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RISKS OF INDIRECT TRAUMA AMONG DIRECT SUPPORT PROFESSIONALS
WHO WORK WITH ADULTS WITH INTELLECTUAL/DEVELOPMENTAL
DISABILITIES: IMPACT ON ORGANIZATIONAL, STAFF AND CLIENT
OUTCOMES

By

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A Dissertation

Submitted to the Faculty of the

Raymond A. Kent School of Social Work of the University of Louisville

in Partial Fulfillment of the Requirements

for the Degree of

Doctor of Philosophy in Social Work

Raymond A. Kent School of Social Work

University of Louisville

Louisville, Kentucky

May 2020

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DEDICATION

This dissertation is dedicated to my parents
Mr. Paul Kwabena Boamah and Mrs. Grace Serwah Boamah
who have given me invaluable educational opportunities and my beloved
wife Mrs. Irene Achampong Boamah for her support and encouragement.

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needed to persevere and accomplish this goal. There are many who have helped and supported me in diverse ways, for whom I am forever grateful.

ABSTRACT

RISKS OF INDIRECT TRAUMA AMONG DIRECT SUPPORT PROFESSIONALS WHO WORK WITH ADULTS WITH INTELLECTUAL/ DEVELOPMENTAL DISABILITIES: IMPACT ON ORGANIZATIONAL, STAFF AND CLIENT OUTCOMES

Daniel A. Boamah

April 14, 2020

Direct support professionals (DSPs) are essential in the continuum of care for individuals with intellectual and/ or developmental disabilities (ID/DD). DSPs provide a wide range of support including services to ensure the safety and welfare of individuals, support in the development of independent living skills and support in community integration. Existing literature has shown that as frontline workers, DSPs face various occupational hazards such as burnout, yet very little is known about prevalence of secondary trauma stress (STS) among DSPs and how burnout and secondary trauma impact various outcomes.

The present study examined the prevalence of STS and the predictive factors of STS and burnout among DSPs who work with adults with ID/DD. In addition, the study looked at the relationships between burnout and STS on organization-related outcomes (work satisfaction and intent to leave), client-related outcome (client success) and staff-related outcomes (general health and life satisfaction). This cross-sectional design used a convenience sampling method to recruit DSPs from 20 state licensed community-based agencies serving individuals with ID/DD. Three hundred and sixty-six DSPs completed surveys. The findings confirm that the prevalence of STS (13%) in the DSPs in ID/DD

population is consistent with other professionals such as foster parents and social workers but lower than others such as child welfare workers and juvenile justice workers. Various individual, interpersonal and organizational factors served as risk factors (client challenging behaviors, workers' own trauma history, exposure to client trauma) and protective factors (personal resilience and organizational support) in predicting burnout and STS among DSPs. Also, STS and burnout predicted organization-related, client-related and staff-related outcomes at varied levels, suggesting that, STS and burnout have significant material effects on ID/DD clients' success, staff well-being and organization viability. An SEM analysis revealed a complex relationship between the predictor variables and STS and burnout, and staff intent to leave. Implications of the findings to social work practice, education and research are discussed.

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CHAPTER I

INTRODUCTION

Background

Direct support professionals (DSPs) play important roles in the lives of individuals diagnosed with intellectual and/or developmental disabilities (ID/DD) in diverse ways during their lifespan. It is estimated that about 1.4 million ID/DD persons are receiving or are formally awaiting services from state developmental disabilities program agencies (Anderson et al., 2016). The various support ID/DD individuals receive from DSPs enables them to live in various communities throughout the United States. The job titles of DSPs include habilitation specialist, job coach, residential counselor, family care provider, personal assistant and others. Many DSPs work for state agencies to give support to ID/DD individuals. However, a vast majority of DSPs deliver support to ID/DD individuals through the private sector through both for-profit and nonprofit companies. Yet, current projections from the Bureau of Labor Statistics for demand for DSPs remains high (Bureau of Labor Statistics [BLS], 2019).

The Changing Pattern of Services and Supports for ID/DD Persons

During the past 50 years, the federal government and individual states have embraced a commitment to reduce institutional placement of persons diagnosed with ID/DD. The focus has been to seek alternative community-based support to meet long-term services and support (LTSS) needs for this population. As a result, the average daily population of persons with an ID/DD diagnosis in state institutions as of 1967 was

estimated at 194,650, which was significantly reduced by the year 2003 to 42,386 (78%) (U.S. Department of Health and Human Services [USDHHS], 2006). As expected, the deinstitutionalization of persons with ID/DD coincided with a significant increase in the system of home and community-based supports (Lakin et al., 2004)). In addition, a series of federal and state laws and partnerships can be credited for the trend in transformation of LTSS for the ID/DD population. Notable among these initiatives are: the Americans with Disabilities Act (ADA) passed in 1990 and its interpretation by the Supreme Court decision in *Olmstead et al. v L.C.* 527 U.S. 581 (1999); the New Freedom Initiative; and the Developmental Disabilities Assistance and Bill of Rights Act (DD Act) of 2000. These and a range of other pieces of legislation, judicial decisions, and administrative policies resulted in a seismic shift in ID/DD service delivery in the United States (Lakin et al., 2004).

The role of Medicaid as the main financier of this transformation has been a major driving force in shaping the landscape of LTSS for people diagnosed with ID/DD. As part of the Social Security Act 1915(c) — Home and Community Based Services Medicaid (HCBS) waivers — states were allowed to use LTSS programs to meet the needs of ID/DD people as an alternative to living in an institutional setting. The states gained access to federal cost-sharing agreements to finance existing and new programs. The access to this money to finance ID/DD programs is evident in the increase in Medicaid HCBS funding from \$1.655 billion in 1993 to \$14.123 billion in 2003 (Eiken et al., 2018). In 2014, 53% of all Medicaid long-term care spending was allocated to home and community-based services (HCBS), totaling about \$80.6 billion (Eiken et al., 2018). As of 2016, it reached \$94 billion (Eiken et al., 2018).

The Center for Medicare and Medicaid Services estimates that nearly one million individuals received services under HCBS waivers by 2009, and by 2013, there were estimated 3.7 million HCBS recipients in the United States (Eiken et al., 2016).

The increase in the number of service recipients coincided with changes in the service delivery system. For example, in 1992, only about 49.7% of Intermediate Care Facilities for Individuals with Intellectual Disabilities (ICF/IID) and HCBS recipients lived in community settings. By 2003, the number increased to 87%. One of the implications of this transformation in service to this population has been to recruit, train, and maintain a competent work force to provide needed support for ID/DD persons, which allows them to live in communities of their choice.

Direct Support Professionals Who Support the ID/DD Population

The 2003 Direct Support Professional Recognition Resolution (S.Con.Res. 21/H. Con. Res.94) states that the U.S. Congress identified persons directly working with ID/DD population as “direct support professionals” (DSP). The Congressional definition states that DSPs are individuals who receive monetary compensation to:

provide a wide range of supportive services to individuals with intellectual and developmental disabilities on a day-to-day basis, including habilitation, health needs, personal care and hygiene, employment, transportation, recreation, and housekeeping and other home management-related supports and services so that these individuals can live and work in their communities and lead self-directed, community and social lives (Congressional Record, 2003, p. H10301).

DSPs are often the primary source of support for ID/DD individuals and their quality of life (DeWaele et al., 2009; Schuengel et al., 2010). The range of support they provide

spans from: ensuring individuals basic health, safety, and welfare needs; supporting the development of independent living skills; and supporting in-community integration and relationship building goals (Hewitt & Larson, 2007; Miller & Chan, 2008; Skirrow & Hatton, 2007).

DSPs are considered to be the most valuable resource to organizations who provide services to ID/DD population (Devereux et al., 2009). A conservative estimate of DSPs in the nation is about 4.5 million (Espinoza, 2017; BLS, 2015). This is believed to be an underestimation of the actual DSP workforce due to the wide range and variation of job titles assigned to DSPs. The general trend for the demand for DSPs needed to meet the long-term support needs of the population has been projected to be substantially outpacing other industries. In 2006, it was expected to increase by 37% by 2020. Yet, the traditional pool of laborers (i.e. adults aged 18 to 39) was expected to increase by only 7% (USDHHS, 2006). More recent estimates by the U.S. Department of Labor show the projected change in employment for DSPs from 2018 to 2028 to be 36%, while the average rate for all occupations is 5% (BLS, 2019). Although the Bureau of Labor Statistics does not keep records of DSPs who exclusively serve the ID/DD population, the shift in service delivery and other evidence suggests that persons diagnosed with ID/DD are living longer and (Coppus, 2013) would suggest that the demand is high. It is also important to note competing demands for DSPs to support the nation's aging population. Furthermore, there is a general shortage of DSPs in the industry and potential allocation issues with the services this sector provides.

As backdrop for the demand for DSPs is the fact that over the years, DSPs are being asked to do more and more (Braddock et al., 2011) in poor working conditions with

low wages with poor employment benefits. Poor working conditions including low wages, limited benefits, and stressful working conditions can keep these workers trapped in a cycle of poverty with limited employment alternatives (Hewitt & Larson, 2007; Larson et al., 2003; Hewitt et al., 2015). This has resulted in a high percentage of DSPs living below the poverty line and reliance on public assistance to make a living in spite of the vital roles they play in supporting one of the most vulnerable groups of people in the society (Larson & Hewitt, 2005). Recruitment and retention of DSPs has been difficult for organizations who support and serve ID/DD people (Hewitt & Larson, 2007; Schuengel et al., 2010). Various studies have estimated annual turnover rates ranging from 45% to 70% (Bogenschutz et al., 2014). Recurrent job vacancies, high turnover, and the inability to hire qualified staff present ongoing systemic problems that often result in increased work responsibilities for the remaining employees and additional organizational strain (Howard & Gould, 2000; Larson et al., 1999; Larson, Hewitt & Lakin, 2004).

A report released by the President's Committee for People with Intellectual Disabilities (2017) identified eight major challenges confronting DSP workforce. They are:

- high staff turnover.
- a growing demand for services due to the growth and aging of the U.S. population in general.
- increased survival rates for people with the complex health needs found among persons with ID/DD.
- demographic shifts resulting in fewer people moving into the DSP workforce.

- the persistently non-competitive aspects of direct support employment, including low wages, poor access to health insurance, lack of paid time off; and other benefits.
- the high stress and demands of direct support employment, including round-the-clock, seven days-a-week work.
- insufficient training and preparation for DSP roles.
- lack of professional recognition and status for skilled DSPs.

High rates of turnover among DSPs pose a significant financial challenge to organizations that support the ID/DD population. The costs of replacing a DSP in the ID/DD workforce have been estimated to range from \$2,413 to \$5,200 (Hewitt & Larson, 2007; ANCOR, 2010; Medisked Connect, 2016). Nationally, the estimated projected costs associated with the ID/DD turnover rate is more than \$2 billion (President's Committee for People with Intellectual Disabilities, 2017).

Organizations that struggle to attract adequate numbers of qualified DSPs are likely to experience suboptimal service delivery and interrupted care for individuals already vulnerable (Larson et al., 1999, 2004; Hamilton et al., 2005; Murphy et al., 2007). To understand the prevailing issues which confront the ID/DD workforce, it is important to consider how organizational, staff and client characteristics interact to determine various outcomes in the workspace such as work satisfaction, intent to leave, client success, staff general health and life satisfaction. During the past two decades, researchers have explored the factors that influence burnout among DSPs. However, a dearth of knowledge exists on how secondary trauma impact DSPs who work with ID/DD individuals and how that and other variables influence organizational, client and

staff outcomes such as turnover, and client and staff well-being. Therefore, this study seeks to explore these contextual relationships in the quest to gain knowledge and provide recommendations to best support the DSPs who work with the ID/DD population.

Trauma and ID/DD Population

Historical Perspective

Early studies of the interaction between trauma and mental illness can be traced as far back as the 19th century to a French neurologist, Jean-Martin Charcot, whose work investigated traumatized women in the Pitie-Salptriere Hospital (Ringel & Brandell, 2012). The focus of Charcot's study was hysteria, a condition or disorder characterized by amnesia, sensory loss, paralysis, and convulsions. Charcot was the first to establish that the origin of hysteria was psychological rather than physiological, until then the prevailing school of thought. It is important to note that most of the patients diagnosed with hysteria were women, and the common treatment for the condition was a hysterectomy (Ringel & Brandell, 2012). Pierre Janet, a student of Charcot, and Sigmund Freud, who studied dissociative phenomena and traumatic memories, are historic contributors to the study of trauma. Like their predecessors, both used hypnosis as the main intervention technique (van der Kolk, Weisaeth & van der Hart, 1996).

In the United States, interest in the study of trauma has been influenced by the social and political landscape of American society. Documented efforts to address traumatic events were gradual and could be traced to 1902, when the first suicide hotline was established in San Francisco (Ringel & Brandell, 2012.) The psychological "first aid" was then developed within the context of military combat to help World War I

soldiers overcome symptoms of “shell shock” syndrome, such as physical paralysis, memory loss, weeping, and screaming (Herman, 1992). Through the years, interest in trauma increased with events such as wars, natural disasters, and horrific human-made events but faded as a crisis subsided (Herman, 1992; Pryce, Shackelford, & Pryce, 2007, Branson, 2018).

Although there are many reasons why trauma continues to be of interest to researchers, there is a report of renewed and sustained interest in trauma research since Sept. 11, 2001, due to: terrorist attacks in the United States on the Twin Towers, the Pentagon, and on an airliner that crashed in Pennsylvania; and steady involvement in military conflicts since (Ringel & Brandell, 2012). In addition, trauma has become a focus of clinical disciplines and changes in therapeutic approaches have led to increased efforts to address trauma as a primary influence of ongoing dysfunction (Barrington & Shakespeare-Finch, 2013; Iqbal, 2015). Despite these trends, trauma continues to impact many people in American society. Much remains to understand about the ways people experience trauma and how trauma could be transferred indirectly to others. **Definition of Trauma**

According to the Substance Abuse and Mental Health Services Administration (SAMHSA) an:

individual trauma results from an event, series of event, or set of circumstances that is experienced by an individual physically or emotionally harmful or life threatening and that has lasting adverse effects on the individual’s functioning and mental, physical, social, emotional or spiritual well-being (SAMHSA, 2014, p. 7).

Trauma is as an individual experience or event — or series of activities — that pose an actual or perceived threat to a person’s life or personal integrity, to a family member or to a career (Kesler, 2016). The adverse could be perceived to cause emotional or physical harm, and has lasting effects on the individual’s mental, physical, social, emotional, or spiritual well-being (Brown et al., 2011; Harris & Fallot, 2001). Some of the adverse events are overt in nature, such as physical and sexual abuse or witnessing domestic violence, whereas chronic experiences in childhood, such as emotional neglect, an absent parent, or a substance-abusing caretaker, might be subtle but leave insidious and traumatic effects.

Individuals often are exposed to multiple traumas and poly-victimization, leading to toxic stress and complex trauma reactions (Finkelhor et al., 2011; Maschi et al., 2013).

Traumatic experiences take many forms, but they typically involve an unexpected event outside of a person’s control such as criminal victimization, accidents, natural disasters, war, or exposure to community or family violence (Levenson, 2017). Research suggests these exposures to adverse events are relatively common in the general population (Hammen, 2011; Felitti et al., 1998). Such exposures to adverse events are believed to be the source of trauma responses, which have been described in the literature as impacting trauma victims in general (Laird, & Alexander, 2019; Zetterqvist et al., 2013; Edwards et al., 2003).

However, certain groups in society might be more prone to experiencing adverse events and related trauma responses. For instance, children are more prone to adverse events than adults. A study conducted by Kaiser Permanente Health System on the scope of adverse childhood experiences — involving more than 17,000 adult patients with

private health insurance — found that 64 percent of participants reported at least one type of childhood maltreatment or household dysfunction, and nearly 13 percent reported four or more (Center for Disease Control [CDC], 2019). Also, the rates of early trauma appear more often among the poor, the disadvantaged, criminals, and individuals with intellectual and developmental disabilities (Eckenrode et al., 2014; Larkin et al., 2014; Levenson et al., 2016).

Traumatic Events and ID/DD Population

Individuals diagnosed with ID/DD are believed to be at a higher propensity of exposure to adverse events due to their increased vulnerability (Hastings et al., 2004; Wigham et al., 2011). An estimated 2.5 million to 4 million U.S. adults have been diagnosed with an intellectual disability and even more with developmental disabilities (Lauer & McCallion 2015). Recent estimates in the United States show a growing trend among children with developmental disabilities. The data shows that approximately one in six children, or about 15%, aged 3 through 17 years have one or more developmental disabilities (Boyle et al., 2011).

Among the adverse experiences that the ID/DD population might experience that could result in one or more traumatic response include bullying, the death of a family member, illness, out-of-home placement, poverty, abuse, neglect, and exploitation. Historical traumas, such as systemic oppression or discrimination, also are prevalent for minority and other marginalized groups, including those in the ID/DD population. The existing research suggests that the ID/DD population in particular is at a higher risk of interpersonal violent victimization, especially sexual victimization (Fogden et al., 2016; Mevissen & de Jongh, 2010). Other risk factors include vulnerability associated with

higher dependency on third parties for activities of daily living. These include high rates of interpersonal violence in ID/DD individuals who are injured by caregivers and family members (Fogden et al. 2016; Wigham & Emerson, 2015). A meta-analysis on trauma among children diagnosed with ID/DD concluded that approximately 25 percent of children with disabilities experience child maltreatment (Jones et al., 2012). Also, the result shows that children with disabilities are 3.7 times more at risk of being victims of abuse than their peers without disabilities. Jones et al. (2012) estimates that children with ID/DD are 4.3 times more at risk of being victims of family violence than their peers without disabilities.

Moreover, compared with their peers without disabilities, the risk of suffering sexual violence is 4.6 times higher for children with ID/ DD.

It is 2.9 times higher for children with all other types of disabilities (Jones et al., 2012). Also, they experience healthy lifestyle barriers, higher health risks, and higher prevalence of mental health illnesses (E.g. Charlot & Beasley, 2013; Evans et al., 2012).

Trauma Diagnosis

As discussed in the previous section, traumatic events are incidents that can cause physical, emotional, psychological, and spiritual harm to a person. A traumatic response is the associated psychological, emotional, and physiological reaction a person might experience as a result of the exposure to or the experience of the traumatic event. Henceforth, in this study, the word “trauma” is defined as traumatic responses experienced as a result of exposure to traumatic events, unless stated otherwise.

It is important to emphasize that not everyone who experiences a traumatic event develops a trauma response, and those who do might not exhibit clinical-level symptoms.

The science on how people react to traumatic events is far from complete. However, later in this chapter, an attempt will be made to explain this phenomenon from a theoretical perspective. Some of the existing diagnostic criteria for trauma are discussed below.

Types of Trauma Diagnosis

Post-Traumatic Stress Disorder. Not until 1980 did psychological trauma and Post-traumatic Stress Disorder (PTSD) become included in the Diagnostic and Statistical Manual (DSM) of Mental Disorders developed by the American Psychiatric Association (APA). Through the advocacy efforts of combat veterans, mental health professionals, and others, the DSM-III committee included the diagnosis of PTSD in the manual.

The DSM diagnosis of PTSD addressed immediate symptoms associated with combat, rape, domestic violence, and child abuse in four categories: intrusive re-experiencing, avoidance; hyperarousal; and hypervigilance with general symptoms of anxiety and dysphoria added (Ford & Courtois, 2009). The current edition of DSM (Edition 5) has included a criterion of a secondary exposure by family members and close friends, and extreme or repeated exposure to adverse details of the event by professionals (American Psychiatric Association [APA], 2013). Post-traumatic stress disorder diagnostic Criteria A in DSM-IV-TR (APA, 2013) states:

Exposure to actual or threatened death, serious injury, or sexual violence in one (or more) of the following:

1. Directly experiencing the traumatic event(s).
2. Witnessing, in person, the event(s) as it occurred to others.

3. Learning that the traumatic event(s) occurred to a close family member or close friend. In cases of actual or threatened death of a family member or friend, the event(s) must have been violent or accidental.
4. Experiencing repeated or extreme exposure to adverse details of the traumatic event(s) (e.g., first responders collecting human remains; police officers repeatedly exposed to details of child abuse).

Note: Criterion A4 does not apply to exposure through electronic media, television, movies, or pictures, unless this exposure is work related (p. 271).

The ID/DD population has been identified to have elevated levels of post-traumatic risk factors. Lower cognitive ability has been identified in research in the general population as a risk factor for the development of PTSD after trauma exposure (Breslau et al., 2013; Brewin et al., 2000).

Developmental Trauma Disorder. van der Kolk (2005) recommended a diagnosis of developmental trauma disorder for children with complex developmental trauma histories. The diagnosis encompasses the effects associated with early trauma as it relates to abuse and neglect. In the Kaiser Permanente study of more than 17,000 participants, van der Kolk noted that: 30.1% reported having been physically abused as children; 11% reported emotional abuse; and 19% reported sexual abuse. Ringel and Brandell (2012) asserted that the study suggests higher rates of trauma than previously known, and in the absence of intervention, the participants over time were more likely to develop behavioral, psychological, and cognitive disruptions. Also, early trauma has been documented to deteriorate the neuronal development of young children. This impacts

their ability to process information, regulate emotions, and categorize experiences. van der Kolk (2005) identified that multiple exposures to childhood traumatic experiences — such as sexual assault, betrayal, witness to domestic violence, physical abuse, and abandonment — have significant prolonged impacts throughout childhood, adolescence, and adulthood.

Current evidence indicates that children diagnosed with ID/DD are at greater risk of exposure to multiple traumatic events and more likely to exhibit severe psychological symptoms following trauma (Emerson & Hatton 2007; Wigham & Emerson 2015). Also, existing research has documented that exposure to adverse events on a lower developmental level is associated with higher and more severe trauma symptoms (Mevissen et al., 2014; Mevissen & De Jongh, 2010). This suggests that both age and cognitive impairment could be plausible factors that could exacerbate the risks of ID/DD individuals to traumatic events and associated psychological symptoms.

