anxiety were significantly related to worker resilience.

However, as this did not account for the interaction of supervisor attachment anxiety and attachment avoidance, both which would simultaneously impact the worker, a 2 x 2 MANOVA was conducted to explore the interaction effects between supervisor attachment anxiety and attachment avoidance. The overall 2 x 2 MANOVA was
significant and there were several multivariate interaction effects and one univariate main effect found. Multivariate interaction effects included significant effects on secondary traumatic stress work-life balance, perceived supervisor support, and work stress as dependent variables.

The multivariate interaction effect on secondary traumatic stress as the dependent variable was significant. These results show that those with a supervisor with a more secure attachment style, that is low attachment avoidance and anxiety, have a significantly lower overall STS score. Those with an anxiously attached, or preoccupied supervisor attachment style (high anxious, low avoidance), have the highest overall STS score. The interaction effect with work-life balance as the dependent variable was also significant. Results demonstrated that those with a supervisor with a secure attachment style had a significantly higher level of work-life balance, and those with a dismissively attached supervisor had the lowest perceived work-life balance.

Interestingly, perceived supervisor support was also significant. For perceived supervisor support, those with a securely attached supervisor perceived the least amount of support, while those with a preoccupied supervisor perceived the most support. While it was predicted that those with a secure supervisor would perceive increased levels of supervisor support, it is not altogether surprising that those with a supervisor with preoccupied, or high anxiety, attachment would also perceive high levels of support. As noted in previous chapters, those with insecure or anxious attachment can provide support for self-serving motives (Davidovitz et al., 2007). Individuals with preoccupied attachment frequently seek approval from others and worry about conflict with their employees (Keller & Cacioppe, 2001), and are less likely to delegate tasks (Johnston,
This may be perceived as supportive at an individual level though long term it may have deleterious effects on the team as a whole. Additionally, those with anxious attachment have been found to overly exaggerate their employees’ needs (Davidovitz et al., 2007), and while employees with secure or dismissive attachment styles may not appreciate this, those with preoccupied or fearful attachment may perceive it as extra support.

The univariate main effect showed a significant difference with supervisor avoidant attachment and worker perception of co-worker support as the dependent variable. Within this effect, workers who had a supervisor with high levels of avoidance perceived a greater level of co-worker support, than workers whose supervisor had low levels of avoidance.

Therefore, through the two-way MANOVA analysis, the hypothesis was supported through the interaction effects, the supervisor level of attachment anxiety and avoidance did have a significant impact on the worker’s level of secondary traumatic stress, work-life balance, perception of supervisor support, and work stress. The hypothesis that there would be a significant impact on level of worker resilience was not supported.

Research question six asked what was the nested interaction of worker attachment and supervisor attachment on the worker’s perception of supervisor support, co-worker support, organizational support, perception of stress, personal coping, work-life balance, and resilience? It was hypothesized that the worker’s attachment style would have a significant direct and indirect effect on their development of STS as well as a direct effect on the worker’s perception of support, perception of stress, personal coping, work-life
balance, and level of resilience. The supervisor’s attachment style would also indirectly impact development of STS through a moderating effect on the worker’s perception of support, perception of stress, personal coping, work-life balance, and level of resilience.

This hypothesis was partially supported. Supervisor attachment anxiety was found to be a predictive variable of worker general anxiety and supervisor attachment avoidance a predictor of worker general avoidance. Worker general avoidance was a predictor of worker supervisor-specific avoidance. Additionally, workers who reported lower levels of affective supervisor support and a lower perception of overall supervisor support, along with those who reported higher levels of work-life balance had increased levels of supervisor-specific attachment avoidance. Supervisor-specific attachment anxiety was predicted by worker general level of attachment anxiety and by increased levels of supervisor-specific attachment avoidance. In turn, frontline worker supervisor-specific attachment anxiety was predictive of worker levels of secondary traumatic stress.

**Discussion of Findings**

The present study aimed to fill gaps in the literature examining attachment and secondary traumatic stress. Specifically, it aimed to utilize adult attachment theory as the theoretical foundation and mechanism through which to explain the import of the supervisor-employee dyad and the impact of support and supervision as a predictive variable of secondary traumatic stress.

One of the initial findings is related to the sample of frontline public child welfare workers surveyed in this study. In his seminal study, Bride’s (2007) sample had an average STS score of 29.69, the average in this sample was 33.39, indicating significantly
higher levels of STS. Additionally, according to the criteria Bride created to measure severity of STS, this population was experiencing increased levels of secondary traumatic stress with only 40.7% in the little STS category compared to Bride’s 50%, 26.3% mild STS compared to 25%, 12.1% moderate compared to 15%, 8.3% severe compared to 5% and 12.6% severe compared to 5%. Of course, these numbers only work to further emphasize that the child welfare workforce is at an enhanced risk for secondary traumatic stress, even amongst other helping professionals. The level of secondary traumatic stress within this sample is important to consider with regards to the results of this study, as with a cross-sectional study, causality can be difficult to determine. Having such an impaired workforce may have already had deleterious effects on perception of supervision, or other predictive variables.

Additionally, the sample of both frontline workers and supervisors both had disproportionately higher levels of insecure attachment. Hazan and Shaver’s (1988) seminal study showed the adult attachment style distribution was typically around 56% secure, 25% avoidant, and 19% anxious. While this study utilized the four-category system, only 33.9% of frontline workers exhibited a secure general attachment style, and only 17.8% of supervisors were secure. Much like with levels of secondary traumatic stress, this sample may be true of other child welfare populations, but does differ from the general population, indicating much higher levels of insecure attachment. Specifically, the sample had much higher levels of anxious attachment as 15.7% of frontline workers had a preoccupied/anxious attachment style, and an additional 30.6% had fearful attachment, which scores high on both avoidant and anxious attachment. This mean that 46.3% of the sample had higher than average levels of anxious attachment,
compared to the 19% found in the general population. The same was even more true for supervisors, where 30.7% had preoccupied attachment and 41.6% had fearful, leading to 72.3% with higher-than-average levels of anxious attachment. Avoidant attachment was also elevated in this sample of workers if one adds together dismissive attachment (19.8%) with fearful (30.6%) for a total of 50.4% avoidant and for supervisors if one adds together dismissive attachment (21%) with fearful (30.7%) for a total of 51.7%. Thus, the increased levels of both secondary traumatic stress and insecure levels of attachment within this sample are further supported by the results of the correlational analysis demonstrating a significant, positive relationship between attachment anxiety and overall secondary traumatic stress along with all three secondary traumatic stress symptom subtypes.

Impact of Attachment at the Frontline Employee Level

At the individual employee level, both general and supervisor-specific attachment proved significant across several fronts. Preliminary correlational analyses demonstrated a significant effect for both general and supervisor-specific levels of anxious and avoidant attachment and secondary traumatic stress. This indicated that employees with lower levels of attachment avoidance and anxiety, whether in general or towards their supervisor, experienced lower levels of secondary traumatic stress. In other words, those with a predominately secure attachment style experienced decreased levels of secondary traumatic stress, as a whole and at the individual secondary traumatic stress symptom subtype level. This was an expected finding, as the literature had previously shown that those with secure attachment style experience an increased ability to manage stress (Johnston & Feeney, 2015) and fewer symptoms of alternative forms of indirect trauma.
(Maramas et al., 2003; Pardess et al., 2013). But this study expands upon the earlier research by examining secondary traumatic stress specifically.

While it was anticipated that both worker attachment avoidance and anxiety would directly relate to levels of secondary traumatic stress, the typology of secondary traumatic symptomology may explain some of the increased variance related to attachment anxiety. Secondary traumatic stress is defined as symptoms related to increased levels of arousal, intrusive thoughts, and avoidant symptoms. Both arousal and intrusive symptoms relate more heavily to behaviors and mental frameworks surrounding attachment anxiety. Those with more anxious attachment styles are more prone to worry, perseveration, and an overall sense of fear or apprehension related to the perception or stability of others. These would lend themselves to both increased levels of arousal and intrusive thought symptoms, which played out in the correlational analysis exploring both general and supervisor-specific levels of attachment avoidance and anxiety, and the symptom sub-types of secondary traumatic stress. While general and supervisor-specific attachment avoidance and anxiety both correlated significantly with overall level of STS, only general and supervisor-specific levels of anxiety correlated to all three symptom subtypes, as neither general or supervisor-specific attachment avoidance was related to intrusive symptoms.

