

ASSESSING THE LEVEL OF SECONDARY TRAUMATIC STRESS EXPERIENCED BY
CHILDREN'S ADVOCACY CENTER EMPLOYEES

A Dissertation by

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DEDICATION

To Dr. B – who taught me, encouraged me, challenged me, and believed in me
And to Dallas, Thatcher, Brynn, Emerson, Mom, Dad, Jake, Joni, and all who knew I could

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ABSTRACT

At work, employees of children's advocacy centers (CACs) are routinely exposed to the trauma experienced by the children they help. This secondary exposure to trauma can elicit responses similar to, or meeting diagnostic criteria for, post-traumatic stress disorder (PTSD). This phenomenon is often referred to as secondary traumatic stress (STS). This study sought to 1) assess the level of STS experienced by CAC employees, 2) assess how the employees' perceptions of organizational support, their levels of coping resiliency, and their perceptions of teamwork are related to the level of STS experienced, and 3) identify specific predictors of STS in this population. An online, self-report survey was sent to CAC employees in Kansas, Michigan, and North Dakota. In total, 129 CAC employees participated. The level of STS experienced by CAC employees in this study was $M = 39.44$ ($SD = 10.57$), which is comparably higher than what has been found in similar studies, indicating the level of STS experienced by CAC employees is high. There were not many differences found across demographics or in relation to the measures studied. Multiple regression was used to assess the ability of level of perceived organizational support, perception of teamwork, and number of years spent working with victims of child abuse and neglect to predict levels of STS. The model explained 32% of the variance in STS, $F(3, 61) = 10.93$, $p < 0.001$. The biggest predictor of STS was level of perceived organizational support. This aligns with other research which has also found a negative correlation between organizational support and reported STS. Based on this study, it is clear STS is an issue for CAC employees and that CACs would benefit from understanding the critical role that their support plays in mitigating or addressing STS. Further studies which examine the impact of direct exposure to traumatic events or which measure changes in level of STS over time may be helpful in further understanding STS.

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LIST OF ABBREVIATIONS

CAC	Children's Advocacy Center
BRCS	Brief Resilient Coping Scale
SPOS-8	Survey of Perceived Organizational Support: 8 Item Version
STS	Secondary Traumatic Stress
STSS	Secondary Traumatic Stress Scale

CHAPTER 1

INTRODUCTION

Each year, more than 370,000 children in the United States receive help from one of the nation's 900 children's advocacy centers, or CACs (National Children's Alliance, 2020a). These children are victims of physical and/or sexual abuse. The abuse they have endured is often severe and repeated, and their stories are shocking and heartbreaking. CACs provide children with safe places to report their abuse and to have their needs met.

A CAC is a comprehensive, child-oriented center that provides an immediate and compassionate response to a child's disclosure of abuse (Hubel et al., 2014; National Children's Alliance, 2020a). CACs are designed to meet the unique needs of their local communities. While distinct in some ways, all CACs deliver services consistent with the national accreditation standards and share a universal commitment to a specific set of goals (Hubel et al., 2014; National Children's Alliance, 2020a). According to the National Children's Alliance (2020a), these goals are to:

- Minimize further trauma to victims,
- Increase access to high-quality medical and mental health services,
- Reduce the number of child victim interviews,
- Increase successful prosecutions to hold offenders accountable, and
- Provide consistent support to child victims and non-offending family members from initial report to case closure.

CACs use a multidisciplinary approach that involves the coordination of child welfare and law enforcement investigations, medical care, therapy, support services, and prosecution of offenders to meet these goals. While community partners provide many of these functions, CACs

employ a range of staff, including administrators, forensic interviewers, victim advocates, therapists, and community education and awareness personnel. Each employee plays a vital role in addressing the trauma of the child.

Through their work, CAC employees are routinely exposed to the trauma experienced by the children they help. This secondary exposure to trauma can elicit responses similar to post-traumatic stress disorder, commonly known as PTSD (Figley, 1995b). This phenomenon is often referred to using the terms secondary traumatic stress (STS), compassion fatigue, or vicarious traumatization.

Researchers have become increasingly aware of STS, with a focus on better understanding the toll STS takes on both the professionals impacted and the populations they serve. The symptoms of STS include intrusive thoughts about the trauma, numbing of responsiveness, and persistent anxiety (Figley, 1999b). STS may also lead to an increased prevalence of depression, anxiety, and professional burnout (Figley, 1995b), which can create issues such as cardiovascular diseases, musculoskeletal problems, depressive symptoms, job dissatisfaction, and absenteeism (Salvagioni et al., 2017).

Multidisciplinary CAC professionals have scored in the 68th percentile for burnout and in the 94th percentile for STS associated with work-related hazards (Letson et al., 2019). Furthermore, the annual turnover of employees who provide services to traumatized clients ranges from 20% to 60% (Paris & Hoge, 2010). This turnover is especially problematic considering the specialized education and training required to perform these duties.

Researchers have theorized that professionals who experience STS are at an increased risk for making poor professional judgments compared to those who are not affected (Bride, 2007; Pearlman & Saakvitne, 1995; Stamm, 1997). This may lead to misdiagnosis of client

conditions, treatment planning that does not meet the client's needs, or even the abuse of clients (Bride et al., 2004) and further highlights the need to address STS among employees of CACs.

CHAPTER 2

INDIRECT EXPOSURE TO TRAUMA

2.1 Post-Traumatic Stress Disorder and Secondary Traumatic Stress

The exploration of post-traumatic stress disorder (PTSD) and secondary traumatic stress (STS) is still relatively new. PTSD was first included in the Diagnostic and Statistical Manual of Mental Disorders (DSM-III) in 1980 (American Psychiatric Association). Prior to that, it was referred to using various terms, including “traumatic neuroses,” “battered child syndrome,” “battle fatigue,” and “war neurosis.” It had long been understood that soldiers who had witnessed the traumas of combat experienced negative psychiatric symptoms (Ganesh et al., 2015; Scott, 1990). These symptoms were typically grouped with other diagnoses like alcoholism, depression, or even schizophrenia (Ganesh et al., 2015; Scott, 1990). However, after much discussion and study, it became clear that the soldiers’ reactions were not abnormal conditions of the soldiers themselves; rather, they were exhibiting the normal consequences of their involvement in the abnormal traumas of war (Ganesh et al., 2015; Scott, 1990). This understanding laid the foundation for PTSD’s acceptance as a diagnosis in its own right.

Critical to the original definition of PTSD was the criteria that the patient had to experience an abnormal traumatic event (Andreasen, 2010; Friedman, 2013; Scott, 1990). The DSM-III described such an event as a significant stressor outside the range of usual human experience (Andreasen, 2010; Friedman, 2013). Traumas such as war, torture, and rape were considered such stressors (Friedman, 2013). These abnormal stressors were clearly differentiated from normal stressors such as divorce, failure, or serious illness and excluded vicarious trauma (Friedman, 2013). The basic premise was that most individuals are capable of coping with

normal, ordinary stress, but their adaptive capacities are likely overwhelmed when faced with a traumatic stressor (Andreasen, 2010; Friedman, 2013).

Starting in the early 1990s, researchers identified that indirect exposure to trauma could also inflict harm to individuals, who can then exhibit a range of symptoms similar to PTSD (Bride et al., 2004; Figley, 1993; Figley, 1995a; Figley, 1995b; McCann & Pearlman, 1990). Charles R. Figley was one of the first researchers to suggest the exposure to other's trauma could lead to similar traumatization of the secondary individual. He suggested that close family and friends of traumatized individuals are at risk for such vicarious trauma, as are the professionals who listen to their stories (Figley, 1995b). Figley referred to this phenomenon as the "cost of caring" (1995a, p. 1). He defined it as "the natural consequent behaviors and emotions resulting from knowing about a traumatizing event experienced by a significant other [or] the stress resulting from helping or wanting to help a traumatized or suffering person" (Figley, 1995b, p. 10).

Several definitions and terms have been used to describe this concept of indirect traumatization. Initially, Figley used the term "compassion fatigue" and described it as feelings of helplessness, confusion, isolation, avoidance, and persistent arousal among individuals who interact with traumatized individuals (1993). Later, Figley and other researchers determined that indirect traumatization results in symptoms almost identical to PTSD and coined the term "secondary traumatic stress" (STS) (1995b). Following this, he suggested the term "compassion fatigue" was a less stigmatizing way to describe the phenomenon, as it connects to the compassion one has for the work (1995a, 1995b). In many cases, the two terms are used interchangeably without distinction; however, the differing terms have allowed for a range of

latent constructs and measures to be used throughout the literature (Bride et al., 2004; Salston & Figley, 2003; Stamm, 2002).

Other researchers have taken a different approach. Specifically, Pearlman and Saakvitne (1995) examined the cumulative impact of learning the details about others' traumatic experiences on professionals. They utilized cognitive self-development theory to explore how this indirect exposure to traumatization may alter the professional's cognitive schemas and systems of meaning (Pearlman & Saakvitne, 1995). Through this framework, the phenomenon is described as "vicarious traumatization" (Pearlman & Saakvitne, 1995).

Other researchers have sought to differentiate among the constructs of vicarious trauma, STS, and compassion fatigue (Baird & Kracen, 2006; Jenkins & Baird, 2002). However, there is no consensus regarding any fundamental differences among the terms or the phenomena they seek to describe (Stamm, 2002). The main distinctions appear to be related to the applied theoretical framework behind the constructs. Based on the theoretical approach to this research study, and for the purpose of clarity within this paper, the term STS was used exclusively.

In order to understand STS, it is important to consider the diagnostic criteria for PTSD. According to the DSM-5, a PTSD diagnosis is characterized by exposure to one of four stressor criteria (Figure 1) (American Psychiatric Association, 2013). These stressors, such as direct exposure to trauma and repeated exposure to aversive details of a traumatic event, are categorized as Exposure Criterion. Exposure is then followed by the four symptom clusters: intrusive recollection of the traumatic event, avoidance, negative cognitions & mood, and hyperarousal (American Psychiatric Association, 2013). In addition, the criteria of a specific duration of symptoms, functional significance of the symptoms, and the exclusion of all other possible causes must be met (American Psychiatric Association, 2013).