Complex Traumatic Stress Disorder. The term “complex traumatic stress” was first suggested by Herman (1992) as a new diagnosis to address multiple origins of trauma and their profound impact on life. One of the criticisms of the PTSD diagnosis in the DSM has been that it does not offer a complex and comprehensive view of the long-term psychosocial stressors on social and professional functioning, and the role of trauma in personality disorders (Ringel & Brandell, 2012). In her work, Herman noted a connection between a client’s past experience of sexual abuse and his or her present personality structure. Courtois developed a diagnostic criterion for complex trauma (Courtois, 2004). The symptoms include an inability to: self-regulate; to self-organize; or to draw upon relationships to regain self-integrity (Ford & Courtoise, 2009). Ford and

Courtoise (2009) define complex trauma as a condition “associated with histories of multiple traumatic stressors and experiences, along with severe disturbances in primary caregiving relationships” (p.18). In addition to multiple trauma experiences in the early stages of life, the ID/DD population also experiences prolonged and interpersonal trauma (Wigham & Emerson, 2015). Studies have found that people with ID/DD — more than people without an ID/DD diagnosis — experience: sexual or physical abuse; emotional abuse (Reiter et al., 2007); institutionalization (Wigham & Emerson, 2015); life-threatening illness or injury; and parental divorce (Hatton & Emerson, 2004).

Moreover, Hollins and Sinason (2000) argued that even having an ID/DD can be traumatic itself. A study on 33 adults with mild-to-moderate intellectual disabilities with at least one traumatic event revealed that 42.4% (n = 14) of the sample reported multiple traumatic experiences, including exposure to life events in both childhood and adulthood (Mason-Roberts et al., 2018). These types of trauma have been shown to lead to particularly pervasive effects in the general population (Lueger- Schuster et al., 2014).

Complex traumatic stress disorder has been associated with homelessness and substance abuse with a profound impact on wellbeing (Ringel & Brandell, 2012).

Conceptualization of Indirect/ Secondary Trauma

Interventions have increased in line with increased attention to the pervasiveness of trauma and the correlations with adverse outcomes, trauma research, clinical curricula, and trauma-informed practice. High interest of inquiry has developed into the short-term and long-term effects of trauma exposure on workers who work with traumatized populations when they become prone to more trauma-based information and client-based traumatic disclosures and experiences (Barrington & Shakespeare-Finch, 2013).

Clinicians and others who work with traumatized individuals increasingly are called upon to assist survivors of violent crime, child abuse, torture, natural disasters, war-related trauma, and acts of mass killing (Cohen & Collens, 2013). These professionals, as they continue to hear the traumatic experiences of others, might become overwhelmed and distressed, and might find it difficult to distance themselves emotionally from their clients' traumatic experiences (Figley, 1995; Pearlman & Saakvitne, 1995). Increasing awareness and inquiry have been directed toward the understanding of the indirect effect of trauma on workers who provide services to highly traumatized populations (Sansbury, Graves, & Scott, 2015). The majority of the studies have focused on mental health providers. However, because of the ongoing and inherently intimate nature of the client-therapist relationship (Pearlman & Saakvitne, 1995; Chouliara et al., 2009), the adverse impact of trauma work has been documented across groups, such as firefighters (Brown, Mulhern, & Joseph, 2002), ambulance workers (Clohessy & Ehlers, 1999) and social workers (Bride, 2007).

Subsequent sections of this chapter discuss terms used in the literature to describe the indirect effect of trauma on workers and discuss some of their theoretical underpinnings.

Various Terms to Describe the Indirect Effect of Trauma on Workers

Working with traumatized clients has been linked to physical, cognitive, emotional, mental, social, and spiritual experiences by workers (Branson, 2018). However, an attempt to understand this presents significant challenges to the academic researcher due to the complexity of the events. Some challenges associated with

understanding the relationships among the terms and the developmental nature of the understanding of them.

Having well-defined terminology is an essential foundation for any research. A review of research indicates that multiple terms are being used to explain the indirect effect of working with traumatized clients. These include countertransference, traumatic countertransference, post-traumatic stress disorder, emotional contagion, shared trauma, double exposure, secondary traumatic stress, vicarious trauma, burnout, compassion fatigue, and compassion satisfaction.

Countertransference

Countertransference refers to the internal emotional reaction of professionals to therapeutic material being presented by clients due to unresolved personal issues on the part of the professional (Tosone et al., 2012). This phenomenon is an indication of the presence of unresolved personal issues with the professional, which has the potential to interfere with service provision and professionalism. Countertransference could result in poor professional or therapeutic boundaries with potential adverse effects on the overall quality of care clients receive (Capri et al., 2013).

Traumatic Countertransference

The term traumatic countertransference was developed by Herman (1997) to describe the negative metamorphosis of the worker from professional helpmate to a pathological rescuer. Herman explains that a worker might struggle with a strong innate desire to assist traumatized clients, who in their pursuit to make sense of their suffering, project paradoxical behaviors toward the worker, such as rage and anger. The professional, as a means of protection and out of good s, might assume the role of

rescuer, creating a situation of dependency and a reinforced sense of helplessness in the client. Out of the self-imposed importance, the worker might begin to believe that he or she is the only person who can help the client. The result often includes the worker violating both professional and personal boundaries to provide services for the client.

Likely, the worker might neglect other work duties related to the client's care by working outside professional hours, providing extra services outside of professional responsibilities, and engaging in personal communication. Herman (1997) states traumatic countertransference if left unchecked could result in higher levels of client dependency on the worker, creating an adverse treatment outcome. Eventually, this dynamic if not addressed will result in a poor outcome for the clinician and the client (Herman, 1997).

Efforts to measure countertransference and traumatic countertransference have been evolving. One of such measure or one with robust psychometric properties is the Assessment of Countertransference Scale (ACS) (de Moura Silveira et al., 2012). The scale — comprised of 23 items scored in a Likert-type scale (0 = absence to 3 = very) (de Moura Silveira et al., 2012) — was used to conduct psychometric analysis of the ACS among 50 residents in a psychiatric setting. The study identified a three factor (rejection, closeness, and sadness) scale to be a valid way to access countertransference. (de Moura Silveira et al., 2012).

Shared Trauma and Double Exposure

Some researchers postulate that shared trauma or shared traumatic reality occurs commonly among social service workers (e.g. Baum, 2014; Tosone et al., 2012). Shared trauma or shared traumatic reality occurs when a worker and client both experience

similar traumatic events within their lifetime (Tosone et al., 2012). The existing research indicates that this is a common occurrence in social services because workers are often motivated for a career involving helping others due to their prior personal struggles (Shannon et al., 2014). Researchers examined this concept, and found that workers (police officers and mental health professionals), who experienced similar situations as their clients, exhibited a higher level of work engagement than their counterparts without such experiences (Eskreis-Winkler et al., 2014). Moreover, they identified that the associations between the professional experience and work engagement were partially explained by different factors — levels of grit and a greater sense of life-narrative continuity among the police and the mental health workers, respectively (Eskreis-Winkler et al. 2014). Double exposure indicates that a clinician and client have experienced the same trauma at the same time. This often occurs for those serving community-wide traumas, such as political terror, natural disaster, or public catastrophe (Ben-Porat, 2015).

Shared trauma and double exposure currently are assessed in the literature through interviews (e.g. Tosone et al., 2012; Day et al., 2017) or through research questionnaires (e.g. Freedman & Mashiach, 2018).

The assessment process usually consists of a two-step process using established instruments: accessing occurrence and degree, and measuring related symptoms (psychological distress, burnout, functional impairment, and post-traumatic stress symptoms).

Secondary traumatic stress (STS)/compassion fatigue (CF)

Secondary traumatic stress describes the immediate adverse reactions people can have to trauma survivors that they are helping or wanting to help. Figley (1983) defined

secondary trauma as the emotional duress experienced by persons having close contact with a trauma survivor, especially concerned family members. It is a natural response with which helpers might identify and empathize to a survivor's traumatic material (Figley & Kleber, 1995). Figley coined the term secondary traumatic stress (a.k.a. secondary victimization) (1995), which explains a phenomenon where professionals become psychologically overwhelmed by their desire to aid and comfort based on their observations of trauma and suffering in others. The term is most applicable to first responders, social service workers, medical personnel, members of the legal/correctional community, and other professionals who encounter persons who have been traumatized (Branson, 2018). Figley (1995) renamed the term "compassion fatigue" and emphasized that it is a normative occupational hazard for trauma workers and mental health professionals, thus explaining that this term is preferred because it is less stigmatizing. Compassion fatigue describes a phenomenon where professionals experience emotional and physical fatigue because of persistent use of empathy when providing services to suffering clients (Figley, 2002; Rothschild & Rand, 2006). The chronic use of empathy combined with organizational challenges within the working environment is what could generate compassion fatigue (Figley, 1995, 2002).

In 2017, a group of researchers, clinicians, trainers, and policymakers convened to evaluate the state of science regarding STS interventions and to create an agenda for advancing the field. Among other findings, the group concluded that the term STS is more appropriate than CF because it is much more specific (Sprang et al., 2018). The group argued that "compassion," although important, is neither clearly defined in most of the existing literature nor a required panacea to stress reactions to indirect trauma.

Moreover, it could be argued that the term compassion fatigue might not capture the severity of the problem, and impact the necessary attention and resources needed to address this phenomenon. Hence, the term secondary traumatic stress could be the more appropriate description of this condition because it depicts the true reality of risks among a segment of the workforce exposed to client trauma. Secondary traumatic stress often involves a feeling of helplessness, when sufferers become overwhelmed by the quantity of need and their lack of comprehensive and meaningful resources. Presentation of secondary traumatic stress is like post-traumatic stress disorder (PTSD) symptomatology, prompting behavior such as avoidance, unwanted mental images, oversensitivity to trauma-related stimuli, and compromised daily functioning.

Figley (1995) states Secondary Traumatic Stress Disorder (STSD) is a syndrome of symptoms identical to PTSD defined by the expansion of the criterion defining a traumatic event, states the Diagnostic and Statistical Manual, Fourth Edition (DSM-IV); American Psychiatric Association, 1994) and enhanced in the Diagnostic and Statistical Manual, Fifth Edition (APA, 2013). This new definition explicitly includes: “experiencing repeated or extreme exposure to aversive details of . . . traumatic events (e.g., first responders collecting human remains; police officers repeatedly exposed to the details of child abuse)” (APA, 2013, p. 271).

It could be argued that STS and PTSD are similar symptomatically but different in origin. This means the traumatized person might develop PTSD, whereas the one exposed to the traumatized person might develop STS (Jenkins et al., 2002). However, Sprang et al. (2018) noted a difference between the PTSD Criterion A and STS. Notably, PTSD might develop with exposure to repeated or extreme aversive details of traumatic

events, whereas the STS might develop due to exposure to adverse details that could be neither repetitive nor extreme.

The Secondary Traumatic Stress Scale (STSS; Bride et al., 2004) assesses STS symptoms anchored in 17 symptoms of PTSD. STSS consists of three domains of traumatic stress specifically associated with secondary exposure to trauma: intrusion, avoidance, and arousal. The STSS psychometric properties have been well established (Bride et al., 2004, Bride, 2007; Ting et al., 2005) and its reliability is high in several studies. The STSS was designed to be congruent with the Fourth Edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) diagnostic criteria for PTSD but worded specifically to capture the experience of persons who work with a traumatized population and thus those whose exposure to trauma is indirect.

Mordeno, Go, and Yangson-Serondo, (2017) conducted a latent factor structure of STS using DSM- 5 nomenclature among 241 registered nurses. The outcome was a revised 20 item, 7-factor model, comprised of: intrusion; avoidance; negative effect; anhedonia; externalizing behavior; anxious arousal; and dysphoric arousal factors as the best fit to measure STS (Mordeno et al. 2017). One of the criticisms of the STS scale is that it might be too narrow to capture the full conceptualization of STS. The STS scale might not capture reactions to indirect exposure to trauma, such as decreased empathy, diminished professional efficacy, moral distress, and feeling stigmatized (Sprang et al., 2018).

Compassion Satisfaction

The satisfaction workers might experience as a result of being able to aid others is termed as Compassion Satisfaction (CS) (Stamm, 2010). Specifically, CS is explained as

the perceived gratification an individual receives from helping traumatized clients. Compassion satisfaction has been noted to potentially increase a worker's personal growth, to motivate the worker to support clients, and to improve the quality of care (Wagaman et al., 2015). Studies have linked CS to a reduction in worker vulnerability to STS and burnout, and it might be a protective factor for the development of adverse psychological responses (Simon et al., 2006).

The Professional Quality of Life Scale (ProQOL; Stamm 2010) is a widely used scale to measure CS. The ProQOL is a revision of Figley's (1995) Compassion Fatigue Self-Test. The ProQOL reflects Stamm's conceptualization of professional quality of life as encompassing the constructs of a 30-item questionnaire with a 5-point Likert scale regarding compassion fatigue (characterized by burnout and secondary trauma), and compassion satisfaction. Each of the ProQOL's three scales is psychometrically unique and cannot be combined with the other scores.

Recent work examining the construct validity of the ProQOL scale using a Rasch analysis among 1,615 registered nurses reported robustness in the use of the compassion satisfaction scale but not the burnout and traumatic stress scales (Heritage et al., 2018).

Vicarious Trauma

To understand the impact of trauma on a therapist, Lisa McCann and Laurie Anne Pearlman (1990a) coined the term "vicarious traumatization" in an attempt to describe and articulate the repercussions of trauma and its consequences on therapists.

Pearlman and Mac Ian (1995) defined vicarious trauma (VT) as the "transformation that occurs within the therapist... as a result of empathic engagement with clients' trauma experiences and their sequelae" (p. 558). According to Pearlman and

Saakvitne (1995), VT has its theoretical basis in constructivist self-development theory, defined as the permanent “transformation in the inner experience of the therapist that comes about as a result of empathic engagement with clients’ trauma material” (p. 31). The main symptoms of VT are disturbances in the therapist’s cognitive frame of reference, “identity, worldview, and spirituality...affect tolerance, fundamental psychological needs, deeply held beliefs about self and others, interpersonal relationships, internal imagery, and... physical presence in the world” (Pearlman & Saakvitne, 1995, p.280).

Verbal exposure to traumatic material theoretically changes cognitive schemas regarding both self and others in five key areas representing primary psychological needs relevant to trauma: trust, safety, control, esteem, and intimacy (Pearlman & Saakvitne, 1995). Intrusive imagery and other PTSD symptoms also appear as disruptions to the professional’s imagery system of memory, yielding painful experiences of images and emotions associated with the client’s traumatic memories. These effects could be profound and long-lasting (McCann & Pearlman, 1990).

The development of VT is directly related to client disclosures of trauma, often detailed and graphic, which occur during a therapeutic relationship (Possick et al., 2015). Vicarious trauma is principle among clinicians who help victims of violence, particularly sexual assault and incest survivors (Jenkins et al. 2002). Engaging in an empathic relationship and understanding trauma from the client’s person-in-environment point of view is an essential part of a professional skill set and therapeutic rapport (Chang et al., 2013).

In this case, the professional is expected to be open to the detailed disclosures of the client's traumatic experiences, suspend personal values and judgments, and adopt the client's worldview. This level of therapeutic intimacy creates a vulnerability for the therapist — becoming “infected” with the cognitive and affective aspects of the client's trauma (Aparicio et al., 2013; Van Hook & Rothenberg, 2009). As a result of the client-therapist relationship, some researchers see VT as an inevitable, natural, and reasonable response to the therapeutic relationship (Barrington & Shakespeare-Finch, 2013; Sansbury et al., 2015). Therefore, it should be considered a work hazard and a catalyst for prevention development, training initiatives, and supports for practitioners (Branson et al., 2014; Shannon, et al. 2014). Similar to symptoms of primary trauma, VT symptomatology is diverse. It can manifest in a clinician's professional and/or personal life, and it falls into four categories: intrusive imagery, arousal, avoidance behaviors, and adverse changes to cognitions (Aparicio et al., 2013; Mishori et al., 2014).

Vicarious trauma was measured with the TSI Belief Scale, Revision L (Pearlman, 1996) as an instrument to measure VT. The 80-item, 6-point Likert scale (1 D disagree strongly, 6 D agree strongly) instrument measures disruptions in five cognitive schemes/beliefs (safety, trust, esteem, intimacy, and control), each about self and others, yielding 10 subscales. Scores obtained include a total score calculated from the sum of all responses. A higher score indicates greater disruption. The average score for mental health professionals is 166.83 (Pearlman & Mac Ian, 1995). Psychometric analyses of the scale have produced mixed outcomes (Jenkins & Baird, 2002; Adams et al., 2001).

Post-traumatic stress disorder. Post-traumatic stress disorder is a diagnosis involving psychological anxiety resulting from exposure to a threat via first-hand

victimization, bearing witness to a threat, being overwhelmed by the knowledge of a loved one's trauma, or extreme repeated exposure to details of an ordeal. PTSD symptoms must create daily impairment for more than a month (less than one month in duration would dictate acute traumatic stress) and are divided among five clusters: exposure to traumatic events (directly or indirectly); exhibition of one or more intrusive symptoms; alterations in arousal; avoidance; and detrimental changes in cognition and mood (APA, 2013). The symptoms of PTSD overlap with STS and VT. However, STS and VT do not meet the requirements of precipitating events (Branson, 2018). First, professionals are neither part of a primary victim's first-hand account nor do they witness the trauma unfold in real time. Additionally, professionals are not bearing witness to the traumatic details of trauma from loved ones or close peers, due to existing professional boundaries and ethical norms. (Iqbal, 2015). The last qualifying criteria (extreme exposure to the details of the event) could justify the development of STS and VT, but it is important to note that the professionals do possess tools such as educational training, practiced coping skills, supervision, peer colleagues, and other resources to manage exposure to traumatic exposure from clients (Iqbal, 2015; Sansbury et al., 2015; Branson, 2018). The DSM is the widely used assessment tool to diagnose PTSD.

Emotional Contagion

This condition, coined by Hatfield, Cacioppo, and Rapson (1993), involves a two-step process of mimicry and imitation. Humans have an innate ability to reflect encountered emotions. Therefore, when faced with a traumatized individual, the displayed feelings might be indicated by the bystander. Emotional contagion is one element of the more complex phenomena of empathy. Hence, emotional contagion is a

small part of the overall process of vicarious trauma development but not a synonymous term (Branson, 2018).

The Emotional Contagion Scale (ECS) was first developed by Doherty and colleagues (Doherty, 1997; Doherty et al., 1995). It underwent two revisions from a 38-item measure to a 20-item measure (Doherty et al., 1995) to the current 15-item version (Doherty, 1997). The ECS measures an individual's susceptibility to mimic the emotions of others. It examines a person's tendency to mimic five basic emotions: sadness, fear, anger, happiness, and love. The psychometric analyses have yielded insubstantial results (Lo Coco et al., 2014; Bhullar & Bains, 2013).

Burnout

Conceptually, burnout is a defensive response to prolonged occupational exposure to demanding interpersonal situations that produce psychological strain and inadequate support (Jenkins et al., 2002). It was first used by psychologists in the occupational stress literature to describe emotional consequences associated with human service workers and mental health professionals who work intensely with other the problems of others (Maslach, 1976, 1982). Burnout is the product of a poor working environment and usually entails deficient administrative support, insufficient compensation, persistent staffing problems, high turnover, poor morale, lack of opportunities for advancement, lack of appreciation, and exasperating work with little hope of change (Dombo & Gray, 2013; Sansbury et al., 2015). Indicators of burnout are a feeling of depersonalization, a negative shift in productivity, generalized apathy, and emotional exhaustion (Hayes, 2013).

Maslach (1982) provided the most widely used construct definition of burnout, containing three content domains: a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who do people-work of some kind as a:

. . . response to the chronic emotional strain of dealing extensively with other human beings, mainly when they are troubled or having problems . . . A pattern of emotional overload and subsequent emotional exhaustion is at the heart of the burnout syndrome. A person gets overly involved emotionally, overextends himself or herself, and feels overwhelmed by the emotional demands imposed by other people (p. 3).

Commonly Used Constructs in Indirect Trauma Literature

Although various concepts are widely used interchangeably in secondary trauma literature, one of the significant difficulties in the systematic study of the construct relates to a lack of clarity regarding terminology. In recent years, attempts have been made to examine the theoretical and conceptual distinctions put forward by authors. Three of the principal concepts often used interchangeably are secondary traumatic stress (STS), vicarious trauma (VT), and burnout (Tabor, 2011).

Secondary Traumatic Stress and Vicarious Trauma

Secondary traumatic stress is used interchangeably with vicarious trauma in some of the literature (Dombo & Blome, 2016). STS is a condition which affects workers, family members, and close friends of people with PTSD (Figley, 1995). STS encompasses several symptoms like PTSD, such as hypervigilance, numbing, and avoidance (Molnar et al., 2017). However, STS differs from PTSD in that only the

traumatized individual could develop PTSD, whereas the person exposed to the traumatic experience develops STS (Jenkins & Baird, 2002).

Both VT and STS signify reactions to the emotional demands on professionals from exposure to the trauma survivor's horrifying and shocking images, the strong chaotic effect, and the intrusive traumatic memories (Figley, 1995; Pearlman, 1996; Stamm, 2002, Jenkins et al. 2002). However, Branson (2018) argues that it is worth noting two main differences that distinguish the two concepts. First, VT associates with professionals who are involved in an empathetic relationship with clients and who come to understand trauma from a client's worldview and to understand what meaning the client subjectively subscribes to the event. Second, STS is acute and can occur after a single episode of exposure, whereas VT is accumulative and happens over time (McCann & Pearlman, 1990, Bride 2007; Aparicio et al. 2013; Schauben & Frazier, 1995). Although both STS and VT models include re-experiencing trauma symptoms as a significant component, VT theorizes cognitive disruptions, including alteration in the worker's worldview as the primary effect, instead of the broader range of symptoms associated with STS.

Like STS, VT constructs stem from contact with trauma survivors and both include a similar component of residual PTSD-like symptoms that suggest a moderate-to-high correlation between them (Jenkins et al., 2002). Jenkins et al. (2002) differentiates between STS and VT in four categories:

- Focus on symptomatology versus theory: As the proponent of STS, Figley (1995) focuses on observed PTSD symptomatology. McCann and Pearlman (1990) and

Pearlman and Saakvitne (1995) adopted the constructivist self-development theory to explain the self-perceived changes associated with VT.