This finding was again relevant in examination of the structural equation model, which showed both a direct and indirect pathway co-efficient for supervisor-specific attachment anxiety to secondary traumatic stress, but only an indirect path for supervisor-specific attachment avoidance. As expected, increased levels of frontline worker supervisor-specific attachment anxiety led to increased levels of frontline worker
secondary traumatic stress. Supervisor-specific attachment anxiety also indirectly impacted levels of secondary traumatic stress, as increased levels of supervisor-specific attachment anxiety led to decreased perception of organizational support, decreased levels of resilience, and increased levels of perceived work stress. Decreased levels of organizational support and resilience, and increased perception of work stress were, as expected, associated with increased levels of secondary traumatic stress. The negative association of anxious attachment and resilience is unsurprising, as the literature has shown that those with secure attachment style are associated with greater levels of resilience (Halpern et al., 2011). This is extended to the association with work stress, as increased levels of resilience has also been associated with decreased levels of perceived work stress (Marriner et al., 2014).

Interestingly, supervisor-specific attachment avoidance was only indirectly associated with secondary traumatic stress through a negative relationship with the same three variables of organizational stress, meaning increased levels of avoidance led to decreased perception of organizational support, and increased rates of secondary traumatic stress. An additional explanation for this is that attachment avoidance, as described by Bowlby (1978), has turned off or deactivated their attachment system. It is possible that those with higher levels of attachment avoidance may inherently experience less work stress because they have a more “checked-out,” perception of the work environment. In the same way, this would impact their perception of support throughout the organization, as because they have less in tune with the organization as a whole. Whereas those with an anxious level of attachment are overly concerned with the
perception and behaviors of others, so they may be more in tune with not only levels of organizational support, but additional perceive greater levels of work stress.

**Impact of Attachment at the Supervisor Level**

The impact of attachment at the supervisor level was explored through the 2 x 2 MANOVA, which showed an interaction effect demonstrating a significant effect of the supervisor’s level of attachment avoidance and attachment anxiety on frontline worker’s level of secondary traumatic stress. More specifically, frontline workers whose supervisor had a secure attachment style experienced significantly lower levels of secondary traumatic stress, particularly than those whose supervisor had a preoccupied attachment style. This was an expected result, as the literature has shown that supervisors with a secure attachment style are more adept at providing support (Davidovitz et al., 2007), while those with a more anxious attachment style are not as adept at truly identifying and meeting their team member’s needs (Davidovitz et al., 2007; Feeney & Collins, 2003). However, this is the first study to test the effect in a child welfare workplace.

A significant interaction was also found for supervisor attachment style and frontline worker’s perception of supportive supervision. This was a bit of an unexpected result in that those with a securely attached supervisor perceived a significantly lower amount of supervisor support than those with a supervisor with preoccupied attachment style. However, as described above, those with insecure or anxious attachment can provide support for self-serving motives (Davidovitz et al., 2007). Individuals with preoccupied attachment frequently seek approval from others and worry about conflict with their employees (Keller & Cacioppe, 2001). These supervisors are less likely to
delegate tasks (Johnston, 2000), which may be perceived as supportive at an individual employee level. Additionally, those with anxious attachment have been found to overly exaggerate their employees’ needs (Davidovitz et al., 2007), and while employees with secure or dismissive attachment styles may not appreciate this, those with preoccupied or fearful attachment may perceive it as extra support, and this sample had a higher level of preoccupied (15.7%) and fearfully (30.6%) attached employees. The HLM analyses show a slightly different pattern of results that indicate less of a perception of overall supervisor support, especially in the form of affective support, was predictive of being avoidantly attached to one’s supervisor which in turn predicted an anxious attachment to supervisor (fearful attachment style) and then to heightened STS.

Additional results showed an interaction effect between supervisor level of attachment avoidance and anxiety and worker’s perception of work stress and work life balance. Workers with a securely attached supervisor perceived greater levels of work life balance and decreased perception of work stress. This was an expected result as supervisors with a secure attachment style are more likely to provide adequate levels of support and guidance to their team members, allowing the frontline worker to more accurately assess workplace stressors, and in turn, delineate work from life circumstances. Those with a dismissively attached supervisor had the least amount of work life balance and greatest amount of perceived work stress. Again, this is not unexpected, as supervisors with a dismissive attachment style are known to be the least engaged and to provide the least amount of support (Cassidy & Shaver, 2008; Collins & Feeney, 2000) while also being more task/outcome focused (Davidovitz et al., 2007), thereby placing an increased level of stress and pressure on the frontline worker.
**Impact of Supervisor-Employee Nested Attachment Level**

The impact of the supervisor-employee dyadic attachment relationship was explored through a nested analysis within hierarchical linear modeling. Related to the findings described above, the frontline worker supervisor-specific attachment anxiety proved to be a driving force of worker secondary traumatic stress, as it was the only significant predictor of secondary traumatic stress. However, the level two variable of the supervisor attachment style was a predictive variable for worker general attachment style, with the supervisor’s anxious attachment style predicting worker general anxious attachment and the supervisor’s avoidant attachment style predicting worker general avoidance. This relationship is unsurprising considering attachment theory posits that whether in infancy, or adulthood, working mental models of attachment are derived from relationships with caregiver or authority figure behavioral patterns, which are in turn derived from their own mental model and attachment styles. Therefore, the anxious or avoidant attachment style of the supervisor would inherently serve as a primer for the general anxious and avoidant attachment of the worker.

Additionally, with this particular analysis, point in time should be a particular consideration. While the literature has shown that there are both global and relationship specific levels of attachment, global attachment is what the individual brings into the situation, and then interactions with an authority or attachment figure shape the relationship specific level of attachment. Therefore, it makes sense that the supervisor’s attachment style would most directly impact the employee’s general attachment style through a priming effect, which would then lead to the supervisor-specific attachment style. This proved to be true in the data, with supervisor attachment anxiety relating to
frontline worker general attachment anxiety, which then directly predicted frontline worker supervisor-specific attachment anxiety. Similarly, supervisor attachment avoidance was directly related to frontline worker general attachment avoidance, which then directly predicted frontline worker supervisor-specific attachment avoidance.

An interesting finding within the HLM analysis was related to the additional predictor variables of frontline worker supervisor-specific avoidant attachment. HLM analysis showed that decreased perception of affective supervisor support and decreased levels of perception of supervisor support were predictive of increased levels of frontline worker supervisor-specific avoidant attachment. According to attachment theory, when an authority figure consistently fails to provide the secure base that is needed, the individual begins to internalize that and develop working models that detach them from that need or the drive to look for that support from others. In this scenario, the supervisor, as the attachment figure, is perceived as having provided diminished affective and overall support, leading the employee to develop a specific attachment avoidance related to the supervisor. However, as is true in many instances within child welfare, it is possible that the employee has either experienced a frequent change in supervisor, or that the supervisor themselves displays frequent changes in support provision, which in turn has led to the additional finding, in that worker supervisor-specific attachment avoidance impacts level of worker supervisor-specific level of attachment anxiety. While those with pure attachment anxiety may be accounted for and strictly derived from general anxiety, it is possible that the influence of the supervisor-specific attachment avoidance predictor variable is being seen in the supervisor-specific attachment anxiety as it relates to the high percentage of frontline employees with fearful attachment (30.6%), which is
inclusive of both high avoidance and high anxiety. Additionally, being in such a fearful environment exacerbates the impact of exposure to traumatized clients. There is a growing literature that a lack of psychological safety is a problematic outcome of unhealthy organizational cultures (Newman et al., 2017; Shahid & Din, 2021). The results of this study on attachment and STS helps to explain the mechanisms for where a lack of psychological safety comes from.

