Complex Organization Trauma: Development of a Measurement Tool

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ABSTRACT OF THE DISSERTATION

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Background: Complex Organizational Trauma (COT) is a prolonged state of organizational dysfunction and chaos marked by ineffective responses and the inability to effectively manage agency operations. COT occurs as a reaction to multiple incidents of sustained organizational trauma and is characterized by multiple crises that erode an organization's capacity to accomplish its mission. COT is conceptualized across three levels: (1) individual trauma history of employees and supervisors, (2) quality of work environment, and (3) sudden policy change and financial uncertainty. Together, these three factors may trigger COT, resulting in dysfunctional operating practices, reduced resources, and lack of viability.
Objective: The absence of a reliable assessment tool hinders organizations from responding to COT. The object of this study is to develop a measurement tool, the Complex Organizational Trauma 21 Item Scale (COT-21), to measure COT. **Method:** The Latent Variable Model Framework was used to develop the scale. Four organizations participated in the study (n=167). Descriptive statistics were performed on the COT-21 survey results. To gather psychometric properties, Exploratory Factor Analysis (EFA) and Cronbach's Alpha were used. **Results:** The results show positive support for the COT-21 scale. The coefficient alpha for the COT-21 total scale is considered good ($\alpha = .81$), indicating good internal consistency. Utilizing EFA, items were grouped into four subscales, suggesting good validity. **Discussion**: This study advances social work research by presenting results that validate the COT-21 Scale. The implications for use of the COT-21 in a variety of assessment contexts are discussed.

Keywords: complex organizational trauma, psychometrics, measurement development

DEDICATION

This research project would not be possible without the support of the superheroes in my life. My mother, Patricia Cucura, taught me it is possible to be strong and kind simultaneously. She is always there to remind me I am smart and that the work I do matters. And that it is OK to topple the patriarchy, as needed.

To my late father, David Cucura, who taught me that if you look closely enough, there is always a trauma story to be found, and that true grace and courage are born in how you address that story. And that it is OK to have some fun along the way, figuring it out.

Most importantly, to my husband, William, my true north. You are my fixed point in a whirling world, and you always helped me stay on track through this process, whether through cooking, listening, reading or any of the other extra responsibilities you took on. You are my internal compass. My true north.

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When I was picking a committee, past students advised to "thoughtfully recruit your committee members." Well, I can say, that is one area where I did everything right. To my other committee members, John Conahan, PhD; and Marc Felizzi, PhD, you both provided poignant discussion points and always asked the tough questions. I will never be able to thank you for pushing me out of my comfort zone and teaching me to think like a researcher. All of your support certainly informed the direction of this project and many more to come.

And lastly, to my cohort members Lisa, Tami, Micah, and Krista. The conversations I had with these women inspired me to work harder and look deeper. I will forever be grateful for our friendship.

PREFACE

Like many social workers I have worked in various practice setting with many populations. No different from other young professionals, I struggled to find my niche, the area of practice in which I wanted to focus and grow. That changed in 2002, when I met Cindy and Joe Loftus-Vergari, who instilled in me a passion for working with survivors of trauma. Soon after, I began working in senior leadership positions at Family Services of Wyoming Valley (FSA). During my tenure I saw that FSA did everything right from management's perspective (diversifying, fundraising, planning, caring for the wellbeing of staff), and I learned much from my time there. As I moved to other organizations, I observed very different work cultures than that offered by FSA. Although there was always a great clinical staff, each of these organizations seemed to be functioning in a state of perpetual crisis. One agency had three CEOS at the same time, many had poor board engagement, no raises for staff, no fundraising, constant worry about making payroll or facing closures.

When I entered the Doctorate of Social Work Program, I began to contemplate the parallel process between survivors of trauma and organizations that are always in a state of constant crisis. I coined the term "Complex Organizational Trauma" (COT). I wanted to confirm the factors that constituted COT and develop a way to measure it, while staying close to my passion for trauma services.

Table of Contents

LIST of TABLES

CHAPTER 1: Introduction and Background

Introduction

Bessel van der Kolk (2003) defined trauma as an outcome of exposure to undeniably stressful events that overwhelms a person's ability to cope. Traumatic events overwhelm the ordinary systems of care that provide individuals a sense of power, connection, and worth (Herman, 1992; van der Kolk, 2003). Trauma may have numerous origins, including neglect, physical, emotional, and/or sexual abuse; living with a substance abuser, or a chronically mentally ill person; traumatic loss, terrorism, natural disasters and war; or witnessing violence (Brier & Elliot, 2003; Herman, 1992; Hodas, 2006; van der Kolk, 2003). Trauma occurring in childhood not only creates substantial, lasting psycho-social dysfunction, but also causes a higher probability of being revictimized (Bloom, 2010, Brier & Elliot, 2003; Duckworth & Follette, 2011).

Bloom (2013) asserted that our employment systems, and all organizations that are part of those systems, are alive, operating as interrelated living systems, and consequently subject to the stresses, tensions, and trauma of being alive. Subsequently, organizations need to understand the ways in which staff and managers are impacted by individual trauma and systematic stress related to the quality of their work environment, sudden policy change, or financial uncertainty (Bloom, 2013). For example, job performance can be affected by personal factors other than knowledge and skills. Anda et al (2004) analyzed the ways in which adverse childhood experiences (ACE) (e.g., childhood abuse and household dysfunction) not only demonstrate a strong correlation with many adult health problems, but also exert negative long-term effects on worker performance as an adult. Poor interpersonal skills, emotional distress, frequent somatic symptoms, and substance abuse can decrease worker performance and impose major economic costs (Anda, Fleisher, Felitti, Edwards, Whitfield, Dube, Williamson, 2004). Individual trauma is

not the only factor contributing to the phenomenon of Complex Organizational Trauma (COT). This study examines how the factors of individual trauma, quality of the work environment, sudden policy changes and financial insecurity contribute to an organizational climate that becomes organized around chronic recurrent stress and can destabilize the organizational mission (Bloom & Farragher, 2013). Over time, these behaviors develop into entire systems of new norms and procedures that become self-perpetrating and affect organizational climate (Bloom, 2010).

This study explores the variables that comprise COT across three levels: (1) individual trauma history of individual employees and supervisors, (2) quality of work environment, and (3) sudden policy change and financial uncertainty. The primary objective of this study is to develop a reliable assessment tool with which organizations can effectively measure COT.

Problem Statement

Complex Organizational Trauma (COT) is a prolonged state of organizational dysfunction and chaos marked by unproductive responses, and the inability to effectively manage agency operations (Kahn, 2003). COT is a reaction to repeated exposure to micro and macro organizational issues that erode an organization's ability to function in a healthy and productive manner. COT applies to all organizational settings, which include, but are not limited to, nonprofit human service agencies, public organizations, colleges and universities, medical facilities, and for-profit corporations. COT develops from a combination of elements, including, but not limited to, the loss of an essential funding source (e.g., grant, contract), significant policy changes, increasing managed care requirements, changing societal values, uncertainty regarding health-care reform, dysfunctional leadership, unhealthy employee relationships, experiencing natural or man-made disasters, and staff turnover (Bloom & Farragher, 2013; Vivian &

Hormann, 2012). These multiple traumas become embedded in organizational culture and many organizations fail to return to normal functioning, resulting in dysfunctional operating practices, reduced resources, and a lack of viability that trigger the development of COT (Kahn, 2008). The short-term consequences of COT include employees and supervisors experiencing burnout, services not being effectively provided, and clients receiving inadequate care. The long-term consequences of COT not only impact an organization's climate, structure, and operations, but also diminish the organization's capacity to respond to intrinsic, extrinsic, micro, and macro practice challenges, resulting in an unfulfilled mission and agency closure (Hormann & Vivian, 2005; Kahn, 2008). It is precisely because of these factors that organizations usually discover themselves frozen in routines that hinder their capacity to flourish (Kahn, 2003). The collective traumas of these experiences leave employees emotionally and cognitively unprepared, helpless, and vulnerable (Stein, 1991). Traumatized organizations may not be aware of how their trauma originated, much less understand how to prevent it from occurring again, consequently repeating their misguided actions (van der Kolk, 1998). For example, leaders and employees may cycle in and out of an organization, leaving structural patterns untouched and allowing dysfunctional norms to persist (Bloom & Farragher, 2013). Thereby, due to discontent, burnout, lack of engagement with clients and coworkers, and absenteeism, COT causes a general malaise within the organization (Bloom, 2010; Hormann & Vivian, 2005; Kahn, 2008). The concept of COT is important because it emphasizes both micro and macro triggers rather than looking solely at individuals and their behavior within organizations as the single cause of the phenomenon. Organizations can only thrive when the causes of frustrating patterns are recognized and resolved on a macro organizational level, as opposed to a micro individual level (Bloom, 2010; Hormann & Vivian, 2005; Kahn, 2008; van der Kolk, 1998).

Although the causes and consequences of individual trauma have been studied extensively, literature regarding COT has been limited. Accordingly, there may be less understanding about the influence of trauma specific events on organizations. Literature regarding organizational trauma originating from a single event developed from a handful of researchers, but is insufficient in explaining how multiple traumatic events, constant chaos, and external factors can affect organizations (Brown, 1997; Hormann & Vivian, 2005; Kahn, 2003; Pena, Van den Broucke, Sylin, Leysen, & de Soir 2017; Pross & Schweitzer, 2010). Although there is an abundance of psychometrically robust measures for assessment of trauma, the lack of research literature creates a secondary problem because there are no measures to assess COT (Briere, 2004; Duckworth & Follette, 2012; Feletti et al, 1998; Jenkins & Baird, 2002). Higher employee turnover, staff mental health issues, ineffective service provision, loss of productivity, and organizational dissolvement become the consequences of unaddressed COT (Anda, 2004; Bloom & Farragher, 2013; Kahn, 2003). Developing a psychometrically valid scale is the first step in assessing, intervening, and healing organizations. The objective of this dissertation is to develop a cumulative COT measurement tool which includes three levels: (1) individual staff, (2) work environment, and (3) policy and/or financial uncertainty.

Background

The impact individual trauma has on the family system is similar to the impact employee trauma has on an agency (Bloom & Farragher, 2010). The term "trauma-organized system" was first used to understand how maltreatment and neglect shapes the individual personality traits of abused children, and it helped recognize how the choice of romantic partners, parenting styles, household structure, and career choices are recreations of past childhood traumatic experiences (Bentovim, 1996; Herman, 1992; van der Kolk, 1994). Broadening the span of this theoretical framework from individuals and families, Bloom and Farragher (2010) applied the notion of

trauma-organized systems to organizations. Vivian and Hormann originated the term "organizational trauma," which describes how the results of a single devastating or traumatic event (e.g., an act of violence) can affect the mission-driven work of some organizations and contribute to employee and leadership turnover that negatively affects organizational climate (Vivian & Hormann, 2015). The term "organizational trauma" (OT) describes an acute reaction that fails to describe how organizations react to multiple, prolonged micro and macro traumas. COT differs from OT in that it describe severe, chronic reactions an organization has to multiple incidents of prolonged trauma.

Since Bloom (2010) argues that organizations are living systems, and, therefore, "alive," they are vulnerable to stress. Organizations are also vulnerable to chronic and recurring stress, similar to individuals who receive and deliver services (Bloom & Farragher, 2013). Additionally, individuals and organizations share symptoms associated with incapacitating trauma. These symptoms include a sense of loss over their environment, re-traumatizing triggers, guilt, shame, ineffective coping skills, the development of unhealthy relationships, and the inability to organize information (Bloom, 2010; Herman, 1992; Vivian & Hormann, 2015). Social defense mechanisms such as denial, coercion, avoidance of conflict, and scapegoating come to dominate the environment, often replacing actual service delivery or treatment (Bloom & Farragher, 2013; Vivian & Hormann, 2015). Consequently, when people in organizations remain stuck in these unproductive patterns, they are left feeling unprepared, powerless, and vulnerable (Kahn, 2003). The organization remains symptomatic and cannot evolve or achieve its mission. These unproductive patterns mature into an entire system of bad habits, and organizational behavior that was previously understood as pathological now appears normal (Bloom & Farragher, 2013).

Multiple studies provide insight into how additional workplace characteristics such as team dynamics, supervision, and organizational culture also contribute to COT by eroding standard processes and exaggerating insufficient procedures (Baillien, Neyens, DeWitt, & DeCuyper, 2009; Choi, 2011; Kahn, 2003; Shier, Nicolas, Graham, & Young, 2017; Stein, 1991). Vivian and Hormann (2015) found that the organizations with cultures that harbor an over-reliance on personal relationships also typically have inadequate policy and procedures, leading to a lack of accountability which hinders organizational functioning. Competition for preferred status with leaders thrives, steering some staff to feel entitled, while others describe feeling unsafe and untrusting of anyone within the organization (Vivian & Hormann, 2015). As the interplay of these relationships deteriorates, occurrences of workplace bullying are often reported (Baillien et al, 2009; Heugthen, 2010). Employees and supervisors working in organizations suffering from unhealthy cultures remain uncertain of themselves in their responsibilities, and program results stall (Hormann & Vivian, 2005).

Theoretical Framework

Trauma Theory

Trauma Theory is an area of research developed in the 1980s through interdisciplinary research between psychology, neurobiology, and human development (Herman, 1992; Radstone, Walker, & Shenker, 2013; van der Kolk, 1994). A guiding principle of this theory follows the premise that the cause of one's difficulty is the result of an injury, not of a personal or moral character deficiency (Foderaro, 2001). When this concept is applied to organizations, we come to understand that the organization is neither toxic nor terrible but injured. We begin asking "What happened to this organization?" as opposed to "What is wrong with this organization?" (Foderaro, 2001). Multiple injuries to an organization create a reverberating cycle of

dysfunctional operating practices, inadequate leadership, and ineffective service delivery (Bloom & Farragher, 2013). This shift in questions changes the way we assess and respond to an organization in crisis.

Individual Complex Trauma

Complex Trauma (CT) was first defined by Judith Herman in *Trauma and Recovery* (Herman, 1992). CT was a new diagnosis that addressed multiple origins of trauma and its impact on all facets of an individual's life. CT stems from exposure to severe stressors that (1) happen at vulnerable milestones during a survivor's life, (2) consist of maltreatment or desertion by caregivers or other adults, and (3) are repetitive or prolonged (Herman, 1992; Courtois & Ford, 2009). CT disrupts many aspects of individual development and the formation of one's identity (Courtois & Ford, 2009). To further understand the causes and consequences of COT, parallels can be drawn between Complex Trauma and a chronically traumatized organization. For example, when multiple traumas occur in childhood, normal development of body and brain is likely to be derailed (Bloom & Farragher, 2013). Likewise, CT within an organization disrupts the organization's growth and gets embedded in the organization's identity. Hence, the organization's principles and practices no longer fully represent for the experiences of their members or the organization's relationships with external entities. The organization's identity begins to unravel, and it is forced to consistently respond to chaos rather than its work of providing services (Hormann & Vivian, 2013).