Trauma exposure	
Trauma	Actual or threatened violent death, serious injury or accident, or sexual violence
A. Exposure	Via any of the following: <ol style="list-style-type: none"> 1. Directly exposed to trauma 2. Eyewitness (in person) to others directly exposed to trauma 3. Learning of direct exposure to trauma of a close family member or close friend 4. Repeated or extreme exposure to aversive details of a traumatic event (e.g., trauma workers viewing human remains or repeatedly exposed to details of child abuse), in person or via work-related electronic media
Symptom groups B to E (symptoms beginning or worsening after the traumatic event)	
B. Intrusion	≥ 1 <i>intrusion symptom(s)</i> : <ol style="list-style-type: none"> 1. Recurrent, involuntary, distressing trauma memories 2. Recurrent, distressing trauma-related dreams 3. Dissociative reactions/flashbacks related to trauma 4. Intense or prolonged psychological distress to trauma reminders 5. Marked physiological reactions to trauma reminders
C. Avoidance	≥ 1 <i>avoidance symptom(s)</i> : <ol style="list-style-type: none"> 1. Avoidance/efforts to avoid distressing internal trauma reminders (memories, thoughts, feelings) 2. Avoidance or efforts to avoid distressing external trauma reminders (people, places, activities)
D. Negative cognition and mood	≥ 2 <i>negative cognition/mood symptoms</i> : <ol style="list-style-type: none"> 1. Amnesia for important parts of trauma exposure 2. Persistent, exaggerated negative beliefs about self, others, or the world 3. Persistent, distorted trauma-related cognitions leading to inappropriate blame of self/others 4. Persistent negative emotional state (e.g., fear, horror, anger, guilt, shame) 5. Loss of interest or participation in significant activities 6. Detached/estranged feelings from others 7. Persistent loss of positive emotions (e.g., happiness, satisfaction, love)
E. Hyperarousal	≥ 2 <i>marked alterations in trauma-related arousal and reactivity</i> : <ol style="list-style-type: none"> 1. Irritability and angry outbursts with little/no provocation (e.g., verbal/physical aggression toward people/objects) 2. Reckless or self-destructive behavior 3. Hypervigilance 4. Exaggerated startle 5. Concentration problems 6. Sleep disturbance (e.g., difficulty falling or staying asleep, restless sleep)
Additional criteria	
F. Duration	> 1 month
G. Distress/impairment	Clinically significant distress; social/occupational/other important functioning impairment
H. Not attributable to another disorder	Independent of physiological effects of a substance (e.g., medication, alcohol) or another medical condition

Figure 1: The Diagnostic and Statistical Manual of Mental Disorders (5th Edition) criteria for Post-Traumatic Stress Disorder.

(Source: American Psychiatric Association, 2013)

Psychologists now understand that people who experience secondary traumatization can experience a similar array of symptoms as those with direct exposure. The DSM-5 includes indirect exposure to the details of the trauma, which may occur through the course of professional duties (e.g., first responders, child abuse investigators, medics) as a possible “A” stressor criterion (American Psychiatric Association, 2013). These symptoms can lead to short- and long-term emotional and physical strains on the professionals tasked with responding to the trauma of others (Bride et al., 2004). They are at an increased risk of burnout, which may put their clients at risk of receiving a substandard standard of care (Figley, 1995b). Moreover, these professionals may experience pressure on their personal and professional relationships (Figley, 1995b).

Understanding the phenomena of STS and predicting who will be most at risk is critical to assisting the professionals who care for vulnerable trauma victims. By better understanding STS, prevention strategies could be developed and implemented. The prevention of STS will assist these professionals in avoiding or mitigating the negative consequences of repeated exposure to the trauma of others. Such efforts will also help the trauma victims by ensuring the professionals working with them will be able to provide the best possible care.

2.2 Prevalence of Secondary Traumatic Stress

STS has been studied in specific professional populations, and its prevalence varies significantly across the professions studied. For example, the prevalence of STS has been found to be approximately 49% to 53% among victim advocates (Benuto et al., 2018), 34% among child protective service workers (Bride, 2007), and 35% among police officers in the United Kingdom who investigate child victims of sexual abuse (Hurrell et al., 2018). Understanding the prevalence of STS is an important step in gaining insight on how it impacts a population.

In these studies, the prevalence was determined using a combination of three methods described by Bride (2007) utilizing the Secondary Traumatic Stress Scale or STSS (Perron & Hiltz, 2006). The first strategy uses the endorsement of items from the different symptom clusters (i.e., intrusion, avoidance, negative cognitions and mood, and hyperarousal) of the STSS, which align with the symptom clusters of PTSD. Using this method, researchers determine if respondents endorse the appropriate number of symptoms in a particular cluster in order to meet the criteria for a diagnosis of PTSD (Bride, 2007). The second approach compares responses to a normative curve and classifies individuals into categories ranging from little to no STS (\leq lower 50th percentile) to severe STS ($>$ 95th percentile) (Bride, 2007). The third approach uses a cutoff score at the lower threshold of the moderate range (as described by the second method) and representing the 76th percentile – as compared to the normative curve – to determine the prevalence of STS in a sample (Bride, 2007).

2.3 Children’s Advocacy Center Employees and Secondary Traumatic Stress

Employees of children’s advocacy centers (CACs) are trained to provide quality advocacy and mental health services while minimizing further trauma to victims. The children meeting with CAC employees share the details of their physical and/or sexual abuse. These reports of abuse often include severe and repeated trauma. In addition to being routinely exposed to details of the abuse shared by the child, these cases are often very complex and time-intensive for the CAC employees and their multidisciplinary team members. The totality of stress and the severity of exposure to secondary trauma is extreme for these professionals.

Employees who work at CACs likely experience disproportionality more stress as a function of their jobs than other workers not routinely exposed to indirect trauma. However, relatively few studies have directly studied the employees of CACs. In addition, only one study

has specifically assessed the risks from exposure to work-related hazards among CAC multidisciplinary professionals. This study found that CAC multidisciplinary team members' mean scores were in the 94th percentile for STS ($M = 24.06$; $SD = 5.92$) when compared to a normative population using the Professional Quality of Life (ProQOL) Version 5 scale and scoring interpretation guidelines (Letson et al., 2019).

Three studies have examined forensic interviewers working within CACs. The first study identified that the mean scores of STS for forensic interviewers were at the 75th percentile ($M = 34.2$, $SD = 10.6$) on the Secondary Traumatic Stress Scale (STSS) (Perron & Hiltz, 2006). The second study identified that CAC forensic interviewers' mean scores were in the 90th percentile for STS ($M = 36.7$; $SD = 12.1$) on the STSS (Bonach & Heckert, 2012). The final study identified the mean scores of STS for forensic interviewers in CACs were lower than the 50th percentile ($M = 27$, $SD = 15.8$) (Starcher & Stolzenberg, 2020). This mean is considerably lower than what has been found in other studies. This may be due to selection bias based on the individuals who chose to respond to a national survey (Starcher & Stolzenberg, 2020).

The National Children's Alliance – an organization which sets accreditation standards for CACs in the United States – has recognized the importance of addressing STS among their workforce. It has developed guidelines for promoting employee well-being in their accreditation standards (National Children's Alliance, 2020b) (Figure 2). This recognition of need by the National Children's Alliance, in addition to the findings from these studies, demonstrates the importance of exploring STS among CAC employees. The disparate results of previous research and the overall lack of inclusion of all CAC employees (e.g., victim advocates, executives, administrative professionals) highlight additional gaps in this research. With little known about

this overall population, assessing the extent to which STS occurs among this population remains novel.

H. The CAC promotes employee well-being by providing training and information regarding the effects of vicarious trauma, providing techniques for building resiliency, and maintaining organizational and supervisory strategies to address vicarious trauma and its impact on staff.

STATEMENT OF INTENT: To reduce employee burnout and improve employee retention, the CAC should develop practices that identify and mitigate against factors that negatively influence staff well-being, quality of services, and staff turnover.

This includes not only identifying the risk of vicarious trauma for front-line staff but also providing techniques for building resiliency in workers and maintaining organizational and supervisory strategies to address and respond to vicarious trauma among staff members.

I. The CAC promotes MDT well-being by providing access to training and information on vicarious trauma and building resiliency to MDT members.

STATEMENT OF INTENT: CACs have an important role in strengthening the functioning of the MDT. A highly functioning multidisciplinary team is one in which vicarious trauma can be acknowledged and addressed. While MDT partner agencies have primary responsibility for the health of their workers, the CAC is responsible for providing access to training and information regarding vicarious trauma and resiliency to team members. Moreover, the health of the MDT directly impacts service delivery to children and families. Therefore, attention given to this issue can improve outcomes for abused children and their caregivers.

Figure 2: National Children’s Alliance employee well-being standards.

(Source: National Children’s Alliance, 2020b)

2.4 Risk and Protective Factors

Researchers have sought to identify factors that may either increase the risk or prevent the onset of STS. This research covers a wide breadth of possible factors, ranging from personal income (Quinn et al., 2019) to the strength of the supervisee-supervisor relationship (Slattery & Goodman, 2009). Overall, the research is primarily organized into two sets of factors – personal (or individual) contributors and organizational (or workplace) contributors.

2.4.1 Personal Contributors

Each individual employee has personal factors that must be examined. These factors may contribute to a person's risk or provide protection from experiencing STS. Previous research has examined identified contributing factors such as direct trauma experience, work experience, and coping skills (Dworkin et al., 2016; Pearlman & MacIan, 1995; Slattery & Goodman, 2009).

2.4.1.1 Trauma History

The personal trauma history of individuals experiencing STS is of particular interest among researchers. For the most part, this exploration is based on the theory that when individuals who have a direct history of trauma hear the stories of others' trauma, they are reminded of their own experiences (Figley, 1995a; Pearlman & Saakvitne, 1995; Slattery & Goodman, 2009). However, evidence supporting this theory is mixed.

Some studies suggest individuals with a direct history of trauma are more negatively affected by their work with traumatized clients than those without such a history. For example, both Dworkin and colleagues (2016) and Pearlman and MacIan (1995) suggest that professionals who disclosed a history of personal trauma reported experiencing more symptoms of STS. Their findings suggest a significant relationship between past trauma history and STS, which also indicated that a history of past trauma was a significant predictor of STS (Dworkin et al., 2016; Pearlman & MacIan, 1995).

Conversely, other studies have not supported this relationship. For example, Quinn et al. (2019) examined possible predictors of STS among master's level social workers. Their research found the mean scores for STS were not significantly different between those with a history of trauma and those without (Quinn et al., 2019). Similarly, Bober and Regehr (2006) did not find

any differences in STS symptoms between therapists who had personally experienced trauma and those who had not.