Study Limitations

One limitation of the study is that it was conducted via secondary data analysis. A frequent critique of secondary data analysis is that the data was collected for another purpose (Boslaugh, 2007; Doolan & Froelicher, 2009). This had an impact in this study as there were additional measures that may have been relevant both based on the literature and theoretical review. Specifically, data was not collected on the frontline worker’s history of exposure to personal trauma. As described in chapter one, a history of personal trauma has been found to be a risk factor for secondary traumatic stress (Brady, 2017), and has also been identified as a contributing factors to the development of an individual’s attachment style (Breidenstine, 2011). Exploring how the individual frontline worker’s history of personal trauma fits into the identified model will be important for future research.

Additionally, while the Personal Coping Scale (Hamby et al., 2015) has historically shown a greater level of reliability, the Cronbach alphas within this sample were unacceptably low. This is not unique to this measure, as many instruments utilized to measure coping have identified psychometric problems and struggle with the concept as either a process or a style, which the impacts identified dimensions (De Ridder, 1997).
However, as the reliability within this sample was unacceptable, coping skills were not
t-accounted for within any of the analyses. As coping skills were identified both within the
secondary traumatic stress and attachment literature as a key construct, this is a potential
gap of this study for which future research will need to address.

As reported, while a high response rate was attained, because fewer than 100% of
workers and supervisors completed surveys, there was some mismatch between those that
did complete surveys in the frontline worker and supervisor groups. There were 467
frontline worker surveys completed and 105 supervisor surveys. However, only 367
frontline workers were able to be matched to a supervisor, and there were 19 supervisors
that were not able to be matched with any workers. Additionally, within the data some
supervisors had as few as one direct report, while others had as many as eight. This
potential differential in team size created an unaccounted-for factor that should be
explored in future research.

An additional, potential limitation of the study is the timing of data collection.
Data were collected for this study in early 2019, prior to the start of the Covid-19 global
pandemic. It is unknown how going through this form of collective trauma has changed
the child welfare workforce or altered their perceptions of what is supportive or other
factors that drive retention or turnover. What is known, is that the labor market and
workforce has shifted throughout the pandemic leading to what many are calling the
Great Resignation (Sull et al., 2022). In their review, Sull et al. (2022) found that in just
the six-month period of April 2021 to September 2021, more than 24 million people in
the United States left their jobs, an all-time record. Tessema et al. (2022) contend that
pre-pandemic policies and practices may not apply to post-pandemic periods and that
employers, supervisors, and human resource professionals need to adjust to the new norms of the labor market. While it is unknown how this is impacting child welfare specifically, the reality is that this study should be replicated with post-pandemic data to determine if driving factors that were significant pre-pandemic remain.

**Implications for Social Work Practice, Education, and Research**

**Implications for Practice**

Frontline child welfare workers provide a vital service for the health and wellbeing of youth and families throughout the country. Child welfare workers are exposed to high rates of traumatic material and as such are at high risk for indirect trauma, including secondary traumatic stress (Bride, 2007). While many studies have examined factors that contribute to secondary traumatic stress, few have applied a theoretical lens to delve deeper into the mechanisms through which these factors may be impacting development of STS. This study not only confirms what the literature has previously found with regard to high rates of secondary traumatic stress in public child welfare workers, but it has added an additional potential protective factor and provides a pathway through which intervention can be developed and applied. Specifically, as the results show, those with a low anxiety and low avoidance, or secure attachment style, are at a decreased risk for secondary traumatic stress. However, while many of the working mental models of attachment style develop in childhood, the literature has shown that awareness of these stress responses as well as that priming, or shaping, techniques can support individuals in developing more awareness and creating new state attachments (Carnelley & Rowe, 2007; Mikulincer & Shaver, 2007).
Priming is a way of activating the mental models to make them cognitively active as opposed to subconscious stress responses (Carnelley & Rowe, 2007). Priming allows an individual to develop an enhanced level of consciousness, which gives them greater influence over their emotions, thoughts, and overall attachment patterns (Rowe & Carnelley, 2003). This study has shown that attachment style impacts development of secondary traumatic stress through two mechanisms. First, workers with increased levels of anxious and avoidant attachment experienced increased levels of secondary traumatic stress. Secondly, workers whose supervisor had increased levels of insecure attachment had increased levels of secondary traumatic stress. In both instances, there is opportunity for intervention.

At the worker level it is possible that priming techniques to counter the priming that exposure to abused and neglected children and removal of children from families naturally triggers in this workforce, should be utilized to assist the worker in developing a more securely attached perspective, whether for decision making or stress-evaluation purposes. It is possible that repetitive priming of attachment security for these individuals may lead to a shift towards enhanced secure attachment, as Carnelley and Rowe (2007) found that repeated priming experienced increased positive relationship expectations, increased positive self-views, and less attachment anxiety. Priming can similarly be used at the supervisor level, not only to support with decision making and stress evaluation, but additionally to support with improved support provision, increased awareness of team dynamics, as well as addressing the supervisor’s own level of secondary traumatic stress. Supporting the leaders who manage supervisors as well as front line supervisors in developing skill sets that mimic secure attachment may
significantly impact the prevalence of frontline supervisor and worker secondary traumatic stress.

An additional practice implication surrounds organizational implications of support. This study has shown that supervisor, co-worker, and general organizational support all have an impact in prevalence of frontline worker development of secondary traumatic stress. While there was significance found to associate this with the supervisor and worker’s attachment style, there remains unexplained variance. Some of this unexplained variance could be related to the fact that through training and development, even those with insecure attachment styles can learn how to provide supportive supervision, which the literature has shown is a significant protective factor against secondary traumatic stress (Collins-Camargo & Antle, 2018; Miller, 2018). While supportive supervision training may be of benefit to all employees, it may be of particular importance to those supervisors who have insecure attachment styles. Through coaching, development, and potentially even priming efforts, these supervisors may develop increased levels of skill for supportive supervision which will lead to a healthier workforce.

**Implications for Education**

As described above, there are many training and educational implications that have been illuminated through this study. First, the current research confirms previous studies in emphasizing the significant risk of front-line public child welfare workers. The prevalence of secondary traumatic stress within this population not only demonstrates an occupational hazard but remains significantly higher than other helping professionals. The literature has shown that trainings focused on information about the etiology,
symptoms, and impact of secondary traumatic stress, as well as coping skills, job task
specific skills and evidence-based practices all serve to empower the worker, increase
self-efficacy through knowledge attainment, and decrease risk of secondary traumatic
stress (Bell et al., 2003; Sprang et al., 2018). With this in mind, social work curricula,
along with federal, state, and organizational employment guidelines should all require
training for both the employee and the supervisor.

Additionally, as described above in terms of practice implications, the
development of a training curriculum surrounding priming and supportive supervision
techniques may improve the support and skillset of child welfare supervisors. This
enhanced educational opportunity for supervisors would have exponential effects as their
ability to provide increasingly supportive supervision would overtime lead to a healthier
workforce, which in turn has potential to improve client outcomes. Not only would it
improve outcomes, but as described in chapter one, secondary traumatic stress is a
significant contributor to turnover, which is both its own problem as well as a
compounding factor for the issue of deficient funding that plagues child welfare systems
throughout the nation. Improving the skillset of supervisors and support for frontline
workers, has the potential to increase retention, improve funding inadequacies, and
translate to improved client outcomes.

**Implications for Research**

As described in the limitation section above, the current study did not include a
measure assessing for the frontline worker’s personal history of trauma. As trauma has
both theoretical and empirically based implications on attachment and secondary
traumatic stress, it will be important for future research to address this gap. Additionally,
though this study attempted to account for coping skills, the poor internal reliability did not allow for utilization of the data. Future studies will want to evaluate the impact of coping style as it relates to attachment and its’ effect on development of secondary traumatic stress.

Additionally, as described above, the covid-19 pandemic has had significant ramifications throughout the workforce. As such, future research may want to replicate the study to verify the results found within. The global pandemic and corresponding Great Resignation have led to a shift in employee’s perceptions of support, work-life balance, and overall job satisfaction. Future studies will want to utilize lessons learned from this study, to inform future studies as they relate to individual factors that impact perception of support, stress, and work-life balance.