Building on the original work of Herman (1992), Bloom (2010) and Vivian and Hormann (2012) it is determined that organizations plagued by repetitive or prolonged stress mimic CT symptoms in their daily interactions with their staff, clients, and environment. Exposed to recurring and enduring trauma, abuse, neglect or injustice, individuals and organizations become

organized around the traumatic experience. The organization then tends to become structured around the persistent and unyielding stresses that accompany service delivery (Bentovim, 1992; Bloom, 2010). The CT symptoms that individuals and organizations share are a sense of loss of control over their environment, re-traumatizing triggers, shame and guilt, and the inability to organize information (Bloom, 2010; Vivian & Hormann, 2015). The agency-destroying behavioral and emotional responses to symptoms include scapegoating, reenacting trauma by creating chaos, leadership and staff turnover, disempowerment of staff, rigid management styles, and detachment from the organizational mission (Bloom, 2010; Kahn, 2003; Vivian & Hormann, 2015).

General Systems Theory

One of the guiding principles of most organizational theories is that organizations are systems; they are a convergence of intertwining parts made up of programs, departments, clerical staff, consumers, leaders, direct practice staff, board members, and community stakeholders (Bertalanffy, 1974; Esaki, Benamati, Yanosy, Middleton, Hopson, Hummer, & Bloom, 2013). General Systems Theory argues that individuals are designed to function in unity, as an interconnected whole (Bertalanffy, 1974; Bronfenbrenner, 1989). A change in one part of the system produces a change in the entire system (Bertalanffy, 1974). Further, organizations are subsets of larger systems, so they are directly affected by events that occur in surrounding social, economic, or political systems (Esaki et al, 2013; Pross & Schweitzer, 2010).

The ability to think and act logically creates a vulnerability to biological, psychological, social, or moral stress (Bloom, 2010), and, like individuals, organizations' interagency and intra-agency communications and relationships can also be influenced by stress (Horwath & Tidbury, 2009). Illustratively, if an organization perceives its environment as hostile, it will begin to

protect itself by allowing boundaries to become less permeable to ensure less information penetrates the organization (Bronfenbrenner, 1989; Esaki et al, 2013). Closed boundaries shut out the external environment, creating dependence on internal relationships (Bloom, 2010; Bronfenbrenner, 1989; Inglehart, 2009). With little new information, the system becomes resistant to change, its self-image distorted, and the organization becomes incapable of assessing internal and external reality (Vivian & Hormann, 2012). Consequently, the organization does not have the ability to respond to micro and macro practice challenges. As communication networks break down, decision making becomes non-participatory, causing feedback loops to break. Feedback loops are essential for prompt and consistent error modification (Bloom, 2010; Bronfenbrenner, 1989). As a result of broken feedback loops, individuals stop communicating and exit the system. Excessive employee hiring and firing rates generate fewer qualified professionals entering high pressure and high stress occupational situations (Inglehart, 2009), and this increases the probable harm those situations may cause the employee and triggers individual and vicarious trauma (Horwath & Tilbury, 2009). Closed boundaries offer no new perspective or energy into the organizational process, despite the effects that changes within economic, cultural, and political systems have on our organizations (Esaki et al, 2013).

In summary, all these dynamics (e.g., closed boundaries, inability to organize information, centrality of relationships, stress and anxiety, constant chaos, and despair and loss of hope) operate in open and hidden ways and have a cumulative impact on an organization (Esaki et al, 2013; Vivian & Hormann, 2012). Families, organizations, and entire communities all exhibit parallel similarities (Bloom & Farragher, 2013). The intrusion of trauma into a client's life is an insidious progression that transforms their current reality into a recurrent sequence of reenactment. The impact of constant pressure on an organization is equally insidious (Bloom &

Farragher, 2013). To complicate this further, organizations are under many competing demands from a variety of outside factors. These factors from the larger environment include policy changes, shifting societal values, and fiscal concerns.

General Systems Theory and Trauma Theory allow us to expand the concept of COT beyond the effects of a single crisis, as well as allowing us to focus on macro circumstances that encircle political, cultural, and economic structures and the ecological milieu of communities and neighborhoods (Bronfenbrenner, 1989; Greene & Greene, 2009). All organizations are completely dependent on inflows of materials, information, and other resources from the macro environment. However, changes within economic, cultural, and political systems can trigger COT. For example, clients carry their personal narratives of traumatic encounters into caregiving agencies. Clients are then served by individual practitioners who have their own personal traumatic experiences, and who are profoundly entrenched in systems that are under substantial pressure from sudden policy changes, shifting society values, and financial concerns resulting from reduced funding, loss of grants, or diminished utilization rates (Bloom, 2010). This demonstrates how COT is linked to individual and external trauma experiences, environmental factors, and merging micro- and macro-level factors (Greene & Greene, 2009). For example, in April of 2018, U.S. President Donald Trump signed a bill permitting states to withhold federal monies from organizations such as Planned Parenthood that provide abortion services (Davis, 2017). Federal funds, however, do not pay for abortion services; they pay for family planning and medical services for many low-income families (Davis, 2017). Proposed, rumored, or actualized budget reductions have a significant impact by causing anxiety and stress for clients, staff, and managers working for or receiving services from such organizations. Since it is unclear how individual states will respond to this bill, employees report concerns over personal financial

affairs and maintaining their individual health insurance, leaving them unable to focus on patient care. These employees and supervisors may be furloughed or leave the organization. This scenario is very different from an employee being terminated for poor patient care. One employee termination would not have the same ripple effect on an organization the way a combination of financial, political, and policy changes, and the loss of furloughed employees would have. As previously noted, it is precisely these types of policy changes and financial concerns that cause a prolonged state of dysfunction and chaos to trigger COT (Kahn, 2003; Mosely, 2010; Pross &Schweitzer, 2010).

Complex Organizational Trauma (COT)

COT is a prolonged state of organizational dysfunction and chaos, characterized by ineffective responses and the inability to effectively manage agency operations. Whether COT is triggered by a series of unusual events, a combination of internal and external events, or is part of the developmental life cycle of an organization, it is important to scrutinize both the macro and micro dynamics that contribute to COT (Greene & Greene, 2009). Based on an exhaustive literature review, the micro and macro factors that trigger COT occur across three levels. As previously noted, those levels are (1) individual trauma history of individual employees and supervisors, (2) the quality of the work environment, and (3) sudden policy change and financial uncertainty (Bloom & Farragher, 2013; Brown, 1997; Herman, 1992; Hormann & Vivian, 2005; Kahn, 2003; Pena et al, 2017; Perlman & Caringi, 2009; Pross & Schweitzer, 2010). The accumulation of the three COT levels places a significant burden on both organizations and individuals within those organizations. Without a strong core identity, organizational self-efficacy, strong processes and structures, and positive connections to other peer organizations,

traumatized organizations are pulled backward into negative patterns and re-harmed, making a hopeful future out of reach (Vivian & Hormann, 2015).

COT Level One: Individual History of Workers and Supervisors

Clients and staff of an organization have complicated trauma histories which impact the functioning of the entire organization (Pearlman & Carinngi, 2009). Epidemiological studies indicate the majority of individual public and private service employees have had traumatic experiences that are similar to their clients' experiences (Bloom, 2010; Choi, 2011; Felitti, Anda, Nordenberg, Williamson, Spitz, Edwards, & Marks, 1998). Factors that influence someone to enter a clinical, educational, or medical profession are typically marked by higher rates of parental psychiatric hospitalization, parental alcoholism, and physical and sexual abuse (DiCaccavo, 2002; Pooler, Siebert, Faul, & Huber, 2008). Elevated levels of childhood trauma and parental alcoholism are found in the families of social workers, psychologists, and medical doctors more frequently than other professions (Elliot & Guy, 1993; Pooler et al., 2008). Family of origin issues trigger a parent-child role reversal and might produce an aspiration to enter a clinical occupation because it allows for an extension of their parentified role. Individuals are drawn to working in an environment typically characterized by chaos because (1) it mirrors the early dysfunctional family system, (2) they can recreate the chaotic childhood home in the workplace, and (3) they are able to exert excessive control over the organization and employees via micromanagement (DiCaccavo, 2002; O'Connor, 2001; Pooler et al., 2008). Staff and supervisors may not have sought treatment to deal with raw and unprocessed trauma. They may have just begun to confront their own history when they started working in the helping field; which can impact the culture of the organization. Moreover, staff trauma is not always recognized by the organization, and in fact may be perpetuated by the organization via

supervisors or managers with unprocessed or reactive trauma (Bloom, 2010; Felitti et al., 1998). The result of recreating trauma in the work environment is chaos and structural dysfunction such as failure to sustain boundaries with colleagues and clients, over-identification with clients, diffusion of roles, poor decision-making processes, and a lack of professional quality standards (Pross & Schweitzer, 2010).

COT Level One: Role of Vicarious Trauma on Workers and Supervisors

Adding to the personal past experiences of human service employees, pervasive Vicarious Trauma (VT) can promote the development of COT. The impact of trauma on individuals has been established, but the impact of employment-related trauma events on employees is underdeveloped in the research literature. As many as 24 million (8%) of United States residents will experience a traumatic experience during their lives, although the rate is estimated to be 2 to 6 times higher (15% to 50%) among human services personnel (Sansbury, Graves, & Scott, 2015). Clearly stated, individuals employed in human service positions are nearly six times more likely than the overall public to experience trauma throughout the course of completing their work (Sansbury et al., 2015). This statistic shows a significant number of individuals who experienced trauma work in these organizations (Bloom, 2010).

VT differs from a personal history of experiencing traumatic events, as it is usually understood to be a new traumatic experience that is transferred from the client to the helper, therapist, staff, or supervisor (Pross & Schweitzer, 2010). VT is defined as ‘‘the transformation that occurs within the therapist as a result of empathic engagement with clients’ trauma experiences and their sequelae’’ (Pearlman, 1995). Employees may no longer feel particularly safe with administration, clients, or co-workers. They may feel chronically angry and frustrated. Consequently, staff may vent their feelings to clients, project their feelings onto clients, bully

other workers, or become dissociated from their feelings altogether (Bloom, 2010). Key team members, coworkers, and management members who exit the work setting may take with them their corporate memory of what was effective and what was dysfunctional, thus collective learning becomes compromised, creating a sense of diminished memory within the organization (Bloom, 2010).

Hormann and Vivian (2013) note these are the same characteristics that permeate traumatized systems. They also note other features of traumatized organizations that include ongoing instability, inadequate emotional containment, shame, guilt, regularity of re-traumatizing triggers, deeply rooted lack of trust, anxiety-based communication, cycles of despair and hope, and hazardous organizational procedures (Hormann & Vivian, 2012). Impaired interactions may lead to ineffective or harmful practices that contribute to COT. For instance, managing the outcomes of an impaired employee takes priority over other critical matters within the institution, overburdening the fiscal health of an organization, and, most significantly, causing undue harm to clients (Pooler et al., 2008). VT occurs at the individual level yet triggers the development of COT. COT becomes exacerbated by environmental factors such as the culture and structure of an organization, the underlying team dynamics, and the affiliation between an institution and the external environment (Pross & Schweitzer, 2010).

COT Level 2: Quality of Work Environment

"Caregiving organizations are institutions whose members directly provide for people who seek healing, growth, ministry, education, healthcare or support of any kind" (Kahn, 2003, p.365). For the purpose of this study, the caregiving organizations we are examining are behavioral providers, secondary and post-secondary educational providers, and medical health providers. While many caregiving organizations might have dysfunctional patterns,

organizations that serve traumatized individuals, groups, or communities are particularly vulnerable to COT because the nature of their work produces traumatizing dynamics and circumstances for staff, supervisors, and the organizational culture (Kahn, 2003; Park & Moseley, 2017; Pross & Schweitzer, 2010). Not only does the nature of social work influence COT, but caregiving organizations are more likely to have incidents perpetrated by an individual or entity outside the organization, resulting in the greater likelihood that COT will develop (Hormann & Vivian, 2013). For example, a domestic violence incident, suicide cluster, intentional or unintentional fire, or natural disaster can exacerbate an unhealthy culture, or even cause the failure of an entire organization already weakened by previous traumatic incidents (Hormann & Vivian, 2013). Many of these caregiving organizations are marked by the need to deal with seemingly never-ending assignments, high caseloads, long hours, complex social problems, and the requirement to satisfy rigorous performance and accountability requirements. The workload in some of these settings often exceeds human and financial resources, creating a prolonged sense of crisis that quickly results in COT (Park & Moseley, 2017; Pross & Schweitzer, 2010). Although none of these patterns may trigger COT as such, their accumulative consequences can, over time, generate traumatization within organizations (Kahn, 2003).

Impaired systems may struggle to recognize that constant stress and chronic organizational trauma impairs employee performance and hinders any attempts to tackle the performance problems by using a system of rewards and punishments that do not focus on the primary factors that exacerbate COT (Bloom, 2010). The core issue of chronically stressed organization is how faulty and insufficient their problem-solving is under stress. These organizations usually revert to longstanding policies and procedures, even if these timeworn ways no longer work, rendering them unable to adapt well to such shifting conditions as policy

changes, financial difficulty, or additional regulatory requirements (Bloom, 2013). These dynamics become the framework for the organization's climate by eroding normal structures and exacerbating insufficient ones (Stein, 1991). These entities never fully heal (Kahn, 2008). Despite a good manager's best efforts, dysfunction is intensified and a flawed culture sustained. This is difficult to repair, and subsequently creates a cycle that leads to the development of COT in the organization.

COT Level 3: Policy and Financial Uncertainty

Organizations must navigate tumultuous environments and unremittingly deal with reliance on funders and donors while validating the worth of the services they offer and meeting the shifting demands of their clients, boards, and communities (Mosley, 2010). The political atmosphere has a significant impact on organizations, especially when that political setting results in fluctuations in funding, guidelines, or overall public welfare (Mosley, 2010; Smith, 2012). A number of researchers argue that negative modifications in the political environment encourage advocacy involvement and are a means by which institutions can increase influence and be reshaped in superior ways (Mosley, 2010; Jenkins, 1983). Thus, a negative policy environment may in fact function as motivation for healthy organizations to mobilize. However, organizations experiencing COT do not have the resources to unify or establish change. A negative change in policy and financial uncertainty leads to crisis and shapes a culture of chaos that may develop into COT (Bloom, 2013; Park & Moseley, 2017).

The economic downturn of 2008 created challenging internal and external funding environments for many organizations in the United States (Park & Moseley, 2017; Moseley, 2010). Declines in foundational assets and individual giving were accompanied by severe state-funding cutbacks in many regions that were still seeing an increased demand for services (Park

& Moseley, 2017). While many organizations dissolved, others began to grow by diversifying programs, engaging in advocacy, developing strong organizational leadership, and reaching out to private philanthropic groups and individual donors (Park & Moseley, 2017). It has been established that trauma within organizations may be cumulative and subtle and internal and external; organizations suffering from COT do not have the resources to diversify, engage in advocacy, or develop new relationships (Kahn, 2003). Although subtle schemes may erupt from a single traumatic incident, the incremental results can, over time, catalyze traumatization within the organization and its representative and trigger COT. Additionally, rumors of organizations closing, funding cuts, and policy changes can negatively impact workers. This phenomenon reinforces the idea that trauma changes the organization's climate, contributing to the development of COT (Vivian & Hormann, 2013).