Additionally, research has not been conducted to explore this personal experience of trauma among CAC employees. A history of direct exposure in itself does not present avenues for possible prevention of STS. Given the frequency of which it is studied, coupled with the prevalence of individuals experiencing trauma (an estimated 70% to 89% of people) (Kilpatrick et al., 2013), the possible relationship between STS and a personal history of experiencing trauma remains a point of interest worth exploring in this unique population.

2.4.1.2 Amount of Experience

Researchers have also examined the possible relationship between the amount of experience working in a profession with frequent exposure to indirect trauma and experiences of STS. Several studies suggest greater professional experience may act as a buffer against the effects of STS, with individuals who have more years of experience reporting lower levels of STS (Cunningham, 2003; Ghahramanlou & Brodbeck, 2000; Sprang et al., 2019). However, one study suggests that years of experience is not a significant predictor of STS but of increased compassion satisfaction – or the pleasure one derives from effectively doing his or her work (Craig & Sprang, 2010; Stamm, 2002).

The single published study of CAC multidisciplinary teams suggests there are differences in STS levels related to years of experience (Letson et al., 2019). For example, those individuals working in the area of child abuse for 11 to 19 years had significantly higher STS scores than those who had been working in the area for more than 20 years (Letson et al., 2019). However, there were no significant differences found between other groups (Letson et al., 2019). In one of the studies of forensic interviewers, researchers examined the differences in employee

engagement as it related to the length of time in their positions. They found no significant differences between STS levels reported by forensic interviewers who had been employed for less than two years and those who had been employed for more than two years (Perron & Hiltz, 2006).

Further study is needed to better understand the possible relationship between a professional's number of years working in the field and STS. Specifically, when studying CAC employees, examining this relationship across a broad range of years of experience may assist with understanding the acquisition of possible protective factors associated with the amount of experience. This understanding could help with targeted training and support for this population.

2.4.1.3 Coping and Resilience

Individuals employ cognitive and behavioral strategies to cope with stress. Some of these strategies can effectively alleviate stress and promote positive psychological well-being (Endler & Parker, 1994; Violanti et al., 2018). On the other hand, some coping strategies can make stress worse and harm psychological well-being (Endler & Parker, 1994; Littleton et al., 2007; Violanti et al., 2018). Due to the stress and repeated exposure to traumatic content of CAC employees, it is vital to explore the coping strategies of those working in such positions.

Resilience is a personal characteristic that entails the ability to bounce back after experiencing challenging circumstances. Resilience is an important resource that may facilitate successful coping (Saklofske et al., 2012). Researchers suggest that individuals with greater personal resiliency experience less depression, anxiety, and stress (Smith et al., 2016). In their study, Smith and colleagues (2016) identified that personal resiliency served as a moderator, which reduced the effects of negative coping strategies and enhanced the effects of positive coping strategies. This further demonstrates the importance of considering both coping skills and

resiliency in understanding the factors contributing to STS in individuals with indirect exposure to trauma.

Despite evidence suggesting the importance of effective coping skills and personal resiliency in increasing a sense of psychological well-being, little is known about their relationships with STS. In his study, Patrick Brady (2017) explored STS risks among individuals who investigate crimes against children committed via the internet (e.g., child exploitation). His research suggests a negative correlation between positive coping strategies and the prevalence of STS within this population (Brady, 2017). Further, Violanti and colleagues looked at how coping may moderate the experience of workplace stressors and PTSD symptoms in police officers (2018). They examined differences in active vs. passive coping (Violanti et al., 2018). Active coping when the individual takes active steps to reduce the stressor's impact. Passive coping on the other hand is when the individual avoids the stressor and relinquishes control of managing it. They found the effect of workplace stress may be made worse by either low levels of active or high levels of passive coping methods (Violanti et al., 2018). However, no other studies examining this possible relationship in this population have been published.

By understanding if resiliency and coping skills can protect individuals from the effects of STS, researchers may better identify personal risk factors within high trauma professions. Further exploring this possible relationship could also assist with designing targeted interventions to prevent or mitigate the effects of secondary exposure to trauma, which could assist with building and/or reinforcing appropriate coping skills and resiliency.

2.4.2 Organizational Contributors

Factors directly related to an organization, workplace, or job description may contribute to the risk of STS for employees. These factors include positions that require direct interactions

with clients as a primary responsibility, the degree of cooperation or teamwork within the workplace, and the overall amount of organizational support given to employees, among others (Au et al., 2018; McDonald et al., 2017; Regehr et al., 2004; Zubatsky et al., 2020). Examining these factors helps to more fully understand the possible risk and protective factors related to STS.

2.4.2.1 Direct Interaction with Clients as a Primary Job Responsibility

Research into STS focuses on indirect exposure to trauma through direct interaction with clients. Most studies have used homogeneous populations of employee position descriptions to explore amounts of STS experienced. For example, researchers have examined licensed master's level social workers (Quinn et al., 2019), forensic interviewers (Bonach & Heckert, 2012; Perron & Hiltz, 2006; Starcher & Stolzenberg, 2020), domestic violence victim advocates (Benuto et al., 2018), child protective service workers (Bride, 2007), and police officers who investigate child victims of sexual abuse (Hurrell et al., 2018). However, none of this research examined if there were differences between those who work directly with the clients and those who provide other supportive services within the organization. In the study of multidisciplinary CAC team members, there were no significant differences in STS among various professionals (e.g., child welfare workers, prosecutors, medical providers, law enforcement) (Letson et al., 2019).

A CAC works to serve the needs of abused children. Each employee plays a role in responding to and addressing that abuse. Accordingly, when studying CAC employees, the differences in the primary roles of the employees must be considered. Understanding how indirect exposure to trauma is associated with employees differently in various positions (e.g., forensic interviewer, executive director) is key to understanding STS and developing targeted interventions.

2.4.2.2 Teamwork

A critical design feature of CACs is the use of a multidisciplinary team. These teams consist of child abuse professionals with a variety of expertise ranging from law enforcement, state and/or local social services, mental health providers, medical providers, forensic interviewers, victim advocates, and prosecutors (Hubel et al., 2014). Teams are employed to coordinate the investigation and treatment services needed for children who report physical and/or sexual abuse. To minimize the likelihood of retraumatizing the child, one person interviews the child (Hubel et al., 2014). In an interview, Juliane Walker, the Executive Director of the Children’s Advocacy Centers of Kansas, Inc., described how these types of interviews work. She reported that the non-interviewing team members observe behind a one-way glass or using a video system, assisting in the interview by communicating via earpieces (J. Walker, personal communication, November 20, 2020). Using this team approach reduces the number of times a child victim must be interviewed during the initial investigation of abuse and prosecution of the offender (Hubel et al., 2014).

After the interview, teams coordinate their strategies, share information, and make decisions together. To ensure appropriate treatment services are provided, the team supports each child from the initial report to the closure of the case. Each child receives specialized advocacy, therapeutic services, and medical evaluations onsite or through local partners. CAC workers also deliver training, crisis interventions, and ongoing support to assist non-offending caregivers. This team approach provides a child-centered response to the individual needs of each child victim.

Implications related to job satisfaction and burnout in integrated settings have been studied related to work within medical treatment, like hospitals and urgent care centers. One study suggests that with an increased level of integration (where all components of client care

work together in real-time), job satisfaction increases and burnout decreases (Au et al., 2018). Another study indicates that employees (specifically behavioral health professionals working in a medical setting) who worked in organizations with greater levels of integrated care reported decreased levels of client depersonalization and increased levels of feelings of personal accomplishment than those working in organizations with lower levels of integration (Zubatsky et al., 2020). Other research suggests that worksites that promote shared power through consensual decision-making significantly protect employees in high-trauma occupations from STS (Slattery et al., 2009).

Further exploring the concept of teamwork and the implications of different levels of work within a multidisciplinary team in a CAC setting may provide important insights into possible protective factors for STS. The relationship between the level of teamwork perceived and the level of STS reported is of specific interest. This information may be used to further explore recommendations for things like cross-agency agreements and responsibility-sharing as appropriate.

2.4.2.3 Organizational Environment

Each CAC has different structure, model, and set of relationships with partners. These differences contribute to a unique environment and organizational culture. Within these different workplaces, employees face different levels of stress and support. Workplace stress is associated with significant negative effects on psychological wellbeing and physical health within healthy populations (Goh et al., 2015). This stress can lead to greater incidence of physical illness, workplace injury, and even mortality (Goh et al., 2015). Previous research demonstrates employees in low-trauma exposure occupations who experience low support from supervisors and coworkers are more likely to experience stress (Sosik & Godshalk, 2000; Giorgi et al., 2015)

than those in high-trauma exposure occupations who feel supported by their coworkers and supervisors (Slattery et al., 2009). Additionally, employees in low-trauma occupations who feel they have little job control and few opportunities to make decisions about their jobs are more likely to report stress (Trousselard et al., 2016).

At an organizational level, a worksite's environment can be associated with burnout and STS. For example, in one study measuring predictive factors related to burnout and the impact of traumatic events among child welfare workers, the organizational environment (e.g., ongoing and chronic stress) is the strongest predictor of STS (Regehr et al., 2004). In fact, this persistent, chronic workplace stress is more powerful in predicting post-traumatic distress than individual factors (e.g., having a greater sense of control over their lives, engaging in meaningful relationships) or incident factors (e.g., less frequent exposures to secondary trauma) (Regehr et al., 2004).

Another example of the contribution of the organizational environment is a study conducted with social workers assisting family violence and sexual assault survivors, which suggests that support from supervisors, peers, and work teams is critical in reducing STS (Choi, 2011). A third study that examined workplace factors associated with STS among domestic violence advocates suggests that those who reported greater support from coworkers were less likely to experience STS (Slattery & Goodman, 2009).

Considering these findings and their implications for how workplace factors can guard against STS among employees, it is critical to explore this topic further. Little is known about how to protect CAC employees from STS. By better understanding how employees' perceptions of support from within CACs are associated with employees' levels of STS, tailored interventions could be developed to protect employees from STS.

2.4.2.4 Varying Models of CACs

While all CACs use a multidisciplinary approach to address child abuse and neglect, the model used by individual CACs differs by agency with varying in levels of integration and collaboration. However, in the United States, there are two primary models used: integrated and non-integrated sites. In an integrated CAC, all partner agencies (e.g., law enforcement, child welfare, prosecutors, medical staff, CAC employees) are co-located in one facility where they work cases together. At non-integrated sites the CAC provides the facility for the child-centered interview and may employ forensic interviewers, victim and family advocates, mental health, and other services. However, in a non-integrated CAC, the partner agencies do not co-locate or share office space with the CAC staff.