Most importantly, this study has contributed to laying the groundwork for future study that involves an intervention directed towards supervisors to assist them in learning more supportive supervision techniques as they relate to each of the attachment styles. As the study has shown, those with different levels of attachment anxiety and attachment avoidance perceive and seek support differently. It will be important for the health of the workforce, to develop an intervention or curriculum designed to coach supervisors on how to approach support for each style of employee.

**Conclusion**

Despite limitations discussed above, this study advances gaps in the literature related to the occupational hazard of secondary traumatic stress in frontline child welfare workers. Specifically, it is the first to apply adult attachment theory to this phenomenon
within the child welfare workforce and identify attachment style as both a significant factor at the individual worker and supervisor level. As described above, secondary traumatic stress has significant detrimental effects on the individual worker, child welfare organizations, and on the youth and families they serve. Identifying potential protective factors or intervention points is imperative to improving the health of the workforce. The results of this study and its’ implication for future research, practice, and policy are potentially far reaching and continued evaluation will be vital as efforts to improve the child welfare system continue to evolve.
REFERENCES


Berger, R., & Gelkopf, M. (2011). An intervention for reducing secondary traumatization...
and improving professional self-efficacy in well baby clinic nurses following war and terror: A random control group trial. *International Journal of Nursing Studies, 48*, 601-610.


Children’s Bureau Workforce Workgroup. (2022). Quality Improvement Center for


TABLES

Table 1

*Sample Size at Baseline.*

<table>
<thead>
<tr>
<th>County</th>
<th>Worker Baseline (Feb 2019)</th>
<th>Supervisor Baseline (Feb 2019)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Champaign</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Crawford</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>Hamilton</td>
<td>193</td>
<td>47</td>
</tr>
<tr>
<td>Huron</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>Knox</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>Summit</td>
<td>139</td>
<td>32</td>
</tr>
<tr>
<td>Trumbull</td>
<td>37</td>
<td>9</td>
</tr>
<tr>
<td>Wayne</td>
<td>33</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>449</td>
<td>103</td>
</tr>
</tbody>
</table>
### Table 2

**Demographics of Frontline Worker and Frontline Supervisor Sample**

<table>
<thead>
<tr>
<th></th>
<th>Worker Demographics</th>
<th></th>
<th>Supervisor Demographics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>61</td>
<td>14%</td>
<td>16</td>
<td>16%</td>
</tr>
<tr>
<td>Females</td>
<td>376</td>
<td>85%</td>
<td>84</td>
<td>84%</td>
</tr>
<tr>
<td>Nonbinary</td>
<td>1</td>
<td>&lt;1%</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Prefer not to say</td>
<td>3</td>
<td>&lt;1%</td>
<td>3</td>
<td>&lt;1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>441</td>
<td></td>
<td>101</td>
<td></td>
</tr>
<tr>
<td><strong>LGBTQ</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify As LGBTQ</td>
<td>26</td>
<td>6.65%</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>303</td>
<td>69%</td>
<td>77</td>
<td>74%</td>
</tr>
<tr>
<td>Black/African American</td>
<td>110</td>
<td>25%</td>
<td>21</td>
<td>20%</td>
</tr>
<tr>
<td>Latino</td>
<td>9</td>
<td>2%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Mixed Race</td>
<td>12</td>
<td>4%</td>
<td>5</td>
<td>5%</td>
</tr>
<tr>
<td>Asian</td>
<td>4</td>
<td>&lt;1%</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Native American</td>
<td>1</td>
<td>&lt;1%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>439</td>
<td>&lt;1%</td>
<td>104</td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>20-68</td>
<td></td>
<td>25-67</td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>38.34(11.34)</td>
<td></td>
<td>41.99 (8.65)</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>433</td>
<td></td>
<td>101</td>
<td></td>
</tr>
<tr>
<td><strong>Years in CW</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>0-37 years</td>
<td></td>
<td>0-33 years</td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>10.22(9.66)</td>
<td></td>
<td>14.08(8.09)</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>383</td>
<td></td>
<td>102</td>
<td></td>
</tr>
</tbody>
</table>
Table 3

*Distribution of years in Child Welfare for Frontline Workers*

<table>
<thead>
<tr>
<th>Years in Child Welfare</th>
<th>n</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;2 Years</td>
<td>116</td>
<td>30%</td>
</tr>
<tr>
<td>3-4 Years</td>
<td>52</td>
<td>14%</td>
</tr>
<tr>
<td>5-9 Years</td>
<td>49</td>
<td>13%</td>
</tr>
<tr>
<td>10-19 Years</td>
<td>83</td>
<td>22%</td>
</tr>
<tr>
<td>20+ Years</td>
<td>83</td>
<td>22%</td>
</tr>
</tbody>
</table>
**Table 4**  
*Distribution of Average Hours Worked per week by Frontline Workers*

<table>
<thead>
<tr>
<th>Hours Worked Per Week</th>
<th>N</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>39 hours or less</td>
<td>5</td>
<td>1.00%</td>
</tr>
<tr>
<td>40-49</td>
<td>310</td>
<td>69.50%</td>
</tr>
<tr>
<td>50-59</td>
<td>100</td>
<td>22.50%</td>
</tr>
<tr>
<td>60-69</td>
<td>20</td>
<td>4.50%</td>
</tr>
<tr>
<td>70+</td>
<td>11</td>
<td>2.50%</td>
</tr>
<tr>
<td>Total N</td>
<td>446</td>
<td></td>
</tr>
</tbody>
</table>
**Table 5**

*Secondary Traumatic Stress Scale for Frontline Workers*

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary Traumatic Stress Disorder (17)</td>
<td>430</td>
<td>33.39</td>
<td>12.13</td>
<td>16</td>
<td>73</td>
<td>0.927</td>
</tr>
<tr>
<td>Avoidance Symptoms (5)</td>
<td>430</td>
<td>13.32</td>
<td>5.40</td>
<td>7</td>
<td>31</td>
<td>0.841</td>
</tr>
<tr>
<td>Intrusive Symptoms (7)</td>
<td>429</td>
<td>9.90</td>
<td>3.96</td>
<td>2</td>
<td>23</td>
<td>0.814</td>
</tr>
<tr>
<td>Arousal Symptoms (5)</td>
<td>430</td>
<td>10.20</td>
<td>3.79</td>
<td>5</td>
<td>25</td>
<td>0.766</td>
</tr>
</tbody>
</table>

1 = Number of items in each scale  
SD = Standard Deviation  
α = Cronbach’s Alpha
Table 6

Statistical Information and Cronbach Alphas for Worker Predictor Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Supervisor Support (6)1</td>
<td>441</td>
<td>23.60</td>
<td>5.20</td>
<td>6</td>
<td>30</td>
<td>0.930</td>
</tr>
<tr>
<td>Affective Supervisor Support (13)</td>
<td>441</td>
<td>43.35</td>
<td>11.94</td>
<td>13</td>
<td>65</td>
<td>0.951</td>
</tr>
<tr>
<td>Perceived co-worker support (5)</td>
<td>442</td>
<td>20.65</td>
<td>3.67</td>
<td>5</td>
<td>25</td>
<td>0.917</td>
</tr>
<tr>
<td>General Organizational Support (9)</td>
<td>435</td>
<td>31.54</td>
<td>12.65</td>
<td>5</td>
<td>59</td>
<td>0.946</td>
</tr>
<tr>
<td>Work Stress (6)</td>
<td>432</td>
<td>16.97</td>
<td>4.46</td>
<td>4</td>
<td>30</td>
<td>0.821</td>
</tr>
<tr>
<td>Appraisal Coping (7)</td>
<td>448</td>
<td>21.4</td>
<td>2.64</td>
<td>13</td>
<td>28</td>
<td>0.473</td>
</tr>
<tr>
<td>Behavioral Coping (6)</td>
<td>447</td>
<td>16.38</td>
<td>2.98</td>
<td>8</td>
<td>24</td>
<td>0.407</td>
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<tr>
<td>Work-Life Balance (4)</td>
<td>441</td>
<td>12.49</td>
<td>4.03</td>
<td>4</td>
<td>20</td>
<td>0.886</td>
</tr>
<tr>
<td>Resilience (10)</td>
<td>449</td>
<td>29.29</td>
<td>5.84</td>
<td>6</td>
<td>40</td>
<td>0.874</td>
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</table>