After reviewing and defining COT, it appears that COT develops from the following combination of micro and macro dynamics: (1) individual staff, (2) quality of work environment, and (3) policy and/or financial contributions. After a review of the literature, there appeared to be no assessments available to measure COT, even though there is great need of a measurement tool to assess this phenomenon.

Literature Review: Measurements

As previously stated, the objective of this study is to develop a COT measurement tool for employees and managers to assess the micro and macro context of their organization that will include the following factors: (1) individual staff, (2) work environment, and (3) policy and/or financial uncertainty. Numerous instruments assess traumatic event exposure, posttraumatic reactions, VT, and organizational culture and health (Briere, 2004; Elhai, Gray, Kashdan, & Franklin, 2005; Jenkins & Baird, 2002). After reviewing 50 measurements, no measurement

tools were found to sufficiently assess all three levels of COT in one inclusive tool. Since there are no known COT scales, three categories of measurements were reviewed: (1) micro-individual trauma measures, (2) micro-individual vicarious trauma measures, and (3) macro level measures that focus on the work environment, organizational policy, and financial health. Each of these categories corresponds to one of the three levels of COT. Inclusion criteria for the scales consisted of (1) validated measures, (2) acceptable internal consistency (Cronbach's alpha), and (3) any scales that assessed at least one of the three levels of COT. Commercial measurement scales that required a fee for use were excluded from review as such costs are not typically affordable to an organization suffering from financial insecurity. After reviewing all related criteria, it was apparent that eight scales fit the criteria. Two measurement tools are micro-individual trauma measures, two measurement tools assess micro-individual VT, and four measurements are macro level measures that focus on work environment, organizational policy, and financial health. The strengths and limitations of each measure will be explored.

Micro-Individual Trauma Measurements

In this section, the Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5) and the Life Events Checklist for DSM-5 (LEC-5) are reviewed (The National Center for Post-Traumatic Stress). The literature indicates that both measures are well-validated and have been tested on large populations (Blevins, Weathers, Davis, Witte, & Domino, 2015; Elhai et al., 2005; Wilkins, Lang, & Norman, 2011). Both measures can be used individually, used in tandem, or as part of a clinical interview to diagnose Posttraumatic Stress Disorder (PTSD) or to determine the severity of PTSD symptoms. Both measurements have implications for application in a broad spectrum of research contexts and different populations.

The Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5) is one of the most frequently used self-report assessments of PTSD (Weathers, 2008). The National Center for PTSD developed the measure in 1990, and then later revised it in 2010. "The most noteworthy modifications to the PCL-5 included (1) adding three extra items to measure three additional DSM-IV PTSD symptoms (blame, recklessness, negative emotions, or self-destructive behavior), (2) rephrasing existing items to mirror changes to existing PTSD symptoms, and (3) changing the rating scale from 1–5 to 0–4 so that the lowest total is 0 rather than 1" (Blevins et al., 2015, p. 490; Weathers, 2008, p. 491). "The PCL-5 is a 20-item measurement tool that assesses PTSD symptoms. Respondents indicate how much they were bothered by each of the items in the past month on a 5-point Likert scale from 0 = not at all to 4 = extremely" (Weathers, 2008, p.492). Items' scores are added to produce a continuous measure of PTSD symptom severity. Examples of questions include Item 4: "Feeling very upset when something reminded you of the stressful experience?" and Item 15: "Irritable behavior, angry outbursts, or acting aggressively?" The PCL-5 has been shown to be psychometrically sound (Blevins et al., 2015). In addition, there is a strong convergent and discriminant validity for assessing PTSD symptoms, and the coefficient alpha for the PCL-5 PTSD total scale is considered excellent ($\alpha = .97$) (Blevins et al., 2015).

The PLC-5 has several advantages (Blevins et al., 2015). First, the measure takes only five to ten minutes to complete. Second, it allows a clinician to monitor client progress pre- and post-treatment. Lastly, items on the scale map are on the DSM-IV diagnostic criteria (Wilkins et al., 2011). The PCL-5 is a versatile measurement tool as it can be used to obtain a total severity score and allows for cluster symptom severity to be scored (McDevitt-Murphy, Monahan, & Williams, 2014). However, critics argue that this versatility can overestimate PTSD prevalence (Wilkins et al., 2011). In addition to its wide use as a clinical screening tool for PTSD, this

measure is also used to determine frequencies of PTSD in sizeable epidemiologic research studies (Schlenger, Caddell, Ebert, Jordan, Rourke, & Wilson, 2002), particularly among U.S. military personnel, combat veterans, mental health professionals, and the general public (Erbes, Westermeyer, Engdahl, & Johnson, 2007). The PCL-5 has excellent internal consistency (α=94), making it a reliable measure to assess the COT level of micro individual trauma (Blevins et al., 2015). The PCL-5 does not assess other levels of COT which include micro level VT, work environment concerns, and policy and financial uncertainty. Therefore, the development of a cumulative COT scale that addresses all three levels is needed.

The Life Events Checklist for DSM IV (LEC-5) is a self-report assessment intended to assess traumatic events over a participant's lifespan. The National Center for PTSD developed the measure in 1990, and later revised it in 2013. The original LEC was established simultaneously with the Clinician-Administered PTSD Scale for DSM-IV (CAPS) and was to be distributed in advance of the CAPS scale (Weathers, 2008). The original LEC revealed adequate psychometric properties as a separate measurement of traumatic exposure, specifically when assessing events that happened to a participant (Gray, Litz, Hsu, & Lombarardo, 2004). The LEC-5 is comprised of 17 items and assesses 16 types of event exposures that cause PTSD. The LEC-5 also includes one supplementary item measuring additional extraordinarily traumatic events not captured in the first 16 items. The LEC-5 is intended to gather information about potentially traumatic events suffered by an individual.

There is no prescribed scoring procedure or interpretation other than detecting whether a person has experienced one or more of the events included on the checklist. Respondents designate varying levels of exposure to each category of possible traumatic incident included on a 6-point Likert scale. Participants may assign several levels of exposure to the same trauma

type. Respondents check if one of the events on the measure happened to them, if they observed it, if they learned about it, if it occurred while they were working, if they're not sure, or if it does not apply. Examples of questions include Item 4: "Serious accident at work, home, or during a recreational activity?" Item 13: "Severe human suffering?" and Item 17: "Any other very stressful event or experience?" The measure does not produce a total or composite score. "Unlike the PCL-5, the LEC-5 is designed as a Potentially Traumatic Exposure (PTE) screen, and is not intended to ascertain conclusively that a person has suffered an event of sufficient severity to meet DSM-IV diagnostic criteria for traumatic exposure. It also does not measure symptom severity" (Weathers, 2008). "Since PTE contact is not a uni-dimensional concept, internal consistency is not an essential property of PTE measurement" (Weathers, 2008, p.493). "Thus, any analysis of internal consistency of such measures is inappropriate and possibly misrepresentative" (Gray et al., 2004; Netland, 2001, p. 333). Nonetheless, in the Korean version of the scale, the internal consistency was questionable (α=0.66) (Bea, Kim, Koh, Kim, & Park, 2008). The Cronbach alpha of (α=0.66) is below the generally accepted limit (0.70). It should be cautioned not to assume the same Cronbach alpha value to be consistent in the English version of the LEC-5, as events and language could have different meanings across cultures. An additional limitation of this scale is that it only provides a list of events that an individual is exposed to, nor does it offer a cumulative score or suggest that a certain number of events confirm a diagnosis of PTSD. The LEC-5 has a below-accepted limit of internal consistency, making this checklist a less reliable measure to assess the COT level of micro individual trauma than the PCL-5. Additionally, the LEC-5 does not assess the other levels of COT which include micro level VT, work environment concerns, and policy and financial uncertainty. Therefore, the development of a cumulative COT scale that addresses all three levels is needed. On the other hand, the LEC-5

offers an interesting checklist format that may be useful to replicate when developing a COT measurement tool.

Micro-Individual Vicarious Trauma Measures

"Secondary Trauma (ST), Vicarious Trauma (VT), and burnout are similar in that they result from contact with emotionally engaging clients via interpersonally challenging occupations and characterize the impairment that can impede the provision of services" (Jenkins & Baird, 2002, p.425). While the body of research related to VT is growing, a primary limitation of empirical studies notes that existing assessments are not sufficient to perceive variances among professionals with VT (Bride, Robinson, Yegidis, & Figley, 2004). "Generally, instruments used in research were intended to address symptomatology among trauma survivors who were directly exposed to trauma rather than experiencing it secondarily or vicariously" (DeVellis, 2017). The review of VT scales is important to the development of a COT measurement because ST, VT, and burnout are hypothesized as mediators of the correlation between inadequate job match and job execution, satisfaction, and retention (Maslach, 2001). Two assessment measures were chosen because they represent individual VT, a factor of COT. Those measures are: (1) The Professional Quality of Life R-IV (ProQOL R-IV) and (2) Secondary Traumatic Stress Scale (STSS). Both measures correspond with ST, VT, and burnout. The literature indicates that both measures are well-validated and have been tested on large populations (Blevins et al., 2015; Elhai et al., 2005; Wilkins et al., 2011). Both measures have implications for use in a variety of assessment contexts in diverse populations and disciplines, but do not address individual trauma. However, the ProQOL R-IV does have items that correspond to work environment conditions, in addition to measuring VT.

The Professional Quality of Life R-IV (ProQOL R-IV) assesses perceptions practitioners have about the value of their work (Stamm, 2009). The instrument is a fourth revision. The 30-item scale was created to encapsulate experiences of secondary traumatic stress, compassion satisfaction, and burnout among human service workers. Respondents indicate how frequently helping clients has affected them in a negative way in the past 30 days on a 5-point Likert scale ranging from 1=Never, 2=Rarely, 3=Sometimes, 4=Often, and 5=Very Often. Examples of items include Item 3: "I get satisfaction from being able to help others," Item 8: "I am not as productive at work because I am losing sleep over traumatic experiences of a person I help," and Item 26: "I feel bogged down by the system." Several items require reverse coding so that high scores on all items specify elevated compassion satisfaction, burnout, and compassion fatigue (Stamm, 2009).

This measurement tool has been used to establish the influence of combat deployment on compassion-fatigued military healthcare providers and to design a mindfulness-based stress-reduction program to educate healthcare practitioners to identify and mitigate burnout. Thus, this measurement has multiple diagnostic and clinical applications (Cragun, April, & Thaxton, 2016; Potter, Leake, Longsworth-Reed, Altschul, & Rienks, 2014). The Cronbach alpha for Compassion Satisfaction is considered good ($\alpha = .88$), the Cronbach alpha for Burnout is acceptable ($\alpha = .75$), and the Cronbach alpha for Compassion Fatigue ($\alpha = .81$) is also considered acceptable (Hemsworth, Bareghe, Aoun, Kazanjian, 2018; Potter, Leake, Longsworth-Reed, Altscheil, & Rinks, 2016). Limiting its use, this tool should only be used for screening and not diagnostic functions. For example, a respondent's score might be elevated on burnout due to his or her state of mind in a particular moment, but that might not necessarily reflect a continued problem with burnout (Potter et al., 2016; Stamm, 2009). Another limitation with this

measure is that it is difficult for resource-deprived employees and organizations to repeatedly administer a measurement to recognize trends. The proposed measurement tool of this dissertation will reflect persistent issues related to VT and will only need to be administered once. The ProQOL R-IV has an acceptable internal consistency, making it a reliable measure to assess the COT level of micro individual VT. The ProQOL R-IV does not assess the other levels of COT which include micro level individual trauma, work environment concerns, and policy and financial uncertainty. Therefore, the development of a cumulative COT scale that addresses all three levels is needed.

The Secondary Traumatic Stress Scale (STSS) is a self-report measure intended to evaluate the prevalence of secondary traumatic stress symptoms like avoidance, arousal, and intrusion. Participants are directed to review items and specify how regularly true the item was for them in the previous seven days. "The STSS utilizes a 5-choice, Likert-style scale ranging from 1= (never) to 5= (very often). The tool has 17 items and contains three factors: Avoidance (items 1, 5, 7, 9, 12, 14, and 17), Arousal (items 4, 8, 11, 15, and 16), and Intrusion (items 2, 3, 6, 10, and 13)" (Bride et al., 2004). Scores for all items and each of the three factors are obtained by aggregating the items apportioned to each (Bride et al., 2004). Examples of items include Item 3: "It seems as I was reliving the trauma(s) experienced by my client(s)," Item 9: "I was less active than usual," and Item 16: "I expect something bad to happen." The Cronbach alpha for the STSS and its factors were as follows: Full STSS is excellent ($\alpha = .93$), the Cronbach alpha for Intrusion is good ($\alpha = .80$), the Cronbach alpha for Avoidance is good ($\alpha = .87$), and the Cronbach alpha for Arousal is good ($\alpha = .83$).

This measurement tool has some limitations. For example, it has only been tested on licensed clinical social workers, so the measure cannot be generalized to other specialties. The

likelihood remains that inclusion of any other professional occupations may lead to dissimilar outcomes. Notwithstanding these limitations, the measure is a significant contribution toward the advancement of empirical knowledge. The STSS can support the appraisal of approaches planned to moderate secondary traumatic stress. It also allows for the evaluation of VT symptoms in social work practitioners (Bride, et al., 2004). The STSS has a good internal consistency, making this measurement a reliable measure to assess the COT level of micro individual VT. The STSS does not assess the other levels of COT which include micro level individual trauma, work environment concerns, and policy and financial uncertainty. Therefore, the development of a cumulative COT scale that addresses all three levels that can be generalized to other disciplines and addresses this gap is needed.

Macro-Organizational Level Measurement

It is generally recognized that organizations deliver services through multifaceted organizational structures. "The success of such structures is likely to be shaped by numerous macro-level dynamics that consist of funding requirements, federal and state guidelines, and cooperative arrangements among associated service systems" (Glisson, Green, Williams, 2012). "But these wider system-level factors neglect to describe why some clinical, financial, and educational organizations are more prosperous than other organizations that function in those same practice settings (Glisson et al, 2012). "Also, organizations are often called on to participate in adaptive organizational transformation in response to deviations in community circumstances, funding opportunities, changing societal norms, and the regulatory environment" (Bess, Perkins, & McCown, 2010, p. 36). Due to functioning in a state of constant chaos, an organization's actual practice setting may become a barrier to making adaptations. This section will examine macro level measurements that assess practice setting issues or policy and/or funding challenges. The four measures examined are: (1) Work Organization Assessment

Questionnaire (WOAQ), (2) Organizational Learning Capacity Scale (OLC), (3) The Organizational Readiness for Change (ORC), and (4) Comprehensive Organizational Health Assessment (COHA). These four measurements have been used across all enterprises in both for-profit and nonprofit sectors. They tend to address common issues like physical setting, organizational policy and practices, and financial health. It should be advised that assessing these common issues may not provide detailed assessment information regarding COT.