- Nature of symptoms (observable reactions versus more covert changes in thinking): Although Figley (1983) acknowledges the impact of trauma on cognition, the emphasis on PTSD symptoms with rapid onset are central to the theory of STS. Conversely, McCann and Pearlman (1990) discuss physical PTSD symptoms but emphasize their content rather than intensity in the context of profound belief system changes.
- Relevant populations: Figley (1983) initially identified secondary traumatic stress in sexual assault in the significant others of survivors and combat veterans. However, recent studies have expanded the concept to apply to professionals, such as police officers, nurses, and trauma therapists, who provide direct services to sexual assault (and other trauma) survivors (e.g., Figley, 1995). However, McCann and Pearlman (1990) and Pearlman and Saakvitne (1995) focused on mental health professionals, especially those who work with survivors of incest and childhood sexual abuse.
- The critical amount of exposure to trauma survivors: Figley (1983) asserted that one severe exposure to only one other person's traumatic material could lead to symptoms of secondary traumatic stress, but McCann and Pearlman (1990), believe VT results from cumulative exposure to traumatized clients over time. In the context of the argument as to whether STS and VT are the same constructs or not, Gulin (2017) asserted that it depends on the answer to the question as to

whether these conceptual differences are reflected in differential associations for which they intend to measure.

Burnout, Secondary Traumatic Stress, and Vicarious Trauma

Although the initial presentation of these terms shows conceptual overlap and similarities, a significant number of studies have highlighted their distinctions (Canfield, 2005; Schauben & Frazier, 1995). Burnout was first conceptualized in the occupational stress literature to describe emotional, mental, and physical exhaustion associated with the workplace (Maslach & Jackson, 1981). It is defined as a defensive mechanism among human services workers who deal with intensely challenging behaviors with prolonged lack of personal and organizational support (Tabor, 2011). Contributors to burnout include professional isolation, cynicism, emotional and physical strain, and lack of expected rewards or accomplishment (Gulin, 2017). It is often associated with adverse occupational outcomes such as absenteeism, tardiness, and delayed productivity (Dunkley & Whelan, 2006). Like STS and VT, burnout might occur in trauma providers. However, the burnout construct is more widely applicable to working with challenging populations in which structural supports are insufficient (Gulin, 2017).

Various studies have attempted to examine the points of convergence and divergence between burnout, STS, and VT (Deville et al., 2009). The convergence of STS, VT, and burnout constructs rely on the belief that they share common theoretical underpinnings. This means they all emanate from exposure to emotionally engaging clients via interpersonally demanding jobs and represent debilitation that can obstruct a provider's services (Jenkins et al., 2002). Jenkins et al., 2002, added that due to factors such as empathy as a theoretical vulnerability factor, interpersonal demands and

psychological distress are common among these constructs. Therefore, a finding of moderate overlap with burnout supports the construct validity of both STS and VT. However, the constructs should be no more than moderately related because of the theoretically different impact of trauma exposure compared with workplace structural strains (Schauben & Frazier, 1995; Jenkins et al., 2002). It is important to emphasize that in the long run, regardless of their theoretical convergence, they should be distinctive psychometrically as independent valid constructs for any major distinction to be made. This could be achieved through comparative analysis of the scales used to measure these underlying constructs within a study group. Table 1 below represents the various terms in the literature to describe the indirect effect of trauma on workers, measurement tools and its psychometric properties discussed in this section.

Table 1

Various Terms in the Literature to Describe the Indirect Effect of Trauma on Workers, Measurement Tools and Psychometric Properties.

Concept	Measure	Psychometric Properties	Reference
Trauma and countertransference	Assessment of Countertransference Scale (ACS)	Rejection; $\alpha = 0.88$ closeness; $\alpha = 0.82$ sadness; $\alpha = 0.72$	de Moura Silveira, et al. (2012)
Shared trauma and double trauma	Interviews and Research Questionnaires	N/A	Tosone et al. (2012) Freedman & Mashiach (2018)
Secondary trauma	Secondary Traumatic Stress Scale	Full scale; $\alpha = 0.93$ Intrusive; $\alpha = 0.80$ Avoidance; $\alpha = 0.87$ Arousal; $\alpha = 0.83$	Bride et al. (2004)
Compassionate Satisfaction	Professional Quality of Life Scale (ProQOL)	Compassionate Satisfaction; $\alpha = 0.88$ Burnout; $\alpha = 0.75$ Secondary Traumatic Stress; $\alpha = 0.81$	Stamm (2010)
Vicarious trauma	Traumatic Stress Institute Belief Scale (TSI)–Revision L	Full scale; $\alpha = 0.98$	Pearlman (1996)
Emotional contagion	Emotional Contagion Scale	Full scale; $\alpha = 0.90$	Doherty (1997)
Burnout	Maslach Burnout Inventory (MBI)	Emotional Exhaustion; $\alpha = 0.90$ Depersonalization; $\alpha = 0.79$ Personal Accomplishment; $\alpha = 0.71$	Maslach & Jackson (1981)

Theoretical Perspective of Trauma and Secondary Trauma

Trauma and ID/DD Population: Cognitive-Behavior Theoretical Perspective

Cognitive theorists postulate that people develop constructs that help them to identify and process incoming information. Piaget termed this concept schema, which helps one's ability to organize and adapt to the environment (Piaget, 1936). Therefore, cognition represents an internal organization of systems guided by sets of rules that aid in the processing of information and the connection of events to past experiences (Hayes & Oppenheim, 1997). Two main concepts from this structural perspective of cognition are organization and adaptation.

- Organization in this context is the tendency to combine and associate physical or mental structures into coherent, complex, and higher-order structures (Robbins et al., 2006).
- Adaptation refers to the process by which structures of the mind develop throughout a period of time into a better fit between a person, their environment, and external reality.

These individual schemas develop as a result of one's life experiences within a meaningful social and cultural context. These experiences shape the development of either positive or negative schemas within the areas of psychological needs, which in turn serve as the frame through which any event is viewed (McCann & Pearlman, 1990). Therefore, a person's reality is a consequence of one's experiences guided by the interactions between the person and the environment. This process is recursive and underscores human effort to make sense of the nature of its interaction with the world (Hayes & Oppenheim, 1997).

As a result, people construct their assumptions of what is reality and create sets of rules that aid them in processing and adapting to new information and events. Through the concept of adaptation, people can assimilate new perceptual events and information, and incorporate them into their mental frame or schema. Also, the assumptions allow people to arrange information and function within their world with some degree of confidence (Epstein, 1985; Janoff-Bulman, 1992; Parkes, 1975). These assumptions include beliefs that the world is a safe place (Janoff-Bulman, 1989), that one is invulnerable (Perloff, 1983), that self and other people are basically good, and that the events that occur are meaningful (Janoff-Bulman, 1989; Janoff-Bulman & Frieze, 1983; McCann & Pearlman, 1990). McCann and Pearlman (1990) explained that these experiences shape the development of either positive or negative schemas within five areas of psychological needs. The psychological needs are: safety, trust, esteem, control, and intimacy. They constitute the “lens” through which any event is understood (McCann & Pearlman, 1990).

Developmental psychopathologists propose that emotional and social adaptations to environmental conditions arise from a reciprocal intersection of thoughts and emotions — humans “establish a coherence of functioning as a thinking, feeling human being” through the meaning they affix to experiences (Rutter & Sroufe, 2000, p. 265). Janoff-Bulman (1985) suggested that any traumatic experience will disrupt and shatter an individual’s underlying assumption about themselves and their world. For example, a traumatized individual will change how they view themselves, determine that the world is an unsafe place, and question the orderliness of the world in which they live. Over time,

the changes in cognition could be emotionally destabilizing, behaviorally maladaptive, and cognitively impairing (Anda et al., 2006).

In a nutshell, experiences of trauma can impact how people view themselves and their world (Janoff-Bulman, 1989, Magwaza, 1999). For example, a study by Janoff-Bulman (1989) compared two undergraduate groups: those who have been victims and those with no experience of victimization.

Janoff-Bulman found that survivors of abuse had a more negative view of themselves and the world than did non-victims. Also, studies have found that exposure to persistent life-threatening events such as abuse, violence, and neglect exhibit the most personally and clinically challenging behaviors (Jankoski, 2003). These people are more likely to experience tremendous loss, a sense of betrayal of trust, a lack of control, and unsafety. These negative emotions could result in challenging behaviors such as terror, rage, and overwhelming anguish (Jankoski, 2003).

To fully comprehend the impact of trauma on a victim, we must also be aware of the emotional, behavioral, and physical repercussions these traumatic events could have on an individual. Figley (1985) stated that post-traumatic stress reactions are the natural behaviors and emotions that accompany traumatic events. The DSM-V (2013) identifies the symptoms of PTSD to include but that are not limited to: recurrent and distressing recollections of the event, including images, thoughts, or perceptions; dreams with the sense of reliving the event; illusions; flashbacks; efforts to avoid thoughts, feelings, activities, people, and places; decreased interest in involvement; and feelings of detachment from others. These indicators, among others, can be intrusion symptoms associated with events, persistence avoidance of stimuli associated with the event,

detrimental alterations in cognitions, and alteration in arousal and reactivity (DSM-V; Herman, 1992). Therefore, a person who has been previously traumatized, who becomes exposed to an actual or perceived threat, is more likely to exhibit intense and intolerable emotions, and cope through challenging behaviors (Brown, 2016; Janssen et al., 2002).

Individuals with ID/DD are known to have higher rates of challenging behaviors than the general population (Lowe et al., 2007; Tyrer et al., 2006; Emerson, & Einfeld, 2010).

These challenging behaviors potentially are the expression of emotional reactions connected to past trauma exposure. For instance, arousal symptoms might be manifested in the form of self-injury, aggression, and outbursts of anger, or avoidance symptoms seen as noncompliance (Tomasulo & Razza, 2007). The need to understand how individuals diagnosed with ID/DD process trauma and react to when they re-experience events is an evolving field of study but a necessary one to better support the population.

Secondary Trauma and Direct Support Professionals: Symbolic Interactionism

Theoretical Perspective

The milieu within which DSPs provide support to persons with ID/DD population are usually influenced by predetermined assumptions. These assumptions range from personal biases, stereotypes and lack of knowledge that might have developed over a lifetime. Undoubtedly, many DSPs comes to the field with the desire and passion to do the best at their jobs but face societal norms and to some extent lack of experience and inadequate training.

The list of contributors to the development and evolvement of symbolic interactionism theory includes but is not limited to Charles Cooley, John Dewey, Josiah

Royce (George H. Mead's teacher), Ervin Goffman, Manford Kuln, and Max Weber (May, 1996; Robbins et al., 2006). Mead is considered one of the most influential in the development of symbolic interactionism (Ritzer & Stepnisky, 2014). The term "symbolic interactionism" was coined by Herbert Blumer, a student of Mead in 1937 (Morriane, 2007).

Blumer argued that human beings respond to their environment through a medium of meaningful interpretations (May, 1996). Symbolic interactionism is rooted in the concept of pragmatism. Pragmatism posits that reality is socially constructed and that "true" reality does not exist.

Rather, people base their decisions on what knowledge makes the most sense to them (Ritzer and Stepnisky, 2014).

Symbolic interactionism embodies a wide range of theories with shared assumptions about the nature of human development. Symbolic interactionists argue that the definitions attributed to spatial and physical objects are constructed based on usefulness to people. Also, human beings are social beings who engage in symbolic interactions, i.e. people interact with one another based on shared meanings or symbols (Robbins et al. 2006), the meaning and symbols people ascribe to social objects forms the basis from which social interaction is made possible. For this research study, we will consider four critical components of symbolic interactionism in an attempt to explain how interactions between ID/DD clients (specifically those with a traumatic past) and staff in their social environment could impact the DSP's self-conception, thinking process, and actions. The four in order are:

- the dynamics of the interactions between the actor and the society.
- how various actors or individuals interact to create dynamic social institutions.
- how individual acts, gestures, and significant symbols contribute to symbolic interaction.
- expounding on the concept of action and interaction in symbolic interactionism.

The Actor and the Society

Philosophical pragmatists such as John Dewey viewed the “mind” as a thinking process rather than a psychological object that involves a series of actions (Jacobs, 2007, Stryker, 1980). Similarly, Mead defined the mind as an inner conversation with one’s self, a social phenomenon and a process but not simply a thing (Franks, 2007). In one of the four books published posthumously, *Mind, Self and Society* (1934), Mead expounded on this idea with emphasis on the concept of human consciousness — the “mind” and the “self” as social product developed through social process (Robbins et al., 2006). Mead (1934/1962) postulated that it is through reflexivity that the self is developed:

It is by means of reflexiveness — the turning-back of the experience of the individual upon himself — that the whole social process is brought into the experience of the individuals involved in it; it is by such means, which enable the individual to take the attitude of the other toward himself, that the individual is able consciously to adjust himself to that process, and to modify the resultant process in any given social act in terms of his adjustment to it. (p. 134).

This means the development of self involves the taking on roles of others (Mead 1959). The theory assumes that humans possess the capacity to think and make reflective

decisions, and that capacity is influenced by social interaction. It is further postulated that a connection exists between social interaction and human capacity for thought. This ability to think is believed to have developed early in life, and it adjusts over time through socialization (Ritzer & Stepnisky, 2014). In Mead's analysis of the social process, he applied priority to the social world when it comes to understanding social experience (Ritzer & Stepnisky, 2014).

This suggests that human interaction with their social environment is significant in shaping the concept of the self and the thinking process. Therefore, the mind, the self, and the society are not distinct elements but are processes of personal and interpersonal interactions (Littlejohn, 1977). Hence, people bear the mark of their interactions and relationships with others (Ritzer & Stepnisky, 2014). When people interact with themselves and others, their thoughts, perceptions, and actions would be affected in the process. Such effects will ultimately influence their ability to process information, outline alternative choices, evaluate outcomes, and make optimal choices (Ritzer & Stepnisky, 2014).

The Emergence of Social Institutions

It must be noted that although Mead described mind, self, and society as interconnected, his concept of society was not associated with macro social structures found in the works of Marx, Weber, and Durkheim (Robbins et al, 2006). In spite of being criticized for limited work in developing his concept of macro structures, Mead explained that social institutions and the individual member do interact (Ritzer & Stepnisky, 2014). Mead argues that to have a self, it is important for one to be part of a community and adhere to the attitudes common to that community (Ritzer & Stepnisky,

2014). Also important in that environment is the “society” or the “institution” where the interaction takes place. Charles Cooley emphasized that the relationship between the individual and the society are reciprocal in nature (Robbins et al, 2006). He postulated that “individual mind” and “social mind” are inseparable. Likewise, Blumer emphasized that it is the interconnectivity of social actions and interactions that create society (Robbins et al. 2006), suggesting that a society is created organically through the joint actions of the actor’s interpretive processes.

Two important views on society by Mead and Blumer are worth emphasizing in the context of this study.

First, Mead understood the impact social institutions could have on the individual. He advocated that institutions should not destroy individuality or stifle creativity. He pointed out that (Mead 1934/1962): “There is no necessary or inevitable reason why social institutions should be oppressive or rigidly conservative, or why they should not rather be, as many are flexible and progressive, fostering individuality rather than discouraging it” (p. 262). This implies that social institutions, such as an organization or agency, exert influence in the social milieu and impact the individual or “actor” positively or negatively by their actions. This suggests that organizational culture and norms do play an important role in how the actors interact, think, and act. Second, Blumer argued that social institutions are made up of people or actors whose actions constitute the institution’s actions. Blumer (1962/1969) in his criticism of social determinism indicated that: “with social determinism, the social action of people is treated as an outward flow or expression of forces playing on them rather than acts which

are built up by people through their interpretation of the situations in which they are placed” (p. 84).

To Blumer, institutions are not made up of gatherings of isolated acts but a collective act known as “joint action” (Ritzer & Stepnisky, 2014). Therefore, it is through the understanding of the processes by which individuals interpret situations and construct their actions with respect to each other that humans could understand social institutions (House, 1977). Also, individual actions collectively do have impact on the character of the social institution and that joint action is fluid and flexible (Ritzer & Stepnisky, 2014). This suggests that social institutions emerge and evolve over time and that the actors or people have the power to initiate such change. However, Blumer admitted that such changes might be difficult to enact, partly due to systems of pre-established meanings, such as culture and social order (Ritzer & Stepnisky, 2014).

Nevertheless, he emphasized that such pre-established patterns are not permanent but organic and natural, so they are subject to change. Mead (1959) explained that “it is the social process in the group life that creates and upholds the rules, not the rules that create and uphold group life” (p. 19).

This signifies that to the symbolic interactionist, social institutions, through pre-established patterns, might constrain individuality. However, even in such situations, the individuals have the power to change the social institution through self-consciousness.

Symbolic Interaction

In symbolic interactionism, the concept of “*act*” involves stimulus and response, i.e. a stimulus elicits an opportunity to act. Mead distinguished this concept from

behaviorist's approach by emphasizing that a stimulus does not trigger an automatic unthinking response but a thoughtful process. However, he asserted that not all responses require cognitive processing (Ritzer & Stepnisky, 2014)

Mead differentiated the act in four stages (Ritzer & Stepnisky, 2014) as:

- impulse, the immediate response to stimulus.
- perception, the thinking and assessment through mental imagery prior to responding.
- manipulation, the ability to manipulate the object by contemplating on various responses prior to making a choice.
- consummation, the action taken that satisfies the original impulse.

These stages could appear sequential in order, but they also could present a dialectical relationship and form one organic process (Baldwin, 1986).

This suggests that how people respond to a stimulus might be different from one person to another and one circumstance to another.

As discussed previously, the act in symbolic interactionism involves one person, but a “social act” involves two or more people (Ritzer & Stepnisky, 2014). A social act involves “gestures” and “significant symbols.” In a broad social context, gestures are used as the basic mechanism for interaction. Mead defined gestures as “movements of the first organism, which act as specific stimuli calling forth the (socially) appropriate responses of the second organism” (Mead, 1934/1962: 14). Gestures could be vocal or physical, and are reciprocal in nature between organisms. Gestures form the basis of communication. It is argued that vocal gestures in the form of language are a distinctive

part of human development (Ritzer & Stepnisky, 2014). Human beings communicate through vocal gestures and physical gestures. The highest order of gestures is known as “significant symbols” and only humans can make them. Significant symbols possess three features. First, they elicit the same response (it need not be identical) from both the person expressing it and the person to which it is being expressed. Second, significant symbols have a functional aspect because significant symbols allow for explanation and referencing in interaction and enhancement of the thinking process. Lastly, significant symbols allow for symbolic interaction — interaction with oneself and others centered on shared meanings and symbols (Ritzer & Stepnisky, 2014).

In symbolic interactionism, symbols are social objects which are used to represent what people agree they represent (Charon, 1998). The object can be any aspect of a person’s life which he/she can name and represent symbolically. Therefore, meaning is not inherent in the object itself but rather meaning is assigned to the object (House, 1977).

The symbols are used as mediums of communication to others. Symbols allow people to identify and categorize objects, create perception, improve ability to think, increase ability to problem solve, and to imagine scenarios (Ritzer & Stepnisky, 2014).

Action and Interaction

Mead differentiated between “covert behavior” and “overt behavior” to depict the actions emanating from meaning and symbols associated with social objects (Ritzer & Stepnisky, 2014).

The covert behavior embodies the thinking process, while the overt behavior depicts the response performed by the individual. Although a majority of human actions involve both covert and overt behaviors, not all overt behaviors involve covert behavior. Such behaviors include impulsive or habitual reaction to external stimuli.

The acquisition of meaning and symbols foster social action and social interaction (Ritzer & Stepnisky, 2014). Social action involves a single actor who gauges his or her action on how it will impact others, whereas a social interaction involves a process through which people use symbols to communicate meanings to others. The recipients then interpret the symbols and respond accordingly. The aspects of social institution or society where this process of cognitive interpretation and behavioral construction occurs are the most important areas of inquiry to symbolic interactionist (House, 1977).

Implication of Symbolic Interactionism Theory to ID/DD workers

From the symbolic interactionism theoretical persuasion, the social institution within which individuals diagnosed with ID/DD receive care consists of key actors such as the clients, staff, agencies, and other stakeholders. Such social society is shaped by the joint actions and interactions of these actors.

Also, individual actors (i.e., the client and the staff) inevitably bear marks of the joint interaction in their conception of self, thinking process, and decision-making. Symbolic interactionists suggest that it is through these joint actions of the various actors that the social institution (in this case, the system of care) emerges.

Returning to care, it is important to note that within this society the actors come with preexisting symbols and meanings from other previous or currently existing social

lives (other relationships outside of ID/DD care). As a result, staff and clients might present various attributes and characteristics which form parts of their characterization of reality, which might have evolved and continue to evolve through childhood. As identified in literature, client-related attributes could include experiences from childhood, adverse events to complex trauma, as well as previous treatment experience and the love of caring family. Likewise, the staff might come into this social institution with a certain preexisting education and work experience, history of trauma, and experience with family members with ID/DD diagnosis, as well as general life experiences, which influence the staff sense of reality. These and other currently existing social circles, such as familiarity, friendships, relationships, and health status, become the filter of reality through which actions and interaction occurs.

Another important actor in this dynamic is the social institution which organically emerges from the joint interaction of the individual actors. However, symbolic interactionists such as Mead and Blumer pointed out that social institutions might have pre-established meanings in the form of organizational culture and social orders, which guide such entities. These cultures could include organizational philosophy, chain of command, description of roles and responsibilities, supervision support, and modalities of treatment.

These social orders and cultures are significant aspects of the overall interaction that exist within this society of ID/DD care and are likely to affect actors, such as staff, in its roles, self-conceptualization, thinking process, and actions. This multifaceted level of interaction between the various actors in this milieu is bound to have an impact on staff, clients, and the organization as a whole. It is more likely that some old meanings and

symbols could be recalled in order to make a different meaning out of certain stimuli, whereas new ones will be constructed when presented with new challenges.

Exposure to challenging client behaviors has been noted to generate PTSD symptoms among staff (Jacobwitz et al., 2015), and alter the working environment (Adams et al., 2008). It is contended that challenging environments do impact individuals (staff/caregivers) and elicit neurological, cognitive, and physiological alterations and functioning (Adams et al. 2008; Boscarino et al., 2006; Francis, 1997).