1 = Number of items in each scale  
SD = Standard Deviation  
α = Cronbach’s Alpha
### Table 7

*Statistical Information and Cronbach Alphas for Worker Attachment Variables*

<table>
<thead>
<tr>
<th>Scale</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Avoidance (6)</td>
<td>434</td>
<td>18.29</td>
<td>6.48</td>
<td>6</td>
<td>42</td>
<td>0.821</td>
</tr>
<tr>
<td>General Anxious (3)</td>
<td>434</td>
<td>9.15</td>
<td>4.99</td>
<td>3</td>
<td>21</td>
<td>0.900</td>
</tr>
<tr>
<td>Supervisor Avoidance (6)</td>
<td>433</td>
<td>18.02</td>
<td>8.51</td>
<td>1</td>
<td>42</td>
<td>0.700</td>
</tr>
<tr>
<td>Supervisor Anxious (3)</td>
<td>435</td>
<td>4.68</td>
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<td>2</td>
<td>14</td>
<td>0.725</td>
</tr>
</tbody>
</table>

1 = Number of items in each scale
SD = Standard Deviation
α = Cronbach’s Alpha
Table 8

*Frontline Worker General Attachment Style Categorical Distribution.*

<table>
<thead>
<tr>
<th></th>
<th>Low Avoidance</th>
<th>High Avoidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Anxiety</td>
<td>Secure: 33.9% (n=147)</td>
<td>Dismissive: 19.8% (n=86)</td>
</tr>
<tr>
<td>High Anxiety</td>
<td>Preoccupied: 15.7% (n=68)</td>
<td>Fearful: 30.6% (n=133)</td>
</tr>
</tbody>
</table>
Table 9

*Frontline Worker Supervisor-Specific Attachment Style Categorical Distribution*

<table>
<thead>
<tr>
<th></th>
<th>Low Avoidance</th>
<th>High Avoidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Anxiety</td>
<td>Secure: 40.9% (n=177)</td>
<td>Dismissive: 21% (n=91)</td>
</tr>
<tr>
<td>High Anxiety</td>
<td>Preoccupied: 7.6% (n=33)</td>
<td>Fearful: 30.5% (n=133)</td>
</tr>
</tbody>
</table>
Table 10

*Supervisor Categorical Attachment Style Distribution*

<table>
<thead>
<tr>
<th></th>
<th>Low Avoidance</th>
<th>High Avoidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Anxiety</td>
<td>Secure: 17.8% (n=18)</td>
<td>Dismissive: 9.9% (n=10)</td>
</tr>
<tr>
<td>High Anxiety</td>
<td>Preoccupied: 30.7% (n=37)</td>
<td>Fearful: 41.6% (n=42)</td>
</tr>
</tbody>
</table>
Table 11

*Distribution of Frontline Workers by Supervisor Attachment Style*

<table>
<thead>
<tr>
<th></th>
<th>Low Avoidance</th>
<th>High Avoidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Anxiety</td>
<td>Secure: 20% (n=58)</td>
<td>Dismissive: 10% (n=30)</td>
</tr>
<tr>
<td>High Anxiety</td>
<td>Preoccupied: 31% (n=94)</td>
<td>Fearful: 39% (n=115)</td>
</tr>
</tbody>
</table>
Table 12

*Statistical Information and Cronbach Alphas for Supervisor Measures*

<table>
<thead>
<tr>
<th>Measure</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary Traumatic Stress Disorder (17)</td>
<td>100</td>
<td>25.87</td>
<td>9.26</td>
<td>17</td>
<td>67</td>
<td>0.923</td>
</tr>
<tr>
<td>Avoidance Symptoms (5)</td>
<td>100</td>
<td>10.13</td>
<td>4.01</td>
<td>6</td>
<td>29</td>
<td>0.843</td>
</tr>
<tr>
<td>Intrusive Symptoms (7)</td>
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<td>2</td>
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</tbody>
</table>

1 = Number of items in each scale
SD = Standard Deviation
α = Cronbach’s Alpha
### Table 13

*Correlation for STS, Attachment, and Predictor Variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tr>
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<td>3 Gen Anx</td>
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<td>.373**</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>4 Sup Anx</td>
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<td>.212**</td>
<td>.374**</td>
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<td></td>
</tr>
<tr>
<td>5 Sup Av</td>
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<td>.353**</td>
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<td>.504**</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>6 Gen Org Sup</td>
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<td>7 PSS</td>
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<td>8 AFF SS</td>
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<td>-.153**</td>
<td>-.103**</td>
<td>-.492**</td>
<td>-.631**</td>
<td>.455**</td>
<td>.817**</td>
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</tr>
<tr>
<td>9 PCWS</td>
<td>-.100*</td>
<td>-.197**</td>
<td>-.191**</td>
<td>-.263**</td>
<td>-.312**</td>
<td>.286**</td>
<td>.447**</td>
<td>.366**</td>
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</tr>
<tr>
<td>10 Resilience</td>
<td>-.493**</td>
<td>-.027</td>
<td>-.205**</td>
<td>-.186**</td>
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<td>.166**</td>
<td>.214**</td>
<td>.160**</td>
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<tr>
<td>11 WLB</td>
<td>-.475**</td>
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<td>-.205**</td>
<td>-.136**</td>
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<td>.279**</td>
<td>.189**</td>
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<td>12 Work Stress</td>
<td>.635**</td>
<td>-.026</td>
<td>.258**</td>
<td>.197**</td>
<td>.070</td>
<td>-.321**</td>
<td>-.162**</td>
<td>-.187**</td>
<td>-.062</td>
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<td>-.470**</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

STS = Secondary Traumatic Stress  
Gen Av = General Avoidance  
Gen Anx = General Anxiety  
Sup Anx = Anxiety to Supervisor  
Sup Av = Avoidance to Supervisor  
Gen Org Sup = General Organizational Support  
PSS = Perceived Social Support  
AFF SS = Affective Social Support  
PCWS = Perceived Co-worker Support  
WLB = Work-life Balance
Table 14

Correlation Matrix of Frontline Worker Attachment Type and STS Symptom Sub-type

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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</thead>
<tbody>
<tr>
<td>STS Avoid</td>
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<td></td>
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<tr>
<td>STS Intrus</td>
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<td>STS Arous</td>
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<td>.721**</td>
<td></td>
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</tr>
<tr>
<td>SupAvoid</td>
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<td>.059</td>
<td>.128**</td>
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<tr>
<td>SupAnx</td>
<td>.244**</td>
<td>.194**</td>
<td>.255**</td>
<td>.504**</td>
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<tr>
<td>GenAvoid</td>
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<td>.037</td>
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<td>GenAnx</td>
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<td>.193**</td>
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<td>.373**</td>
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</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).