Work Organization Assessment Questionnaire (WOAQ) was initially developed by Griffith, Cox, Karanika, Khan, and Thomas (2006) at the University of Nottingham as an instrument to aid manufacturing organizations in recognizing the facets associated with the systematic administration of work, and to assess the influence of these dynamics on the health, success and wellness of employees. Later, the measurement was used to help employees cultivate professional development goals. The WOAQ contains 28 items that represent five characteristics of work: workload concerns, relationship quality with leadership staff, reward and appreciation, relationship quality with co-workers, and condition of the physical work setting (Griffith et al., 2006). "Using a 5-point Likert scale, respondents were asked to appraise each facet of their job in relation to how challenging or beneficial it had been in the past six months ranging from (5 = very good to 1 = major problem)" (Griffith et al., 2006, p. 670). Examples of items include Item 3: "It seems as I was reliving the trauma(s) experienced by my client(s)," Item 9: "I was less active than usual," and Item 16: "I expect something bad to happen." "Statistics from a separate reliability study were used to calculate Cronbach's alpha for the subsequent time samples (Time 1, Time 2, and Time 3)" (Griffith et al., 2006, p. 672). All factor were above (α=0.70), which is acceptable (Griffiths et al, 2006). The WAOQ has an acceptable internal consistency, making it a reliable measure to assess the COT levels of practice setting

concerns and policy and financial uncertainty. Although this scale has more of an emphasis on work environment, the WAOQ does not assess the other levels of COT which include micro levels of individual or VT.

Organizational Learning Capacity Scale (OLC) was developed specifically for use in nonprofit organizations. The 16-item measurement is modeled after Marsick and Watkins's Dimensions of Learning Organizations Questionnaire (DLOQ) (2003) which assesses financial performance in the nonprofit sector. OLC is divided into two sections. The first component concerns organizational systems alignment. Organizational systems alignment signifies current systems within the institution that warrant employees to react productively to challenges and opportunities in the organization's internal and external surroundings (Bess et al., 2010). The second component, culture of learning and development, denotes practices established, based on the ideals of staff development, scholarship, candid communication, and employee empowerment (Bess et al., 2010).

This measure utilizes a Likert-type scale (−3 to +3). The OLC's six dimensions are: (1) External alignment practices, (2) Internal alignment practices, (3) Practices that promote open communication, (4) Learning practices, (5) Staff empowerment practices, and (6) Staff development practices (Lehman, Wayne, Greener, & Flynn, 2012). Examples of items include: Item (4) "My organization builds alignment of visions across different levels and work groups," Item (9) "In my organization, people openly discuss mistakes to learn from them," and Item (16) "In my organization, the number of individuals learning new skills is greater than last year." The Cronbach alpha for the total scale is excellent (α =.93) and all factors have strong internal consistency, with alpha reliability coefficients between acceptable (α=.74) and good (α=.84) (Bess et al., 2010). The OLC can be used as a diagnostic instrument to appraise organizational

enthusiasm for engaging in organizational development, however, it has not been widely tested on a large sample size. The OLC has an excellent internal consistency, making this measurement a reliable measure to assess the COT levels of practice setting concerns and policy and financial uncertainty. Nonetheless, this scale places more emphasis on policy uncertainty, rather than practice setting concerns. OLC does not assess the other levels of COT which include micro levels of individual or VT.

The Organizational Readiness for Change (ORC) survey is used in community-based treatment settings to assess readiness for change before the administration of new clinical programs (Lehman et al, 2012). "The ORC includes four domains (21 scales, 125 items), including Needs/Pressures for Change (Program Needs, Staff Necessities, Educational Needs, and Pressures for Change), Institutional Resources (Office, Staff, MIS equipment, and Supervision), Staff Attributes (Job satisfaction, Influence, Growth, Efficacy, Adaptability), and Organizational Climate (Mission, Cohesion, Autonomy, Communication, Stress, and Openness to Change)" (Greener & Simpson, 2008, p. 99). "Response categories for the items scored are obtained by aggregating responses for a set of items (after reversing scores on reflected items by subtracting the item response from "6"), dividing the sum by number of items included (yielding an average), and multiplying by 10 to rescale final scores so they range from 10 to 50 (e.g., an average response of 2.6 becomes a score of "26")" (Lehman, Greener, Rowan-Szal, & Flynn, 2012, p. 102). Response categories for the items in the ORC were on a 5-point Likert scale ranging from (1= strongly disagree to 5 = strongly agree). Examples of items include: Item (1) "You have good program management at your program," Item (4) "Your facilities are adequate for conducting group counseling," and Item (9) "Other staff often ask for your opinion about counseling and treatment issues."

ORC data on the reliability supported internal consistency ranges from questionable to good (Cronbach α between .69, and .80). "To date, the measure has been administered in more than 650 organizations representing a variety of substance abuse, social, medical, and mental health settings in the United States in both mental health and correctional practice environments" (Lehman et al., 2012). The scale has been tested in an assortment of practice settings and HSO environments. The ORC appears to be a reliable diagnostic tool to detect employee perceptions that can influence each element of the innovation process (Lehman et al., 2012). The limitations of the scale include that it is time consuming to complete and has a rather complicated scoring structure. The internal consistency of the ORC varies from questionable to good, making this measurement a reliable measure to assess the COT levels of work environment concerns and policy and financial uncertainty. The ORC does not assess the other levels of COT which include micro levels of individual trauma or VT. Therefore, the development of a cumulative COT scale that address all three levels, is not complicated to score, and has a good internal consistency is needed.

The Comprehensive Organizational Health Assessment (COHA) was developed by the University of Denver. It is a mixed-methods comprehensive assessment that can be used as a diagnostic tool to help agencies identify workforce strengths and gaps that impact the overall functioning of the organization, including workforce recruitment and retention, service delivery, client outcomes, and the ability of an agency to implement change (Middleton & Potter, 2015). The COHA can also be used as a pre-post assessment to measure changes in organization health that result from targeted interventions. The survey includes approximately 300 items across 24 scales. It takes 35-45 minutes to complete the measure. Data on its reliability supported internal consistency ranges from good to excellent (Cronbach α between .81, and .94) (Potter, Comstock,

Brittain, & Hanna, 2016). Sample items include, “How often do you think: “I can’t take it anymore?” “Do you feel that every working hour is tiring for you?” and “Does it drain your energy to work with clients?” Although this measurement is available in the public domain and there is no cost associated with its use, there are several limitations. First, a 300-item assessment and recommended interview may be too time-consuming for resource-depleted organizations. Second, without having someone trained in the COHA interview process, assessment results could be skewed. Third, the measure is no longer offered in a paper and pencil format and requires digital software to administer the assessment. Resource-depleted organizations may not have access to software or have the needed technical resources to complete the COHA. The internal consistency of the COHA varies from questionable to good, making this measurement a reliable measure to assess the COT levels of practice setting concerns and policy and financial uncertainty. The COHA does not assess the other levels of COT which include micro levels of individual trauma or VT. Therefore, the development of a cumulative COT scale that addresses all three levels, is not complicated to score, and is available in a non-electronic format is needed.

The overview of the measurement tools examined above shows that there are many psychometrically sound measurements that measure one level of COT. However, there is a lack of academic or commercial instruments that measure all levels of COT. A phenomenon like COT is challenging to measure because clients, employees, leadership personnel, and community members with differing claims on the organization’s resources measure the organization’s outcomes, goals, and overall authenticity using diverse evaluation criteria (Miller-Millesen, 2003). Based on the literature, there is need for a brief, easily accessible scale built around the three levels of COT that addresses the needs of multiple stakeholders. The objective of this study is to develop a cumulative COT measurement tool which includes those three levels: (1)

individual staff, (2) work environment, and (3) policy and/or financial uncertainty. A summary of the measurement tools mentioned is included in Table 1, Appendix A.

CHAPTER 2: Methods

Research Questions

The aim of the dissertation is to develop and investigate the psychometric properties of a COT measure. The two research questions answered are: (1) To what extent is the COT measure internally consistent? and (2) To what extent do the individual items on the COT measurement accurately represent the three factors of COT?

Methods

Development of the Scale

Eight specific steps were followed to develop and validate the Complex Organizational Trauma (COT) measurement tool. The process was adopted from DeVellis (2017) *Scale Development Theory and Applications,* which utilizes the latent variable framework. The eight step process includes: (1) determine the variable to be measured, (2) create a pool of items, (3) determine the measurement format, (4) have the item pool examined by experts, and then by non-expert employees (lay people), (5) include other validated items, (6) distribute the items to a developmental sample, (7) validate the items, (8) adjust the scale length, and generate the final measurement.

Step One: Determine the Construct to be Measured

An exhaustive literature review identified the need for a COT measurement tool that contains a combination of micro and macro dynamics: (1) individual staff trauma, (2) quality of the work environment, and (3) policy and/or financial uncertainty. Despite the identification of these three factors, no measurement tool was located to assess COT, to date. The measurement tools examined in the literature review reveal there are many psychometrically sound measurements for only one level of COT, however, there are no current measures that assess all levels of COT, the construct that was measured.

Step Two: Generate an Item Pool

An item pool was generated to reflect COT (latent variable). After the items were proposed, the lengthy items were shortened and revised to reflect a sixth-grade reading level. Any item that had two or more concepts, also referred to as double-barreled items, were converted into separate items. The original pool generated fifty-four items over three levels of COT and had 16 items for level 1: individual factors, 26 items for level 2: quality of work environment, 12 items for level 3: policy and financial uncertainty. The original item pool is included in Appendix B.

Step Three: Determine the Format for Measurement:

A 6-point Likert response format was chosen because it allows for sufficient variability in answers and allows for an opportunity to collapse categories, if needed, for a higher quality data analysis. Using a 4-point scale will limit variability. Items were created as a declarative statement followed by a response option that indicates varying degrees of agreement (DeVellis, 2017). The six response options are: Not True (0), Mostly Not True (1), Slightly Not True (2), Slightly True (3), Mostly True (4), and True (5). An even number of response categories was chosen because having a middle response option such as "Neither Disagree or Agree," "Neutral," or "Undecided" lowers the quality of the data (Germain, 2006; Losby, & Wetmore, 2012). A middle response option may be confusing to respondents and may encourage impulsive and imprecise responses. Participants will often select a middle response when given the opportunity, which leads to limited variability, measurement error, and lower quality data (DeVellis, 2017). Eliminating the mid-point response forces respondents to be more thoughtful in their answers and produces higher quality data (Losby, & Wetmore, 2012).

Step Four: Have the Initial Item Pool Reviewed by Experts & Pilot Test

After the item pool was formulated, a group of six experts was selected to review the item pool to affirm, revise, or delete items that did not represent COT well (DeVellis, 2017; Germain, 2006). The aim of this step was to improve content validity. The experts were asked to review the measure using a scale matrix: (1) rate how relevant each item is to the latent variable by indicating strong, moderate, or low relevance, (2) provide general feedback on each item, (3) identify confusing items and suggest alternative language, and (4) identify ways that the latent variable was not represented (DeVellis, 2017). The list of experts, areas of expertise and qualifications are can be found in Appendix C. The scale review matrix form can be found in Appendix H. After the expert review was completed, the scale was again revised.

Three experts participated in the item pool review and returned their scale matrix: Duane Hagelgans, PhD; Linda Van Meter, PhD, and Michael Zimmerman, MA. Several minor suggestions were made, which included changes to the language used to create the item pool. For example, Mr. Zimmerman suggested changing the item "This organization provides services to individuals who have: - Mental health issues" to "This organization provides services to individuals who have: - Chronic mental health issues." Dr. Van Meter suggested changing "In my entire life, I lived with someone who committed suicide" to "In my entire life, I lived with someone who attempted suicide." Both suggestions were accepted. All reviewers rated the item pool as having a strong relevance to the latent variable. Their findings suggest the scale has strong content validity. After the expert review, the measurement tool was revised again.

Once the expert review was complete and the Institutional Review Board (IRB) protocol approved, the COT measure was administered to 10 employed individuals that were not experts on the subject and were considered "lay" people. This review also served as a pilot study

(Germain, 2006; Hertzog, 2008; Johnson & Brooks, 2009). These individuals were comprised of public school teachers, direct service workers, social workers, and support staff. The purpose of this step was to further assess items that might be worded in a confusing fashion or for statements that might display double meanings. The non-expert individuals were asked to (1) rate the clarity of each item (strong, moderate, or low) and (2) identify confusing items and suggest alternative language. After receiving feedback from the non-expert individuals, items were either accepted, revised, or eliminated. The pilot group was also asked to complete the scale using the Qualtrics Research Platform, the purpose of which was to (1) ensure that the platform functioned properly, and (2) gather feedback regarding the ease of use of the software. All ten individuals completed the COT measurement. Five offered feedback that included "This sounds like my job," "It was easy to take on my phone," "No confusing items," and "language was good." One person stated they "did not like the inclusion of validated item because it was confusing." The inclusion of validated items is discussed in the next section, and is not part of the final scale.

Step Five: Inclusion of Validated Items

The proposed measurement tool should be correlated to other related scales to determine construct validity (DeVellis, 2017). The COT measurement was correlated to a brief vicarious trauma scale and an eight item PTSD scale. The inclusion of these items evaluated the relationship between COT and other similar variables. The expectation was that the COT measurement tool would have some correlation to other related measures, but since it is a separate and new construct, it should not be highly correlated with other scales. The scale and items that were included are discussed below.

Step Six: Administer Item to a Sample

DeVellis (2017) recommends that the scale be administered to ten participants per item for a quality factor analysis. A recent systematic review of validation articles revealed the majority did not meet this standard (Morgado, Meireles, Neves, Amaral, Frerreira, 2017; Nagy, Blair, Lohrke, 2012). One study showed that as few as three participants per item did not lower the quality of the factor analysis (Nagy et al, 2012). The goal of an item-to-response ratio close to 1:10 eliminates subject variance and unstable covariation among items (DeVellis, 2017). For the purpose of this study, the recruitment goal was a minimum of three to a maximum of ten participants per item for the factor analysis to be considered valid. For further discussion on sample size, please refer to the Sampling Section in Chapter 3.

Step Seven: Evaluate the Items and Analysis

Cronbach's Alpha

The first research question was concerned with the extent to which the COT measure was internally consistent. According to DeVellis (2017), internal consistency is an indicator of how well the individual scale items are consistent with all other scale items. Coefficient alpha, or Cronbach's alpha, is used to assess internal consistency (Bride et al, 2004). Cronbach's alpha was completed to assess the internal consistency of the entire scale and each of the three factors. In this step, item-score correlation and item mean were examined (DeVellis, 2017). IBM SPSS 25 was used to calculate Cronbach's alpha in this current study. Cronbach's alpha, α, is the most common measure of scale reliability (Field, 2013). Cronbach's alpha of 0.70 is acceptable reliability, 0.80 is good reliability, and .90 is excellent reliability (Field, 2013).