Summary

Given the extent to which the literature indicates the prevalence of trauma in ID/DD population both in severity and frequency compared with other populations, this study seeks to inquire how staff cognitive interpretations could be affected in such an environment and how such impact — if any is identified — will have on staff behaviors. Which interactional factors are likely to contribute to shared meanings and symbols from staff exposure to an ID/DD client's traumatic pasts? How will that affect staff concept of self, thinking process, and actions? This inquiry will attempt to answer the question: "Does a DSP's exposure to client's traumatic past, as presented in the ID/DD society, put DSPs at risk of developing shared symbols and meanings (indirect trauma)?" Also, "How will such symbolic interactions impact a DSP's social actions and social interactions in terms of specific outcomes?"

It is important to note that the quantitative method employed to study these phenomena is not one endorsed by symbolic interactionists from the Chicago School of thought such as Cooley, Mead and Blumer. Their recommended qualitative methodology

involves observations coupled with informal interviewing and examination of personal and public documents (House, 1977; Robbins et al. 2006)

Contrary to that, Manford Kuhn developed a school of interactionist thought (The Iowa School) using a scientific approach to study interactionism. Other major figures in this school include Rose, Rosenberg, and Stryker, whose work used quantitative empirical methods and deductive theoretical processes (House, 1977; Robbins et al. 2006).

Trauma Theory and ID/DD Individuals

People diagnosed with ID/DD have been exposed to traumatic events. Thus, they express their trauma in various forms. The trauma symptoms people diagnosed with ID/DD exhibit are a function of their cognitive ability and developmental level (Doyle et al., 2003), and can be presented in different ways (McCann et al. 1990). Trauma response in the ID/DD population could manifest in the form of challenging or aggressive behavior, anxiety, depression, mood swings, disruptive/defiant behavior, self-harm, agitation, distractibility, and sleep problems. The current state of knowledge suggests that people diagnosed with ID/DD who do experience these symptoms are sometimes misdiagnosed or under-diagnosed. Cognitive-behavioral theory creates the avenue for researchers and practitioners to contextualize trauma from ID /DD perspective in ways that consider the cognitive-processed and the underlying function of the behavior exhibited by the traumatized individual.

Secondary Trauma Theory and ID/ DD Workers

As is the case with the general population, people with ID/DD experience trauma and might express their experiences in various forms. People who work with them are

exposed to these experiences indirectly and in detail either through narrative, observation, or possibly through their challenging behaviors. The literature suggests that in addition to staff exposure to a client's traumatic experiences through narration and observation, staff who work with ID/DD populations experience a client's trauma through challenging behavioral expressions.

The exposure to a client's traumatic experiences could have significant impact on the staff. Such impact could manifest in the form of secondary trauma symptoms.

The ID/DD population is highly vulnerable and highly traumatized, therefore increasing the risk of workers to experience indirect trauma. It must be noted that in addition to the risk of ID/DD staff exposure to client traumatic experiences, workers are at a higher threshold to be exposed to aggressive/challenging behaviors.

It is believed that prolonged exposure to a challenging work environment could produce psychological strain and without inadequate support, that will lead to burnout (Jenkins et al., 2002; Tabor, 2011). It is argued that by nature, the development of secondary traumatic stress is inevitable when someone is exposed to a traumatizing event experienced by a significant other (client) and to the stress associated with being a helper (Figley, 1995). The presentation of STS includes the behavioral symptoms similar to the presentation of PTSD in the primary victim(s) of trauma. Lastly, it is postulated that within trauma service therapeutic milieu, the workers empathetic impulses and physiological reactions place him or her at risk of cognitive alterations and changes in worldview, resulting in VT (Saakvitne & Pearlman, 1999).

As noted, the presentation of trauma symptoms among ID/DD populations is somehow different from peers without an ID/DD diagnosis. Hence, a primary interest of

this study is the extent to which challenging working environments (especially challenging client behaviors) influence the development of burnout and secondary trauma in DSPs who work with adult ID/DD populations. Another area of interest is the impact of burnout and secondary trauma on DSP employment outcomes.

As a discipline, social work is built core fundamental principles such as service, social justice, importance of human relationship, competency and dignity of the person (National Association of Social Workers [NASW], 2017). Understanding the occupational needs and challenges of DSPs is essential to developing resources and capacity needed to serve people with intellectual and developmental disabilities. Also, the potential impact of burnout and secondary traumatic stress on organization, staff and client outcomes could inform advocacy and policy priorities necessary to improve the quality of care of clients, quality of life of the workers and viability of organizations in this field.

CHAPTER II

LITERATURE REVIEW

Introduction

How professionals respond to needs and preferences among clients with intellectual disabilities (ID) or developmental disabilities (DD) is commonly viewed as an essential aspect of quality of care in welfare services (Ineland, & Hjelte, 2018). However, such interactions could be challenging, and providers could be at risk for physical and/or emotional consequences of this work (Benson & Brooks, 2008). The potential impact of trauma and related effects on professionals who work with ID/ DD individuals are the focus of this study. The existing literature on the two relevant concepts, burnout and secondary traumatic stress among ID/DD workers, are the focus of this chapter (e.g. Butler et al., 2017; Hernandez-Wolfe et al., 2015; Cummings, et al., 2018).

Factors that Influence Burnout and Secondary Traumatic Stress.

Within the context of burnout and secondary traumatic stress, three categories of factors can be identified in the existing literature to influence these constructs. These include:

- 1) individual factors such as demographic, psychological, and history of traumatic experience that influence the capacity for the caregiver to cope with the impact of secondary trauma.

- 2) interpersonal factors, which are elements that emanate from the emotionally charged and demanding interaction between the caregiver and the traumatized ID/ DD clients.
- 3) organizational factors which exist within an organization to either contribute to or reduce the caregiver's ability to cope.

The extent to which each of these factors contributes to each construct differs due to theoretical differences and similarities. This chapter examines the current state of literature and proposes a study to advance knowledge in the field.

Data Search and Results

A systematic search was conducted involving five databases: PsycINFO, H.E. Wilson (Social Science Abstract); Ovid (Social Abstract Plus); Web of Science (Social Sciences Citation); and Psychology and Behavioral Sciences Collection. Keywords used in the search included: Burnout, Secondary Traumatic Stress, Direct Support Professionals, Direct Support Workers, Direct Support Staff, Direct Support Care, Intellectual Disability Workers, and Developmental Disabilities Workers. The bulk of the results were related to burnout among ID/DD workers. In all, 51 studies on burnout and one study on STS were included in the literature review. These studies were the ones which examined burnout and STS in ID/DD staff. The selected studies (including, study purpose, methodology, instruments, sample and relevant findings) on burnout and STS among ID/DD staff are represented in Table 2 and Table 3 respectively. Given the limited number of STS studies found, the search was expanded more broadly to STS among social service workers. The 34 studies reviewed from that subsequent search are represented in Table 4, for a total of 86 studies reviewed.

Table 2*Represents Studies of Burnout Factors among ID/DD Workers**Individual Factors*

Author	Purpose of Study	Methodology	Sample	Instruments	Relevant Findings
Aitken, C.J. & Schloss, J.A. (1994)	The study assessed the levels of occupational stress and burnout among staff who works people with ID both in an institutional and community settings. Also, explored the extent to which mental health, occupational stress and burnout are related construct.	Quantitative study/ ANOVA was used to analyze the Data on Occupational Vs Stress measure. MBS & OSI for Direct Care Staff was assessed using separate t-tests for each measure.	150 government al ID worker: 97 direct care workers, 24 therapy staff and 11 managerial staff.	-Maslach Burnout Inventory. -Occupational Stress Inventory	Staff- Higher levels of anxiety and/ or depression is associated with higher scores of EE and DP scales on the MBI. However, relatively low correlation between PA and mental health measures. Occupational Groups- Level of EE and DP were low compared to other occupational groups (Management, Therapy and DSW). Workplace Environment- low PA was reported by institutional staff (i.e. higher burnout risks). They reported higher levels of occupational stress (Role conflict, Role overload, Role ambiguity and stress due to physical environment).
Bekhet, A., Johnson, N., & Zauszniewski, J. (2012)	This study examined the effects of caregiver burden (risk factor) and positive cognitions (protective factors) on resourcefulness (resilience indicator) in 95 caregivers of persons with autism spectrum disorder.	Quantitative design. Cross-sectional analysis	Sample size was 95 caregivers of persons with autism spectrum disorder.	-Zarit Burden Interview. -Depressive Cognition Scale - Resourcefulness Scale	As positive cognitions increased, caregivers' resourcefulness increased. A substantial drop in the beta weight of caregiver burden from $B = -.36$ to $-.04$ when positive cognitions was entered the equation suggested that positive cognitions mediated the effect of caregiver burden on resourcefulness
Dennis, A.M. & Leach, C. (2007)	The study examined the level of EE in staff in a medium secure learning disability service for people with psychosis and explored the relationship of level of EE and burnout.	Qualitative study/ Mixed method design. Multiple credibility checks were adopted to overcome any possible bias from the researcher working in the study area. Standardized interview	10 nursing staff who works in learning disability services: 3 females and 7 males	-Maslach Burnout Inventory. -Five Minutes Speech Sample (FMSS): An audio interview tool.	No participant met all the criteria for a high degree of burnout on MBI. High EE was more prevalent in male staff, being evident in 41% of male responses and 8% of female responses. In terms of position, high EE was more prevalent in Health Care Support Workers (35%), compared with 17% for RNs. There is no general trend in EE and age groups. Participants exhibited different levels of EE in relationships with different patients suggesting that EE is not a trait in staff but a reflection of interactional characteristics and

		tools were used.			the state of that specific relationship at that time.
Duran, A., Extremera, N. & Rey, L. (2004)	The study examined the relationships among different subscales of the Trait Meta-Mood Scale and components of burnout and engagement in Spanish workers.	Quantitative study/ Correlational design. Pearson correlations were performed among all the subscales.	112 participants . Aged between 19 and 63 years (M=33 yr.; SD=8.6)	-Maslach Burnout Inventory. -Spanish version of the Trait Meta-Mood Scale. -Utrecht Work Engagement Scale.	Emotional Intelligence, Emotional Clarity and Repair to moods, showed moderate associations with PA but not with EE and DP.
Ingham, B., Riley, J., Nevin, H., Evans, G., & Gair, E. (2013)	The study examined if a brief workshop that aimed to develop resilience within care staff was associated with a shift in emotional response in the individual staff and shifts in job-related factors such as burnout.	A naturalistic, pre-post design.	Total of 37 staff in the experimental group and 21 in control group. Both groups were inpatient services.	-Emotional Responses to Aggressive Challenging Behavior Scale -Maslach Burnout Inventory -Helpful Aspects of Workshop Questionnaire	There was a significant difference within the group that received the resilience workshop between scores on the Emotional Responses questionnaire pre and post completing the workshop (pre=27.76 (SD=6.37), post=22.90 (SD=7.53); t=7.938, df=36, p < 0.001). There was no significant difference between scores on Maslach Burnout Inventory (pre: mean = 63.21, SD = 11.81, post: mean = 62.31, SD = 14.78; t = 0.510, df = 36, p = 0.613). The small effect size (d = 0.09) was calculated as above. It was found that negative emotional reactions to challenging behavior significantly reduced following the workshop, but a measure of burnout did not.
Ko, C., Lunskey, Y., Hensel, J. & Dewa, C.S. (2012)	The study highlights the experience of summer camp staff by reporting on the occurrence of exposure to client aggression in the summer camp setting and examining whether it is associated with burnout in staff.	Quantitative study/ Cross-sectional design.	169 ID staff from 16 summer camp programs consisted of 10-day camps, 5 residential camps, and 1 camp with both day and residential sites.	-Maslach Burnout Inventory -Self-Report Questionnaire	Being female was a significant predictor of EE, and age was negatively associated with but no other demographic variables were associated with any of the three burnout dimensions. The percentage of workers who scored in the ranges indicative of burnout were in EE, DP, and PA, respectively. There was a significant positive partial correlation between the composite aggression severity score and EE, as well as between composite aggression and PA. Perceived severity was partially correlated with EE, and PA.
Kowalski, C., Driller, E., Ernstmann, N., Alich, S., Karbach, U., Ommen,	The study examined the association between emotional exhaustion and social capital, workload, and latitude in decision-	Quantitative study/ Cross-sectional design. A multivariate logistic regression analysis was used for analysis.	Sample size: 175 caregiving and pedagogical staff who works with ID and physical	-Maslach Burnout Inventory. -Social capital in organizations (SOCAPO) Scale. - Homonymous	High positive intercorrelation was detected between an employee's reported workload and EE. Social capital is inversely correlated with EE; the lower the social capital in the organization perceived by an employee, the higher the EE. Logistic regression identified three significant predictors of EE: (1) workload; (2) latitude in

O., Schulz-Nieswandt, F & Pfaff, H. (2010)	making, after controlling for gender, age, work experience, and job tenure.		disability people.	scale used to measure 'latitude in decision-making.	decision-making; and (3) male gender.
Kozak, A., Kersten, M., Schillmoeller, Z. & Nienhaut, A. (2013)	The aim of the study was to assess the extent to which demographic, job-related characteristics and perceived psychosocial working conditions were related to personal burnout.	Quantitative study/ Explorative cross-sectional design. Pearson's correlation analysis. Chi-square test and multiple logistic regressions were calculated.	409 ID workers from 10 service providers (30 facilities) participated. Participation rate varied greatly among the facilities (11–90%).	-German version of the Copenhagen Burnout Inventory (CBI).	High burnout rates were associated with women than men. Staff in the intermediate age (30–39 years) group were at an increased risk of reporting higher levels of burnout than colleagues under 30 years of age. Five psychosocial factors which were associated with personal burnout are: (1) emotional demand (2) work-privacy conflict (3) role conflict (4) job security and a negative predictor was (5) feedback at work. These factors explained 49% of the total variance in the dependent variable.
Lin, L. & Lin, J. (2013)	The study aimed to identify workplace or personal characteristics associated with burnout among ID/DD workers, utilize the Chinese version of the Copenhagen Burnout Inventory.	Quantitative study/ Cross-sectional design. Purposive sampling method used. Multiple regression.	276 of ID/DD caregivers from 4 different institutions participated.	-Chinese version of the Copenhagen Burnout Inventory (CBI)	The results revealed that the average personal burnout score (PBS) and work-related burnout score (WBS) were 44.0 (SD = 16.8) and 34.2 (SD = 15.9). These burnout scores were higher compared with general full-time employees in Taiwan. The results showed that that 17.8% of the staff were moderately burnt out (PBS score: 50–70), and 7.6% of the staff were in the highest exhausted level (PBS score 3 70) of PBS. With regard to the WBS score, 20.7% were moderately burnt out (PBS score: 50–70), and 5.1% of the staff were in the highest exhausted level (WBS score 3 70). Finally, a multiple regression analysis reported that the factors of self-report health status and WBS significantly predicted higher respondent PBS ($R^2 = 0.642$).
Lin, L., Wu, T. & Lin, J. (2015)	The study aimed to provide a profile of burnout and wellbeing of direct-care caregivers working in disability institutions.	Quantitative study/ A cross-sectional design. Purposive sampling method was used. Chi-square, t-test and correlation analyses were used	Sample size: 46 female living assistants of people with ID/DD institutions: 23 locals and 23 foreign workers.	-Copenhagen Burnout Inventory. -Subjective Happiness Scale (SHS). -Satisfaction with Life Scale (SWLS).	The average score of personal burnout in local respondents was higher than foreign living assistants (43.4 ± 17.4 vs. 34.4 ± 15.0), but it was not considered to be a significant statistical difference. Among all respondents. Those caregivers from foreign countries seem to be slightly happier and have higher life satisfaction than native caregivers.

Lundström, M., Graneheim, U.H., Eisemann, M., Richter, J. & Åström, S. (2007)	The study explored the relationships between staff personality variables and emotional reactions, work-related strain, and experiences of burnout when staff in group homes for people with ID were exposed to violence directed toward them.	Quantitative study/ Explorational design. Sample size: To test relationships among the variables under study, t-tests, Phi-test, Pearson's correlations, a multiple regression analysis, and multiple analyses of variance were calculated.	112 staff from 22 ID group homes: 1 registered nurse, 5 assistant nurses, and 106 nurse's aides. Female (n=85, 76%). Their ages ranged from 19 to 67 years (mean 35.9 ± 10.3 years).	-Maslach Burnout Inventory. -Tedium Scale (TS). -Short version of the Temperament and Character Inventory (TCI-125). -Rosenberg's Self-Esteem Scale (RSES). -Emotional Reactions in Nursing Care Scale (ERNCS). -Strain in Nursing Care (SNC) assessment scale	The personality dimensions of harm avoidance and self-directedness were related to burnout, tedium, EE, and DP. This meant that the more pessimistic, worrying, shy with strangers, fatigable, irresponsible, aimless, undisciplined in behavior, and lacking in impulse control the staff generally were, the more easily they became burned out. It was observed that personality dimensions alone explained 10%–30% of the variance in burnout scores. Besides personality traits, emotional reaction was the only additional variable that significantly contributed to the explanation of variations of the burnout scores implying that there is a slightly independent influence of emotional vulnerability on burnout.
Lunsky, Y., Hastings, R.P., Hensel, J., Arenovich, T. & Dewa, C.S. (2014)	The study examined the factor structure of a briefer version of the Staff Positive Contributions Questionnaire and examined any association between positive contributions and PA, along with other burnout dimensions.	Quantitative study/ Cross-sectional design. First, an exploratory factor analysis was conducted. Second, confirmatory factor analysis was carried out. Third, descriptive statistics on the final scale was conducted. Associations between variables were examined by using hierarchical and linear regressions.	926 direct support staff who provide community services to adults with DD.	-Maslach Burnout Inventory (MBI-HSS). -Staff Positive Contributions Scale-Brief Form (SPCQ-BF).	Based on the confirmatory analysis, a 2-subscale measure: General positive contributions (5 items) and Positive work motivation (3 items) were derived. For both EE and Dp, demographic variables alone accounted for a significant proportion of total variance. In addition, in the final models including the SPCQ-BF scores, Positive work motivation was also significantly associated with these two burnout subscales. However, in contrast to its relationship with PA, the shared variance between the SPCQ-BF and the other aspects of burnout was lower. Significant predictors of EE included age, years of experience, and Positive work motivation. Significant predictors of Dp included age, gender, and Positive work motivation. For each of the three burnout components (EE, Dp, and PA), the other SPCQ-BF subscale, General positive contributions were not a significant predictor.
Mascha, K. (2007)	The study aims to identify the levels of burnout amongst staff in day services of adults with ID.	Mixed method design. Data was analyzed using t-test, one-way ANOVA and Pearson's correlation.	36 direct-care workers and senior officers from 4 ID adult's day care setting: 11	-Maslach Burnout Inventory. -The Staff Support Questionnaire . -Shortened Ways of	The results showed no differences between the services on the feelings of EE, Dp and lack of PA. The only significant difference found was between groups of marital status (married, single and divorced/ separated) on the Dp scale. Post hoc tests (Scheffe) showed that there was a

		Qualitative analysis was used for all the open-ended questions of the staff-support questionnaire.	day-service assistants, 17 day-service officers (levels I and II) and 8 senior officers (deputy managers, managers, senior day-service officers).	Coping (Revised) Questionnaire (SWC-R).	significant difference between the group of single people (mean 12, SD 5.6) and the two other groups of married (mean 3.2, SD 3.2) and divorced/ separated people (mean 4.6, SD 4.4). Practical coping was unrelated to all the other factors. On the other hand, staff who used wishful thinking more frequently reported lower levels of role clarity and more EE. Staff who were satisfied with the supervision levels provided to them by the service also reported experiencing higher levels of role clarity and job satisfaction and lower levels of intended turnover and EE. EE was also highly associated with lower levels of satisfaction with support, role clarity and overall job satisfaction. Similarly, to the variable of lack of PA, however, Dp was mostly unrelated to the other factors investigated.
Mutkins, E. Brown, R.F. & Thorsteinsson, E.B. (2011)	The study examined direct and indirect associations between work stressors (i.e. challenging client behavior), staff emotional response to the behavior (i.e. perceived stress, anxiety, and depression), social and organizational support resources, and staff burnout.	Quantitative study/ Cross-sectional design. Multiple linear regressions were used to determine potential moderators of the work stress to burnout relationship. Mediation was performed using the bootstrap method of Preacher & Hayes (2004).	Sample size of 80 ID staff. 44% - staff had trade certificate/ diploma, 14% university degree. DSW represented 56% and 44% management/ administrative personnel.	-Maslach Burnout Inventory (MBI-HSS). -Depression Anxiety Stress Scale-21 (DASS-21). -Perceived organizational support (POS) Survey. -Short version of the Social Support Questionnaire.	EE and Dp were positively correlated with psychological stress, anxiety and depression, and negatively correlated with Perceived Organizational Support (POS), although the latter variable was only weakly correlated (missing values not replaced). Social support (number) was positively correlated with PA, but challenging client behavior was uncorrelated with any study variable. Social support number ($r = 0.31$), indicating that the more social support that was provided to staff, the higher their PA. High depression score and low POS shown to be related to worse EE. With high depression score and low POS shown to be related to worse Dp. However, in this study, only staff emotional response (i.e. depression) and personal resources (i.e. low POS) were related to worse EE and Dp, accounting for 40% or so of the variance in these scores, whereas low PA was only correlated with personal resources (i.e. less social support).
Nevill, E. A. (2017)	The study investigated predictors of direct support providers' retention, burnout, and		A sample of 97 caregivers was surveyed at two time points	-Psychiatric Assessment Schedules for Adults with Developmental Disabilities Checklist	Resilience significantly mediated the effect of adult physical health needs on caregiver burnout. Resilience did not play a role in mediating the effect of adult mental health needs on caregiver burnout.