The prevalent model (non-integrated sites) can be isolating for CAC employees. For example, one study identified that forensic investigators who were not part of larger teams (e.g., law enforcement, social services) reported feeling isolated. In contrast, those who worked at centers with other forensic interviewers reported feeling less isolated (McDonald et al., 2017).

2.5 Social Ecological Model

The Social Ecological Model is a theory that asserts there are several levels of influence that are relevant to consider when attempting to enact behavior change (McLeroy et al., 1988). Although STS symptomology is not a behavior – but rather the manifestation of a disorder – this model remains beneficial in conceptualizing the various levels in which risk and protective factors involved in the onset of STS may be influenced. The levels described by the Social Ecological Model include intrapersonal, interpersonal, institutional, community, and policy (Figure 3). Applied in this context, the Social Ecological Model suggests that each level contains

relevant factors that can influence an individual and may increase the risk of or provide protection from the onset of STS.

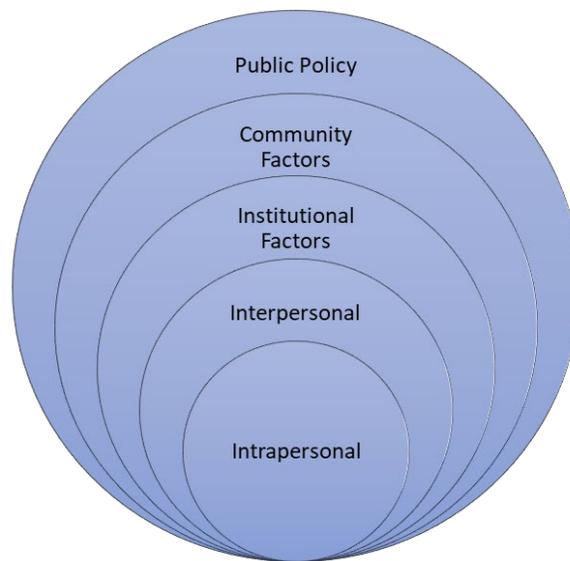


Figure 3: A diagram of the Social Ecological Model.

The Social Ecological Model can be a useful theoretical foundation for assessing STS among CAC employees. It can assist with better understanding personal contributors (i.e., intrapersonal) and organizational contributors (i.e., interpersonal, institutional). Understanding the importance of these factors can provide the basis for developing well-tailored interventions to address STS among CAC employees effectively. Although research has been conducted to develop STS interventions for juvenile justice staff and primary care physicians (Sprang et al., 2019), CAC employees are a novel population for this research and can advance this area.

2.6 Goals of the Study

The current study is an exploratory assessment of the level of STS experienced by children's advocacy center (CAC) employees. The goals of this study are to 1) assess the level of STS experienced by CAC employees, 2) assess how the employees' perceptions of organizational support, their levels of coping resiliency, and their perceptions of teamwork are

related to the level of STS experienced, and 3) identify specific predictors of STS in this population. By better understanding the professionals who work at CACs and their workplace environment, this study can provide the groundwork for developing interventions tailored to their specific needs. Through such interventions, those providing the care for the most vulnerable – abused children – will also have their needs met.

CHAPTER 3

METHOD

3.1 Participants

For this study, the statewide associations of CAC members of the Midwest Regional Children's Advocacy Center, a region of the National Children's Alliance were asked to participate. This included Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. Of the states contacted, Kansas, Michigan, and North Dakota agreed to participate.

These statewide associations contacted their member organizations for permission to share the names and email addresses of employees as prospective participants. In Kansas and North Dakota all of the member CACs agreed to share their employee lists. In Michigan 11 of the 38 member CACs agreed to share their employee lists. All CAC employees in these organizations were asked to participate, including executive directors, forensic interviewers, therapists, advocates, community education specialists, office administrators, and receptionists. A complete list of the demographics of the participants can be found in Table 3 in RESULTS.

3.1.1 Kansas

In Kansas, there are 16 nationally accredited CACs, several of which have multiple sites and one center operates six mobile units. (Figure 4). Prospective participants included individuals from all of the 16 CACs in Kansas. These centers serve approximately 90% of the state. There is one fully integrated CAC site in Kansas. The other 15 CACs in Kansas are partially integrated or non-integrated sites.

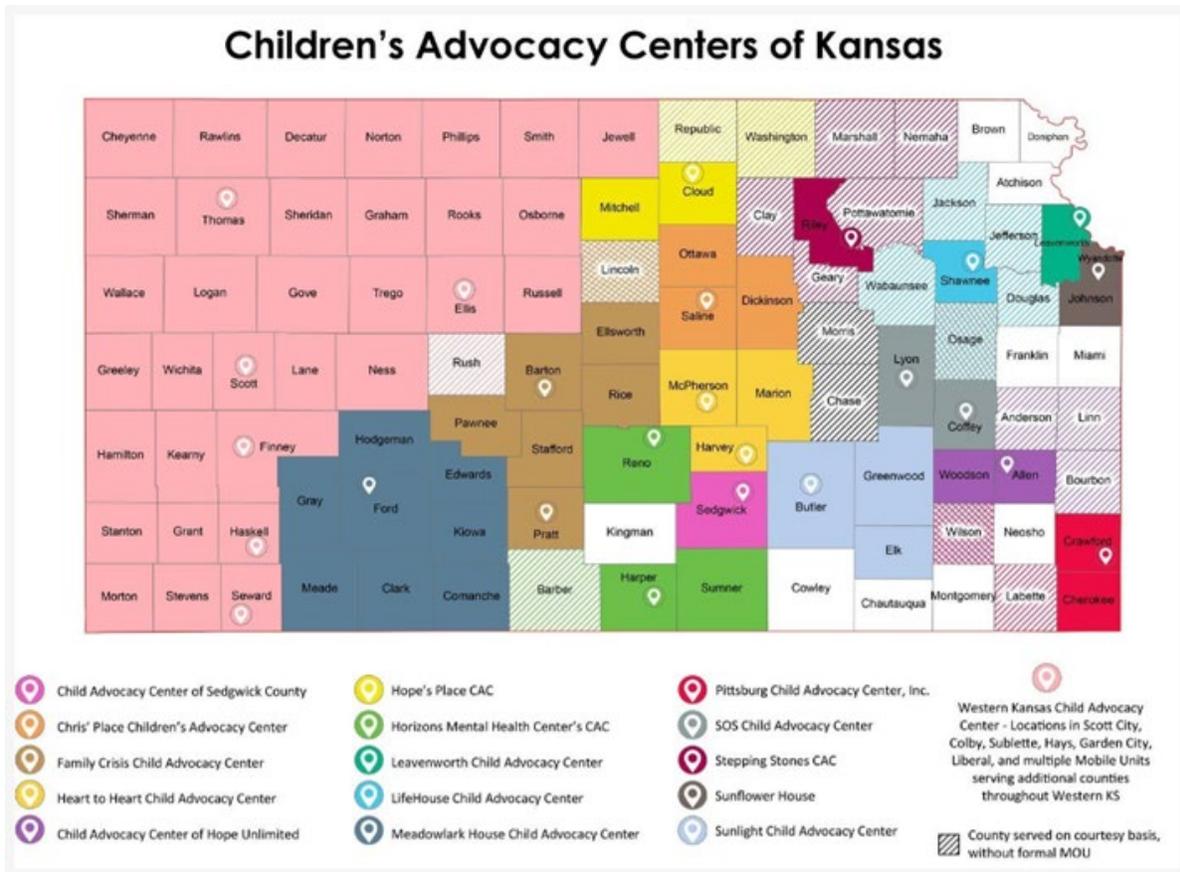


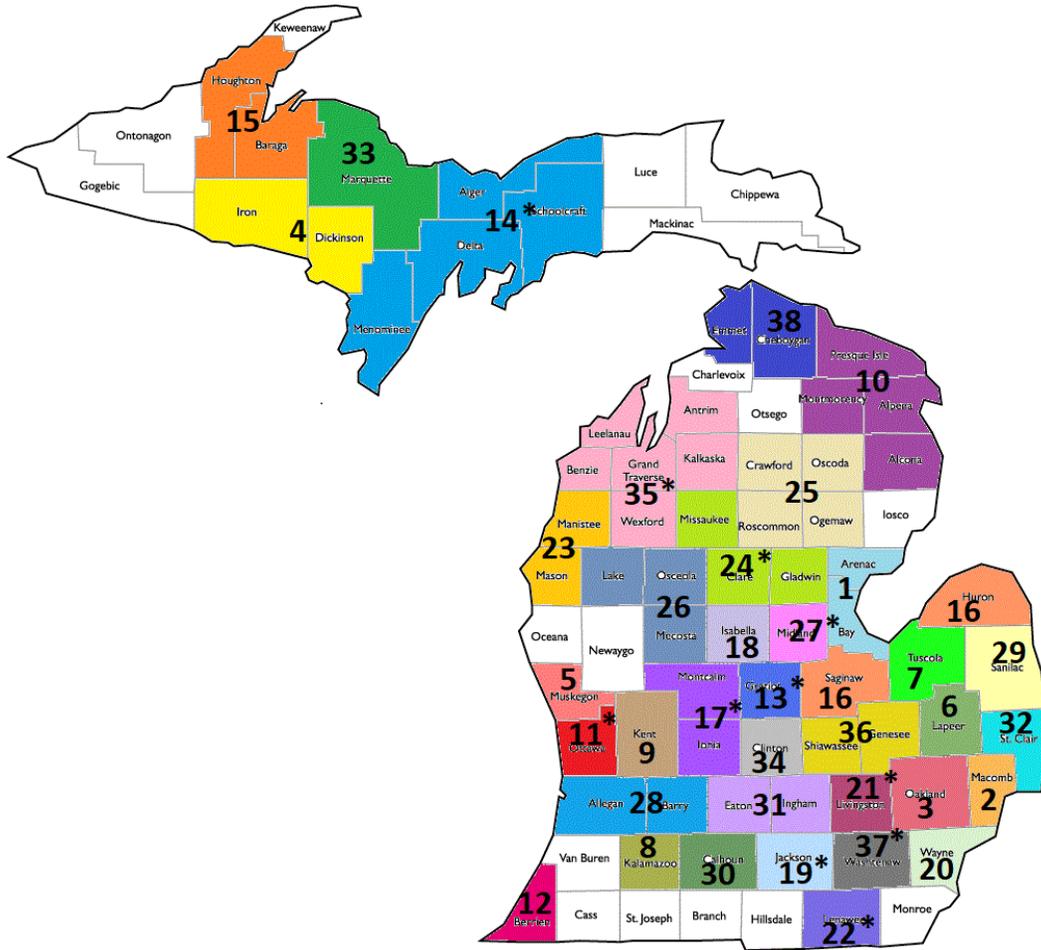
Figure 4: A map of children's advocacy centers in Kansas.