STS Avoid= Secondary traumatic stress avoidant symptoms
STS Intrus= Secondary traumatic stress arousal symptoms
STS Arous= Secondary traumatic stress arousal symptoms
Gen Avoid = General Avoidance
Gen Anx = General Anxiety
Sup Anx = Anxiety to Supervisor
Sup Avoid = Avoidance to Supervisor
### Table 15

**Correlation for STS, Attachment, and Predictor Variables of Frontline Workers with Supervisor Attachment Avoidance and Attachment Anxiety**

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
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<tr>
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<tr>
<td>Gen Org Sup</td>
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<td>-.145*</td>
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<td>-.300**</td>
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<td>-.153**</td>
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<td>-.526**</td>
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<td>.041</td>
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<td>.047</td>
<td>.037</td>
<td>-.031</td>
<td>-.017</td>
<td>-.066</td>
<td>-.090</td>
<td>.088</td>
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<tr>
<td>Sup's Avoid</td>
<td>0.040</td>
<td>-.022</td>
<td>.088</td>
<td>.050</td>
<td>.040</td>
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<td>-.014</td>
<td>-.084</td>
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<td>-.029</td>
<td>.051</td>
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<tr>
<td>Sup's Anx</td>
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<td>.080</td>
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<td>-.009</td>
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<td>.063</td>
<td>.441**</td>
<td>.333**</td>
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** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

STS = Secondary Traumatic Stress
Gen Av = General Avoidance
Gen Anx = General Anxiety
Sup Anx = Anxiety to Supervisor
Sup Av = Avoidance to Supervisor
Gen Org Sup = General Organizational Support
PSS = Perceived Social Support
AFF SS = Affective Social Support
PCWS = Perceived Co-worker Support
WLB = Work-life Balance
Sup STS = Supervisor’s level of Secondary traumatic Stress
Sup’s Avoid = Supervisor’s level of Avoidant Attachment
Sup’s Anx = Supervisor’s level of Anxious Attachment
Table 16

Two by Two MANOVA Results with Supervisor Attachment Style as Categorical Variables

<table>
<thead>
<tr>
<th>DV</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
<th>Partial Eta Squared</th>
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<tbody>
<tr>
<td>STS</td>
<td>1</td>
<td>647.993</td>
<td>4.575</td>
<td>0.033</td>
<td>0.015</td>
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<tr>
<td>WLB</td>
<td>1</td>
<td>57.469</td>
<td>3.455</td>
<td>0.064</td>
<td>0.012</td>
</tr>
<tr>
<td>PSS</td>
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<td>127.713</td>
<td>4.660</td>
<td>0.032</td>
<td>0.016</td>
</tr>
<tr>
<td>Resilience</td>
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<td>17.214</td>
<td>0.517</td>
<td>0.473</td>
<td>0.002</td>
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<tr>
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<td>130.310</td>
<td>6.844</td>
<td>0.009</td>
<td>0.023</td>
</tr>
<tr>
<td>PCWS</td>
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<td>0.432</td>
<td>0.090</td>
<td>0.764</td>
<td>0.000</td>
</tr>
</tbody>
</table>

df= degrees of freedom
STS= Secondary traumatic stress
WLB = Work-life balance
PSS= Perceived supervisor support
WkStress= Work-Stress
PCWS= Perceived co-worker support
Table 17

*Supervisor Attachment Anxiety and Attachment Avoidance ANOVA Interaction Effect on Worker STS*

<table>
<thead>
<tr>
<th>Supervisor Own Attachment Style</th>
<th>Low Avoidance</th>
<th>High Avoidance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low Anxiety</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SECURE*</td>
<td>30.53 (SD =9.81)</td>
<td>N = 58; 20%</td>
</tr>
<tr>
<td>DISMISSIVE</td>
<td>34.40 (SD=13.17)</td>
<td>N = 30; 10%</td>
</tr>
<tr>
<td><strong>High Anxiety</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PREOCCUPIED*</td>
<td>35.31 (SD= 12.76)</td>
<td>N = 94; 31%</td>
</tr>
<tr>
<td>FEARFUL</td>
<td>32.44 (SD=11.79)</td>
<td>N = 115; 39%</td>
</tr>
</tbody>
</table>

DV = STS
$\eta^2 = .015$

$F(1,647) = 4.575, p = .033$

* = significant difference in means, $t(151) = -2.521, p = .037$
Table 18

*Supervisor Attachment Anxiety and Attachment Avoidance ANOVA Interaction Effect on Worker Work-Life Balance*

<table>
<thead>
<tr>
<th>Sup own attachment style Low Anxiety</th>
<th>Supervisor Own Attachment Style Low Avoidance</th>
<th>Supervisor Own Attachment Style High Avoidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Anxiety</td>
<td>SECURE* 12.78 (SD =3.78) N = 58; 20%</td>
<td>DISMISSIVE* 11.57 (SD= 4.93) N = 30; 10%</td>
</tr>
<tr>
<td>High Anxiety</td>
<td>PREOCCUPIED 11.98 (SD=4.25) N = 94; 31%</td>
<td>FEARFUL 12.77 (SD=3.83) N = 115; 39%</td>
</tr>
</tbody>
</table>

DV = Work-Life Balance

\[ F(1, 57.469)=3.455, p=.012, \eta^2=.012 \]

* = significant difference in means, \( t(86)= 1.279, p=.017 \)
Table 19.

*Supervisor Attachment Anxiety and Attachment Avoidance ANOVA Interaction Effect on Worker Perception of Supervisor Support*

<table>
<thead>
<tr>
<th>Sup own attachment style Low Anxiety</th>
<th>Supervisor Own Attachment Style Low Avoidance</th>
<th>Supervisor Own Attachment Style High Avoidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Anxiety</td>
<td>SECURE*</td>
<td>DISMISSIVE</td>
</tr>
<tr>
<td></td>
<td>21.93 (SD = 6.11) N = 58; 20%</td>
<td>24.00 (SD = 4.93) N = 30; 10%</td>
</tr>
<tr>
<td>High Anxiety</td>
<td>PREOCCUPIED*</td>
<td>FEARFUL</td>
</tr>
<tr>
<td></td>
<td>24.22 (SD = 4.73) N = 94; 31%</td>
<td>23.30 (SD = 5.23) N = 115; 39%</td>
</tr>
</tbody>
</table>

DV = Perception of Supervisor Support  

\[ F(1, 127.713) = 4.660, p = .032, \eta^2 = .016 \]

*= significant difference in means, *t*(153) = -2.438, *p* = .026
Table 20.

*Supervisor Attachment Anxiety and Attachment Avoidance ANOVA Interaction Effect on Worker Level of Stress*

<table>
<thead>
<tr>
<th>Supervior Own Attachment Style</th>
<th>Low Avoidance</th>
<th>High Avoidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Anxiety</td>
<td></td>
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</tr>
<tr>
<td>Supervisor own attachment style</td>
<td>SECURE*</td>
<td>DISMISSIVE*</td>
</tr>
<tr>
<td>16.16 (SD =3.44)</td>
<td>18.27 (SD=5.05)</td>
<td></td>
</tr>
<tr>
<td>N = 58; 20%</td>
<td>N = 30; 10%</td>
<td></td>
</tr>
<tr>
<td>Preoccupied</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.49 (SD=4.64)</td>
<td></td>
<td>FEARFUL</td>
</tr>
<tr>
<td>N = 94; 31%</td>
<td></td>
<td>16.58 (SD=4.35)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N = 115; 39%</td>
</tr>
</tbody>
</table>

DV = Frontline worker stress $\eta^2=.023$

$F(1, 130.310)=6.844, p=.009,$

$*= $significant difference in means, $t(86)=-2.316, p=.002$
Figure 1.

Figure 2.
A Conceptual Model of Risk of Secondary Traumatic Stress in Frontline Child Welfare Workers
Figure 3.

Map of Ohio counties sampled for study.
Figure 4.

Hypothesized SEM Model of Attachment and Frontline Worker STS
SupAnxious = Employee’s level of Anxious attachment towards supervisor
SupAvoidant= Employee’s level of Avoidant attachment towards Supervisor
STS=Overall Level of Employee secondary traumatic stress

Figure 5.

*SEM Model of Worker Attachment towards Supervisor and Worker STS*
Figure 6

*HLM Predictive Pathway to Worker Secondary Traumatic Stress*
Appendix A

Institutional Review Board Preamble

Quality Improvement Center on Workforce Development (QICWD) Study

January 2019

Dear Participant:

You are being invited to participate in a research study by answering questions in the attached survey about the workplace in preparation for an impending workforce intervention in your site. The purpose for the QICWD study is to assess the workforce in each site before the intervention begins. This assessment survey portion of the study is conducted by Dr. Anita Barbee of the University of Louisville in collaboration with the rest of the QICWD team. There are no known risks for your participation in this research study. The information collected may not benefit you directly. The information learned in this study may be helpful to others. The information you provide will help us understand the workforce in your agency. Your completed survey will be stored on a secure server or in a locked file cabinet on Belknap Campus at the University of Louisville. The survey will take approximately 1 hour to complete.