	resilience when working with an adult with a developmental disability who engages in regular physical or verbal aggression.		separated by three months.	-Maslach Burnout Inventory -The Areas of Worklife Survey -Brief COPE -The Kentucky Inventory of Mindfulness Skills -Brief Resilience Scale	
Nevill, R. & Havercamp, S. (2019)	The study investigated the relationships between hypothesized protective factors, burnout severity and short-term retention in DSPs who support aggressive adults with DD.	Longitudinal Study. A brief interview and questionnaires at two time points, 3 months apart. Spearman's correlation, hierarchical linear and binary logistic regression were used.	Sample size of 102 DSPs. Brief interview and questionnaires at two time points, 3 months apart.	- Maslach Burnout Inventory - The Kentucky Inventory of Mindfulness Skills - The Brief Coping Orientation to Problems Experienced - Brief Resilience Scale	There were also no significant differences within and between groups on burnout scores over time. Resilience was negatively associated with emotional exhaustion in caregivers but did not significantly predict outcomes. Mindfulness, specifically describing one's experiences non-judgmentally, emerged as a protective factor against burnout among DSPs. Maladaptive coping strategies, composed of substance abuse, denial and behavioral disengagement, significantly predicted burnout. Emotion-focused coping styles, which included seeking out emotional and instrumental support, venting and self-blaming, predicted increased emotional exhaustion in caregivers.
Rose, D., Horne, S., Rose, J.L. & Hastings, R.P. (2004)	The study analyzed the association between negative emotional reactions to challenging behavior and staff well-being (specifically, burnout) to replicate the Mitchell & Hastings (2001) results.	Quantitative study/ Pearson's correlation coefficients.	1st study – 101 staff. 2nd study 99 staff.	-Maslach Burnout Inventory. - Emotional Reactions to Challenging Behavior scale	The analyses showed that negative emotion was significantly positively associated with and DP but not with PA.
Noone, S.J. & Hastings, R.P. (2011)	The purpose of this research was to contribute to the evidence base and to introduce a new measure of staff values in	Quantitative study/ Associations between acceptance and values scores and support staff	59 support staff working in residential community services for adults with ID.	-Maslach Burnout Inventory (MBI-HSS). -Acceptance and Action Questionnaire -II (AAQ-II).	There is evidence of concurrent validity for the two measures was found using associations with an established measure of burnout. Staff who reported more psychological acceptance also reported less EE at work, and staff with higher scores on the

	ID services: The Support Staff Values Questionnaire (SSVQ-ID)	demographic variables were explored using Pearson's correlations.	Eight staff had some managerial responsibilities and 51 had no managerial responsibilities.	-Support Staff Values Questionnaire (SSVQ-ID).	SSVQ-ID also reported fewer depersonalizing attitudes toward people with ID and more feelings of accomplishment at work. Staff scores on the acceptance and values measures were not correlated.
Pătraș, L., Martínez-Tur, V., Gracia, E. & Moliner, C. (2016)	The study proposed the two dimensions of eudaimonia beliefs about well-being (self-development and contribution-to-others beliefs) as moderators between surface acting and exhaustion.	Quantitative study/ A regression analysis was carried out using the Process Macro for SPSS (Hayes, 2013) to test the hypotheses of the current research study.	817 ID services workers. The mean age was 37.45, ranging from 20 to 64 years old. About 50% of the participants were university educated.	-Maslach Burnout Inventory. -Emotional Labor Scale. -Beliefs about Well-being Scale.	Results show that people who regulate their emotions in "bad faith" (Rafaeli & Sutton, 1987), making the conscious effort of "faking" the expression of their true emotions in order to satisfy requirements at work, are more likely to report a higher level of exhaustion. Also, high self-development beliefs protect one from the negative effects of surface acting, whereas high contribution to others beliefs accentuate the negative relationship between surface acting and exhaustion.
Quilliam, C., Bigby, C. & Douglas, J. (2018)	This paper aimed to explore the self-perception of frontline staff about their role in group homes for people with intellectual disability, using one broad question: How do staff perceive their work?	Qualitative study/ A constructivist grounded theory (CGT) methodology and constructivist epistemological lens underpinned the study. Coding and sorting methods were used to analyze participants' self-perception.	29 participants in total: 2 part-time supervisors, 10 part-time support workers, three casual support workers and 14 group home residents.	-Semi-structured interviews and participant observations	Frontline staff valued their work and that of their colleagues. They considered themselves an important part of service—as stakeholders who offered valuable practice insights and skills. Despite considering themselves as valuable contributors, staff felt powerless in their everyday practice because of their low hierarchical position in the organization. They felt disregarded by other stakeholders and disconnected from the managing organization, which left them feeling excluded from much of the organizational dialogue regarding expected service procedures. Intrusions into their physical and emotional space and personal time left staff stressed and exhausted.
Rose, D. & Rose, J. (2005)	The study tested the applicability of a model for the impact of perceived stress on the quality of care provided by examining whether attributions within the previous applications of Weiner's (1986) model can help	Quantitative study/ Kolmogorov Smirnov tests and Principal component factor analysis with orthogonal varimax rotation (Dagnan et al. 1998) was conducted.	107 DSWs who works in community homes for ID population participated. The mean age was 35.73 years. Participants had worked in services	-Maslach Burnout Inventory. -Attribution Style Questionnaire (ASQ). -General Health Questionnaire (GHQ), version 12. Aberrant Behavior	A principal component factor analysis with orthogonal varimax rotation of the emotion variable produced an empirically distinct three-factor solution, accounting for 74.86% of the total variance rotation. The MBI burnout scales of EE ($r = 0.351$) and DP ($r = 0.346$) were significantly correlated at $P < 0.01$, with the negative emotion scale. The model was a poor fit for the data and offered little explanatory power in integrating the stress and

	explain a greater proportion of the variance in this relationship.		for adults with IDs for an average of 72.68 months.	Checklist (ABC).	attributional theoretical perspectives.
Shaddock, A.J., Hill, M. & van Limbeek, C.A.H. (1998)	It was hypothesized that burnout scores of workers in residential services for people with an intellectual disability would be associated with gender, education level, skill level, training, the practice of religion, personal relationships, social support, time and effort required in their job, control over outcomes and participation in decision-making, and desire to leave the job.	Quantitative/ Cross-sectional design. Kruskal Wallis tests and Spearman's rank order correlation coefficient. The Kruskal Wallis test were used	173 direct support workers in both government and non-governmental residential services.	-Maslach Burnout Inventory	There was no difference in the mean burnout scores of males and females. There was a significant difference in burnout scores among those professing different religious affiliations. Respondents who were divorced or in de facto relationships had the highest burnout scores, whilst widowed respondents (n = 4 only) had the lowest scores. No relationship was found between burnout and marriage length ($p > .05$). Burnout scores were related to responses to the statement "I am satisfied in my job". Those who agreed with the statement tended to have lower burnout scores. Burnout scores among those who responded differently to the statement "I would quit this job immediately if I could". Respondents who agreed with this statement tended to have higher burnout scores. Those respondents who felt that they gained support in their job from their family tended to have lower burnout scores.
Symth, E., Healy, O. & Lydon, S. (2015)	The study explored the impact of exposure to aggressive/ destructive topographies of challenging behavior, measures of stress, burnout, and work commitment among a sample of disability support workers.	Quantitative study/ Pearson Product-Moment correlations were used. Also, a series of hierarchical multiple regressions were conducted to examine predictors of burnout among the sample.	138 ID and DD workers from 18 residential community homes. The mean age was 41.4 years (range 19–68 years). The mean length of employment experience in ID/DD field was 8.1 years, range 0–41 years.	-Maslach Burnout Inventory (MBI-HH). -Behavior Problems Inventory (BPI-01). -Perceived Stress Scale (PSS-10). -TCM Employee Commitment Survey Revised Version.	Participant age was negatively correlated with DP. Severity of aggressive behavior was positively correlated with EE. On work commitment: EE was negatively correlated with affective commitment and positively correlated with continuance and normative commitment. DP was negatively correlated with continuance commitment. PA was positively correlated with affective commitment. Predictors of Burnout: EE predictors were lower age, longer years of experience working with persons with ID, greater severity of the aggressive/destructive behavior to which participants were exposed, affective work commitment, and, most strongly, greater perceived stress. Predictors of DP included lower age, greater frequency of aggressive/ destructive challenging behavior, greater severity of aggressive/destructive

					challenging behavior, and greater perceived stress. The only predictor of PA was normative commitment.
Tartakovsky, E., Gafer-Shor, A. & Perelman-Hayim, M. (2013)	The study focused on the connections between the value preferences, attitudes toward community living, and burnout among staff members of community services for people with intellectual disability.	Quantitative study/ Pearson's correlation test and hierarchical regression analyses were used to examine the data.	220 community service workers. 126 worked in services for people with ID, and 96 worked in services for people with SMI. 10% of the respondents in both types of services held managerial positions, 24% were social workers, and about 65% were support workers.	-Maslach Burnout Inventory (MBI-HSS). -Community Living Attitudes Scale (CLAS). - Portrait Values Questionnaire	The self enhancement value type was significantly correlated with Dp (0.21) and accomplishment (-0.15). In addition, the self-transcendence value type was significantly correlated with Dp (-0.18) and PA (0.14). No significant correlation between value types and exhaustion was found. At the level of basic values, power was significantly correlated with Dp (0.22) and PA (-0.19). In addition, benevolence was significantly correlated with Dp (-0.18). Finally, universalism was significantly correlated with PA (0.18). Age was a significant predictor of burnout: it was negatively associated with EE (-0.24) and DP (-0.23). Empowerment was positively correlated with PA (0.17) and negatively correlated with EE (-0.17) and DP (-0.22). Similarity was also positively correlated with accomplishment (0.29) and negatively correlated with EE (-0.28) and DP (-0.31). Exclusion was negatively correlated with PA (-0.38) and positively connected with EE (0.22) and DP (0.31).
Thomas, C. & Rose, J. (2010)	The study examined a model relating to the concept of reciprocity and burnout in staff, incorporating previous research findings based upon Weiner's (1980, 1986) cognitive-emotional model linking emotions, optimism and helping behavior, with the aim of testing the model.	Quantitative study/ Cross-sectional design. Regression analyses were conducted to examine the effect of reciprocity on burnout.	95 direct care staff. The mean length of time spent working within intellectual disabilities services were 7.49 years.	-Maslach Burnout Inventory. - Global Reciprocity Measure - Specific reciprocity measure - The positive and negative affect schedule (PANAS)	The MBI scale of EE was significantly correlated with perceived reciprocity with residents, colleagues, and the organization on both the specific and global reciprocity measure. The DP subscale was significantly correlated with reciprocity within all three social exchange relationships on the global reciprocity measure and with the organization on the specific reciprocity measure. In addition, the PA scale was found to have significant negative correlations with perceived reciprocity with the organization on both the specific and global reciprocity measures. Reciprocity with both the organization and colleagues significantly predicted EE and accounted for 36.7% of the variance in relation to the specific measure. The variance explained by reciprocity for DP is 29.5% (specific) and 23% (global), with the relationship with the

					organization being the most significant, followed by that with colleagues. Reciprocity with the organization is the only significant predictor of PA where the variance explained is 12.9% (specific) and 12.1% (global).
Vassos, M., Nankervis, K., Skerry, T. & Lante, K. (2013)	The research aims to investigate work engagement and burnout in the DSW population.	Quantitative study/ Pearson's correlation tests, one-way ANOVA and multiple regression analyses were used to analyze the data.	258 direct support workers. Mean participant age was 43.47 years. The majority (53.9%) worked in full-time positions (part-time: 36.7%; casual: 9.4%), in metropolitan areas (60.5%; rural: 39.5%).	-Maslach Burnout Inventory (MBI-HSS). - Utrecht Work Engagement Scale (UWES). - Staff Stressor Questionnaire (SSQ)	Females reporting significantly higher EE than males. Metropolitan workers reporting significantly lower PA compared to rural workers. A significant difference between education levels was found for EE, and Dp. Post hoc Bonferroni comparisons indicate that those with tertiary qualifications score higher on Dp compared to those with secondary school qualifications. For EE, significant predictors were workload, role ambiguity, challenging behavior and low job status. Dp, predictors included challenging behavior and role ambiguity. For PA, role ambiguity and poor client skill accounted for the most unique variance. Lack of resources was predictor of EE and Dp, while job feedback predicted PA.

Interpersonal Factors

Author	Purpose of Study	Methodology	Sample	Instruments	Relevant Findings
Capri, C. & Buckle, C. (2015)	The study investigated nurses' experiences of intellectual disability work in a psychiatric hospital,	Qualitative study/ An exploratory descriptive-interpretivist method. Interviews were triangulated with the audio-recordings and transcriptions. Data were analyzed by thematic analysis, and participant narratives served as the primary units of analysis (Babbie & Mouton 2007).	16 psychiatric intellectual disability nurses.	-The study used intersubjective theoretical framework. -- Free association narrative interviews approximating 60 min were conducted.	Interaction- Client aggressive behaviors inflicted physical and psychological harm upon the caregivers. They described their tasks as taxing, overwhelming and could induce fear or powerlessness. Organizational Factors- Heavy workload can lead to emotional fatigue. Other organizational factors include inadequate staffing, schedule inconsistency and low staff morale and Lack of organizational support. Faith, integrity and introspection, multitasking, dedication and determination, experience, informal support groups, structure and endurance may serve as coping resources where intellectual disability nurses.
Vassos, M.V. & Nankervis, K.L (2012)	The research investigated a set of empirically validated burnout prediction (that align with the theories of burnout development, individual, interpersonal, organizational and demographic) to evaluate each predictor's unique contribution to the prediction of the three facets of burnout.	Quantitative study/ Cross-sectional design. One-way analysis of variance (ANOVA), t-tests and Pearson's correlation tests and multiple regression analyses were used for further data analyses.	108 direct support workers. The mean age of the DSWs was 41.61 years. Years worked in the disability sector ranged from 0.75 years to 50 years with a mean of 10.75 years. The main disability type was intellectual disability (72%) followed by multiple disability types (11%), autism	-Maslach Burnout Inventory (MBI-HSS). -Staff Stressor Questionnaire	For EE the interpersonal variables significantly accounted for 29% of the variance with challenging behavior the only significant predictor. The individual variables significantly accounted for 47% of the variance in EE with lack of staff support, work-home conflict and workload the only significant predictors. The organizational variables significantly accounted for 54% of the variance in EE with low job status, role ambiguity and role conflict the only significant predictors. The only demographic variable that produced statistically significant differences in EE scores across its groupings (full and part time work). For Dp the significant interpersonal variables were challenging behavior. The significant individual variables were work-home conflict and supervisor support. The significant organizational variables were low job status and role ambiguity. The

			(7%), cerebral palsy (4%), physical disability (3%) and acquired brain injury (3%).		significant demographic variables were work hours and gender. For PA, challenging behavior was the only significant interpersonal variable. Job feedback was the only significant individual variable. The significant organizational variable was role ambiguity. There were no significant differences in PA scores across any of the demographic variables.
Chung, M.C. & Harding, C. (2009)	The study aimed at investigating the impact of five personality traits (NEO-FFI; Costa & McCrae 1992: neuroticism, extraversion, openness to experience, agreeableness and conscientiousness on burnout and psychological well-being among care staff working with people with ID and challenging behavior.	Quantitative study/ cross-sectional questionnaire study. A series of hierarchical multiple regression tests were conducted to test the relationship between personality traits, challenging behavior, burnout and psychological wellbeing.	103 staff from 13 residential community homes participated in the study. They were, on average, 38 years (SD = 10.97) of age. The average length of time working in the area of intellectual disabilities among these staff was about 8 years (SD = 7.56).	-Maslach Burnout Inventory - Aberrant Behavior Checklist (ABC). - General Health Questionnaire-28 (GHQ-28). - NEO-Five Factor Inventory (NEO-FFI)	Challenging behavior (CB) predicted EE ($P < 0.001$). After controlling for challenging behavior in model 1, model 2 improved significantly the prediction of EE. Tests associated with the regression coefficients show that neuroticism ($P < 0.001$) and extraversion ($P < 0.05$) made a significant contribution to predicting EE. Controlling for models 1 and 2, model 3 also improved significantly the prediction of EE. Challenging behavior predicted PA ($P < 0.001$). After controlling for model 1, model 2 improved significantly the prediction of PA. Regression coefficients show that neuroticism ($P < 0.01$) and extraversion ($P < 0.05$) contributed significantly to predicting PA. Controlling for models 1 and 2, model 3 did not improve prediction. No effects were found on DP.
Mills, S. & Rose, J. (2011)	The study aimed to investigate causal attributions, general perceptions/ beliefs and emotions and these variables will be referred to collectively as 'cognitive variables. It seeks to confirm the association between higher levels of challenging behavior and increased burnout.	Quantitative study/ Cross-sectional correlational design. Spearman's correlations for non-parametric data. Regression analyses was conducted to examine associations in variables.	78 DSWs in 5 facilities which serve ID adults. Mean age was 31.8 years and range from 19 to 60 years.	-Maslach Burnout Inventory	The results show that the higher the level of challenging behavior reported by staff, the higher the burnout reported. Found that self-efficacy moderated the relationship between challenging behavior and burnout. The pattern of results for the CBPQ showed that the higher the perceived negative consequences for the caregiver, the higher the DP; and the higher the perceived negative emotions in response to clients' behavior, the higher the EE and DP. The fear of assault measure showed that the greater the fear, the greater the EE and DP, and the lower the PA. Fear of assault mediated the relationship for

					two components of burnout; EE and DP with both aggressive and other behaviors.
Hensel, J.M., Lunsky, Y. & Dewa, C.S. (2013)	To compare exposure to client aggressive behavior, perceived self-efficacy in managing this behavior and burnout between community residential group home and specialized hospital inpatient staff who provide care for adults with intellectual disabilities (ID).	Quantitative/ Cross-sectional design. T-tests were used. Also used Preacher and Hayes have developed a Macro for SPSS, which performs linear regressions between variables and calculates bootstrap confidence intervals.	926 community staff and 58 hospital staff.	-Maslach Burnout Inventory. - Modified version of the Difficult Behavior Self-Efficacy Scale.	Frequency of exposure to any aggression did not differ between the groups, with 28% of community and 32% of hospital staff reporting exposure almost every day. There hospital staff experiencing more severe forms of all types. Moreover, standardized severity, which reflects an aggregate score of the individual types of aggression, was significantly higher in hospital staff. The perceived severity, however, while higher among hospital staff did not differ significantly between the two groups. Hospital staff scored less favorably on all of the MBI-HSS dimension scales; however, only mean EE scores differed significantly ($t = -2.303$, $p = 0.0029$). Perceived self-efficacy did not differ statistically between groups.
Howard, R., Rose, J. & Levenson, V. (2009)	Using Lazarus's (1999) model of stress, the study explored relationships between burnout and appraisals of violence including fear of violence, self-efficacy and staff support.	Quantitative. Cross-sectional design. Differences between the staff groups were explored using a Mann-Whitney test.	82 staff (44-medium secured settings and 38-staff in community settings.	-Maslach Burnout Inventory. - Staff Support Satisfaction Questionnaire -Difficult Behavior Self-efficacy Scale	EE shows a significant positive correlation with staff support. Self-efficacy and PA show a significant positive correlation. Staff ratings of higher levels of physical and verbal aggression were significantly correlated with higher levels of EE. Verbal aggression showed a positive correlation with PA.
Langdon, P.E., Yaguez, L. & Kuipers, E. (2007)	The study examined the relationship between career characteristics – such as the use of coping strategies, burnout, psychiatric casernes, and attitudes toward treatment, job satisfaction and EE.	Quantitative study/ Between subject design. Given the sample size, the non-parametric Mann-Whitney U-test was employed to examine the statistical significance of any difference between those reporting high or low EE.	27 nursing staff working within a medium-secure hospital for people with ID	-Maslach Burnout Inventory - Five Minute Speech Sample (FMSS). - Attitudes to Treatment Questionnaire (ATQ). -Cooper Coping Skills Questionnaire (CCSQ). -General Health Questionnaire–28 (GHQ–28). -Minnesota Job	The results of the current study revealed that staff rated as having a high emotional expressive relationship with a client had higher levels of burnout, as indicated by scores on the Dp scale of the MBI. High emotional expressive staff were experiencing lower levels of PA than low emotional expressive staff, although both groups fell within the range indicative of higher levels. High emotional expressive staff were also using more coping strategies, specifically, coping strategies that involved trying to reorganize work-related activities, and seeking support through interpersonal

				Satisfaction Scale (MJSS).	relationships at home and at work.
Lawson, D. A. & O'Brien, R. (1994)	The study examined 4 categories of staff behavior: desirable work-related behavior, undesirable work-desirable behavior, non-work-related behavior, and other and burnout and staff outcomes. .	Quantitative study/ Sample size: 79 direct support workers. In addition to completion of questionnaire, 3 agency psychologists were recruited as observers in the study. Also, archival records of staff were collected and analyzed.		-Maslach Burnout Inventory	Negative correlation between positive client interaction and EE ($r = -.38$) was statistically reliable ($p < .01$). The results suggest that, among staff in developmental disabilities service units, direct observation of behavior may tell us more about burnout than can be gained from traditional self-report measures such as MBI.
Rose, J., Madurai, T., Thomas, K., Brigid Duffy, B. & Oyeboode, J. (2010)	This paper summarized data on burnout and reciprocity for three different social exchange relationships in three groups of direct care staff working with children, older people and people with intellectual disabilities.	Quantitative study/ Cross-sectional design. Spearman rho test and one-way ANOVA were used to analyze the data.	242 residential care workers. 95 worked with people with ID, 61 with older people and 86 with children.	-Maslach Burnout Inventory. -Reciprocity Measure	Employing organization and symptoms of burnout indicated that: there were significant correlations between EE and all three social exchange relationships. DP was correlated with a lack of reciprocity with colleagues and the organization, and PA was related to reciprocity with residents and the organization. EE was significant and accounted for approximately 7.5% of the variance with lack of reciprocity, with organization contributing significantly to the variance. DP was significant and accounted for 6.4% of the variance, with lack of reciprocity with colleagues and the organization contributing significantly to the variance. PA was not significant with none of the exchange relationships.