Exploratory Factor Analysis (EFA)

The second research question was concerned with the extent to which the individual items on the COT measurement accurately represent the three factors of COT: individual staff, setting, and policy and/or financial contributions. After the participants completed the scale, the factor performance of individual items was analyzed using Exploratory Factor Analysis (EFA). IBM SPSS 25 was used to analyze EFA and determine factor loadings for each item (Field, 2013). EFA was used to explore the underlying factors of the COT measure, investigating the theoretical constructs, or factors, that might be represented by a set of items. IBM SPSS 25 was used to establish construct validity and to interpret results.

Bivariate Correlation

As mentioned above, the inclusion of additional scale items evaluated the relationship between COT and other similar variables. A bivariate correlation analysis was used to correlate the total scores of the COT scale with the total scores of the two additional scales. The expectation was that the COT measurement tool would have some correlation to other related latent variables, but since COT is a separate and new construct, it should not be highly correlated with other scales. The additional scales are discussed below.

Step Eight: Optimize Scale Length and Construct the Final Measure

The scale was revised again after interpreting the EFA and Cronbach alpha scores. According to DeVellis (2017), the principal researcher should have a pool of items that demonstrate acceptable internal consistency ($\alpha > 70$). Poor items were dropped, resulting in the final item measurement tool. The final scale is located in Appendix J.

Measures

The Vicarious Trauma Scale (VTS) was developed by Vrklevski and Franklin (2008). The measurement consists of 7 items and takes approximately five to ten minutes to complete. Using a 7-point Likert scale, participants are asked how much they agree with each statement; 1= strongly disagree, 2= disagree, 3= slightly disagree, 4= neither agree or disagree, 5= slightly agree, 6= agree, and 7= strongly agree. Examples of items include Item 2: "My job involves exposure to traumatized or distressed clients," Item 4: "I find it difficult to deal with the content of my work," and Item 8: "It is hard to stay positive and optimistic given some of the things I encounter in my work." The summed score ranges from 7 to 49, with the higher scores indicating a greater degree of trauma symptoms. The scale had good internal consistency (α =0.88).

The second measure, the Post Trauma Stress Disorder- Eight (PTSD-8) was initially developed by Hansen, Anderson, Armour, Elkit, Palic, and Mackrill (2010) as a short screening instrument for determining a diagnosis of posttraumatic stress disorder (PTSD). It is estimated the measurement takes between five and ten minutes to complete. The PTSD-8 is adopted from the first sixteen items of the Harvard Trauma Questionnaire Part IV (HTQ). Using a 4-point Likert scale, participants are asked how much each symptom bothered them in the last month: 1= not at all, 2= a little, 3= quite a bit, and 4= all the time. Examples of items include Item 1: "Recurrent thoughts of memories of the event," Item 4: "Sudden emotional or physical reactions when reminded of the event," and Item 8: "Feeling on guard." The summed score ranges from 8 to 32, with higher scores indicating a greater degree of PTSD symptoms. The PTSD scale was widely tested on three different samples that included sexual assault survivors, automobile accident survivors, and disaster victims. The scale had good internal consistency (α =0.84) (Hanson et al, 2010).

Sampling

The sampling strategy was purposeful snowball sampling as specific behavioral health providers and secondary and post-secondary educational organizations were sampled to participate in the survey. For the purpose of this study, participants employed by behavioral health providers, drug and alcohol treatment providers, and secondary and post-secondary educational providers were included. Only participants aged 18 years and older were invited to participate in the study.

Recruitment

Participants were recruited from nonprofit, for-profit, public, and educational institutions. The researcher recruited enough participants for a ratio of three subjects to one scale item (DeVellis, 2017). Organizations where staff may be at risk for COT were selected, and snowball sampling was also utilized. Organizations that employed social workers were selected, however participation was not limited to social workers. Participants were only included in this study if they were employed and aged 18 or above. Unemployed individuals or those under the age of 18 were excluded from the study.

Before conducting the study, written approval was obtained from participating organizations. PA Treatment and Healing, Hoffman Homes, Wyoming Valley Alcohol and Drug Services, and Lakeland School District were purposely recruited, and agreed to participate in the study. Respondents from these organizations were encouraged to invite colleagues that fit the study parameters to participate in the research, as well. Letters of support from the participating organizations are included in Appendix G.

Survey distribution and data collection was completed utilizing the Qualtrics Research Platform. An email invitation with a reusable survey link was sent to the administrator of each

participating organization. The administrator then distributed the invitation with reusable link to their employees via email. The email invitation asked participants to forward the survey to other potential participants that might have interest in completing the survey. The anonymize response option was selected, ensuring IP addresses were not collected by Qualtrics, and therefore not viewed by the researcher. Some participants voluntarily submitted their email address for the opportunity to be randomly selected to receive a gift card.

Demographics

Having determined they were 18 years or older and employed, participants were asked to provide demographic information and data concerning their current occupational setting and position in their organization. Anyone under 18 or not employed was excluded from the study. Demographic information included (1) gender, (2) age, (3) ethnicity/race, and (4) highest level of education. The participants were asked the following questions regarding their current employment history: (1) Do you work for a nonprofit, for-profit, public, or governmental organization? and (2) Are you employed as support staff, direct service staff, clinician, supervisor, or senior management?

Human Subject Protections

Institutional Review Board (IRB)

This dissertation proposal (IRB # 443414096) was submitted to the Millersville University Institutional Review Board (IRB) for an expedited review study since the measurement asks sensitive questions concerning individual and vicarious trauma. The informed consent and debriefing page described available resources for participants who felt distress while answering these questions. Resources included a 24-hour phone crisis and referral line and applicable employee assistance programs. Participants had to consent to participation before

completing the survey. Participation in the research study was voluntary, and subjects maintained the right to decline participation or discontinue participation at any time without penalty. The potential risks associated with the study were minimal and included possible psychological distress associated with the stress of completing the measurement.

Informed Consent

Informed Consent documents were completed and collected through the Qualtrics research platform. The consent form explained that participation was voluntary, and explicitly stated that the assessment tool was used in accordance with practice standards and their respective agency's policies. It also outlined that there were no employment consequences for not completing the survey or for any responses provided. Participant results would not be distributed to employers. It outlined the purpose of the study, what was required by the participant, benefits and risks, and information regarding confidentiality. The informed consent listed contact information for the principle investigator, doctoral dissertation adviser, and Director of Sponsored Programs and Research Administration. The consent form also listed contact information for Help Line of Northeast PA, free 24-hour counseling, crisis, and referral services available to all residents in Pennsylvania. Any participant experiencing distress was directed to phone Help Line for immediate support or a counseling referral. Information on Help Line and their services is included in Appendix F. A copy of the informed consent form (Appendix D), debriefing statement (Appendix E), and letters of approval (Appendix G) are also included.

Incentives, Anonymity, and Confidentiality

Participation was voluntary and anonymous, however, participants had the option of being entered in a drawing to receive one of three $100 gift cards. If participants chose to be

entered in the drawing, they submitted their email address at the end of the survey. The emails were separated from their answers to the survey, and their answers remained confidential. Only the principle investigator saw the participant email. Data was collected and stored using the Qualtrics Research Core platform. All data is password protected and remains strictly confidential, not to be distributed to any other party.

CHAPTER 3: Results

Analysis

The aim of the dissertation was to develop and investigate the psychometric properties of a Complex Organizational Trauma (COT) measure. The final measure was entitled the Complex Organization Trauma 21 Item Scale (COT-21). The following steps were used to analyze the COT-21: (1) Descriptive statistics, (2) Kaiser-Meyer Olkin Measure (KMO), (3) the Principal Component Analysis (PCA) Exploratory Factor Analysis (EFA) with varimax rotation, (4) reliability statistics (Cronbach's Alpha), and (5) bivariate correlation. Utilizing the outlined steps, these two research questions were answered: (1) To what extent is the COT measure internally consistent? and (2) To what extent do the individual items on the COT measurement accurately represent the three factors of COT?

Participant Characteristics

Four organizations participated in this study. They were PA Treatment and Healing, Hoffman Homes, Wyoming Valley Alcohol and Drug Services, and Lakeland School District. According to GuideStar (2019), PA Treatment and Healing had 178 total employees, Hoffman Homes had 335 employees, Wyoming Valley Alcohol and Drug Services had 43 employees, and Lakeland School District had 114 employees (www.guidestar.org). However, this does not account for the total respondent population because snowball sampling was utilized. Employee gender and race demographics could not be obtained.

One hundred sixty-nine surveys were returned. In the first step of the analysis process descriptive statistics were used to analyze the demographic information of the respondents. As shown in table 1, the analysis revealed that a majority of the respondents were White (n =151, 89.3%), followed by African American (n =9, 5.3%), Hispanic (n =5, 3.0%), Native American (n

=1, .6%), and Asian (*n* =1, .6%). The majority of respondents identified as female (*n* =136, 80.5%), while (*n* =31, 18.3%) identified as male.

Table 1.
Race and Gender

Race	Percent	Gender	Percent
White	89.3	Male	18.3
African-American	5.3	Female	80.5
Hispanic	3.0		
Native American	.6		
Asian	.6		

Respondents were aged 21 to 67 years old. As displayed in table 2, the majority of respondents reported they held a master's degree (45.0%), followed by a bachelor's degree (34.0%), high school degree or less (10.1%), associate degree (7.1%), and doctorate degree (2.4%). The majority of respondents reported they are employed by a public or government organization (40.8%), followed by a private nonprofit (37.3%), for-profit (12.4%), and (7.7%) reported being employed in another type of organization that was not listed. Work environment for the participants' occupations were as follows: educator (22.5%), direct services staff (17.2%), support staff (14.2%), clinician (13.6%), senior leadership professional (13.0%), supervisor (9.5%), and (8.3%) reported being employed in another type of position that was not listed. Two respondents did not report any demographic information.

Table 2.
Education and Employer

Education	Percent	Employer	Percent
Master's degree	45.	Government	40.8
Bachelor's degree	34.	Private nonprofit	37.3
High School degree	10.1	For-profit	12.4
Associates degree	7.1	Other	7.7
Doctorate degree	2.4		

Exploratory Factor Analysis

Exploratory Factor Analysis (EFA) is a Principle Component Analysis method (PCA) that is used in measurement construction to determine which scale items are most strongly correlated with each other, and groups these items together into factors (Field, 2018; Urdan, 2017). The expectation is that scale items collect into separate constructs that are able to describe the most variance possible in all the items that are analyzed (Urdan, 2017). EFA was used to evaluate construct validity, or to assess if any of the items in the original pool accurately represented the latent variable, in this case COT.

KMO and Bartlett's Test

The reliability of a factor analysis depends on sample size (Field, 2018). Kaiser-Meyer Olkin Measure (KMO) is a measure of sampling adequacy. The KMO statistic varies between 0 to 1, and a value close to 1 indicates a factor analysis yields reliable factors (Field, 2018). KMO guidelines are as follows: marvelous, over .90; meritorious, between .80 to .89; middling, between .70 to .79; mediocre, .60 to .69; miserable, .50 to .59; and values below .50 are unacceptable (Field, 2018). In the second step of this analysis, the KMO measure verified sampling adequacy for this scale analysis. As shown in table 3, the KMO statistic value is .834, which falls into the meritorious range, meaning the sample size was sufficient to complete the EFA. The Bartlett's Test of Sphericity relates to the significance of the study and reveals the validity and suitability of the responses collected to the problem being addressed through the study (Price, 2017; Urdan, 2017). For Factor Analysis to be recommended suitable, the Bartlett's Test of Sphericity must be less than 0.05. Bartlett's Test value for this study was .000, determining that EFA is an appropriate PCA method to utilize.

Table 3.
KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.834
Bartlett's Test of Sphericity	Approx. Chi-Square	2215.188
	Df	210
	Sig.	.000

Factor analysis is a reduction technique that has an essential role in building construct validity by identifying the minimum number of factors required to account for correlations among items that make up a measurement (Price, 2017). In this dissertation factor analysis was used to identify a set of factors from the initial pool of items that were designed to measure attributes of COT. In the third step, the original fifty-four scale items were evaluated by EFA using SPSS version 25. The EFA identified which items were most strongly correlated with each other and grouped them together, then proceeded to identify the next strongest batch of correlated items, and so on (Price, 2017; Urdan, 2017). EFA then placed the items together to form factors. This process is called extraction, and EFA continues this process until there are no more substantial factors to extract (Urdan, 2017). Each of the fifty-four items had a factor loading, the stronger the item loaded on to a factor the more an item defined that factor (Afulani, Diamond-Smith, Phillips, Singhal, & Sudhinaraset, 2018).

Kaiser's criterion recommends retaining factors with an eigenvalue (the quantity of information gathered by a factor) greater than 1.0 (Field, 2017). The initial factor analysis utilizing principle components extraction and orthogonal factor rotation (varimax) produced 14 factors greater than 1.0. In orthogonal factor rotation, the factor analysis rotates the factors to maximize the distinction between them (Urdan, 2017). The rotated factor matrix is a matrix for factor loading for each variable (item). Loadings were suppressed that were less than .39.

Additionally, a Scree Plot was utilized to depict the factors visually with their eigenvalues and to confirm the factors that should be extracted.

In step four, a reliability analysis was performed to examine the internal consistency of the 14 factors produced by the factor analysis. The reliability analysis suggested the alpha would improve if items were removed. The use of the reliability analysis is discussed at length in the next section. Based on the results of this analysis, 40 items were retained. Step three was repeated and a subsequent factor analyses and reliability analysis were performed, eliminating weak factor loadings that were less than .39, producing six factors. The reliability analysis revealed 29 items, however; the Cronbach's Alpha if Item Deleted suggested eliminating 8 items because they were poor.

A final EFA was conducted on 21 items from the survey, placing the items into four factors or subscales. The content of the questions was examined to identify common themes that loaded highly on to the same factors. This examination of themes identified the constructs. The four factors are as follows: Client history, quality of work environment, staff perception, and staff trauma history. The factors are displayed in Table 4.