Individuals from the Kent School of Social Work, the Institutional Review Board (IRB), the Human Subjects Protection Program Office (HSPPO), and other regulatory agencies may inspect these records. In all other respects, however, the data will be held in confidence to the extent permitted by law. Should the data be published, your identity will not be disclosed.

Taking part in this study is voluntary. By answering survey questions you agree to take part in this research study. You do not have to answer any questions that make you uncomfortable. You may choose not to take part at all. If you decide to be in this study you may stop taking part at any time. If you decide not to be in this study or if you stop taking part at any time, you will not lose any benefits for which you may qualify.

If you have any questions, concerns, or complaints about the research study, please contact: Anita Barbee (502) 852-0416.

If you have any questions about your rights as a research subject, you may call the Human Subjects Protection Program Office at (502) 852-5188. You can discuss any questions about your rights as a research subject, in private, with a member of the Institutional Review Board (IRB). You may also call this number if you have other questions about the research, and you cannot reach the research staff, or want to talk to someone else. The IRB is an independent committee made up of people from the University community, staff of the institutions, as well as people from the community not connected with these institutions. The IRB has reviewed this research study.

If you have concerns or complaints about the research or research staff and you do not wish to give your name, you may call 1-877-852-1167. This is a 24 hour hot line answered by people who do not work at the University of Louisville.

Sincerely,

[Signature]

January 2, 2019
Appendix B
Frontline Worker Survey
Ohio WORKER Survey

SACWIS ID ___________ Today’s Date ________________

Are you of Hispanic/Latina/o origin? □ Yes □ No

What is your self-identified race (check all that apply)?

□ American Indian or Alaska Native □ Black or African American □ Native Hawaiian or Other Pacific Islander
□ Asian □ Caucasian/White □ Other ____________________ (Please specify)
□ Biracial/Multiracial (Please list)

What is the year you were born? ______________________________________________________

Do you consider yourself a member of Lesbian, Gay, Bisexual and/or Transgender (LGBT) community? □ Yes □ No

What is your gender?

□ Female □ Non-binary/third gender □ Prefer to self-describe________________________________
□ Male □ Prefer not to say

How long have you worked in the field of child welfare?         Years            Months

How long have you worked for the county you are working in now?         Years            Months

Average hours you have worked on your job per week in the past 6 months (not just what were paid for but actual hours it takes you to do your job each week):

□ 39 or less □ 40-49 □ 50-59 □ 60-69 □ 70+

<table>
<thead>
<tr>
<th>Indicate how you have felt over the past month</th>
<th>1. Rarely True</th>
<th>2. Somewhat True nearly all the time</th>
<th>3. Often True</th>
<th>4. True</th>
</tr>
</thead>
<tbody>
<tr>
<td>Able to adapt to change</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can deal with whatever comes</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>See the humorous side of things</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coping with stress strengthens</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tend to bounce back after illness or hardship</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>You can achieve your goals</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under pressure, focus and think clearly</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not easily discouraged by failure</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Think of self as strong person</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can handle unpleasant feelings</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
My supervisor genuinely cares about me.

My supervisor gives me help when I need it.

My supervisor supports me in difficult case situations.

My supervisor helps me learn and improve.

My supervisor values and seriously considers my opinions in case decision-making.

My supervisor helps me prevent and address burnout.

I currently have a good balance between the time I spend at work and the time I have available for non-work activities.

I feel that the balance between my work demands and non-work activities is currently about right.

Co-workers in my unit professionally share and learn from one another.

Co-workers in my unit share work experiences with each other to improve the effectiveness of client services.

Co-workers in my unit encourage each other to exercise professional judgment when making decisions.

Co-workers in my unit are willing to provide support and assist each other when problems arise.

Co-workers in my unit accept support from their colleagues.

Indicate how you have felt over the past month.

I tend to bounce back quickly after hard times.

I have a hard time making it through stressful events.

It does not take me long to recover from a stressful event.

It is hard for me to snap back when something bad happens.

I usually come through difficult times with little trouble.

I tend to take a long time to get over setbacks in my life.

Circle the number that corresponds to your level of agreement with each statement. Please note the new scale below.

1 Strongly disagree   2 Disagree   3 Somewhat disagree   4 Neither agree nor disagree   5 Somewhat agree   6 Agree   7 Strongly agree

Please rate the extent you believe each statement best describes your feelings about close relationships in general.

It helps to turn to people in times of need.

I usually discuss my problems and concerns with others.

I talk things over with people.

I find it easy to depend on others.

I don’t feel comfortable opening up to others.

I prefer not to show others how I feel deep down.

I often worry that other people do not really care for me.

I am afraid that other people may abandon me.

I worry that others will not care about me as much as I care about them.

Please answer the following questions about your supervisor.

It helps to turn to my supervisor in times of need.

I usually discuss my problems and concerns with my supervisor.

I talk things over with my supervisor.

I find it easy to depend on my supervisor.

I do not feel comfortable opening up to my supervisor.
Circle the number that corresponds to your level of agreement with each statement. Please note the new scale below:


<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>I prefer not to show my supervisor how I feel deep down.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>I often worry my supervisor does not really care for me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>I am afraid that my supervisor may abandon me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>The organization shows very little concern for me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>The organization really cares about my well-being.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>The organization cares about my general satisfaction at work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>The organization cares about my opinions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>The organization is willing to extend itself in order to help me perform my job to the best of my ability.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Even if I did the best job possible, the organization would fail to notice.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>The organization takes pride in my accomplishments at work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>The organization strongly considers my goals and values.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Help is available from the organization when I have a problem.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

For the next 6 items, think of your WORK SITUATION when responding to each question.

<table>
<thead>
<tr>
<th>Experience Description</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>been upset because of something that happened unexpectedly?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>felt nervous and “stressed”?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>found that you could not cope with all the things you had to do?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>been angered because of things that happened that were outside your control?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>found yourself thinking about things that you had to accomplish?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>felt difficulties were piling up so high that you could not overcome them?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the past 7 days how often have you had these EXPERIENCES:

<table>
<thead>
<tr>
<th>Experience Description</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel emotionally numb.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My heart starts pounding when I think about my work with clients.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It seemed as if I am reliving the trauma experienced by my clients(s).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have trouble sleeping.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel discouraged about the future.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reminders of my work with clients upset me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have little interest in being around others.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel jumpy.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am less active than usual.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I thought about my work with clients when I did not intend to.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have trouble concentrating.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I avoid people, places, or things that remind me of my work with clients</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have disturbing dreams about my work with clients.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I want to avoid working with some clients.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am easily annoyed.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I expect something bad to happen.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I notice gaps in my memory about client sessions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CURRICULUM VITA

Lisa M. Purdy

BIOGRAPHICAL DATA:
Date of Birth: 10-17-1983
Address: 1139 Samuel St.
         Louisville, Kentucky 40204
E-Mail Address: lisa.purdy@louisville.edu

EDUCATIONAL EXPERIENCE:
Graduate: University of Louisville Kent School of Social Work
         Doctor of Philosophy, Anticipated Graduation May 2023
         University of Louisville
         Louisville, KY 40292
         Cumulative GPA 3.982/4.00

         Licensed Clinical Social Worker (LCSW), Kentucky
         License # 254581 December 2019-present

         University of Louisville Kent School of Social Work,
         Master of Science Social Work, Specialization in Mental Health, May 2017
         Dean’s Citation 2017
         Cumulative GPA: 4.00/4.00

         University of Kentucky College of Medicine
         2007 – 2009
         Completed 1st & 2nd Year coursework, 81 credit hours, towards Doctor of Medicine
         Cumulative GPA: 3.51/4.00

Undergraduate: Centre College
         Bachelor of Science, May 2006
         Major: Psychobiology
         Study Abroad, London 2005
         Cumulative GPA 3.456/4.00

HONORS:

Awards
• Louisville Business First’s Forty Under Forty Honoree, 2022
• Leadership Louisville Ignite Honoree, 2022
• Dean’s Citation, University of Louisville, May 2017
• Favorite Faculty Teaching Nomination, 2020
• Louisville Business First’s Forty Under 40 Nominee, 2021
• Clinical & Translational Sciences Professional Student Mentored Research Program Award, UK College of Medicine
• Emory Wilson Research Grant, UK College of Medicine
• Distinguished Portfolio Award, UK College of Medicine
• Brown Scholarship Leadership Program (Centre College)
• Study Abroad scholarship 2005 (Centre College)
• National Merit Scholarship from Sara Lee Corp.
• NCAA Division III Academic All-American 2003
• Centre College Deans List: 2005 & 2006

Organizations
• Psi Chi National Psychology Honor Society
• Leadership Louisville

GRANTS AND CONTRACTS WORKED ON AS DOCTORAL STUDENT:

Department for Health and Human Services, Administration on Children and Families, Children’s Bureau (funded). 2016-2021. $15 million. Quality Improvement Center: Workforce Development
(Graduate Assistant on Project, Co-PI and Lead Evaluator; Anita Barbee, PI: Michelle Graef, University of Nebraska-Lincoln).