Organizational Factors

Author	Purpose of Study	Methodology	Sample Size	Instruments	Relevant Findings
Blumenthal, S., Lavender, T. & Hewson, S. (1998)	The purpose of the study was to investigate the relationship between role, perception of organization and burnout, and to examine differences between staff working for public and private providers.	Quantitative study/ Between Group and Within Group Correlational Design. Mann-Whitney U-tests, Kendall's tau-b test and Kruskal-Wallis test were used.	101 participants who works with ID population.	-Maslach Burnout Inventory	National Health Service (NHS) Trust staff are more likely to have negative perception of the organization than charity workers. They reported that their views are not appreciated, clients do not have a voice over their lives, unrealistic expectations of staff and staff required to do unnecessary work. Significant differences were found between NHS Trust and the charity staff on EE subscale with NHS Trust staff scoring higher. No significant differences between PA and DP.
Dyer, S. & Quine, L. (1998)	The study applied Payne's model of occupational stress to staff working with people with learning disabilities.	Quantitative study/ Cross-sectional design. Analysis of variance (ANOVA) was performed to examine the separate and combined effects of supports and demands on job satisfaction and burnout.	80 DSWs in a learning disability service of a local community trust participated .	-Items were drawn from the MBI, Roberts' (1986) signs and symptoms of burnout List, and Firth and Myers' (1985) Common Reactions to Burnout List. -Role Conflict and Role Ambiguity Scales.	Burnout positively correlated with resident characteristics, role ambiguity and role conflict, and negatively correlated with support and job satisfaction. Job satisfaction positively correlated with support and negatively correlated with non-participation in decision-making, role ambiguity, role conflict and burnout. Increased demands have a damaging effect on job satisfaction and burnout. Support was positively correlated with job satisfaction and negatively correlated with burnout. However, support did not have a main effect on burnout scores when it was grouped with role ambiguity or non-participation in decision-making.
Flynn, S., Hastings, R.P., Gillespie, D., McNamara, R. & Randell, E. (2018)	The study examines whether exposure to aggressive CB is associated with reduced work-related well-being in staff working in ID residential settings.	Quantitative/ Spearman's correlation and Pearson's product moment correlation coefficient were used	186 ID workers from 100 settings. Mean age of 40 years.	Flynn, S., Hastings, R.P., Gillespie, D., McNamara, R. & Randell, E. (2018).	There was little association between staff exposure to aggressive CB and work-related well-being. Clustering effects were found for emotional exhaustion and positive work motivation, suggesting these variables are more likely to be influenced by the environment in which staff work.
Devereux, J.M., Hastings, R.P., Noone, S.J., Firth,	The study explored the putative mediating or moderating effects of coping	Quantitative study/ Correctional - exploratory longitudinal design	1st study sample size: 96 participants . The mean	-Maslach Burnout Inventory (MBI-HSS). -Shortened Ways of	A significant association was found between full- and part-time work status and PA, with part-time workers reporting lower PA than full time workers. The results found

A. & Totsika, V. (2009)	and support on the relationship between perceived work demands and support ID staff burnout.	(involved 2 data points). The 1st study used hierarchical regression models were used.	age was 38.5 years. Follow up study sample size: 38 Mean age was 43.7 years.	Coping Questionnaire -Staff Support and Satisfaction Questionnaire	evidence that wishful thinking coping partially mediated the relationship between perceived work demands and EE. Practical coping did not act as a mediator of this relationship, and there was no evidence of either wishful thinking or practical coping acting as moderator variables. There was no evidence that support acts as a mediator of the relationship between perceived work demands and burnout but some evidence of a moderated effect when predicting PA.
Edwards, P. (1991)	The study examined the levels and types of burnout experienced by direct-care and supervisory staff.	Quantitative/ Cross-sectional design. Series of ANOVA was used to compare the groups' subscale scores	125 ID staff who worked in community residential facilities. Mean age of 30.2 years. 78 DSPs 46 supervisory staff.	-Maslach Burnout Inventory	That all staff experienced moderate levels of burnout on all the three subscales of MBI when compared to MBI norms from Maslach and Jackson (1981a, 1981b). Between groups analyses revealed that the supervisory staff reported experiencing more intense feelings of EE, and more intense feelings of PA, than did the direct-care staff.
Hickey, R. (2012)	The purpose of this study was to test the moderating effects of prosocial motivation on the association between stress and burnout.	Quantitative/ Cross-sectional design. Correlation matrices, multivariate analytic strategies were used.	1570 DSWs from 16 agencies. Average tenure in the sector was slightly more than eleven (11) years. Most survey respondents (55%) reported working full-time, while (45%) worked part-time or on a casual basis.	-Maslach Burnout Inventory. -Positive and Negative Affect Schedule (PANAS). - Affective Commitment Scale. - Occupational Role Questionnaire (ORQ). - Prosocial Motivation Scale.	Satisfaction with communication and overall satisfaction appeared as significant and negatively associated with EE. In contrast, satisfaction with benefits was positively associated with EE. Role overload had the most significant direct association on feelings of EE. Direct support workers who self-identified as visible minorities were significantly and negatively associated with feelings of DP. Satisfaction with the nature of work in the field and training were both negatively associated with DP. Satisfaction with advancement opportunities and with relations with supervisors were both found to be positively associated with DP when controlling for other factors. People of Aboriginal descent and visible minorities had a stronger sense of PA when controlling for other factors. Foreign-born workers and negative affect ($b = -0.073$, $P < 0.05$) were both negatively associated with feelings of PA.
Judd, M.J., Doronzen	The study aimed to explore DSWs	Qualitative study/ Thematic	12 direct support	-This research was qualitative and based on	All of the participants spoke of experiencing stress and a few described experiencing what

ko, K.P. & Breen, L.J. (2017)	perceptions of enjoyable and challenging aspects of disability support work, sources of stress and burnout, and the strategies they use to cope when these issues arise.	analysis was chosen to analyses the transcripts (Braun & Clarke, 2006).	workers (DSWs).	semi structured interviews with DSWs. Each participant completed a participant information sheet	they considered to be burnout (Maslach 1982). Stress and burnout were described by participants as occurring when the negative aspects of disability support work were perceived to outweigh the positives. The participants described a number of negative aspects of their work, including a lack of decision-making power, earning a low income, lack of management insight into the high expectations for care and constant pressures due to staff shortages, challenging client behavior, and the death of clients. The participants spoke of many positive rewards, ranging from simply putting a smile on the client's face to assisting them in achieving their goals.
Innstrand, S.T., Espnes, G.A. & Mykletun, R. (2004)	The study evaluated possible changes in stress, burnout and job satisfaction that might occur between pre and post measurements after stress-reducing interventions on both the individual and organizational levels has been applied to the experimental group.	Quantitative study/ Longitudinal quasi-experimental design. Analysis were performed using analysis of covariance (ANCOVA) to compare post-intervention with pre-intervention values as covariates.	112 ID staff worker from 2 municipalities. Municipality 1: experimental group (pre, n=43; post, n=36). Municipality 2: control group (pre, n=22; post, n=11).	-Maslach Burnout Inventory. -Job Satisfaction Scale	The results indicated that, the experimental group showed a significant reduction in stress and exhaustion and a strong rise in job satisfaction compared to the controlled group. However, there were no significant effect in cynicism and professional self-efficacy among the 2 groups.
Finkelstein, A., Bachner, Y.G., Greenberger, C., Brooks, R. & Tenenbaum, A. (2018)	The aim of the current study is twofold: (1) to evaluate the burnout level of different professions working with people with IDD; (2) to examine the associations between personal, professional and organizational characteristics and burnout.	Quantitative/ Cross-sectional design. ANOVA tests, Pearson's, Spearman's or Chi-square correlation coefficients were used	199 ID/DD staff. Participants' mean age was 38.3 years. About half (48%) of the participants belonged to the therapeutic professions	-Maslach Burnout Inventory. -Short version of the Staff Stressor Questionnaire. - short version of the Role Conflict and Ambiguity Questionnaire. - Job involvement Scale	The level of burnout within the entire sample was found to be low to medium ($M = 2.72$; $SD = 1.12$, range 1–7). No significant differences in the level of burnout among the various professions was found. All four variables associated with organizational characteristics (except for care group recipients) emerged as significant predictors of burnout (rated by their contribution to the variance): subjective overload, role ambiguity care-recipients group and job involvement.

Gray-Stanley, J.A. & Muramatsu, N. (2011)	The study aimed to examine what types of work stress are related to direct care workers burnout, and how social and personal resources, such as work social support and locus of control, contribute to lower burnout for DCWs caring for adults with ID.	Quantitative/ Multiple regression analysis was	323 DCWs employed at five organizations that provide residential, vocational, and personal care services for adults with ID/DD.	-Shortened version of Maslach Burnout Inventory (MBI-HSS). - Work Stress Scale - Work Social Support Scale. - Locus of control Scale	Work stress was positively associated with burnout for models using the global work stress for Model 1 and Model 2. When all work stress sub dimensions were simultaneously entered in the model (Model 3), work overload, client disability, and low decision-making participation had statistically significant associations with burnout. Role ambiguity and role conflict were not statistically significant. Regarding resources' main effects, work social support, the sub dimensions of supervisor and coworker support, and locus of control were not significantly associated with lower levels of burnout in models 1, 2 and 3. Moderating Effect: The association between work social support (global) and burnout was statistically significant when work overload was at the medium ($p < .01$) and the high levels. The association between supervisor support and burnout was statistically significant when work overload was at the high level. The association between coworker support and burnout was statistically significant when work overload was at the high level. The association between locus of control and burnout was statistically significant when decision-making participation was at the low level.
Hensel, J.M., Lunskey, Y. & Dewa, C.S. (2014)	The study examined whether positive work factors contribute to EE, the core domain of burnout, after controlling for demographics and negative emotional reactions, in a sample of community DSPs who are regularly exposed to	Quatitative/ Cross-sectional design. Independent t-test, ANOVA, and hierarchical linear regression was performed with EE subscale of the MBI-HSS	671 DSPs who were working in community service settings for adults with developmental disabilities and were exposed to aggressive behavior at least monthly were examined.	-Maslach Burnout Inventory (MBI-HSS). -Adapted from the Staff Observation Assessment Scale revised (SOAS-R). -Emotional Reactions to Aggressive Behavior Scale. -Difficult Behavior Self-Efficacy Scale.	When controlled for demographic, occupational and psychological variables, self-efficacy and positive work motivations were protective factors against EE. Positive work motivation but not self-efficacy was a moderator of the relationship between exposure to aggression and EE. Also, after controlling for other factors, younger age and more experienced DSPs were associated with EE (Younger DSP- lack of control at the work place. Experienced- long period of exposure of aggression). Negative

	aggressive behavior in their work supporting adults with DD.			-Positive Work Motivations Scale (PWMS). -General Positive Contributions Scale (GPCS).	emotional reactions contributed to the highest amount of explained variance in EE. In particular depression/ anger reactions were significantly associated with higher EE.
McFadden , P., Manthorp e, G. & Mallett, J. (2018)	The study drew comparisons between levels of burnout expressed by social workers working in adult learning disability and child protection social workers within the same survey.	Quantitative study/ Cross-sectional design. Non-probability sampling.	Sample size: 382 child protection services workers and 77 social workers who work predominantly with ID/DD adults.	-Maslach Burnout Inventory (MBI-HSS).	The mean score for EE and DP were higher in the current study than in a normative sample of 1,538 social services employees reported in the MBI manual (Maslach et al., 1996, p. 8). PA was similar to a normative sample. While child protection social workers scored higher in EE. DP was higher among social workers working with adults with learning disabilities.
Moliner, C., Lorente, L., Molina, A., Garcia, E. & Martinez-Tur, V. (2017)	The study tested a model where worker burnout in centers for people with IDD is related to the service quality perceived by workers.	Quantitative study/Cross-Sectional Study - Correlation analysis and confirmatory factor analyses were used to examine the measurement model for the variables and Hayes's (2012) PROCESS macro (Model 6) for SPSS.	1st study sample size: 714 workers and 612 family members of people with IDD. 2nd study 86 representing 601 workers and 819 family members	-Maslach Burnout Inventory -Service Quality Scale -Socio-Technical Situational Constraints Scale	Study 1: Burnout presented a significant negative relationship with service quality perceived by workers. The total indirect relationship of staff burnout with family members' satisfaction was estimated at .09, with a 95%. Study 2: both social and technical constraints presented a significant positive relationship with burnout. Burnout, in turn, presented a significant negative relationship with the service quality perceived by workers. In these two separate studies, the consensus was that worker burnout is related to customer satisfaction through service quality perceived by workers and service quality perceived by family members.
Outar, C. & Rose, J. (2017)	The study investigated the relationship between work demands, role identity, and burnout in direct care staff who work with individuals with intellectual disability.	Quantitative study/ Cross-sectional design. Data were analyzed using Spearman's rho, a non-parametric correlational test.	70 staff from 14 services participated in the study. The types of services included were independent group residential facilities, supported living, day centers, and	-Maslach Burnout Inventory (MBI-HSS) - The Demands of the Job Inventory. -Self Determination Questionnaire. - Role Identity Questionnaire.	The results showed significant positive correlations between EE and all subscales of the Demands of the Job Inventory (social role/contact, resident interaction, domestic issues, and work pressures). Significant positive correlations were also found between DP and all scales of the Demands of the Job Inventory except for resident interaction. No significant correlations were found between PA and work demands. For MBI-HSS and the Role Identity Questionnaire, EE and DP showed no relationship to the

			community support/day provision.		subscale of adviser versus servant. Significant positive correlations were found between PA and the adviser versus servant subscale. The servant and parent roles were negatively associated with PA. The adviser role was positively associated with PA. Significant positive correlations were found between PA and the three scales of the Self-Determination Questionnaire (general intention, specific situations, and other values). No significant relationships were found between EE and DP and the scales of the Self-Determination Questionnaire.
Skirrow, P. & Hatton, C. (2007)	The study intends to provide review of the state of the research in burnout among ID/DD workers.	Systematic review/ Studies that employed MBI-HS (Maslach et al. 1996) measure with DCWs working with adults with intellectual disabilities were specifically targeted for review.	Sample size: 15 studies.	-Maslach Burnout Inventory	It remains difficult to draw firm conclusions from the studies reported, given the wide variety of measures used and the lack of any major replication studies. The samples that have been used in these studies have been taken from several different countries with very different cultures and from services that varied in both their physical environment and, most likely, in their organizational culture. The different roles in which the staff members worked and by big differences in sample sizes and sampling rates. In a number of cases, poor reporting of data, sampling techniques and assessment measures make strong conclusions difficult. The results could be seen to suggest that, with the exception of Dp scores, the levels of burnout amongst DCWs of adults with intellectual disabilities do not differ to a significant degree from those of the normative sample. It appears that organizational variables were often the most reliable predictors of burnout.
Thomas, C. & Rose, J. (2011)	The article reviews the literature regarding the factors relating to organizational climate and burnout for staff working with people with	Literature Review	21 studies which broadly fell into the following two categories: the impact of deinstitution	-Search terms for 'staff burnout/ stress, environment/or ganizational climate and ID/ learning disabilities	The majority of the earlier studies that focused upon the effects of the transition away from older models of institutionalized care towards a more person-centered or community-based model of care suggest that this has reduced levels of staff burnout. Some of these studies,

	intellectual disability.		nalization within service provision, and the application of work-stress theories within organizational contexts.		however, suggested that the implementation of a person-centered or community-based model of care had greater levels of burnout (Pelletier et al., 1995) or had no effect on burnout levels. The majority of the findings from these studies support the idea that the presence of a supportive working environment, with fewer constraints, at a level which matches staff needs based upon the demands within the environment, may contribute to higher levels of job satisfaction and play a protective role in the development of burnout. It was found that staff support is important across all levels of staff groups within the hierarchy in order to reduce levels of staff burnout within an organization.
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Table 3*Represents Studies of Secondary Traumatic Stress Factors among ID/DD Workers*

Author	Purpose of Study	Methodology	Sample	Instruments	Relevant Findings
Keesler, J.M. (2016)	The study explores individual and organizational factors in predicting DSPs' professional quality of life (i.e. compassion satisfaction, burnout, and secondary traumatic stress; Stamm, 2010).	Quantitative study. Cross-sectional survey design. Data was analyzed using descriptive statistics and a series of stepwise regressions.	480 direct support workers from 8 agencies. 86% of the total sample worked full-time. 67% of the sample worked in residential settings. 38% of the sample "often" or "very often" acquired overtime.	-Professional Quality of Life (ProQOL). - Adverse Childhood Experiences (ACEs). -Emotional Intelligence Measure. - Trauma-informed Organizational Culture Measure. - Behavioral Exposure	Burnout scores were negatively associated with ethnicity (i.e. non-Caucasian) and age, and positively associated with length of time in the field, length of time with one's employer, and acquisition of overtime. Secondary traumatic stress scores were negatively associated with gender (i.e. female) and FtPt status (i.e. part-time). Direct exposure, observation, intervention and injury to challenging behavior were associated with increased scores for burnout and STS. Respondents who more frequently encountered challenging behavior tended to report greater levels of burnout and STS. Emotional intelligence (i.e. One's ability to be self-aware of their emotion and those of others to guide in his or her thinking and acting processes) was significant in reducing the risks of STS.

Table 4*Represents Secondary Traumatic Stress Factors among Social Services Workers**Individual Factors*

Author	Purpose of Study	Methodology	Sample	Instruments	Relevant Findings
Bride, E. B., (2007)	The purpose of the present study was to investigate the prevalence of STS in a sample of social workers by examining the frequency of individual symptoms, the frequency with which diagnostic criteria for PTSD are met, and the severity of STS levels.	Quantitative study. Cross-sectional design.	282 master's level social workers. Mean age of 44.8 years. 56.6% of participants were in mental health or substance abuse, health care (20.1%), child welfare (7.2%), school social work (4.7%), community organizing (1.8%), public welfare (1.4%), and DD (1.1%).	-Demographic Information Questionnaire (DIQ). -Secondary Traumatic Stress Scale (STSS).	The most frequently reported symptom was intrusive thoughts related to work with clients (40.5%). Experiencing psychological distress or a physiological reaction in response to reminders of work with traumatized clients were the next most frequently reported symptoms, with 19.1% and 12.4% of respondents reporting these symptoms, respectively. Intrusion symptoms were reported much less frequently, with 5.8% reporting disturbing dreams and 5.0%. Fifty five percent met at least one, approximately one-fifth met two, and 15.2% met all three core diagnostic criteria for PTSD. 45% did not meet any of the three core criteria for PTSD.
Badger, K. Royse, D. & Craig, C. (2008)	The study explored the predictive contributions of empathy, emotional separation, occupational stress, and social support for producing STS in hospital social workers.	Quantitative study. Cross-sectional survey design. A stepwise regression analysis was conducted to explore the predictive ability independent variables on the STS	121 social workers employed in one of five trauma centers. Participants reported a range of six months to 43 years of social work experience, with an average of 15.8 years' (SD = 9.76) general experience. An average of 9.3 years (SD = 8.36) of this	- Interpersonal Reactivity Index (IRI) to measure empathy. - Maintenance of Emotional Separation Scale. - Work-Related Strain Inventory (WRSI). - Multidimensional Scale of Perceived Social Support (MSPSS). - Secondary Traumatic Stress Scale (STSS).	Emotional separation and occupational stress were strongly correlated with an increased likelihood of STS in hospital social workers. Perceived social support was weakly and negatively correlated with STS in this sample. Higher levels of empathy were weakly and positively associated with reported symptoms of STS. A greater number of years of experience in social work was weakly associated with fewer reported symptoms of STS whereas the correlation between the years of experience in hospital social work and STS was not significant. Multivariate Analyses: Emotional separation explaining approximately 39% of the variance in STS. Model

			experience represented hospital social work		2 was significant with emotional separation and occupational stress accounting for approximately 50 percent of the variance in STS. Model 3 was significant with emotional separation, occupational stress and years worked in social work explaining approximately 52 percent of the variance. Empathy and social support were not significant in this regression analysis.
Bauwens, J. & Tosone, C. (2014)	Tested hypotheses: (a) a greater number of traumatic life events will be related to primary trauma; (b) greater traumatic life events will be related to secondary trauma; (c) greater traumatic life events will be related to posttraumatic growth; (d) primary trauma will be related to posttraumatic growth; (e) secondary trauma will be related to posttraumatic growth.	Quantitative study. Cross-sectional in design. Structural equation modeling was used.	The sample included 244 social workers and clinicians who were primarily white (85.6%). Ages spanned from 24 to 79 ($M = 47.73$, $SD = 13.09$). Average of 16 years of experience in the field.	<ul style="list-style-type: none"> - Quality of professional Practice Survey (PKQPPS). - PTSD Checklist-Civilian Version (PCL-C). - Professional Quality of Life Scale R-III. - Life Events Checklist. - Posttraumatic Growth Inventory. 	Everyone included in the sample experienced at least one traumatic event in their lifetime such as natural disaster, accident, fire, or exposure to some toxic substance. Clinicians who experienced a greater number of traumatic events had a stronger propensity toward primary trauma. Similarly, the path from traumatic life events to secondary trauma was significant in the final model. The path from traumatic life events to growth was not significant. Secondary trauma and professional satisfaction were inversely related.
Berger, Abu-Raiya, & Benatov, (2016)	The study investigated the impact of a universal school-based resiliency intervention (ERASE-Stress) on educators who were working with elementary schoolchildren exposed to the Canterbury earthquake in New Zealand.	Randomized controlled study. Chi-squares and t tests. ANOVAs and MANOVA were used.	The sample consisted of 69 members of the Linwood College's educational staff. Mean age was 44. Female 76.7%, Teachers 88.4% and 75% Caucasians.	<ul style="list-style-type: none"> - 17-item Posttraumatic Check List - Professional Quality of Life scale - Connor Davidson Resilience Scale - Adult Hope Scale - Disaster-Helper Self-Efficacy Scale - Trauma Exposure Questionnaire 	The study demonstrated that the ERASE Stress (ES) intervention is efficacious in enhancing and solidifying the resilience and coping resources of educators who were exposed to the Christchurch earthquake and working with affected students. Specifically, compared with those who took part in the control group, participants in the intervention group significantly reduced their posttraumatic stress and secondary traumatization symptoms.
Brady, P. Q. (2017)	The study explored data from Internet Crimes Against	Quantitative study. Cross-sectional survey design.	Sample of 443 ICAC personnel. White	- The Professional Quality of Life	STS- Male and feeling supported outside of work were associated with lower levels of STS. Having a history of