Table 4.
Item/Factor

ITEM	FACTOR
1. This organization provides services to individuals who have: - Experienced violence	Factor 1 Clients
2. This organization provides services to individuals who have: - Serious problems	Factor 1 Clients
3. This organization provides services to individuals who have: - Experienced sexual violence	Factor 1 Clients
4. This organization provides services to individuals who have: Been traumatized by others	Factor 1 Clients
5. This organization provides services to individuals who have: - Mental health issues	Factor 1 Clients
6. This organization provides services to individuals who have: - Addictions	Factor 1 Clients
7. Staff in this organization are: - Have too many work tasks	Factor 2 Work environment
8. Staff in this organization are: - Have little time to get their work done	Factor 2 Work environment
9. At this job: - This job is emotional draining	Factor 2 Work environment
10. In this organization: - Policies change frequently	Factor 2 Work environment
11. Staff in this organization are: - Work many extra hours beyond the normal schedule	Factor 2 Work environment
12. At this job: - This job is affecting my health negatively	Factor 2 Work environment
13. Staff in this organization are: - Feel bullied by supervisors	Factor 3 Staff Perception
14. Staff in this organization are: - Feel bullied by managers	Factor 3 Staff Perception
15. Staff in this organization are: - Feel bullied by staff	Factor 3 Staff Perception
16. Staff in this organization are: - Care less about the clients than when they started	Factor 3 Staff Perception
17. In my entire life, I: - Lived with someone that was a problem drinker or used drugs	Factor 4 Trauma History
18. In my entire life, I: - Lived with someone who was mentally ill	Factor 4 Trauma History
19. In my entire life, I: - Lived with someone who attempted suicide	Factor 4 Trauma History
20. In my entire life, I: - Experienced a sexual assault	Factor 4 Trauma History
21. In my entire life, I: - Witnessed someone being hurt	Factor 4

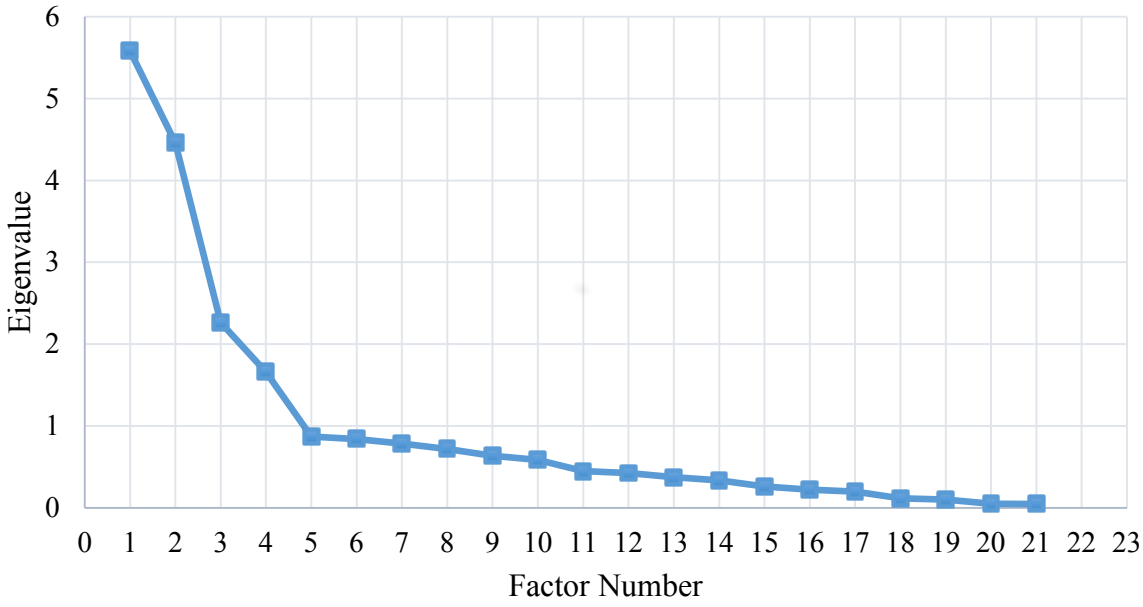
Table 5 displays the Total Variance Explained for the final EFA that was completed on the final version of the scale. Table 2 shows the Initial Eigenvalues above 1, confirming four factors. Factor one (client history) explained 26.57% of the variance in items, this factor displays strong factor loading for the six items that loaded on this factor. The second factor (quality of the work environment) explained 21.23% of the variance in items, and had strong loadings for six items. The third factor (staff perception) explained 10.77% of the total variance in items, and had loadings for four items. The fourth and last factor (staff trauma history), explained 7.92% of the variance in items, and had loadings for five items.

Table 5.
Factor Analysis Eigenvalues and Total Variance Explained in 4-Factors

Factor	Eigenvalue	% of variance	Cumulative % of variance	Cumulative % of variance after extraction
1	5.581	26.575	26.575	25.572
2	4.460	21.239	47.814	45.110
3	2.263	10.776	58.591	53.741
4	1.663	7.921	66.511	59.802

Table 6 visually depicts the final Scree Plot displaying the four factors and the eigenvalues above 1, confirming that the four factors should be retained.

Table 6. *Scree Plot*



To visually display where the items (variables) load onto each factor, a Component Matrix was completed. To aid in the interpretation of these four factors, the rotation technique of Varimax (orthogonal) was used to maximize the distinction between factors (Urdan, 2017). As displayed on Table 4, items are loaded with each factor. It should be noted that the item "This job is affecting my health negatively" loads onto factor two (.529) and onto factor three (.303). In this instance, Field (2017) recommends considering this factor part of factor two only because the loading is higher there. The rotation model was also used to name each of the four factors, or reveal that the survey is comprised of four subscales: Client history, quality of work environment, staff perception, and staff trauma history. Table 7 displays the rotation model, titled Component Matrix.

Table 7.
Component Matrix

	Factor			
	1	2	3	4
This organization provides services to individuals who have: - Experienced violence	.938			
This organization provides services to individuals who have: - Serious problems	.922			
This organization provides services to individuals who have: - Experienced sexual violence	.919			
This organization provides services to individuals who have: Been traumatized by others	.871			
This organization provides services to individuals who have: - Mental health issues	.867			
This organization provides services to individuals who have: - Addictions	.802			
Staff in this organization are: - Have too many work tasks		.846		
Staff in this organization are: - Have little time to get their work done		.806		
At this job: - This job is emotional draining		.620		
In this organization: - Policies change frequently		.568		
At this job: - This job is affecting my health negatively		.532		
Staff in this organization are: - Work many extra hours beyond the normal schedule		.504		
Staff in this organization are: - Feel bullied by managers			.931	
Staff in this organization are: - Feel bullied by supervisors			.931	
Staff in this organization are: - Feel bullied by staff			.742	
Staff in this organization: - Care less about the clients than when they started			.471	
In my entire life, I: - Lived with someone that was a problem drinker or used drugs				.779
In my entire life, I: - Lived with someone who was mentally ill				.720
In my entire life, I: - Lived with someone who attempted suicide				.522
In my entire life, I: - Experienced a sexual assault				.451
In my entire life, I: - Witnessed someone being hurt				.432

Cronbach's Alpha

As mentioned above, the fourth step performed was a reliability analysis. The final factor analysis resulted in four factors with 21 items. Cronbach's Alpha was used to measure the strength of consistency, or that the factors measure the concept of COT. Cronbach's alpha is interpreted in the following fashion: 0.70 is acceptable reliability, 0.80 is good reliability, and .90 is excellent reliability (Field, 2013). The internal consistency of this study revealed that the four subscales formed a reliable scale (α=.81). The reliability statistic test revealed that the alpha would not significantly improve with the removal of any additional items. However, the same statistic test suggested that the alpha would be lowered with the removal of certain items. Alpha levels for the COT-21 subscales are as follows: Client history (α=.96), work environment (α=.82), staff perception (α=.87), and staff trauma history (α=.73). The first subscale, client

history, consists of seven items. These items represent types of caregiving organizations that serve organizations that serve traumatized individual, groups and communities that may in turn produce traumatizing dynamics and circumstances for staff, supervisors, and the organizational culture (Kahn, 2003; Park & Moseley, 2017; Pross & Schweitzer). Examples of items in this subscale include "This organization provides services to individuals who have been traumatized by others," "This organization provides services to individuals who have chronic mental health problems," and "This organization provides services to individuals who have experienced sexual violence." The second subscale, quality of work environment, consists of six items. These items represent organizations that are marked by the need to deal with never-ending assignments, high caseloads, long hours, and the obligation to satisfy rigorous performance and accountability requirements that come with policy changes and financial insecurity. Examples of items in this subscale include "Staff in this organization: feel policies change frequently," "Staff in this organization: feel this job is emotionally draining," and "Staff in this organization: have too many work tasks." The third subscale, staff perception, consists of four items. These items represent employee perceptions that sustain a flawed culture. Examples of items in this subscale include "Staff in this organization: feel bullied by managers," and "Staff in this organization: care less about the clients than when they started." The fourth subscale, staff trauma history, consists of four items. These items represent an employee's trauma history which can impact the functioning of the entire organization (Perlman & Carinngi, 2009). Examples of items in this subscale include "In my entire life, I witnessed someone being hurt," and "In my entire life, I experienced a sexual assault." The reliability statistic test is displayed in Table 8.

Table 8.

Cronbach's Alpha

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
This organization provides services to individuals who have: - Serious problems	65.25	253.264	.573	.855	.801
This organization provides services to individuals who have: - Experienced sexual violence	65.52	248.591	.639	.870	.797
This organization provides services to individuals who have: - Experienced violence	65.42	250.612	.603	.927	.799
This organization provides services to individuals who have: - Mental health issues	65.08	252.878	.591	.810	.800
This organization provides services to individuals who have: Been traumatized by others	65.32	253.799	.553	.882	.802
This organization provides services to individuals who have: - Addictions	65.68	249.878	.605	.732	.799
Staff in this organization are: - Have too many work tasks	65.24	268.182	.395	.650	.811
In this organization: - Policies change frequently	65.83	275.379	.232	.420	.818
Staff in this organization are: - Have little time to get their work done	65.59	269.523	.344	.630	.813
At this job: - This job is affecting my health negatively	66.69	268.406	.373	.481	.812
Staff in this organization are: - Work many extra hours beyond the normal schedule	65.32	280.150	.143	.361	.822
Staff in this organization are: - Feel bullied by staff	67.15	275.610	.249	.636	.817
Staff in this organization are: - Feel bullied by supervisors	66.85	271.910	.283	.908	.816
Staff in this organization are: - Feel bullied by managers	66.80	272.023	.278	.900	.816
Staff in this organization are: - Care less about the clients than when they started	67.01	274.558	.299	.370	.815
In my entire life, I: - Lived with someone who was mentally ill	65.78	261.817	.348	.493	.814
In my entire life, I: - Lived with someone that was a problem drinker or used drugs	66.03	264.244	.285	.524	.818
In my entire life, I: - Lived with someone who attempted suicide	67.28	272.038	.256	.254	.817
In my entire life, I: - Witnessed someone being hurt	65.83	269.638	.249	.238	.819
In my entire life, I: - Experienced a sexual assault	67.07	266.763	.307	.244	.815
At this job: - This job is emotional draining	65.20	269.750	.357	.422	.813

Correlation

In the fifth and final step of the analysis, the COT-21 scale was correlated to the Vicarious Trauma Scale (VTS) and the Post Traumatic Stress Disorder Eight (PTSD-8) scale. The inclusion of the items from the VTS and PTSD-8 evaluated the relationship between COT and other the similar variables represented by these two scales. A bivariate correlation was used to compare the 3 measurement tools' total scores for all respondents as a method to analyze whether they are measuring the same latent variables. The expectation is that the COT-21 scale would have some correlation to the VTS and PTSD-8 measures, but since it is a separate and new construct, it should not be highly correlated with other scales. The correlation between the COT-21 and VTS is moderate (r =.599). The correlation between the COT-21 PTSD-8 is weak (r =.457). These results indicate that the variables are similar, but distinct, constructs.

Summary of Results

The first research question involves the internal consistency of the COT-21 Item scale. Internal consistency demonstrates the homogeneity of the items contained in a measurement tool (DeVellis, 2017). The statistic most commonly used to assess internal consistency is Cronbach's alpha (α) (Bride, et al. 2004, Fields, 2017, & DeVellis, 2017). To meet internal consistency standards, the items need to demonstrate a coefficient alpha of .70 or more. As mentioned above, Cronbach's alpha is interpreted in the following fashion: 0.70 is acceptable reliability, 0.80 is good reliability, and .90 is excellent reliability (Field, 2013). Higher values for coefficient alpha indicate a larger correlation (Fields, 2017). It is also desirable that an alpha level of .80 is achieved because after the measurement is re-distributed to a new sample, the

alpha value decreases (DeVellis, 2017; Fields, 2017). This scale has good reliability (α=.81). The subscales have excellent to good alpha levels. Cronbach's alpha levels for the subscales are as follows: Client history (α=.96, excellent), work environment (α=.82, good), staff perception (α=.87, good), and staff trauma history (α=.73, adequate). The COT-21 demonstrates internal consistency.

The second research question examines the factorial validity of the COT- 21 Item Scale. KMO and Bartlett's Test were used to determine that sample size and the number of responses were adequate to conduct an EFA statistical test. EFA was used to reduce the items into 4 factors: clients, quality of work environment, staff perception, and trauma history. The first subscale, clients, consists of six items. The second subscale, quality of work environment, consists of six items. The third subscale represents employee perceptions concerning an organizational culture and is comprised of four items. The fourth and final subscale, trauma history, is comprised of five items. Accordingly, the individual items on the COT measurement scale accurately represent the factors of COT.

CHAPTER 4: Discussion and Conclusions

Discussion of the Results

This dissertation developed the COT-21 Item Scale, which can be used to assess Complex Organizational Trauma within organizational settings. The literature review determined that COT develops from the following combination of micro and macro dynamics: (1) individual staff, (2) quality of work environment, and (3) policy and/or financial contributions. The final 21 items were grouped into four subscales (factors): client history, quality of work environment, staff perception, and staff trauma history, and were grouped together based on the results of EFA statistical testing. The factor analysis provided a comprehensive picture of how each item loaded onto the four factors listed above. These findings are also consistent with the literature that suggests COT is caused by the factors of individual trauma, quality of the work environment, sudden policy changes and financial insecurity. Additionally, the reliability analysis suggests the internal consistency of the four subscales formed a reliable scale (α=.81).

The first subscale, client history (α=.96), was originally classified as quality of work environment in the literature review and original item pool (Appendix B). EFA determined that six items from the original 27 item "work environment" pool "hang together" or cohere in groups (Field, 2018). For example, the items in the client subscale relate to categories of clients that may have experienced or disclosed trauma (e.g., violence, sexual violence, chronic mental health issues). The premise argues that not only does the nature of the work with these individuals influence COT, but organizations that serve traumatized clients are more likely to have incidents perpetrated against them by individuals outside the organization (Hormann & Vivian, 2013).

The second subscale, quality of work environment (α=.82), was originally also classified as quality of work environment in the literature review and original item pool (Appendix B). Like the previous subscale, EFA determined that six additional items from the original 27 item "work environment" pool "hang together" or cohere in groups (Field, 2018). For example the items in the work environment subscale relate to negative characteristics that staff and supervisors believe are true about their organization (e.g., the job is emotionally draining, too many extra hours, and the job is affecting their health). One question from the policy and financial insecurity item pool loaded onto this factor. That item is "Staff in this organization feel policies change frequently." The premise is that these characteristics become part of the organizational climate by eroding normal structures and intensifying dysfunction (Kahn, 2008).

The third subscale, staff perception (α=.87), was also originally classified as quality of work environment in the literature review and original item pool (Appendix B). Like the previous subscale, EFA determined that four additional items from the original 27 item "work environment" pool "hang together" or cohere in groups (Field, 2018). For example the items in the staff perception subscale relate to employees' and supervisors' perceptions regarding feelings concerning the quality of the work environment (e.g., staff care less about the clients than when they started, feel bullied by managers, feel bullied by other staff). The premise is that these perceptions regarding staff members' feelings cause staff members to vent these feelings to clients, project their feelings onto clients, or bully other workers, leading to impaired interpersonal interactions that create harmful practices that contribute to COT (Bloom. 2010; Hormann & Vivian, 2012).