CURRENT CONTRACTS (CENTER FOR FAMILY AND COMMUNITY WELL-BEING [CFCWB])

Key Assets (funded). 2019-present. $38,000. Key Assets offers a residential, therapeutic, and support services to special needs children in out of home care. Key Assets has negotiated a contact with the CFCWB to do the following: 1) Operationalization of outcome measures and data collection methods; 2) Analysis of outcome data and reporting for various audiences; and 3) Administrative oversight, advanced analytics and collaborative research development. PI Becky Antle.

Maryhurst (funded). 2019-present. $16,000/year. Maryhurst offers a variety of therapeutic services to at-risk girls in residential and outpatient settings. Maryhurst has a contract with the CFCWB to assist with logic model planning and outcome data identification; data integration and analysis of standardized assessment data from the state system; conducting an agency-wide assessment of trauma informed care; collecting data on the effectiveness and funding needs of an intensive outpatient approach; and assistance with post-discharge data collection. PI Becky Antle.

Maryhurst (funded). 2021-present. $19,000. Maryhurst has contracted with CFCWB to provide training, booster sessions, fidelity and other evaluation on motivational interviewing. PI: Becky Antle
RESEARCH INTERESTS:
Having spent nearly a decade working in the non-profit child welfare sector and currently overseeing clinical, training, and agency performance and quality improvement departments as the Chief Operating Officer, for a behavioral health organization in Louisville, KY. I have developed a strong research interest related to child welfare workforce development, with a specific focus on indirect trauma and its’ relationship to organizational and individual factors. As part of my research, I have served as a Graduate Assistant on the Quality Improvement Center for Workforce Development team on their grant funded through the Department of Health and Human Services, Administration for Children and Families, Children’s Bureau. Additionally, I serve as a consultant and research assistant with the Center for Family and Community Well-Being.

PROFESSIONAL AFFILIATIONS:
• National Association of Social Workers, 2015 – present
• Society for Social Work and Research December 2019 – present

PUBLICATIONS IN PEER REVIEWED JOURNALS


PUBLICATIONS OF CONFERENCE PROCEEDINGS, BOOKS REVIEWS, COMMENTARIES AND ABSTRACTS:


MANUSCRIPTS UNDER REVIEW:
Psychoeducation for Trauma in Youth: A Preliminary Trial on the Mind Matters Program. *Children and Youth Services Review.*

**PEER REVIEWED PRESENTATIONS AT PROFESSIONAL CONFERENCES/MEETINGS:**


Purdy, L. (2020, June). Pathways to permanency: An agency’s effort to provide innovative services to at-risk youth. The Training Institute for Innovation and Implementation. Orlando, FL.


**POSTERS PRESENTED AT PROFESSIONAL MEETINGS:**


Purdy, L. (2020, June). Pathways to permanency: An agency’s effort to provide innovative services to at-risk youth. The Training Institute for Innovation and Implementation. Orlando, FL.


Purdy, L., & Wertz, J. J. (March, 2006). Student Alcohol Consumption’s Relation to Academic Success and Familial Drinking. Poster presented, Southeastern Psychological Association, Atlanta, GA.

ACADEMIC POSITIONS:

University of Louisville Kent School of Social Work 2019-present, Lecturer I

TEACHING EXPERIENCE:

MSSW Practicum Supervisor: Fall 2018-Spring 2019
Issues in Policy & Service Delivery, (SW 622), Spring 2020
Social Welfare Institutions, Policies, & Services, (SW 602), Fall 2019
Advanced Social Work Practice III, Working with Organizations, & Multi-Level work with Complex Cases, (SW 677), Spring 2019, Graduate Teaching Assistant

PROFESSIONAL EXPERIENCE:

University of Louisville, Kent School of Social Work – Lecturer I, 2019 - present

University of Louisville Kent School of Social Work – Graduate Assistant, 08/2017 – present
Served as graduate assistant to Lead Evaluator Anita Barbee on Department for Health and Human Services, Administration on Children and Families, Children’s Bureau grant. Performed tasks throughout research process including literature review, data collection and management, statistical analysis, reporting and dissemination of findings. Project includes assessment, implementation, and evaluation of various workforce development strategies across jurisdictions throughout the United States.

Maryhurst, Inc. – February 2017 - present
Chief Operating Officer – March 2022 – Present
Oversee entirety of operations inclusive of residential treatment, psychiatric residential treatment, outpatient behavioral health, and all associated administrative functions. Coordinate with internal and external partners to develop, test, organize, and encourage innovative best practices with the goal of fostering a culture of innovation and process improvement within Maryhurst. Acts as part strategist and part troubleshooter with a focus on execution. Leader in innovation, clinical care, and continuous improvement in the employee experience.

Vice President of Renewal Outpatient Services – July 2020 – March 2022

Served as the Vice President of Outpatient Services, overseeing clinical and programmatic services for outpatient program including licensed clinicians, targeted case managers, community support associates, and behavior analysts. Responsible for developing and managing budget for department (3-4 million dollars annually). Program provides annual services for greater than 400 youth and families throughout the Louisville Metro area as well as additional community outreach events and supports.

Director of Therapeutic Support Services – February 2017 – July 2020

Served as the Director of Therapeutic Support Services, overseeing clinical and programmatic services for the residential agency. Responsible for developing and managing budget for department (1-2 million dollars annually). Direct department approximately sixty specially trained behavior support technicians, board certified behavior analysts, clinicians, as well as program managers to work with a specialized population of emotionally and behaviorally troubled youth within the Kentucky state child welfare system. Previously served as Director of Community-Based Programs, during which time I was responsible for overseeing the direction and operation of community-based residential programs, independent living programs, and transitional living programs. This included developing, monitoring, and management of all division budgets (between $1-2 million dollars annually). I was additionally responsible for ongoing program development as well as professional development for all levels of staff within department, approximately 60 staff, including clinicians, program managers, shift supervisors and youth counselors.

Uspiritus, Inc. – Senior Program Manager & Quality Assurance Manager - 07/2012 – 08/2017

As the head of the agency’s Quality Assurance and Improvement department, I coordinated and provided support for the agency’s compliance process, such as COA and state licensing. I was also responsible for developing and communicating corrective plans of action as needed to remain in compliance. In addition, I developed and maintained agency databases as well as implemented the agency’s compliance program providing consultation when necessary to different departments or external agencies. As a Senior Program Manager, I oversaw the direction and operations of multiple residential programs within the private childcare residential department. This included providing direct supervision to approximately thirty staff including clinicians and supervisors. In addition, I developed a new onboarding process for new direct care specialists including education on trauma informed care, crisis management techniques, and overall behavior management interventions.

CONSULTING:

Center For Family and Community Well-Being, University of Louisville (2021-Present)
SCHOOL SERVICE: UNIVERSITY OF LOUISVILLE
  • Student Representative, Doctoral Program Committee, 2019- present
  • Mentor, KENTucky Kids Program, 2017 – 2019

COMMUNITY SERVICE
  • My Dog Eats First – Volunteer 2019-2021