	Children (ICAC) Task Force personnel to explore the impact of individual and work-related factors associated with the risk of STS, burnout, and compassion satisfaction.	Univariate, bivariate and multivariate analyses were utilized to examine the variables.	(92.4%), male (72.0%), and between the ages of 40–49(40.6%). The majority of the participants held a bachelor's degree or higher (60.1%) and were married (79.4%), with 84.3% of respondents indicating that they were a parent with an average number of two children.	Scale (ProQOL-V). - Self-Care Practices Questionnaire. -	trauma and frequently engaging in spiritual/ altruistic coping mechanisms were significantly associated with higher levels of STS. Work-related factors, such as frequently feeling overwhelmed, low organizational support, working cases where the average age of the child victims is relatively young, and frequent indirect exposure to crimes against children (CAC) were associated with higher STS scores. Positive coping was marginally significant with STS. Burnout- Strong support system outside of work and frequent use of positive coping mechanisms significantly mitigated the risk of burnout. Low organizational support, frequently feeling overwhelmed, and frequent indirect exposure to CAC were associated with higher levels of burnout. CS- Home support and frequent use of positive and spiritual coping mechanisms were significantly associated with higher levels of CS. For work-related factors; working undercover, feeling overwhelmed less often, feeling supported within the organization, and frequent indirect exposure to CAC significantly increases compassion satisfaction.
Carew, N.M. (2016)	The study begins with an exploration of the prevalence and intensity of STS in foster parents as a result of indirect exposure to trauma in caring for foster children who have experienced traumatic events.	Quantitative study. A cross-sectional survey design. A descriptive and correlation analyses were conducted.	A total of 50 participants . Mean age was 41 years old with ages ranging from 27-68.	- Secondary Traumatic Stress Scale (STSS).	Fifty-eight percent of participants in the study reported that they are indirectly exposed to trauma on a daily or weekly basis. A small, but clinically significant minority of foster parents to be experiencing clinically high levels of secondary traumatic stress. Of the participants in this study, 12% met qualifying criteria for a PTSD diagnosis through indirect exposure to their foster child's trauma and 20% were found to be experiencing moderate to severe levels of STS. Interestingly, personal trauma history was significantly negatively correlated with secondary trauma scores. Only

					2% ($n = 1$) of foster parents indicated that their personal trauma history negatively impacted their role as a foster parent. Both perceived support and personal trauma history emerged as strong variables in the model ($p < .05$) and are negatively correlated with STS.
Chang, K. & Taormina, R. (2011).	This study examined the prevalence of secondary trauma among 102 Chinese soldiers who were rescuers in the 2008 Sichuan earthquake.	Quantitative study Correlational and regression analyses.	A total of 102 male Chinese soldiers. Average age was 22 years old. 85 were single, 16 married and 1 was widowed or divorced.	-Professional Quality of Life Scale (ProQOL) - Life Status Review Scale	secondary trauma had an overall mean of 1.06 ($SD=0.61$), which represents a significantly low score compared to the 2.50 mean on this scale, $t(100)=23.68$, $p<.001$. For the other main measures, rescuer satisfaction had an overall mean of 3.21 ($SD=0.89$), which reflects a significantly high value (on the 0 to 5 scale), $t(95)=7.83$, $p<.001$. For rescuer resilience, which was measured on a 7-point Likert scale (ranging from 1 to 7) and had a midpoint value of 4.00, the overall mean score was 5.48 ($SD=0.75$), which indicates a significantly high score on this scale. Secondary trauma was inversely related to rescuer resilience.
Choi, G. (2011b)	The research project examined the prevalence and severity of secondary traumatic stress among social workers who assist survivors of family violence or sexual assault.	Quantitative study. Cross-sectional design.	154 NASW members. Sample constituted female (78.6%), White (87.7%), and (92.2%) held an MSW degree.	-Secondary Traumatic Stress Scale (STSS).	Mild levels of STS indicated by the mean STSS score of 32.07 ($SD = 10.39$). Approximately 65% ($n=101$) of the social workers had at least one or more STS symptoms that meet the <i>DSM-IV</i> diagnostic criteria. Further, approximately one third (29.8%, $n = 46$) of the study participants reported having moderate to severe STS symptoms.
Choi, G. (2017)	The examined the relationship between psychological empowerment and secondary traumatic stress among social workers who provide services to family violence or sexual assault survivors on a regular basis.	Quantitative study. Cross-sectional design. Multivariate ordinary least squares regression analysis was conducted.	The study participants were 154 NASW members. Women (78.6%), Caucasians (87.7%), and earned a Master of Social Work (MSW) degrees (93.5%).	-Secondary Traumatic Stress Scale (STSS). -Psychological empowerment instrument	Social workers who had higher levels of psychological empowerment had lower levels of secondary traumatic stress when controlling for the sociodemographic variables. Past trauma history is also positively related to secondary traumatic stress in this model. Multivariate regression model that tested the influences of each 4 of the individual domains of psychological empowerment on secondary traumatic stress, only having sense of impact predicts secondary traumatic stress.

Dalton, C. (2012)	The study explored the relationship between clinician secondary traumatic stress and the clinician's sex, ethnicity, and sexual identity.	Quantitative study. Convenient sampling method. Independent t-test analyses to determine if there were statistically significant differences between the 2 sites. Chi-square test statistic and ANOVA were conducted.	The sample included 36 clinicians at two community mental health sites. Ages of participants ranged from 27 to 52 years with a mean age of 39.4 years.	-Professional Quality of Life-Revised 3 (ProQOL-CSF-R-III)	Clinicians had a mean score of 22.06 ($SD = 4.57$) on risk for burnout, which was like the instrument average of 23 (ProQOL - CSF-R-III). Clinicians scored a mean of 10.92 ($SD = 5.54$) on the construct for compassion fatigue that was slightly lower than the instrument average of 13. Overall, respondents had a mean score of 37.78 ($SD = 7.87$) on compassion satisfaction that was nearly identical to the instrument average score of 37. There were no statistically significant differences among variables such as age, sex, ethnicity, and sexual orientation with any of the three constructs ($p > .05$). Also, the study did not find a significant relationship between compassion satisfaction levels and compassion fatigue and burnout scores or levels.
Etling, J. (2017)	This study examined the relationship between secondary traumatic stress and self-efficacy and outcome expectancy in therapists treating sexual abuse victims and sexual perpetrators.	Quantitative research design. Multivariate tests were conducted. Individual ANOVAs were conducted.	182 participants. Age from 25 to 73 years with a mean age of 41.31 ($SD = 11.06$).	-Secondary Traumatic Stress Scale (STSS). -Secondary Trauma Self-Efficacy Scale (STSE). -Therapist Expectancy Inventory (Prognostic Scale).	There was not a significant difference in level of STS in therapists treating sexual abuse victims and sexual abuse perpetrators. Results indicate that there was not a significant difference in STSS on Client Type. There was a negative correlation between STS and therapist self-efficacy, which was statistically significant. In summary, as STS symptoms increase, therapist self-efficacy decreases. There was a negative correlation between STS and therapist treatment expectations. As STS increases, outcome expectancies decrease. Results indicate that there was not a significant difference in STSE on Client Type. Results indicate that there was a significant difference on the TEI on Client Type. A post hoc Tukey test showed that analysis indicates that scores on TEI for therapists treating sexual abuse victims and perpetrators was significantly lower at $p < .05$ than those therapists treating only sexual abuse victims.
Harker, R., Pidgeon, A., Klaassen,	The study explored the predictive relationship between	Quantitative study. Correlational analysis and hierarchical	133 human service professionals. Age range was	-General Well-Being Schedule	Resilience accounted for a significant 23.6% of the variance in secondary traumatic stress, $R^2\text{change} = 0.24$, $F = (1, 130) = 40.28$, $p < 0.001$. Higher

F. & King, S. (2016)	resilience, mindfulness, psychological distress, burnout, and secondary traumatic stress among human service professionals.	regression analysis.	20 to 64 years.	-Professional Quality of Life Scale -Resilience Factor Inventory -Frieberg Mindfulness Inventory -	scores on resilience were affiliated with lower levels on secondary traumatic stress. Resilience was found to be a significant predictor of low levels of secondary traumatic stress.
Kintzle, S., Yarvis, J.S. & Bride, B.E. (2013)	The purpose of the study was to explore rates of secondary traumatic stress (STS) in a sample of 70 military primary and mental health care providers.	Quantitative study. Cross-sectional design. A nonrandom convenience sampling.	70 participants . The mean age of 43 years (SD = 12.21) and were 70% women and 30% men. The majority of participants (79%) identified their primary clinical responsibility as mental health, whereas 17% were identified as primary care.	-Secondary Traumatic Stress Scale (STSS)	Participant scores on the STSS ranged from 17 to 68 and had a sample mean score of 30.76 (SD = 12.33). The most frequently reported symptoms were the avoidance symptom of feeling emotionally numb and the arousal symptom of trouble sleeping, with 34% of the sample reporting each, followed by the intrusive symptom of thoughts about clients with 30% reporting. The least frequently reported symptom was an exaggerated startle response, an arousal symptom. About 8% of the sample had total STSS scores of 50 or above, indicating moderate to severe symptomatology. Fifty-four percent of the sample reported no or little symptoms of STS.
Knight, C. (2010)	The study explored a sample of BSW students and their field instructors was assessed for the presence of indirect trauma, including secondary traumatic stress, vicarious trauma, and compassion fatigue.	Quantitative study. Cross-sectional design.	Participants included 42 undergraduate students from one institution and 51 field instructors.	-Professional Quality- of- Life Scale (ProQOL). -Trauma and Attachment Belief Scale (TABS).	Difference of means tests between student and field instructor scores for STS and CF were non-significant. Students' VT scores were consistently higher than those of field instructors. Difference-of- means tests revealed significant differences between the two groups. Student and field instructor average scores on the burnout subscale of the ProQOL were essentially equal. However, they were lower compared to Stamm (2005). Students who described themselves as White scored lower on compassion satisfaction, indicating a greater risk of CF and also exhibited more signs of VT overall and on two subscales (self- trust and other esteem). Younger students and those with less experience also were at greater risk of CF and scored higher on

					one VT subscale (other control).
Nelson-Gardell, D. & Harris, D. (2003)	The study explored the relationship between childhood abuse history, secondary traumatic stress, among child welfare workers	Quantitative study. Cross-sectional design. The univariate analysis included correlations and <i>t</i> tests. Also used to analyze the data were series of multiple regressions.	166 participants made up of child welfare workers. Mean age of 40.42 years and were predominantly women (86.7%). The mean number of years of child welfare experience they possessed was 10.70.	- Compassion Fatigue Self-Test for Psychotherapists. - Childhood Trauma Questionnaire (CTQ).	All five CTQ scales significantly correlated with STS; they were all statistically significant predictors of STS. Emotional abuse or neglect seem to be issues in a person's history that place them at most risk. Neither the age of the worker nor years of experience in child welfare were significant predictors of STS. Neither gender nor educational differences (undergraduate vs. graduate, and social work vs. nonsocial work) had any effect on mean STS scores. Yet although age was a significant predictor in the regression analysis, years of experience was not. When the abuse history was controlled for in the regression, age predicted STS risk. Older participants had lower STS risk scores than younger participants.
Penix, E.A., Kim, P.Y., Wilk, J.E. & Alder, A.B. (2019)	The present study also examined whether STS symptoms were associated with staff functioning, risk factors, and the delivery of psychotherapy techniques.	Quantitative study. A cross-sectional survey. Linear and multiple regression analyses evaluated the relationship DV and IVs.	236 included U.S. military health care staff deployed to Afghanistan.	- WRAIR-Secondary Traumatic Stress Inventory. - WRAIR Combat Experiences Scale. - Deployed Medical Experiences Scale. - Deployed Medical Experiences Scale. - Maslach Burnout Inventory (MBI). - The Health-Promoting Leadership Scale.	STS scores ranged from 1 to 5 in health care staff. Medical and Behavior Health staff ($M = 1.56$; $SD = .76$) reported similar WRAIR-STSI scores, $t(234) = .41, p = .69$. Analyses then identified background variables that were significantly associated with STS. Gender was not associated with STS; neither was education. Professional demands, was associated with greater STS. Less self-care, and less health-promoting leadership, were associated with greater STS scores.
Petersen, K.L. (2014)	The study explored the factors affecting the relationships between personal trauma exposure measured by the Life	Quantitative study. Cross sectional design. A structural equation modeling approach was used to determine the	228 mental health providers. demographic data include the preponderance of female participants	- Trauma Symptom Check-list 40 (TSC-40). - Self-Care Checklist (SelfCare). - Shared Power Scale.	The effect of exposure to primary trauma (LifeExpCh) on symptoms of secondary trauma (TSC40) was significant. Females exhibit higher levels of trauma symptoms than males. The results indicated that self-care measured by the Self-Care Checklist (SelfCare), workplace empowerment

	Experiences Total (LifExCh) and secondary trauma exposure measured by the Secondary Exposure Scale (SecExSc) with the presentation of traumatic stress symptoms measured by the Trauma Symptom Checklist (TSC-40).	general compatibility of the model with the data, and examine the strength and direction of relationships that predict elevated symptoms of secondary trauma.	(79.9%), married participants (65.4%), and the average number of years in practice (16.2)	- Post Traumatic Growth Inventory Short-Form (PTGI-SF). - Secondary Exposure Scale (SecExSc). - Life Events Checklist (LEC).	measured by the Shared Power Scale (ShardPwer), and personal growth measured the Post Traumatic Growth Inventory Short-Form (PTGI-SF) predicted significant indirect effects of secondary trauma exposure (SecExSc) on symptoms of secondary trauma (TSC40). Self-Care Checklist and the Trauma Symptom Checklist-40 suggest a significant correlation between every form of self-care and every form of traumatic stress.
Slattery, S. & Goodman, L.A. (2009)	The purpose of this study was to explore contributors to STS among domestic violence advocates in diverse work settings.	Quantitative study. Cross-sectional design. Multiple regression analyses were conducted.	148 domestic violence advocates working in diverse settings. All participants were females with an age range of 19 to 65 years ($M = 36$ years).	- PTSD Checklist–Stressor Specific Version (PCL-S). - Work Environment Scale (WES). -The Relational Health Index. -Shared Power Scale.	Eighty-two (55.4%) participants reported having experienced one or more of types of abuse. With respect to STS, 70 (47.3%) participants met the criteria for clinical levels of PTSD symptoms calculated according to <i>DSM-IV</i> criteria. Workplace social support was inversely related to STS, the quality of clinical supervision was negatively related to STS and shared power was inversely related to STS. Survivor status was the only individual factor to significantly predict STS. That is, advocates who are survivors of past abuse reported more symptoms of STS than those without abuse histories.
Teel, J., Reynolds, M., Bennett, M., Roden-Foreman, J., McShan, E., Hamilton, R., Driver, S., Powers, M. B. & Warren, A. (2019)	The study explored rate of STS among psychiatrists and the associations between personality factors, resilience, and STS.	Quantitative study. Cross-sectional survey design.	Sample were 88 psychiatrist s. Average age was 42 years. 51% female and 66% Caucasian.	-Secondary Traumatic Stress Scale -Connor-Davidson Resilience Scale	Higher resilience ($OR=0.88$; 95% CI, 0.78–0.98; $P=0.023$) were independently associated with lower odds of positive STS screens. That is, low resilience, low extraversion, and low emotional stability were associated with increases in STS symptomology.

Interpersonal Factors

Author	Purpose of Study	Methodology	Sample	Instruments	Relevant Findings
Bourke, M.L. & Craun, S.W. (2014)	The study examined risk of STS among Internet Crimes Against Children (ICAC) task force personnel.	Quantitative study. Cross-sectional survey design. Univariate, bivariate and multivariate analyses were utilized to examine the variables.	Sample size of 600 ICAC personnel. Used convenient sampling method.	<ul style="list-style-type: none"> - Secondary Traumatic Stress Scale (STSS). - Reactions to Disturbing Media Scale -Used subscales of the COPE Scale. - short form of the International Physical Activity Questionnaire (IPAQ). 	The average STS score was on the lower end of the 5-point scale with an average of 2.2 ($SD = .74$). Self-reported difficulty viewing disturbing material was the strongest predictor of STS scores. The frequency of exposure to this material had the second highest influence on a respondent's STS score. Other risk factors included tobacco or alcohol use during the past year and trying to cope with stress through denial. Positive supervisory support and higher social desirability scores were the strongest two variables associated with lower STS. Coping through outside social support and having coworkers who can be relied upon had the next strongest associations with lower STS scores. However, level of physical activity, active coping, coping through planning, time working in law enforcement, time working in the field of child exploitation were not significantly related to STS.
Bride, E.B., Hatcher, S.S. & Humble, M.N. (2009)	The study examined trauma training, trauma practices, and secondary traumatic stress among substance abuse counselors.	Quantitative study.	225 National Association of Alcohol and Drug Addiction Counselors members. Mean age of 56 years ($SD = 8.74$) and were primarily female (59%) and Caucasian (90%).	-Secondary Traumatic Stress Scale (STSS).	Nearly all (97%) of the counselors in this study had traumatized clients on their caseload, and more than three quarters of counselors indicated that at least 25% of their caseload had experienced trauma in their lives. Also, 44% of respondents did not meet any of the diagnostic criteria other than exposure. However, 56% met at least one, 28% met two, and 19% met all three core diagnostic criteria for PTSD.
Owens, A.P. (2014)	The purposes of the following study were twofold: 1) describe secondary traumatic stress and 2) examine the	Quantitative study. Cross-section design. Bivariate, and multivariate regression analyses.	79 participants. Mean age of study participants as 45.7 years ($SD = 12.4$); respondents were predominantly	<ul style="list-style-type: none"> - The Secondary Traumatic Stress Scale (STSS). - Life Events Checklist (LEC) assessed personal trauma history. - Multidimensional Scale of 	There is a positive correlation between STS and extent of work with trauma-exposed clients ($r = .230, p < .05$). Positive correlation between STS and intensity of work with trauma-exposed clients ($r = .214, p < .05$). No statistically significant relationship was found

	moderating influence of risk and resilience factors on secondary traumatic stress.		female (84.8%). The majority of respondents endorsed very good or good physical health (67.1%).	Perceived Social Support (MSPSS). - Coping Strategies Inventory (CSI). - Maintenance of Emotional Separation (MES) Scale. - General Self-Rated Health (GSRH)	between secondary traumatic stress and personal trauma history ($r = .001, p > .05$). Job satisfaction demonstrated the strongest effect on level of STS, producing a beta of $-.329 (p < .05)$. The results suggested that intensity alone does not contribute to STS. However, when job satisfaction was introduced, the association between intensity of work and STS was seen. The effect of intensity of work on STS depends on level of job satisfaction.
Lee, J.J., Gottfried, R. & Bride, B.E. (2018)	The study was to: (1) document the prevalence of STS in a national (US) sample of clinical social workers, and (2) to examine the relationships between exposures to client trauma, STS, and perceived health of clinical social workers.	Quantitative study. Cross-sectional design. Mediation analysis using Hayes' (2013) PROCESS macro for SPSS.	539 participants made up of NASW members. Respondents were primarily female (81%) and white (92%). The average age was 58.5 years (s.d. = 8.0) with a range of 27–83. The average experience as a social worker was 27.6 years.	- Secondary Traumatic Stress Scale (STSS). - General Health Subscale of the Medical Outcomes Study Short Form Health Survey (SF-36)	Nearly all respondents (94.5%) reported that their caseload included trauma survivors, and most (91.1%) reported that client trauma is addressed in the services that they provide. On average, services addressing trauma comprise 36% (s.d. = 30.71) of the respondents' caseloads. The number of hours spent addressing client trauma ranged from 0 to 55 with an average of 10 hours per week (s.d. = 9.35), with 22% ($n = 109$) of respondents spending more than 16 hours a week addressing client trauma. Roughly half of the respondents ($n = 267, 52\%$) did not endorse any cluster of diagnostic symptoms. Following Bride's (2007) guidelines for STSS score ranges, more than half of the sample ($n = 284, 55.3\%$) reported little to no STS, 29.8% ($n = 153$) reported mild STS, 8.8% ($n = 45$) reported moderate STS, and 6.2% ($n = 16$) were evenly split between high and severe STS. Lastly, 15% scored at or above the suggested clinical cut off of 38. Secondary exposure to trauma was associated with higher levels of STS ($a = .044, p < .01$), and higher levels of STS were associated with lower health perceptions ($b = -.095, p < .001$).
Hatcher, S.S., Bride,	The study was to determine to what extent	Quantitative study. Cross-	118 participants. Study	-Secondary Traumatic Stress Scale (STSS)	Approximately 95% of the respondents reported that the population they work with is

B.E., Oh, H., King, D.M. & Catrett, J.F. (2011)	juvenile justice education staff experience STS.	sectional design.	participants were primarily female, White, and entirely college educated. All of the participants were in the educational profession including special education. More than 80% of their working hours were spent with juveniles.		traumatized and 34% said the students were severely traumatized or worse. 95% of the participants responded that their work addresses client's traumatic issues. Also, 92% of the workers responded that they themselves have experienced some degree of fear, helplessness, or horror in response to the trauma reported by students. The results indicate that staff who engage in direct practice are highly likely to be exposed to traumatic events through their work with traumatized populations. In this sample, only 18.6% of the juvenile justice workers did not meet any of the diagnostic criteria other than exposure. Moreover, 81.4% met at least one, 55.1% met two, and 39.0% met all three core diagnostic criteria for PTSD,
Butler, L.D., Carello, J. & Maguin, E. (2016)	The study examined potential risk factors and protective factors (SC effort and importance) in relation to burnout (BO), health status (HS), secondary traumatic stress symptoms (STSS), and compassion satisfaction (CS) among 195 students in a graduate social work training program.	Quantitative study. Bivariate correlations multiple and regressions logistic regression analysis was performed.	195 students in a graduate social work training program. The median age was between 25 and 29 (range =20–55+).	- Professional Quality of Life Scale (ProQOL). - Secondary Traumatic Stress Scale (STSS).	Trauma exposures involving emotional responses, such as experiencing fear, hopelessness, or horror, or a reactivation of a student's trauma history (retraumatization), were positively associated with STSS. All students reported trauma exposures in their field placements and/or coursework, including retraumatization experiences that were associated with higher STSS and BO. Field stress and SC effort were both consistent predictors across outcomes. Higher field stress levels predicted higher BO and STSS, a greater likelihood of decline in HS, and lower CS. Lower SC effort was also associated with higher BO and STSS, and a greater likelihood of decline in HS, while higher SC effort predicted higher CS.