(Source: Children's Advocacy Centers of Kansas (CAKCS), 2020)

3.1.2 Michigan

In Michigan, there are 38 nationally accredited CACs. Several of these CACs have multiple sites, and in total, they serve more than 90% of the state (Figure 5). Michigan has three integrated CAC sites (two of which participated in this study), where CAC employees are joined by law enforcement, child welfare, and medical staff through onsite co-location in one facility. Similar to Kansas, most CACs in Michigan are non-integrated sites; these CACs provide the facility for the child-centered interview, but their partner agencies are not co-located on site.

Children's Advocacy Centers of Michigan



- | | | | | |
|--|--|---|---|--|
| 1 – CAN Council Great Lakes Bay Region-Bay | 9 – CAC of Kent Co. | 17 – IM SAFE CAC* | 25 – Northern Michigan CAC | 33 – Superior CAC |
| 2 – Care House Macomb Co. CAC | 10 – CAC of Northeast MI | 18 – Isabella Co. CAC | 26 – Open Arms CAC | 34 – The Voice for Clinton County's Children |
| 3 – CARE House of Oakland Co. | 11 – CAC of Ottawa Co.* | 19 – Jackson Co. CAC* | 27 – Safe & Sound Child Protection & Advocacy* | 35 – Traverse Bay CAC* |
| 4 – Caring House | 12 – CAC of Southwest MI | 20 – Kids-TALK CAC | 28 – Safe Harbor CAC | 36 – Voices for Children Advocacy Center |
| 5 – Child Abuse Council of Muskegon Co. | 13 – CAC of Gratiot Co.* | 21 – LACASA* | 29 – Sanilac Co. CAC | 37 – Washtenaw CAC* |
| 6 – CAC of Lapeer Co. | 14 – Delta Regional CAC* | 22 – Lenawee Co. CAC* | 30 – Sexual Assault Services of Calhoun Co. | 38 – Women's Resource Center of Northern MI |
| 7 – CAC of Tuscola | 15 – Dial Help | 23 – Manistee Co. CAC | 31 – Small Talk CAC | |
| 8 – CAC of Kalamazoo Co. | 16 – Huron Co. Child Abuse and Neglect Council | 24 – Northern Michigan Alliance for Children* | 32 – St. Clair County Child Abuse and Neglect Council | * Participating CAC |

Figure 5: A map of children's advocacy centers in Michigan.

3.1.3 North Dakota

In North Dakota, there are three nationally accredited CACs. These three CACs each have satellite locations and provide services to designated areas of the state, ensuring all children in North Dakota have access to a CAC (Figure 6). All of the CACs in North Dakota are non-integrated sites. They provide mental health, family advocacy, and forensic interviewers in their centers, partner with the University of North Dakota to complete medical exams when needed and collaborate with local law enforcement and child welfare services in investigations.

Children’s Advocacy Centers of North Dakota

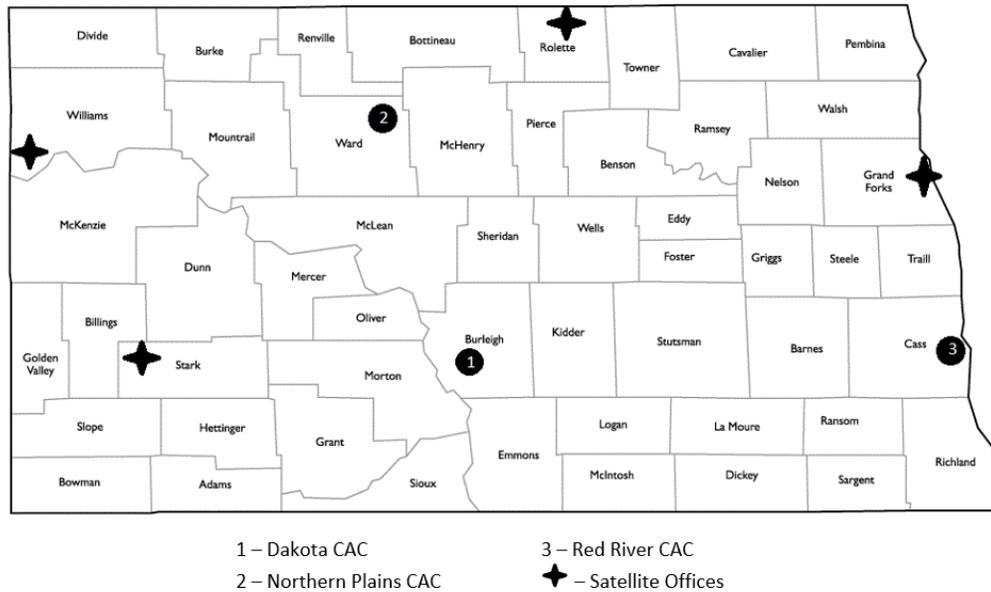


Figure 6: A map of children’s advocacy centers in North Dakota.

3.2 Survey Development

A novel, web-based survey was designed for this study and approved by the Institutional Review Board at Wichita State University. The survey contained an informed consent, a section to collect demographic variables, the Secondary Traumatic Stress Scale, Survey of Perceived Organizational Support-8, the Brief Resilient Coping Scale, and a teamwork scale (Table 1).

TABLE 1
SURVEY CONTENT

Survey Section	α
Informed Consent	-
Secondary Traumatic Stress Scale (STSS)	.91
Survey of Perceived Organization Support-8 (SPOS-8)	.91
Well-being Subscale	.83
Contributions Subscale	.84
Brief Resilient Coping Scale (BRCS)	.62
Teamwork Scale	.83
Demographics	-

3.3 Secondary Traumatic Stress Scale

The Secondary Traumatic Stress Scale (STSS) was utilized to assess STS levels among CAC employees. The STSS is an instrument designed to measure the self-reported frequency of the respondent's symptoms associated with STS. Respondents are instructed to read each item and indicate how frequently the item was true for them in the past seven days, using a five-point, Likert response.

The STSS was developed based on the Diagnostic and Statistical Manual of Mental Disorders' (DSM-IV) conceptualization of the characteristic symptoms of post-traumatic stress disorder (PTSD) (Bride et al., 2004). To assess the construct of STS, questions regarding the DSM-IV criteria for PTSD of intrusion, avoidance, and arousal were included in the scale (American Psychiatric Association, 1994; Bride et al., 2004). After the release of the DSM-5, Bride made suggestions regarding alternate scoring of the items to align with the updated diagnostic criteria for PTSD (American Psychiatric Association, 2013; Bride, 2013). With the inclusion of all four symptom clusters, including negative cognitions and mood, the STSS demonstrates face validity. Internal consistency of the scale was measured using an alpha

coefficient (Table 1). In this study, the STSS had an alpha similar to that which was found by Bride ($\alpha = .91$) (2004).

As the STSS includes items that align with symptom criteria for diagnosing PTSD, responses can be examined to determine the portion of respondents who may be experiencing symptoms of STS which would meet the clinical diagnosis of PTSD (Bride, 2004, Bride, 2007, Bride, 2013). The STSS measures how often during the past seven days the respondent has experienced each symptom, whereas the DSM-5 requires that symptoms persist for at least 30 days. Those who indicated a symptom was experienced “occasionally,” “often,” or “very often” are considered to have endorsed the symptom (Bride, 2004). The overall scores and individual responses are then examined in terms of a total score for STS and possible diagnosis of PTSD with the study population.

3.4 Survey of Perceived Organizational Support

To measure CAC employees’ perceived organizational support, the Survey of Perceived Organization Support (SPOS-8) was utilized (Worley et al., 2009). The SPOS-8 is an eight-item instrument designed to assess employees’ self-reported perceptions of the extent to which the organization values their contribution and cares about their well-being. Respondents are instructed to read each item and indicate the degree of their agreement or disagreement with each statement, using a seven-point, Likert response format. Four items on the scale must be reverse coded to be scored. The scale was initially designed in 1986 (Eisenberger et al., 1986). The full version, which includes 36 items, has been used in numerous studies due to its ability to measure the construct of employees’ perceptions of organizational support (Worley et al., 2009). Since then, shortened versions of the scale have been developed. Worley et al. (2009) examined the factor structures of the original 36-item scale, along with 16-item, 8-item, and 3-item shortened

versions. Each version of the scale includes items with face validity regarding the measurement of subscales of valuation of the employee's contributions and care about the employee's well-being.

The SPOS-8 was selected because it is closely correlated with the longer version (Worley et al., 2009). Additionally, the SPOS-8 short length did not add unnecessary length to the overall survey. In this study, the SPOS-8 had an alpha coefficient which closely aligns with what was found by previous researchers ($\alpha = .91$) (Worley et al., 2009) (Table 1). The SPOS-8 has two subscales: Contributions ($\alpha = .84$) and Well-being ($\alpha = .83$).

3.5 Brief Resilient Coping Scale

The Brief Resilient Coping Scale (BRCS) was used to measure the degree to which CAC employees are resilient copers to better understand how resilient coping may be related to STS (Sinclair & Wallston, 2004). The BRCS is a four-item instrument designed to capture individuals' self-reported tendencies to cope with stress adaptively. The scale focuses on how individuals use specific coping strategies to solve problems despite stressful circumstances – such as those experienced by CAC employees. It includes items such as, “I look for creative ways to alter difficult situations,” “Regardless of what happens to me, I believe I can control my reaction to it,” “I believe I can grow in positive ways by dealing with difficult situations,” and “I actively look for ways to replace the losses I encounter in life” (Sinclair & Wallston, 2004).

The conceptual framework for the development of the BRCS was Polk's (1997) model of resiliency. In his framework, Polk defined resilient coping behavior as a tendency to effectively use cognitive appraisal skills in a flexible, committed approach to active problem-solving in the face of adversity (1997). The BRCS is a four-item self-report instrument. Respondents are instructed to read each item to consider how well each statement describes their behavior and

actions using a five-point, Likert response. In this study, the coefficient alpha for the BRCS was low ($\alpha = .62$) (Table 1).¹

3.6 Teamwork

This study was also designed to explore to what degree employees feel supported in their work as part of a multidisciplinary team. Individuals working as an integrated-service, multidisciplinary team is the cornerstone of the CAC model. Accordingly, CAC employees were asked questions about their perceptions of the level of teamwork experienced and the degree to which their burden of addressing the trauma of others was shared.