The fourth and final subscale, staff trauma history (α=.73), was originally classified as the individual history of workers and supervisors in the literature review and original item pool

(Appendix B). Like all of the other subscales, EFA determined that five additional items from the original 17 item individual trauma history pool "hang together" or cohere in groups (Field, 2018). For example, the items in the trauma history subscale relate to employees' and supervisors' personal trauma history (e.g., experienced a sexual assault, lived with someone who attempted suicide, witnessed someone being hurt). The premise is that the individual trauma history of employees is not always recognized by organizations, and may be perpetuated by the organization via employees and managers with unprocessed or reactive trauma (Bloom, 2010; Felitti, et al., 1998).

Measure Description

The COT-21 Item Scale is a 21-item, pen and paper, self-report measure designed to assess the factors that includes the three levels of COT (Appendix J). Respondents are instructed to read each item and indicate how true or not true an item is. Using the six-point Likert scale, participants are asked how much they agree with each statement; (0) Not True, (1) Mostly Not True, (2), Slightly Not True, (3) Slightly True, (4) Mostly True, and (5) True. Scores for the full COT-21 (all items) and each subscales are obtained by summing the items in each subscale to obtain a cumulative score. The cumulative score ranges from 0 to 105. To score the scale, four levels of COT were created. They are: No to little COT (0-55), mild COT (56-70), moderate COT (71-80), and severe COT (81-105). Observations made in SPSS 25 descriptive statistics Quartile scores were used to score the four levels above. Table 9 displays how the scores on the final version of the COT-21 were split into four equal parts. Thirty-nine respondents scored within the no to little COT category, 42 respondents scored within the mild COT category, 37 respondents scored within the moderate COT category, and 49 respondents scored within the Severe COT category.

Table 9.
COT – 21 Item Scale

N	Valid	161
	Missing	7
Percentiles	25	56
	50	70
	75	81

Applications to Social Work

Most contemporary nonprofit, public, and for-profit social work organizations have an increased reliance on government funding, tremendous budgetary constraints, frequent policy changes, which create a reduced organizational capacity to provide needed services (Park & Mosely, 2017; Pooler et al, 2008; Smith, 2012). Despite budgetary constraints, organizations are required to perform program evaluations aimed at guaranteeing that the services they offer are efficient and effective (Carnochan, Samples, Myers, & Austin, 2014). The need for ongoing evaluation is often a condition for receiving financial compensation from private foundations, third party insurance reimbursement, and government sources (Smith, 2012). Therefore, funding reductions for human services and increased program evaluation processes usually result in a decrease in training and clinical supervision for employees and supervisors (Carnochan et al, 2014). Thus, the opportunities to correct problematic practices created by the three COT factors are often neglected (Bloom & Farragher, 2013). This has not only profoundly altered the way social services are delivered but has the possibility to incapacitate already struggling organizations. The development of the cumulative COT-21 Item Scale is an important first step to diagnose COT reactions that impact agency functioning and influence social work service delivery. This measurement tool can be an important component to any program or outcome evaluation process because the use of the COT-21 can draw attention to the issues that impact

organizational climate, employee wellness, poor client outcomes, and informing decisions leading to prolonged financial sustainability (Forbes, 1998).

This measurement will provide social work employees, managers, and leaders with pertinent information about the health of their organization; identify organizational barriers to implementation of an intervention framework, and highlights interventions targets that might be overlooked (Lehman et al, 2012). This COT-21 Item Scale fills an applied need to measure organizational climate, where the organization may still be unconscious to the various ways in which its adaptation to prolonged tension and chaos has created abnormal functioning. In many cases, abnormal functioning critically limits or prohibits the recovery of clients, and thus undermines the very mission of the system (Bloom & Farragher, 2013). This not only damages clients but demoralizes staff and managers and squanders money and resources (Bloom & Farragher, 2013).

Applications to Social Work Education

However, if organizations want to mitigate the effects of COT, the development of the COT-21 is only the first step. Policy advocacy should be encouraged by organizational leaders and become part of everyday social work practice. Understanding the three levels of COT provides us with an opportunity to reshape how we teach social work advocacy (Kilbane, Rodriguez, Young, & Pryce, 2014). In the current political climate, social work students should to be well-trained to respond and intervene on the rapid political and policy changes within and outside of an organization that can contribute to COT and impact direct care practice. Actively engaging in advocacy influences transformation within those environments (CSWE, 2015). It is only through this understanding that COT intervention frameworks can be implemented.

Limitations

While developing the COT-21 Factor Scale, every effort was made to decrease possible limitations of the measurement tool study. However, this study is not without limitations. First, the sample may not be generalizable to all organizations. First, participants were recruited from two behavioral health organizations, one drug and alcohol treatment provider, and one school district in Pennsylvania. The likelihood remains that inclusion of any other organizations may lead to dissimilar outcomes. Second, the sample is representative of a variety of educational levels and job positions such as support staff, direct service staff, clinician, supervisor, senior leadership, and educator. However, the sample is made up of 80.5% women and is comprised of 89.3% white respondents. The likelihood remains that the addition of other populations may have led to different results. The third limitation is that only three of the six expert reviewers participated in the content validity assessment. Additional appraisals could have resulted in a slightly different set of questions for the proposed scale. Notwithstanding these limitations, the measure is a significant contribution toward the advancement of empirical knowledge.

Directions for Future Research

Future research studies should first validate the psychometric properties of the COT-21 Item Scale with diverse samples in varying employment settings. Cross-validation of findings in a range of samples would be ideal. As mentioned above, this sample was comprised of mostly white women. Future studies should recruit male respondents and more people of color to participate in additional studies that validates the psychometric properties of this scale. Second, future research should consider examining trauma informed practice organizations since the literature review reveals that caregiving organizations that serve traumatized individuals, groups, and communities are vulnerable to COT because the nature of their work produced traumatizing

dynamics and circumstances for staff, supervisors, and organizational culture (Kahn, 2003; Park & Moseley, 2017; Pross & Schweitezer, 2010). Third, the COT-21 has four scoring levels that could be used as an independent variable to determine demographic differences in samples. For example, respondents who score in the severe COT group could be examined to understand the differences in other scoring groups.

Conclusion

The literature reveals numerous measurements that assess only one level of COT which include micro level individual trauma, work environment concerns, and policy and financial uncertainty. Therefore, the objective of this study was to develop a psychometrically valid and reliable measurement that is easy to administer, score, and interrupt. In particular, this study validates the COT-21 Item Scale. The scale is a 21 item measure that offers a beneficial tool to assess the presence of Complex Organizational Trauma in organizations. The COT-21 has a good internal consistency (α=.81), making this measurement a reliable tool to assess the three levels of COT and addresses this gap.

Through the literature review process, application of the evidenced based scale development process (latent variable framework), and the feedback from the expert reviewers, face and content validity was established. Consistent with this object, the validity and reliability of the COT-21 Item Scale is supported through the methods and results of this study. This study contributes to social work knowledge and organization development literature. As such the COT-21 Item Scale fills an applied need for a valid and reliable measurement specifically designed to measure the existence of the negative effects of COT that impair organizations.

Appendix A

Table 1 List of Measurements

Measurement	COT Level	Factors	Internal Consistency α
PTSD Checklist for DSM-5 (PCL-5)	Micro-Individual Trauma Measurements	1 question for each PTSD symptom in DSM	.97 Excellent
The Life Events Checklist (LEC-5)	Micro-Individual Trauma Measurements	16 different exposures to potentially traumatic events measures exposure	.66 Below acceptable limits
The Professional Quality of Life R-IV (ProQOL)	Micro-Individual Vicarious Trauma Measures	Compassion satisfaction, compassion fatigue, burnout, secondary traumatic stress	.81 Good
Secondary Traumatic Stress Scale (STSS)	Micro-Individual Vicarious Trauma Measures	Intrusion, avoidance, arousal	.93 Excellent
Work Organization Assessment Questionnaire (WOAQ)	Macro-Organizational Level Measurement	Relationship quality with supervisors, reward and recognition, workload, relationship quality with colleagues, quality of physical surroundings	.70 Acceptable
Organizational Learning Capacity Scale (OLC)	Macro-Organizational Level Measurement	6 sub-scales. 1 on Internal & External Org. system alignment. Learning & development culture, Candid communication, Learning opportunities, support for staff development	.93 Excellent
The Org. Readiness for Change Survey (ORC)	Macro-Organizational Level Measurement	25 scales under 4 domains- program needs & pressure to change, staff attributes, intuitional resources organizational climate.	.69-.81 Ranges from Questionable to Good
Comprehensive Org Health Assessment (COHA)	Macro-Organizational Level Measurement	Time pressure, supervision, professional sharing and support, team cohesion, and shared vision, leadership, physical environment, learning culture, psychological climate, inclusivity, readiness for change, public perception, & community resources	.81-.93 Ranges from Good to Excellent

Appendix B

Item Pool

Directions: Below is a list of challenges or harmful events that sometimes happen to people. Read each statement then indicate how true this statement is for you.

0	1	2	3	4	5
Not True	Mostly Not True	Slightly Not True	Slightly True	Mostly True	True

Work Environment

1. Staff in this organization:
a. are sick a lot
b. report feeling sick before coming to work
c. typically work without taking breaks
d. are burnt out
e. have experienced a trauma while working here
f. work many extra hours
g. are trustworthy (reverse code)
h. work extra hours beyond the normal schedule
i. care less about the clients then they did when they started working here
j. have too many work tasks
k. have little time to get their work done
l. take time off because they need a break from work stress
m. take sick time when they are not sick
n. are emotionally drained
o. must respond to emergencies
p. feel unsupported by staff
q. feel unsupported by supervisors
r. feel unsupported by managers
s. feel bullied by staff
t. feel bullied by supervisors
u. feel bullied by managers

2. This organization provides services to clients who have:
a. been traumatized by others
b. experienced violence
c. serious problems
d. experienced sexual violence
e. addictions
f. mental health issues

Policy & Financial Uncertainty

In this organization:

a. My supervisor changes frequently
b. I understand my organization's mission (reverse code)
c. Staff quit frequently
d. We need more money to provide services
e. We need more money to pay staff
f. Policies change frequently
g. Programs within it have closed
h. We have lost funding
i. We have lost a major grant
j. I feel effective at my job (reverse code)
k. If we lost a funding source, it would close
l. The board members improve it

Please note that the next series of questions asks sensitive questions concerning individual and vicarious trauma. If you feel distress, you can stop at any time.

Personal History of Trauma

1. In my entire life, I

    a. Was afraid to be physically harmed
    b. Witnessed someone being hurt or threatened
    c. Witnessed someone killed
    d. Lived with someone who was a problem drinker or used drugs
    e. Lived with someone who was mentally ill
    f. Lived with someone who attempted suicide
    g. Experienced a natural disaster
    h. Have been threatened with a weapon
    i. Experienced a physical assault
    j. Experienced a sexual assault

History of Vicarious Trauma

1. At this job:
    a. I have witnessed human distress
    b. I have experienced the same trauma as my clients
    c. This job is emotionally draining
    d. A staff member has been hurt by a client
    e. A staff member has been killed by a client
    f. This job is affecting my health negatively

Appendix C
Table 2 Expert Pool Reviews

Name	Degree	Experience
Bonnie Green, Ph.D.	Ph.D., Experimental Psychology	Associate Professor, East Stroudsburg University Psychometrics Expert & Author
Cindy Loftus-Vergari, MA, FAAETS	Master of Education, Human Sexuality	Fellow, American Association of Experts in Traumatic Stress IATP Certified Clinical Trauma Professional
Linda Van Meter, Ph.D.	Ph.D. Psychology	Mental Health Treatment Expert Clinical Faculty, East Stroudsburg University
Amy Werman, DSW	Doctor of Social Work	Associate Professor, Columbia University Expert in Research Methodology & Program Evaluation
Michael Zimmerman, MA	Master of Science, Organizational Management	CEO, Family Services Association of NEPA Expert in Organization Development and Program Evaluation
Duane Hagelgans, Ph.D. Alternate	Juris Doctorate	Emergency Management Expert Associate Professor, Millersville University

Appendix D

Informed Consent Form

You are invited to participate in a web-based online survey on Complex Organizational Trauma (COT). COT is a prolonged state of organizational dysfunction and chaos and is marked by ineffective responses and the inability to effectively manage agency operations. COT occurs as a reaction to multiple incidents of sustained organizational trauma and is characterized by multiple crises that erode an organization's ability to fulfill its mission. Three factors create COT: (1a) individual trauma history of individual employees and supervisors, (1b) the effect vicarious trauma has on individuals and supervisors, (2) the work environment, and (3) sudden policy change and financial uncertainty.

This is a research project being conducted by Amy Freeman, a doctoral student at Millersville University. I can be reached via phone: (570) 604-5234 or via email at alfreema@millersville.edu. It should take approximately 30 minutes or less to complete the form. The research project will be conducted over approximately a 9-month period. Questions can also be answered by Dr. Alex Redcay, Committee Chair & Research Supervisor, via phone: (717) 480-0585 or via email at Alex.Redcay@millersville.edu

This study has been approved by the Millersville University of Pennsylvania. If you feel you have not been treated according to the description in this form, or that your rights as a participant in research have not been upheld during the course of this study, or you have any questions, concerns, or complaints that you wish to address to someone other than the investigator, you may contact the Millersville University Institutional Review Board. Dr. René Muñoz, Director of Sponsored Projects and Research. Administration may be contacted with any questions at either (717) 871-4457 or (717) 871-4146, or at rene.munoz@millersville.edu.

PARTICIPATION

Your participation in this survey is voluntary, anonymous, and confidential. You may decline to take part in the research or exit the survey at any time without penalty. You are free to decline answering any question you do not wish to answer for any reason. There are no consequences if you choose not to participate or if you stop the survey at any time.

INCENTIVE

Participation is voluntary and anonymous. However, after completion of the survey, you have the option of being entered in a drawing to receive one of three $100 gift cards. If you would like to be entered into the gift card drawing, then you may submit your email address. The emails will be separated from their answers to the survey and all answers will be confidential. Only the principle investigator researcher will see participant email.

BENEFITS & RISKS

You will gain insight into the health of your working environment from participating in this research study. Also, your response may help us learn more about how to diagnosis Complex Organizational Trauma (COT) in organizations and develop ways to intervene. The possible risk of participating in this survey is minimal. However, some of the survey questions ask about your

personal trauma history and may be distressing to you as you think about your experiences. If you experience psychological stress at any time while you are completing the survey or after completion of it, and if you need crisis counseling services or a referral for a provider, please contact Help Line of Northeast PA at (888) 829-1341 or by dialing 211. Help Line is operated by Family Service Association of NEPA.

CONFIDENTIALITY

Your survey answers will be sent to a link where data will be stored in a password protected electronic format. Identifying information such as your name, email address, or IP address is not collected. Therefore, your responses will remain anonymous. No one will be able to identify you or your answers, and no one will know whether you participated in the study. Your employer will **not** have access to any of your answers.

Participation is voluntary and anonymous. However, after completion of the survey, you have the option of being entered in a drawing to receive one of three $100 gift cards. If you would like to be entered into the gift card drawing, then you may submit your email address. The emails will be separated from their answers to the survey and their answers will be confidential. Only the principle investigator researcher will see participant email.