Based on discussions with key stakeholders involved in CACs in Kansas, a review of the current literature regarding multidisciplinary teamwork, and a review of available measurement scales, such as the Assessment of Interprofessional Team Collaboration Scale (AITCS) (Orchard et al., 2018), a five-item scale was developed for this study. Respondents were instructed to consider how well the following statements describe their work within a multidisciplinary team: “I feel supported by my team members,” “My team shares our responsibilities,” “My team shares our successes,” “My team shares our failures,” and “The work of each member of my team is important.” The questions were asked using a five-point, Likert response. Scores were obtained by summing the responses to each item in this category. The coefficient alpha of the Teamwork scale was within the acceptable range, which indicates internal consistency within the scale ($\alpha = .83$) (Table 1).

3.7 Demographics

Demographic information was collected to serve as grouping variables to identify potential differences in levels of secondary trauma experienced. This study was particularly

¹ There were no significant findings related to the BRCS. Given its low alpha, no further discussion regarding the BRCS was included.

interested in examining the different degrees in STS between groups based on previous research, specifically: differences between employees with client-facing vs. administrative roles; among employees with different levels of education; among employees with different amounts of time spent working with child abuse and neglect; among employees with different amounts of time in their current positions at a CAC; and between employees who have personally experienced trauma and/or witnessed a traumatic event vs. those who have not (Brady, 2016; Dworkin et al., 2016; Hensel et al., 2015; Pearlman & MacIlan, 1995). Data regarding sex and gender was not collected for this study, as most CAC employees identify as female.

3.8 Data Collection

An email was sent to each prospective participant inviting them to complete the survey. All participants gave informed consent at the start of the survey and indicated they were at least 18 years old. Two additional follow-up emails were sent to those who had not yet participated, encouraging them to complete the survey. For potential participants in Kansas and North Dakota, the survey was open for approximately two weeks, from January 29, 2021, to February 12, 2021. For potential participants in Michigan, the survey was open from March 25, 2021, to April 8, 2021. This staggered timeline was due to differences in availability of potential participant lists between the states. Participation in this survey was voluntary, and no compensation was given.

3.9 Analysis

This study used SPSS 27.0 for Windows to complete the analyses. Descriptive analysis was conducted to examine the distribution of participant characteristics. The totals for each scale and relevant subscales were calculated for each participant, along with the means and distributions of the scores. The frequency and level of STS reported by CAC employees were analyzed. Correlations between each of the participant characteristics collected and each of the

scales were compared to the extent of STS experienced by CAC employees. Additionally, the correlations among all scales were examined.

In cases where individual scales were missing $\leq 20\%$ of item responses, missing responses were imputed using the series mean method in SPSS (Kalton, 1986).² This allowed for the full scale to be scored and used for analysis. If individual scales were missing more than 20% of item responses, the full-scale score was not calculated or used for analysis. Some analyses with missing data (e.g., demographics) required pairwise deletion, which utilized all available data by discarding cases on an analysis-by-analysis basis (Peugh & Enders, 2004).

Additionally, the demographic characteristics collected (e.g., type of position at the CAC, level of education, amount of time spent working with child abuse and neglect in their specific roles at a CAC, exposure to trauma) were analyzed to see if they were significant predictors of STS experienced by CAC employees. Of specific interest was if the scores related to the SPOS-8 (perceived organizational support) and teamwork scales could be used to predict levels of STS. Notable predictors were selected based on the correlations found related to demographics. Finally, multiple regression was conducted to determine if we could create a reliable equation to predict STS (See Table 8 in RESULTS).

² Both the series mean method and the linear trend method of missing data replacement were explored. The results of the two methods were not significantly different from each other at the .05 alpha level. Given that no differences were found, the series mean method was utilized.

CHAPTER 4

RESULTS

4.1 Participants

A total of 188 CAC employees were contacted to participate in the study, and 129 completed surveys, a 69% response rate. Table 2 shows the relative participation and calculated response rates for Kansas, Michigan, and North Dakota CAC employees.

TABLE 2
RESPONSE RATE BY STATE

State	Completed Survey	Did Not Complete Survey	Total	Response Rate
Kansas	80	27	107	75%
Michigan	35	17	52	67%
North Dakota	14	15	29	48%
Totals	129	59	188	69%

4.2 Demographics

Table 3 displays the characteristics of the participants in total and stratified by the state. Of the CAC employees who responded to the survey ($N = 129$), the majority was in a primarily client-facing role (76%). Most reported personally experiencing trauma (84%), and of those who personally experienced trauma, nearly all reported they had addressed their trauma in some way (95%). The majority reported they had children (68%). Half of the respondents had at least a bachelor's degree (49%), and more than one third (39%) had at least a master's degree. Less than a quarter (23%) had been in their positions for three or fewer years, and twice as many (45%) had been working in the area of child abuse and neglect for over 10 years. Responses were split between those co-located with their multidisciplinary teams and those not (41% vs. 59%).

TABLE 3

PARTICIPANT CHARACTERISTICS

Characteristic	All Total (%)	Kansas Total (%)	Michigan Total (%)	N. Dakota Total (%)
Client-facing Role				
Yes	90 (76%)	58 (81%)	21 (66%)	11 (79%)
No	28 (24%)	14 (19%)	11 (34%)	3 (21%)
Experienced Trauma				
Yes	99 (84%)	62 (86%)	27 (84%)	10 (71%)
No	19 (16%)	10 (14%)	5 (16%)	4 (29%)
Has Addressed Trauma				
Yes	92 (95%)	58 (97%)	25 (93%)	9 (90%)
No	5 (5%)	2 (3%)	2 (7%)	1 (10%)
Has Children				
Yes	80 (68%)	55 (78%)	17 (53%)	8 (57%)
No	37 (32%)	16 (22%)	15 (47%)	6 (42%)
Highest Level of Education				
Less than high school	0 (0%)	0 (0%)	0 (0%)	0 (0%)
High school graduate	1 (1%)	1 (1%)	0 (0%)	0 (0%)
Some college	7 (6%)	6 (9%)	0 (0%)	1 (7%)
2-year degree	4 (3%)	4 (6%)	0 (0%)	0 (0%)
4-year degree	57 (49%)	36 (51%)	15 (47%)	6 (43%)
Master's Degree	46 (39%)	24 (33%)	16 (50%)	6 (43%)
Doctorate	2 (2%)	0 (0%)	1 (3%)	1 (7%)
# of Years in Current Position				
Less than one year	4 (4%)	0 (0%)	3 (9%)	1 (8%)
1 – 3 years	66 (58%)	42 (62%)	17 (54%)	7 (54%)
4 – 6 years	22 (20%)	13 (19%)	8 (25%)	1 (8%)
7 – 9 years	7 (6%)	4 (6%)	1 (3%)	2 (15%)
10 or more years	14 (12%)	9 (13%)	3 (9%)	2 (15%)
# of Years Working with Child Abuse and Neglect				
Less than one year	1 (1%)	0 (0%)	1 (3%)	0 (0%)
1 – 3 years	25 (22%)	17 (25%)	5 (16%)	3 (25%)
4 – 6 years	28 (25%)	15 (21%)	11 (34%)	2 (17%)
7 – 9 years	8 (7%)	6 (9%)	2 (6%)	0 (0%)
10 or more years	51 (45%)	31 (45%)	13 (41%)	7 (58%)
Co-located with MDT				
Yes	46 (41%)	33 (48%)	8 (28%)	5 (38%)
No	65 (59%)	36 (52%)	21 (72%)	8 (62%)
Race and Ethnicity				
White or Caucasian	107 (93%)	66 (96%)	29 (90%)	12 (86%)
Black or African American	1 (1%)	0 (0%)	0 (0%)	1 (7%)
Native American	1 (1%)	0 (0%)	0 (0%)	1 (7%)
Asian American	0 (0%)	0 (0%)	1 (3%)	0 (0%)
Other	1 (1%)	0 (0%)	1 (3%)	0 (0%)
Hispanic, Latinx, or Spanish	10 (9%)	6 (9%)	3 (9%)	1 (7%)
Not of Hispanic, Latinx, or Spanish origin	105 (91%)	63 (55%)	29 (90%)	13 (9%)

* n differs based on response rate.

One-way ANOVAs were completed to check for any significant differences between the participants in each state across each of the characteristics collected. Even without correcting for familywise type 1 error rate, there were no differences found between the groups examined.

4.3 Scales and Subscales

The means, standard deviations, and ranges for the scales and subscales included in the survey are presented in Table 4. A one-way ANOVA examined differences between responses from participants in each state. There were no differences by state; therefore, the scores were analyzed together. The responses to each item of a scale were summed, and then means and standard deviations were calculated. All scales and applicable subscales were correlated with STSS. The SPOS-8 full scale, both SPOS-8 subscales, and the teamwork scale were significantly correlated with STSS.

TABLE 4
MEANS, STANDARD DEVIATIONS, AND RANGES FOR SCALES AND SUBSCALES

Scale/Subscale/Item	Mean (<i>SD</i>) total	Range	Correlation with STSS	<i>r</i>	Skew.	Kurt.
Secondary Traumatic Stress Scale	39.44 (10.57)	19–66	-	-	-.10	-.40
Survey of Perceived Org. Support	34.15 (8.24)	14–48	-.55**	.30	-.10	-.69
Contributions	16.74 (4.25)	7–24	-.47**	.22	.14	-.68
Well-being	17.42 (4.61)	5–24	-.57**	.32	-.39	-.58
Teamwork	19.91 (3.41)	13–25	-.25*	.06	-.10	-.81

** Correlation is significant at the .01 level (2-tailed).

* Correlation is significant at the .05 level (2-tailed).

4.4 The Relation Between STSS and Demographic Variables

Correlations were calculated for each of the participant demographics collected STSS scores (Table 5). The number of years working in the area of child abuse and neglect was only variable found to be significantly correlated with STSS ($r = -0.24, p < 0.05$). It was negatively correlated indicating with increased experience participants had lower STSS scores.

TABLE 5

CORRELATIONS WITH SECONDARY TRAUMATIC STRESS SCALE SCORES

Correlations								
	Secondary Traumatic Stress Scale Scores	Client-facing Role	Experienced Trauma	Has Children	Highest Level of Education	# of Years in Current Position	# of Years Working with Child Abuse and Neglect	Co-located with MDT
Client-facing Role	0.05	--						
Experienced Trauma	-0.11	-0.03	--					
Has Children	-0.16	-0.08	0.20*	--				
Highest Level of Education	-0.06	-0.02	-0.09	0.00	--			
# of Years in Current Position	-0.12	-0.13	-0.12	0.22*	0.23*	--		
# of Years Working with Child Abuse and Neglect	-0.24*	-0.15	-0.01	0.38**	0.29**	0.55**	--	
Co-located with MDT	-0.07	0.11	0.15	0.17	-0.11	0.00	0.02	--

* Correlation is significant at the .05 level (2-tailed).

** Correlation is significant at the .01 level (2-tailed).

Additionally, the data were analyzed to determine if there were any differences in STS levels between various individual characteristics. An independent-samples t-test was conducted to compare the STSS scores for employees with client-facing vs. administrative roles. There was no difference in STSS scores for client-facing employees ($M = 39.85$, $SD = 11.34$) and administrative employees ($M = 38.63$, $SD = 8.60$, $t(74) = -0.41$, $p = 0.69$, $d = .11$).

Similarly, the difference between employees who reported having experienced or witnessed trauma firsthand vs. those who did not was explored. An independent-samples t-test was conducted to compare the STSS scores between these employees. There was no difference in STSS scores between employees who reported having experienced or witnessed trauma

firsthand ($M = 39.12$, $SD = 10.86$) and those who did not ($M = 42.70$, $SD = 9.45$, $t(74) = 0.99$, $p = 0.33$, $d = .33$).

The difference between employees who reported having children vs. those who reported not having children was explored. An independent-samples t-test was conducted to compare the STSS scores between these employees. There was no difference in STSS scores between employees who reported having children ($M = 38.52$, $SD = 10.88$) and those who did not ($M = 42.23$, $SD = 9.99$, $t(74) = 1.38$, $p = 0.17$, $d = 0.35$).

Finally, the difference was explored between employees who reported being co-located with their multidisciplinary teams vs. those who reported not being co-located. An independent-samples t-test was conducted to compare the STSS scores between these employees. There was no difference in STSS scores between employees who reported being co-located with their multidisciplinary teams ($M = 38.59$, $SD = 11.21$) and those who did not ($M = 40.18$, $SD = 10.54$, $t(72) = 0.63$, $p = 0.53$, $d = 0.15$).

4.5 Secondary Traumatic Stress and PTSD Symptoms

Individual scores were reviewed to determine what percentage of respondents were experiencing STS to the degree that may meet the diagnostic criteria for PTSD (Table 6). Intrusion was the most commonly reported symptom cluster, followed by Negative Cognitions and Mood. The items “I thought about my work with clients when I didn’t intend to” and “I had trouble sleeping” were the most frequently reported symptoms. Avoidance was the least commonly reported. The item, “I had disturbing dreams about my work with clients,” was the least frequently reported symptom. Approximately 10% did not report any symptoms, and 26% reported experiencing the symptoms congruent with a PTSD diagnosis.³

³ It should be noted that a PTSD diagnosis requires a duration of symptoms lasting at least 30 days. The participants’ duration of symptoms was not collected in this study.

TABLE 6

FREQUENCY OF DIAGNOSTIC CRITERIA OF PTSD DUE TO SECONDARY EXPOSURE

Criteria Met*	N (%)
None	9 (11%)
Intrusion (B) \geq one symptom	61 (76%)
Avoidance (C) \geq one symptom	36 (45%)
Negative Cognitions & Mood (D) \geq two symptoms	51 (64%)
Hyperarousal (E) \geq two symptoms	48 (60%)
Intrusion + Avoidance + Neg. Cog. & Mood + Hyperarousal (B + C + D + E)	21 (26%)

*In addition to the exposure criteria (criterion A)

4.6 Level of Secondary Traumatic Stress Compared to a Normal Distribution

In addition to examining the mean and frequency of diagnostic criteria met, the STSS scores were also studied by comparing individuals' scores to a normative distribution. This was done as suggested by Bride (2007). Individuals were classified into categories based on percentiles. This approach is shown in Table 7. When the scores are examined in this method, 54% of respondents reported experiencing moderate, high, or severe levels of STS.

TABLE 7

LEVEL OF SECONDARY TRAUMATIC STRESS

Category (based on percentile)	Level of STS	Total N (%)
50 th – less than 39	Little or no	26 (45%)
75 th – between 39 and 44	Mild	15 (26%)
90 th – between 45 and 52	Moderate	13 (22%)
95 th – between 53 and 55	High	2 (3%)
Above 95 th – 56+	Severe	2 (3%)

4.7 Predicting Secondary Traumatic Stress

Another goal of this study was to explore how STS might be predicted by the measures of perceived organizational support, teamwork, and demographic. Multiple regression was used to assess the ability of the measures to predict STS. First, correlations were considered to determine which variables should be included in the model. SPOS-8 full scale scores, teamwork scale

scores, and number of years spent working in the area of child abuse and neglect were the only variables with significant correlations. Therefore, they were included in the model. Reported role within the organization (client facing vs. administrative) and personal history of experiencing and/or witnessing trauma were considered, but not used due to their low correlations with STSS in this study. Table 8 summarizes the multiple regression process.

TABLE 8
CONTRIBUTION OF INDIVIDUAL SCALES FOR PREDICTION OF STSS SCORE

Characteristic or scale/subscale	β	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
SPOS-8 Full Scale	-.51	-.66**	.14	-4.77	<.001
Teamwork Scale	-.11	-.33	.33	-1.00	.32
# of Years working Child Abuse and Neglect	-.17	-.18	.11	-1.69	.11
Constant		70.42	7.17	9.82	<.001
R²	.35				
Adjusted R²	.32				

**Correlation is significant at the .001 level (2-tailed).

The model was significant, $F(3, 61) = 10.93, p < .001$. In total, the model explained 32% of the variance in STSS. The only variable with significant predictive power was perceived organizational support.

CHAPTER 5

DISCUSSION

5.1 Level of Secondary Traumatic Stress Experienced

The level of STS experienced by CAC employees is high. The mean STS score found in this study ($M = 39.44$, $SD = 10.57$) is comparably higher than what has been found in similar studies. These other studies – which examined forensic interviewers working within CACs – had mean scores ranging from $M = 27$ ($SD = 15.8$) to $M = 36.7$ ($SD = 12.1$) (Bonach & Heckert, 2012; Perron & Hiltz, 2006; Starcher & Stolzenberg, 2020). This suggests that not only are the forensic interviewers and therapists affected by the trauma they hear clients describe, so are other CAC employees who do not hear about trauma directly from clients.

In addition, when examining the STS scores along a normal distribution, 54% of respondents reported experiencing mild, moderate, high, or severe levels of STS. If this information is coupled with the finding that 26% of respondents reported experiencing a possibly diagnosable level of PTSD due to their secondary exposure to trauma (Table 6), it is clear STS is impacting this population.

5.2 Variance Across Demographics

This study also sought to explore how STS differs across various demographics. Although other studies suggest differences in STS across various individual characteristics (Dworkin et al., 2016; Pearlman & MacIan, 1995; Slattery & Goodman, 2009), in general, this study did not. For example, there were no differences in STS scores by personal history of trauma experienced, general role within the organization, or between employees who reported having children vs. those who did not.

5.2.1 Personal History of Trauma

Many previous studies of STS have sought to understand what, if any, connection exists between STS and an individual's direct experience of trauma. In this study, 84% of respondents ($n = 99$) reported they had personally witnessed and/or experienced trauma.⁴ However, this direct experience did not significantly correlate with STS score ($r = -.11$). Nor was there a difference in STS score between those who reported having personally experienced trauma and those who did not ($t(74) = 0.99, p = 0.33$). This is interesting as it adds to the increasing number of studies that have not found such a relationship. While many studies have identified a significant relationship between past trauma history and STS (Dworkin et al., 2016; Pearlman & Mac Ian, 1995; Slattery and Goodman, 2009), an increasing number of studies – such as this one – have not found a personal history of past trauma to be correlated with STS experienced (Bober & Regehr, 2006; Quinn et al., 2019).

It is estimated that between 70% to 89% of adults in the United States have personally experienced and/or witnessed trauma which may meet the definition used by the current study (Kilpatrick et al., 2013). With that prevalence, it is difficult to discern personal experience of trauma a characteristic which can be used to predict STS. To better understand a possible relationship, data could be collected in a more nuanced way. This might include asking about how recently the trauma was experienced and/or witnessed or the type of trauma. For example, among sexual assault victims, PTSD is fairly common. One study suggests that approximately 70% of sexual assault survivors experienced significant levels of trauma, and 45% reported symptoms of PTSD (Elklit & Christiansen, 2013). It is possible that sexual assault as a specific type of trauma may have different impact on experience of STS.

⁴ Trauma was defined as, “any event that may be considered extraordinarily stressful and/or disturbing for most people.”

Asking questions to better understand a possible difference between type of trauma or recency of experience are possible lines for future research. It is difficult in organizational studies, such as the current study, to ask questions about issues this personal. Employees may not feel comfortable answering questions regarding the type of trauma they have experienced or exactly how long ago the trauma occurred when the questions being asked are related to their employment. However, given the prevalence of history of personal experience of trauma and what is known about how that links to PTSD, this continues to be an important line of inquiry.

5.2.2 Addressed Trauma

This study did attempt to examine the possible differences related to direct trauma experience and explored possible differences between those who had addressed their personal trauma in some way and those who had not. A high percentage of employees reported having personally experienced trauma. Of them, 95% ($n = 92$) reported having addressed their trauma in some way (e.g., in therapy, with friends/family, with a pastor/priest/religious leader, in a mutual-aid group, or some other capacity). Given this high percent, there was little variance between the two groups to explore.

Even with the limitations of this study, interesting possibilities remain. This study suggests that nearly all employees who had personally experienced trauma had “addressed” it in some way. This finding may help to explain why a history of directly experiencing and/or witnessing trauma was not significantly related to STS. Hardgrave et al. (2006) suggested that volunteer crisis workers who had personally experienced trauma and reported that they had resolved their experiences had less STS than their overall sample. Similar phenomena may be at work in this study; however, given the low number of participants who either have not experienced trauma or have not addressed their trauma, no such conclusions can be drawn.