CONTACT

If you have questions at any time about the study or the procedures, you may contact my research supervisor:

Dr. Alex Redcay	Amy Freeman	Dr. René Muñoz
Chair of doctoral committee	Principal investigator	Director of Sponsored Projects
Assistant Professor	Doctoral Student	and Research
Millersville University	Millersville University	Millersville University
(717) 480-0585	(570) 604-5234	(717) 871-4457
Alex.Redcay@millersville.edu	alfreema@millersville.edu	rene.munoz@millersville.edu.

Appendix E

Debriefing Form

Thank you for participating in the study. Your contribution is highly valued and appreciated.

If you are uncomfortable about anything that happened while participating in the study, or have any questions or comments, I urge you to contact me either in person, or by email. I can be reached via phone at (570) 604-5234 or via email at alfreema@millersville.edu. You can also contact my doctoral dissertation adviser, Dr. Alex Redcay, with any questions, comments, or concerns. Dr. Redcay can be reached via phone at (717) 871-4373 or via email at Alex.Redcay@millersville.edu. You may also contact Dr. René Muñoz, Director of Sponsored Projects and Research, at either (717) 871-4457, or at rene.munoz@millersville.edu.

If you believe you or someone you know may need help in dealing with trauma, please contact your employee assistance program or Help Line of Northeast PA at (888) 829-1341 or dial 211.

Again, thank you for participating in the study! Your contribution will help us to understand and diagnosis Complex Organizational Trauma within agencies.

Amy Freeman, MSW, LCSW, Doctoral Candidate

Appendix F

Help Line Information

(888) 829-1341 or (570) 829-1341 or 2-11 where available or

Text your zip code to 898211.

Help Line is an information and referral service and first response point for crisis calls in Bradford, Clinton, Columbia, Lackawanna, Luzerne, Lycoming, Montour, Northumberland, Pike, Snyder, Sullivan, Susquehanna, Tioga, Union, Wayne and Wyoming Counties. We also provide services in Monroe County with our partner PoconoInfo. It operates twenty-four hours a day, 365 days a year, staffed by trained caseworkers as a program of the Family Service Association of NEPA.

Topics of Interest

- **Latest Weather & Water Levels**

More about HelpLine

Help Line was established in 1972 after Hurricane Agnes to provide a central resource for vital information for the victims of this devastating disaster. In 1975 Help Line entered into agreements with a number of area agencies to provide twenty-four-hour crisis services. Soon after, other agencies signed onto the service and Help Line became the crisis center for most Wyoming Valley social service agencies.

Help Line currently acts as the afterhours crisis service for twenty-one different organizations serving Bradford, Luzerne, Sullivan and Wyoming Counties. It is the central access point for problems and issues regarding:

- **Mental Health - Child Abuse/Neglect Reports**
- **Drug and Alcohol - Runaway - Energy Assistance**
- **Homeless Services - Victim services**

In addition to handling crisis situations Help Line is also an information and referral service. Help Line maintains an active data listing of over 400 local agencies, as well as over 16,000 additional regional, state and national resources. If you need to know where the nearest AA group is being held or the telephone number for the turkey hotline to make sure Thanksgiving dinner is a success, Help Line is there to assist you. Help Line has handled over 2.8 million calls since the start of operations in 1972.

The Help Line staff handled approximately 98,000 calls during the year ending June 30, 2016; this breaks down to approximately 269 calls per day. The vast majority of Help Line calls are made from our 17-county coverage area, however, Help Line also received calls from fifty-eight counties in Pennsylvania as well as thirty-five different states.
Help Line is a member of the Alliance of Information & Referral Systems (AIRS) and the Pennsylvania Alliance of Information & Referral Systems (PA AIRS).

I can't dial 2-1-1 from my work phone.

Some phone networks or PBX systems that require a "9" or another outside line access code may need to be adjusted so you can dial 2-1-1. Most systems allow you to dial 9-1-1, but some may need to be changed for 2-1-1. Your telecommunications staff or service provider should be able to make this simple adjustment. You can also reach us by dialing 1-888-829-1341.

Help Line. (2018, July). Family Service Association of NEPA. Retrieved from http://www.helpline-nepa.info/.

Appendix G

Content Validity Scale Matrix

Thank you for providing your expert opinion regarding the development of this scale. I am following a scale development process adopted from DeVellis (2017) *Scale Development Theory and Applications.*

The aim of this step is to improve content validity. Each of you will be asked to (1) rate how relevant each scale item (strong, moderate, or low) is to the concept of Complex Organizational Trauma (COT), (2) provide general feedback on each item, (3) identify confusing items and suggest alternative language, and (4) identify any ways that COT is not represented (DeVellis, 2017). I have included the test question pool, and a matrix for rating each item. After you complete the matrix, please email it back to me at alfreema@millersville.edu. If you have any questions, feel free to contact me at (570) 604-5234.

Again, thank you for your willingness to participate! Your input will contribute to the body knowledge about how to diagnosis COT in organizations, and to gaining insight into the health of working environments.

Sincerely,

Amy Freeman, MSW, LCSW, ABD

Thank you for providing your expert opinion regarding the development of this scale. I am following a scale development process adopted from DeVellis (2017) *Scale Development Theory and Applications.*

The aim of this step is to improve content validity. Each of you will be asked to (1) rate how relevant each scale item (strong, moderate, or low) is to the concept of Complex Organizational Trauma (COT), (2) provide general feedback on each item, (3) identify confusing items and suggest alternative language, and (4) identify ways that COT is not represented (DeVellis, 2017). I have included the test question pool, and a matrix for rating each item. After you complete the matrix, please email it back to me at alfreema@millersville.edu. If you have any questions, feel free to contact me at (570) 604-5234. Below, I have included the definition and background for COT. The item pool and matrix begin on page 3. After your feedback, items will be eliminated, and the scale will be revised.

Complex Organizational Trauma (COT) is a prolonged state of organizational dysfunction and chaos, marked by unproductive responses and the inability to effectively manage agency operations. COT is a reaction to repeated exposure to micro and macro organizational issues that erode an organization's ability to function in a healthy and productive manner (Freeman & Redcay, 2018). COT applies to all organizational settings, which include, but are not limited to, nonprofit agencies, colleges and universities, medical facilities, and for-profit organizations. COT develops from a combination of factors, including loss of an essential funding source, significant policy changes, increasing managed care requirements, changing society values, uncertainty regarding healthcare reform, dysfunctional leadership, unhealthy employee relationships, and staff turnover. These multiple traumas become embedded in organizational culture, and many organizations fail to return to normal functioning, resulting in dysfunctional operating practices, reduced resources, and a lack of viability that triggers the development of COT. The short-term consequences of COT include employees and supervisors experiencing burnout, services not effectively rendered, and clients receiving inadequate care. The long-term consequences of COT not only impact an organization's culture, structure, and operations, but they also diminish the organization's capacity to respond to intrinsic, extrinsic, micro, and macro practice challenges, resulting in an unfulfilled mission and agency closure (Kahn, 2008). It is precisely because of these factors that organizations usually find themselves stuck in patterns that hinder their capacity to flourish (Kahn, 2003). The collective traumas of these experiences leave employees emotionally and cognitively unprepared, helpless, and vulnerable (Stein, 1991). Through their actions, and reduced resources, traumatized organizations repeat their actions, as they may not know how their trauma occurred, much less know how to prevent it from occurring again (Van der Kolk, 1998). For example, leaders and employees may cycle in and out of an organization, leaving structural patterns untouched and allowing dysfunctional norms to persist. Individuals in the organization perceive COT as a general malaise due to discontent, burnout, lack of engagement with clients and coworkers, and absenteeism. The concept of COT is a fundamental shift as it emphasizes both micro and macro triggers, rather than looking solely at individuals and their behavior within organizations as a single cause of the phenomenon. Organizations can only thrive when the causes of frustrating patterns are recognized and resolved on a macro organizational level, as opposed to a micro individual level.

COT is inspired by General Systems Theory and Trauma Theory. It has been concluded that COT develops from the following combination of micro and macro dynamics: (1) individual staff, (2) work environment, and (3) policy and/or financial contributions. Merging the two theories provides the framework for the three COT levels.

References and the completed literature review are available upon request.

Thank you for your willingness to participate! Your input will contribute to the body knowledge about how to diagnosis COT in organizations, and to gaining insight into the health of working environments.

Sincerely,

Amy Freeman, MSW, LCSW, ABD

When the scale launches the participants will be asked to read each statement then indicate how true this statement is for you.

0	1	2	3	4	5
Not True	Mostly Not True	Slightly Not True	Slightly True	Mostly True	True

Question Pool

Directions: Each set of possible scale items relate to the factors that trigger COT. They are: (1) individual staff (individual trauma history and/or vicarious trauma), (2) practice setting, and (3) policy and/or financial uncertainty. First, rate how relevant each scale item (strong, moderate, or low) is to the concept of Complex Organizational Trauma (please see definition above). Please circle the rating you feel is most appropriate. Second, in the space provided below provide general feedback on items, identify confusing items and suggest alternative language, and (4) identify ways that COT is not represented.

Personal History of Trauma

At some point in my life, I

Question	**Relevancy of item to COT- Please Circle One**
k. was afraid to be physically harmed	strong, moderate, low
l. witnessed someone being hurt or threatened	strong, moderate, low
m. witnessed someone killed	strong, moderate, low
n. lived with someone who was a problem drinker or used drugs	strong, moderate, low
o. lived with someone who was mentally ill	strong, moderate, low
p. lived with someone who attempted suicide	strong, moderate, low
q. experienced a natural disaster	strong, moderate, low
r. was threatened with a weapon	strong, moderate, low
s. experienced a physical assault	strong, moderate, low
t. experienced a sexual assault	strong, moderate, low
u. was neglected as a child	strong, moderate, low

General feedback:

Confusing items & suggested alternative language:

Identify ways COT is not represented:

History of Vicarious Trauma

At this job:

g. I have witnessed human distress	strong, moderate, low
h. I have experienced the same trauma as my clients	strong, moderate, low
i. this job is emotionally draining	strong, moderate, low
j. a staff member has been physically hurt by a client	strong, moderate, low
k. a staff member has been killed by a client	strong, moderate, low
l. I feel my health is being affected negatively	strong, moderate, low

General feedback:

Confusing items & suggested alternative language:

Identify ways COT is not represented:

Work Environment

1. Staff in this organization:

a. are sick a lot	strong, moderate, low
b. report feeling sick before coming to work	strong, moderate, low
c. typically work without taking breaks	strong, moderate, low
d. are burned out	strong, moderate, low
e. have experienced a trauma while working here	strong, moderate, low
f. work many extra hours	strong, moderate, low
g. are trustworthy (reverse code)	strong, moderate, low
h. work extra hours beyond the normal schedule	strong, moderate, low
i. care less about the clients than they did when they started working here	strong, moderate, low
j. have too many work tasks	strong, moderate, low
k. have little time to get their work done	strong, moderate, low

l. take time off because they need a break from work stress	strong, moderate, low
m. take sick time when they are not sick	strong, moderate, low
n. are emotionally drained	strong, moderate, low
o. must respond to emergencies	strong, moderate, low
p. feel unsupported by staff	strong, moderate, low
q. feel unsupported by supervisors	strong, moderate, low
r. feel unsupported by managers	strong, moderate, low
s. feel bullied by staff	strong, moderate, low
t. feel bullied by supervisors	strong, moderate, low
u. feel bullied by managers	strong, moderate, low

2. This organization provides services to clients who have:

g.	been traumatized by others	strong, moderate, low
h.	experienced violence	strong, moderate, low
i.	serious problems	strong, moderate, low
j.	experienced sexual violence	strong, moderate, low
k.	addictions	strong, moderate, low
l.	mental health issues	strong, moderate, low

General feedback:

Confusing items & suggested alternative language:

Identify ways COT is not represented:

Policy & Financial Uncertainty

In this organization:

i.	my supervisor changes frequently	strong, moderate, low
j.	I understand my organization's mission	strong, moderate, low
k.	staff quit frequently	strong, moderate, low
l.	we need more money to provide services	strong, moderate, low
m.	we need more money to pay staff	strong, moderate, low
n.	policies change frequently	strong, moderate, low
o.	programs within it have closed	strong, moderate, low
p.	we have lost funding	strong, moderate, low
i.	we have lost a major grant	strong, moderate, low
j.	I feel effective at my job	strong, moderate, low
k.	if we lost a funding source, it would close	strong, moderate, low
l.	the board members improve it (reverse code)	strong, moderate, low

General feedback:

Confusing items & suggested alternative language:

Identify ways COT is not represented:

Appendix H

Final COT-21 Scale

COT-21 Item Scale

Complex Organization Trauma

Factor 1
COT-21 Item Scale
Please read the following statements and indicate on a scale of **Not True** to **True** how much you agree with them. After you complete the scale, add all of the totals from each section together for a cumulative score.

This organization provides services to individuals who have:

	Not True-0	Mostly Not True-1	Slightly Not True-2	Slightly True-3	Mostly True-4	True- 5
Experienced violence (1)	○	○	○	○	○	○
Serious problems (2)	○	○	○	○	○	○
Been traumatized by others (3)	○	○	○	○	○	○
Experienced sexual violence (4)	○	○	○	○	○	○
Have chronic mental health issues (5)	○	○	○	○	○	○
Addictions (6)	○	○	○	○	○	○

Factor 2 Staff in this organization:

	Not True-0	Mostly Not True-1	Slightly Not True-2	Slightly True-3	Mostly True-4	True-5
Have too many work tasks (7)	○	○	○	○	○	○
Have little time to get their work done (8)	○	○	○	○	○	○
Feel this job is emotionally draining (9)	○	○	○	○	○	○
Feel policies change frequently (10)	○	○	○	○	○	○
Work many extra hours beyond their normal work schedule (11)	○	○	○	○	○	○
Feel this job is affecting their health negatively (12)	○	○	○	○	○	○

Factor 3 Staff in organization:

	Not True-0	Mostly Not True-1	Slightly Not True-2	Slightly True-3	Mostly True-4	True-5
Feel bullied by supervisors (13)	○	○	○	○	○	○
Feel Bullied by managers (14)	○	○	○	○	○	○
Feel bullied by staff (15)	○	○	○	○	○	○
Care less about the clients than when they started (16)	○	○	○	○	○	○

Factor 4

In my entire life, I:

	Not True-0	Mostly Not True-1	Slightly Not True-2	Slightly True-3	Mostly True-4	True-5
Lived with someone that was a problem drinker or used drugs (17)	○	○	○	○	○	○
Lived with someone who was chronically mentally ill (18)	○	○	○	○	○	○
Lived with someone who attempted suicide (19)	○	○	○	○	○	○
Experienced a sexual assault (10)	○	○	○	○	○	○
Witnessed someone being hurt (21)	○	○	○	○	○	○

Score Instructions: Add scores from each section to receive your total score: _____

0-55: Little to no COT

56-70: Mild COT

71-80: Moderate COT

81-105: Severe COT

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