The implications of addressing trauma are important considerations for employers. A meta-analysis of interventions for STS found that counseling can be an effective intervention (Van Mol et al., 2015). While a specific type of counseling was not identified, this suggests that employers could assist their employees by making access to counseling easily accessible (Van Mol et al., 2015). Taking into consideration the prevalence of employees who reported personally experiencing trauma, the high level of STS reported by CAC employees, and that counseling has been shown to be an effective intervention, providing access to such supports would support the overall well-being of employees and may lessen the impact of STS.

5.2.3 Client-Facing Role

Participants were asked if their primary job duties involved regular interactions directly with clients and/or their families. Most respondents 76% ($n = 90$) reported they had frequent direct interactions with clients and/or their families, and 24% ($n = 28$) reported they do not. However, there were no differences in STS scores between these two groups ($t(74) = -0.41, p = 0.69$).

Most research into STS has explicitly examined how the individual professionals who hear the reports of trauma directly from the victims are impacted. This has been done by studying licensed master's level social workers (Quinn et al., 2019), forensic interviewers (Bonach & Heckert, 2012; Perron & Hiltz, 2006; Starcher & Stolzenberg, 2020), domestic violence victim advocates (Benuto et al., 2018), child protective service workers (Bride, 2007), and police officers who investigate child victims of sexual abuse (Hurrell et al., 2018). However, the findings of the current study suggest that STS is also experienced by those who hear about the trauma indirectly in the workplaces or are simply exposed by working within agencies whose primary goal is to assist children through trauma.

Understanding that STS may be experienced by all employees within a CAC is an important finding. As addressed by the National Children's Alliance's employee well-being standards (Figure 2), CACs should strive to promote employee well-being by providing training and information regarding the effects of STS and maintaining organizational strategies to address STS and its impact on all employees. These measures should not simply be provided for front-line staff but rather for all CAC employees, regardless of their primary job responsibilities.

5.2.4 Length of Time Working in the Area of Child Abuse and Neglect

The demographic variable this study suggests is significantly correlated with STS score was the length of time an individual employee had been working in the area of child abuse and neglect ($r = -0.24, p < .05$). This negative correlation suggests that the longer individuals have been working in this area, the lower their level of STS. This is supported by other research which has suggests that individuals who have more years of experience report less STS (Cunningham, 2003; Ghahramanlou & Brodbeck, 2000; Sprang et al., 2019). In this study, participants were stratified into four groups according to the length of time they reported having worked in this area: Group 1: one – three years; Group 2: four – six years; Group 3: seven – nine years; and Group 4: 10 or more years. There were no differences found in the STS score across the four groups ($F(3, 42) = 1.25, p = 0.30$). The biggest difference was between those working in the area of child abuse and neglect for one to three years and those working in the area for four to six years (M difference = 9.04, $p = 0.45$).

To better understand these possible differences, a larger sample should be collected, or a longitudinal study should be conducted. The use of a larger sample could allow for a more comprehensive understanding of how the amount of experience is related to STS. Additionally, a longitudinal study could help to determine if the differences are related to the amount of

experience and/or other factors. For example, people who are less susceptible to the effects of STS might be more likely to continue working in the field for a longer amount of time.

Increasing knowledge about these nuances would be helpful to understanding the underlying risks of experiencing STS.

5.3 Organizational Support

The correlations between the STS scores and organizational support scores ($r = -0.55$) and well-being scores ($r = -.57$) indicate that when employees perceive a high level of organizational support, specifically related to their individual well-being, their levels of secondary traumatic stress decrease. This relationship was further explored through the regression equation, in which organizational support accounted for 24% of the variance of STS scores, with the equation accounting for 32% of the variance of STS scores. This finding is supported by other research, which has suggested that when employees feel supported by their coworkers and supervisors, they are less likely to experience STS (Slattery et al., 2009).

The connection between increased organizational support and decreased STS aligns with the findings of Ni and Wang (2015). They had similar findings in their study. Ni and Wang suggested this might be related to social exchange theory and the idea that the exchange of personal rewards and benefits from the employer might be protective (Ni & Wang, 2015). The current study examines this relationship from the Social Ecological Model. When examined in this framework, there is an understanding that the institutional factors related to an organization can have an impact on an individual employee. This explains both the decrease in STS as perceived organization support increases, and the increase in STS as perceived organization support decreases.

Finding approaches to increase both the organization's efforts to support and the overall ways employees perceive that their organization supports them may help lower the effects of STS. In particular, supporting employee well-being may be of importance in these efforts. The items that make up the Well-being Subscale include: "The agency would ignore any complaint from me (reverse coded)," "The agency really cares about my well-being," "The agency cares about my general satisfaction at work," and "The agency shows very little concern for me (reverse coded)" (Eisenberger et al., 1986). By addressing employee complaints and demonstrating care for the well-being of their employees, CACs may be able to help mitigate the effects of STS. More broadly, there are likely other ways organizations could demonstrate support to their employees, such as through offering health insurance which covers mental health treatment and creating a culture which supports employees accessing those services.

In a meta-analysis which included 127 studies on STS interventions, one of the key findings was the importance of organizational strategies (Potocky & Guskovict, 2020). In fact, the authors stated, "The importance of organizational support for staff who are vulnerable to STS cannot be overstated" (Potocky & Guskovict, 2020, p. 15). While this study did not examine the effects of interventions, it does provide additional support to understand the connection between organizational support and STS.

5.4 Teamwork

The teamwork scale was also significantly correlated with STS score ($r = -0.25$). This correlation indicates that as respondents had an increasing degree of teamwork, their STS score decreased. Teamwork was not a significant predictor of STS score according to the model, accounting for only 1% of the variance. However, teamwork (like organizational support) is an area ripe with opportunity for intervention. Looking for opportunities to increase the support felt

by coworkers across different professions and roles and to assist them in sharing their responsibilities, successes, and failures may decrease the risk of STS. Other research suggests that integrated service delivery models, like that used by CACs, can serve to reduce the risk of STS (Au et al., 2018, Slattery et al., 2009). In addition, the literature on best practices for STS interventions encourages workplace respect and shared decision-making within an organization (Potocky & Guskovict, 2020).

5.5 Limitations

The limitations of this study include the self-report nature of the instrument and the potential for self-selection bias and social desirability bias in the responses. It is possible there is some other unique attribute of the individuals who self-selected to complete the survey that was not measured. Additionally, some of the questions may have a social acceptability basis. For example, respondents were asked about wanting to avoid working with some clients and gaps in their memory. Some individuals may have difficulty recognizing or reporting these less socially acceptable attributes about themselves. To address this possibility, respondents were informed that no identifying information would be collected, and individual responses would not be shared with their employers. However, it is possible that some individuals responded more favorably to such items or that they selected not to answer them at all. Only 44 participants (34%) answered all of the questions on the STS scale. The item, “I had disturbing dreams about my work with clients” was the question most frequently skipped. However, “I thought about my work with clients when I didn’t intend to” and “I had trouble concentrating” were not skipped by any participant who responded to at least 20% of the items. To address these issues, scales which were previously validated through other research were used whenever possible, such as the STS and SPOS-8.

Additionally, this is a cross-sectional study which by its nature does not allow for causation to be determined. Interesting correlations were found, which many help to further understand the relationships. However, further experimental studies would need to be completed in order to conclude any particular causations.

Additionally, this study was conducted in the Spring of 2021, during the COVID-19 pandemic. Participants were asked to answer questions regarding their stress, organizational support, coping strategies, and teamwork during an unprecedented time of stress. It is possible that the findings were influenced by the stress and uncertainty felt by many during this time period (Taylor et al., 2020).

5.6 Future Direction

The exploratory nature of this study provides many avenues for future investigation. One specific direction for additional research is to investigate the difference between individuals who report they have addressed the personal trauma they experienced and those who report they have not. Previous studies have been inconsistent in their findings regarding differences between individuals who have personally experience trauma versus those who have not. It may be because the difference is not found in the direct experience trauma alone, but rather the resolution of it. To study this more closely, the target population would have to be narrowly defined and specific recruitment methods would need to be employed. Additionally, while this study attempted to examine personal resilience, the scale used did not prove helpful. Further examining resilience among this population may be helpful in understanding the possible difference between these groups.

It may also be helpful to examine the STS of CAC employees in a longitudinal study. This would allow for more information to be gained regarding increases and decreases in STS

overtime. In general, other researchers have found results similar to this study which suggest that as employees work in this area for an increased period of time, their STS decreases (Cunningham, 2003; Ghahramanlou & Brodbeck, 2000; Sprang et al., 2007). Further study to examine how this occurs by individual CAC employee may provide more comprehensive data to help understand how STS decreases in relationship to time worked.

Finally, the results of this exploration suggest that the employees' perceptions of organizational support and their work as part of a team may serve as buffers to prevent or lessen the experience of STS. However, the exact nature of what those supports entail or how those supports might be implemented was not a part of this study. Future research may look at how interventions utilizing the development of teams or increased perceptions of organizational support would further this understanding and build on the work begun by this study.

CHAPTER 6

CONCLUSION

CAC employees stand at the front line of assisting children after they have experienced extreme trauma. Through their work, CAC employees provide safe places for children to talk about the trauma they have experienced and for caregivers to access supports. This is important work, and the use of the CAC model reduces the repeated trauma of the children. However, hearing these stories and being around this work creates a heightened risk of secondary trauma for the employees.

The results of this study add to the existing literature regarding STS and provides a partial framework for understanding STS in CAC employees. As a function of the work done by CACs, the employees have many different job titles and responsibilities. Recognizing that all CAC employees are at risk for experiencing STS, and in fact, many do experience STS, is critical toward understanding and addressing their needs.

However, it is not enough to simply measure STS. This study demonstrates that a high-level of STS is experienced by this population. Therefore, it is important to look deeper into risk and protective factors which may influence the experience of STS. The findings from this study add to understanding the critical role played by organizations in their employees' well-being. Through their responses, the CAC employees in this study indicated that low organizational support was the largest predictor of STS. CACs would benefit from understanding the critical role that their support plays in mitigating or addressing STS. Although some work has been done to develop interventions aimed at addressing STS, none have focused directly on the CAC employee population.

Further studies which examine the impact of direct exposure to traumatic events or which measure changes in level of STS over time, along with studies to explicitly examine what mechanisms for organizational support can reduce the experience of STS across this population, will be helpful in furthering understanding in this area.

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