Author	Purpose of Study	Methodology	Sample	Instruments	Relevant Findings
Baugerud, G.A., Vangbæk, S. & Melinder, A. (2018)	The first aim was to evaluate the presence of secondary traumatic stress (STS) and burnout (BO), as well as levels of compassion satisfaction (CS) in a national sample of 506 CPS workers. The second aim was to examine risk and protective factors.	Quantitative study. Cross-sectional survey design. Multivariate (MANOVA) analysis was conducted as well as Pearson correlation analysis. Also, two-step or three-step hierarchical multiple regression analysis was conducted for each of the three factors: BO, STS and CS.	Sample included 506 child protective workers. The mean age of the sample was 41.8 years. Also, 84.8 per cent were formally trained as CPS workers and they had worked as CPS workers on average for 6.75 years.	- The Nordic Questionnaire for Psychological and Social Factors at Work (QPS Nordic). - The Professional Quality of Life-5 (ProQOL). - The Relationship Questionnaire.	Burnout- 30.8% of the sample scored in the low category for BO, 69.2% in the moderate category and 0% in the high category. STS- 63.1% of the sample scored in low category with 36.9% in the moderate category and 0% in high category. CS- 0.9% of the sample scored in the low category 83.7% in the moderate category and 14.4% in the high category. Low levels of CS and high work-load were the strongest predictors of a high score for BO, whereas work-family conflict, work-load and a high score for attachment anxiety predicted symptoms of STS. Positive challenges at work, a sense of mastery of the work and commitment to their organization were associated with improved levels of CS
Benuto, L.T., Newlands, R. Ruork, A., Hoof, S. & Ahrendt, A. (2018)	The purpose of this study was to establish the prevalence of Secondary Traumatic Stress (STS) among victim advocates and to determine if risk factors (for the development of STS) that have been cited in the literature (with other populations) are applicable to victim advocates.	Quantitative study. Cross-sectional design. Series of multiple linear regression analyses were conducted to examine potential risk factors of STS.	Sample included 135 victim advocates using an online survey. Advocates worked an average of 38.07 h per week (SD = 9.29) with an average of 25.31 h (SD = 11.79) per week working directly (i.e., face to face) with victims. Age ranged from 21 to 72 years.	-Secondary Traumatic Stress Scale (STSS).	The prevalence rate of STS among victim advocates is approximately 50%. Of the predictor variables, total hours worked per week and direct services hours per week were both significant predictors of STS. The omnibus test was not significant: $R = 0.221$, $R^2 = 0.049$, suggesting that types of services provided by advocates do not impact STS. The type of victim predicted STS. However, of the predictor variables, only working with adult survivors of sexual abuse was a significant predictor of STS. In addition, given the potential issues with multicollinearity specific betas for this regression should be interpreted with caution.
Kanno, H., Kim, Y.M. & Constance-Huggins, M. (2016)	The study examined predictive factors for secondary traumatic stress (STS) in social workers	Quantitative study. Cross-sectional design. Pearson correlations and multiple regression analyses were	114 participants. Mean age of 39 (SD = 10.1). More than 90% had an associate or bachelor's	- The revised Compassion Fatigue scale (CFS). - Coworker Cohesion scale (subscale of the Work	There was a significant prediction of the level of STS for counseling victim clients, number of victim cases, coworker cohesion, quality of clinical supervision, quality of case conferences, and demographics. Social workers who counseled disaster

	responding to the victims of the 2011 Japan earthquake.	conducted to answer the research questions.	degree. The average years of trauma counseling experience of the participants was 9.60 years ($SD = 7.14$) with a range of 1 to 33 years.	Environment scale).	victims exhibited higher levels of STS than those who did not counsel disaster victims, whereas the number of disaster victim clients did not significantly affect the level of STS in social workers. A strong sense of coworker cohesion significantly reduced the level of STS. Clinical supervision, case conferences, and demographic variables did not significantly predict the level of STS among social workers.
Kanno, H. (2010)	This study explored predictive factors of secondary traumatic stress for social workers assisting 9/11/01 clients, including extent of exposure to traumatized clients, and protective factors that were tested as direct and interactive (buffering) influences.	Quantitative study. Cross-sectional design. Pearson product-moment correlation coefficient. Multiple regression analyses.	Total of 481 participants were included for analysis. Mean age was 60-years old	-Professional Quality of Life Scale, Revision IV (ProQOL R-IV). -Subset of variables from Quality of Professional Practice Survey (PQPPS).	The overall mean score for STS for the social workers assisting victims of 9/11/01 victims ($N=293$) was 12.47 ($SD=5.42$), also in the low range. Also, more hours of assisting 9/11/01 victims did not exhibit an increase in STS. However, social workers with the greatest percentage of contact time with traumatized clients did experience the most STS. A greater number of trauma cases also led to a higher degree of STS. Older social workers reported less STS. Being single did not significantly increase Risk of STS. Higher income had no correlation with STS. More hours of direct contact with clients did not significantly increase in their level of STS. Receiving supervision was associated to higher level of STS. Also, more peer support or personal support did not decrease the level of STS. Likewise, more disaster training before the 9/11/01 event did not influence STS ($r=.04$, ns) in this sample.
Hensel, J.M., Ruiz, C., Finney, C. & Dewa, C.S. (2015)	This meta-analysis of 38 published studies examines 17 risk factors for STS among professionals indirectly exposed to trauma through their therapeutic work with	Meta-analysis.	38 full-text articles were selected for review.		Very small, but significant results were found for age, experience, and trauma training. There were small but significant effect sizes for all measures of caseload, personal trauma, work support, and social support. Small but nonsignificant effect sizes were found for personal trauma same as clients, emotional involvement, posttraumatic growth, and supervision

	trauma victims.				quality. All other risk factors had negligible effect sizes.
Graham, J.R., Shier, M.L. & Nicholas, D. (2016)	It was hypothesized that greater congruence in key work areas among social service workers would likewise result in lower levels of psychological distress and secondary traumatic stress, decreased intentions to leave and increased life satisfaction.	Quantitative study. Cross-sectional design. Structural equation modelling (SEM) and Multiple regression analysis used. Majority of the respondents had a bachelor's degree as their highest attained education (n = 415, 61.57 per cent)	674 participants. The mean age of participants was 42.91 years. Most of the respondents were married (n = 478, 70.92%). Worked in the human services for 9.45 years.	-Brief Symptom Inventory (BSI-18). -Secondary Traumatic Stress Scale (STSS). -Satisfaction with Life Scale (SWLS). -Areas of Worklife Survey (AWS)	The analysis finds that the workplace congruence factors regarding perceived fit with workload, community/work environment characteristics and values significantly predicted levels of each of the occupational outcome variables. Higher congruence with workload, workplace values and community /environment fit resulted in lower levels of psychological distress, secondary traumatic stress and intentions to leave and each predicts higher levels of overall life satisfaction.
Caringi, J.C., Hardiman, E.R., Weldon, P., Fltcher, S., Dlvln, M. & Stanick, C. (2017)	The study examined levels of secondary traumatic stress (STS), compassion fatigue, burnout, and compassion satisfaction in social workers.	A mixed methodology design was utilized.	256 participants. A smaller sample (N =15) of follow-up interviews were conducted to collect qualitative data. population examined in the current study consisted of licensed clinical social workers (LCSWs)	-Social Work Demographics/ Workplace Questionnaire, -Secondary Traumatic Stress Scale (STSS) -Professional Quality of Life Scale (ProQOL).	Social workers in the sample experience significant levels of STS, with 40.9% (n =105) meeting the criteria for posttraumatic stress disorder, using the STSS as a proxy measure. ProQOL results confirm the presence of high levels of burnout and compassion fatigue on subscale scores, with <i>t</i> -tests indicating that individuals performing case management reported lower levels than other groups. Age and time in current job were not found to be significant factors, whereas lower levels of job satisfaction and intent to look for other work were predictive of higher burnout and compassion fatigue scores. Qualitative Findings: - Family support, self-care, teamwork, mastery of skills and duties, peer support and organizational support as a buffer. For 67% of the participants, family support helped.
Choi, G. (2011a)	The research examined the influence of organizational characteristics on STS of social	Quantitative study. Cross-sectional design. Multivariate OLS linear regression	154 social workers. Female (78.6%) and Caucasian (87.7%). Master's	-Secondary Traumatic Stress Scale (STSS). -Social Structural Scale.	Among the organizational support variables, only having sociopolitical support and access to strategic information are significantly related to STS. That is, the social workers who had more

	workers who provide direct services to survivors of family violence or sexual assault.	model was used to test the hypothesis.	level education (96.7%) with MSW degrees (93.5%). Only 1.3% of the respondents held BSW degrees, and 1.9% held PhD degrees. Mean of years working in their current agencies was 8.3.		support from their superiors, peers, and work teams experienced lower levels of STS. Moreover, social workers who had more access to the organization's strategic information were less likely to experience STS. None of the work condition variables are significantly related to STS. Past trauma history is the only control variable that predicts STS. The coefficient indicates that social workers who had experienced more types of personal traumatic events had more severe levels of STS. Moreover, gender is marginally related to STS, suggesting that there might be differences between females and males in their STS levels. The coefficient of gender indicates that female social workers in this study have higher STS levels compared to male social workers.
Kulkarni, S., Beth, H., Hartman, J.L. & Herman-Smith, R.L. (2013)	The current study explored the role of worklife mismatches on domestic violence services providers' experiences of burnout, secondary traumatic stress, and compassion satisfaction after adjusting for other individual, employment, and coping factors	Quantitative study. Cross-sectional design. Series of two-step hierarchical multiple regressions were used to analyze the data.	236 participants-providers of domestic violence services. 63.9% White, 95% women, 72.4% were college educated and age ranges from 22 to 68 years. 52.% have childhood experience and 52.4% have adulthood trauma experience.	-Professional Quality of Life R-IV (ProQOL R-IV). -Areas of Worklife Scale (AWS)	Respondents experienced high levels of compassion satisfaction. Reported levels of experiences of burnout and secondary traumatic stress were below the mean of the scale. The strongest risk factor for both burnout and secondary traumatic stress was a provider's perception of having an unreasonable workload. However, providers' time spent in leisure had a positive relationship with burnout and secondary traumatic stress. Time spent in self-care had nonsignificant but negative relationship to burnout and secondary traumatic stress.

Literature on Burnout and ID/DD Staff

Individual Factors

Age. The majority of the studies concluded that the age of ID/DD staff is inversely related to the risk of burnout. Ko, Lunskey, Hensel and Dewa, (2012) found that, when it comes to the risk of burnout among ID/DD staff, age was negatively associated with the MBI subscale of depersonalization. Another study involving disability support staff working in 18 residential community settings found that age was negatively correlated with the risk of burnout (Symth, Healy, & Lydon, 2015), suggesting that younger staff are prone to depersonalization and emotional exhaustion than older workers. It is important to note that the sample of this study was from one organization, which might limit generalizing. Also, Tartakovsky, Gaftor-Shor, and Perelman-Hayim, (2013) reached a similar conclusion in that staff age was an inversely significant predictor of burnout in terms of emotional exhaustion and can also lead to depersonalization among ID/ DD staff. It is worth mentioning that the Tartakovsky, Gaftor-Shor, and Perelman-Hayim, (2013) study sample comprised 220 community service workers of which 126 worked in services for people with ID/ DD, and 96 worked in services for people with severe mental illness. Hence, findings might not reflect the association of age and burnout among ID/DD workers in general.

The exceptions to the relationship between age and risk of burnout were two studies, one of which concluded that there is no general trend in burnout and age groups (Dennis & Leach, 2007). However, caution must be taken when interpreting Dennis and Leach (2007).

First, the study only looked at the emotional exhaustion subscale from the Maslach Burnout Inventory (MBI) and did not include the other two subscales:

depersonalization and personal accomplishment. Second, the study involved a much smaller sample size of 10 respondents, which could significantly affect the generalizability of the results.

Another study reported that staff in the intermediate age group (30-39 years) were at an increased risk of reporting higher levels of burnout than were colleagues younger than age 30 (Kozak et al., 2013). This study involved staff who worked in residential facilities and used the Copenhagen Burnout Inventory (CBI) as the scale instead of the MBI scale used in the other studies, which might possibly explain the variation in burnout results.

Education and Profession. One study specifically examined the relationship between educational level and risk of burnout and concluded that there is a significant difference between education levels and risk of burnout, concluding that staff with tertiary qualifications score higher on depersonalization from their work compared with those with secondary school qualifications (Vassos, et al., 2013). Denise and Leach (2007) compared direct support workers and nurses in a much smaller sample of 10 and found that burnout is prevalent in direct support workers (35%), compared with registered nurses (17%). Another study, which compared the rate of burnout among different occupations (N = 276) in ID/DD institutions using CBI, found that a psychological counselor (score = 58.3), social worker (score = 49.4), and special educator (score = 47.0) were the top three job categories at risk of burnout (Lin & Lin, 2013). However, a recent study to examine differences in burnout levels among physicians, nurses, therapists, educators, and administrative staff who work in ID/ DD facilities did not find significant differences between the groups (Finkelstein et al, 2018). The finding

in this study suggested that working with people with ID/DD could be emotionally taxing and sometimes physically demanding across professionals.

Marital Status. Mascha (2007) investigated burnout, job satisfaction and intended turnover in 36 DSPs and found that there was a significant difference between the group of single people ($M= 12$, $SD=5.6$) and the two groups of married ($M= 3.2$, $SD= 3.2$) and divorced/separated people ($M= 4.6$, $SD= 4.4$) among ID/DD staff. The analysis of that relationship revealed that staff members who were single experienced significantly more feelings of depersonalization in relation to their job, while married people experienced the least feelings of depersonalization. No significant differences were found between married and divorced groups (Mascha, 2007). Shaddock, Hill and van Limbeek (1998) reported a slightly different outcome in their study involving 173 staff. The results from their study showed that the respondents who were divorced or in de facto relationships had the highest burnout scores, while widowed respondents had the lowest scores. No relationship was found between burnout and marriage length (Shaddock et al., 1998). These findings reinforce the notion that burnout could be an interactional effect of both work-related stress and personal stress. However, given the relatively small sample sizes of both studies, replication might be necessary to fully comprehend the relationship between burnout and marital status.

Race and Ethnicity. Hickey (2012) studied 1,570 direct support workers and found that staff who identified as being from Aboriginal descent as well as visible minorities had lower risks of burnout in terms of a stronger sense of personal accomplishment. They were less likely to depersonalize from their job, compared with staff of a different race and ethnicity. However, foreign-born direct support workers in

the study had negative feelings of personal accomplishment compared with native-born direct support workers.

This exploratory study alludes to interesting dynamics within race and ethnicity that need further investigation by researchers.

A study by Lin et al (2015) explored this relationship among natives and foreign DSPs and found that although the difference was not statistically significant, burnout in local respondents was higher than foreign respondents. This trend was present in the ratings of each item of the personal burnout subscale of the CBI scale. Similar findings were reported on the work-related burnout subscale, indicating a trend in the sample. They reported a significant difference ($p = 0.031$) on the item “Do you feel worn out at the end of the working day?” between local and foreign living assistants (46.7 ± 28.5 vs. 31.5 ± 15.5). The effect of race and ethnicity on burnout among ID/DD workers is at the exploration stages, based on the existing literature. Further inquiry is needed to help understand the factors contributing to such differences — if they exist. For example, how might sociocultural factors such as language, and job opportunities have influenced these results?

Psychological Variables. Various studies associated staff psychological states to burnout. Emotions such as anxiety and depression, which relate to stress, have been linked to higher burnout risks. Aitken and Schloss (1994) studied 150 staff in institutional and community settings and found an association between higher levels of anxiety and/or depression, higher scores of emotional exhaustion and depersonalization subscales, and relatively low correlation with personal accomplishment at work, using MBI as the burnout measurement. Likewise, psychological stress, anxiety, and depression were

positively correlated with emotional exhaustion and depersonalization in another study (Mutkins et al., 2011).

Similarly, Chung and Harding (2009) found that neuroticism (a tendency toward anxiety, self-doubt, depression, shyness, and other similar negative feelings) was associated with the experience of emotional exhaustion when someone felt a reduced sense of personal accomplishment.

A study on the staff's emotional state and burnout revealed that among ID/DD staff, those who reported more psychological acceptance also reported less burnout (emotional exhaustion) at work (Noone, & Hastings, 2011). Also, Duran, Extremera, and Rey (2004), reported that emotional clarity (understanding of one's emotional states) and repair to moods (the ability to regulate one's emotional states) reduced the risk of burnout and increased feelings of the staff's personal accomplishment at the job. The author cautioned that the measure used to assess emotional intelligence in this study was of self-report and could be potentially biased in characteristics. A further examination of this phenomenon by Pătraș, Martínez-Tur., Gracia and Moliner (2016) with 817 workers randomly selected from 118 organizations found that staff who attempted to regulate their emotions in “bad faith” (Rafaeli & Sutton, 1987) — making a conscious effort of “faking” the expression of their true emotions in order to satisfy requirements at work — are more likely to report a higher level of exhaustion. The evidence seems to suggest that, in addition to the association of specific psychological traits of burnout among ID/DD staff, the way staff process and express emotions does affect burnout rate.

Personality Trait. Lundström, Graneheim, Eisemann, Richter and Åström, (2007) identified that the personality dimensions of harm avoidance and self-directedness

were related to burnout. Their results revealed that ID/DD staff who were more pessimistic, worrisome, shy with strangers, easily fatigued, irresponsible, aimless, undisciplined in behavior, and prone to lacking impulse control, were more likely to experience burnout. Further analysis in the study indicated that personality dimensions alone explained 10%–30% of the variance in burnout scores — a more important factor than emotional reactions, work-related strain in care, and self-esteem.

On the other hand, extraversion seemed to be a protective factor for the ID/DD staff. The more extraverted (sociable, talkative, assertive, and excitable) the staff members, the less likely they were to experience emotional exhaustion and more likely to feel a sense of personal accomplishment (Chung, & Harding, 2009). Also, positive work motivation was inversely associated with at least two burnout subscales (emotional exhaustion and depersonalization) when it comes to ID/ DD staff (Lunsky et al., 2014). The results meant that staff members who are inspired to improve their skills, who have a new perspective of their jobs, and who have an uplifting personality are less likely to experience burnout (Lunsky et al., 2014). A similar conclusion was that a more positive attitude toward empowerment, a higher sense of similarity with people with ID/ DD, and a more negative attitude toward exclusion was associated with a lower level of burnout — lower levels of exhaustion and depersonalization and a higher sense of professional accomplishment (Tartakovsky, et al., 2013). Tartakovsky, Gaftor-Shor and Perelman-Hayim (2013) explained that staff who were identified to have higher preference for their self-enhancement value type — characterized by high motivation for power, social status, and personal recognition — were more likely to experience a higher level of depersonalization and a lower sense of professional accomplishment. A higher preference

for the benevolence values such as caring for the welfare of the others with whom one is in frequent social contact was associated with a lower level of depersonalization. Finally, a higher preference for universalism — understanding, appreciation, tolerance, and protection of the welfare of all people and of nature — was associated with a higher sense of professional accomplishment on the MBI subscale. Also, staff with higher desires of self-efficacy as a principle showed high levels of personal accomplishment in a study of 62 in institutional and community settings (Howard et al., 2009).

Personal Resilience. The role of personal resilience as a protective factor of occupational stress and burnout has been examined in various research studies (Bekhet et al., 2012; Ingham et al., 2013; Nevill, 2017). The Ingham, Riley, Nevin, Evans, and Gair (2013) study conducted a pre-post group design by providing a resilience work shop to the experimental group of 37 staff in an inpatient ID/DD facility and found a significant difference between the experimental group and the control group of 21 staff. Negative emotions associated with client challenging behaviors reduced in the experimental group but burnout was not lower. The researchers attributed the nonsignificant difference in burnout within the group to a small effect size. The Bekhet, Johnson, and Zauszniewski, (2012) study involved 95 caregivers and found that personal resilience mediated the effect of caregivers' burden of care and improved retention rates. This study used a Resourcefulness Scale as a proxy to a measure of resilience. Similar results were confirmed in 97 caregivers using the Brief Resilience Scale. However, a longitudinal study to replicate this finding among 102 DSPs produced mixed results (Nevill, & Havercamp, 2019) such that personal resilience only predicted emotional exhaustion but not depersonalization or personal accomplishment of the Maslach Burnout Inventory.

There is the need for further inquiry into the relationship between personal resilience and burnout to validate and extend these findings.

Gender. Seven studies reported on gender and burnout rates, and there were mixed findings. Three studies found that a higher risk of burnout was experienced by male staff (Kowalski et al., 2010; Vassos & Nankervis, 2012). In a sample of 175 professionals who work with individuals with ID and disability, Kowalski et al., (2012) found that male gender is a predictor of emotional exhaustion. In that study, male staff were identified to be more than four times more likely to be in the emotional exhaustion risk group. When interpreting this result, caution must be taken because the study sample included clients with a physical disability. Another study, involving 108 direct support workers, found gender differences in the subscale of depersonalization, suggesting that males reported significantly higher burnout risk. (Vassos & Nankervis, 2012).

In contrast, a subsequent study by Vassos, Nankervis, Skerry, and Lante (2013) revealed an opposite outcome. Females reported a significantly higher rate of emotional exhaustion. Both Vassos and Nankervis (2012) and Vassos, Nankervis, Skerry, and Lante (2013) involved direct support workers. The sample size of the latter (258) was more than twice that of the former (108), which possibly affected the differences. Also, due to the lengthy questionnaire used, it was reported that many of the respondents stopped halfway, which is a limitation which should be considered when interpreting the results. It is important to note that Ko, Lunskey, Hensel, and Dewa (2012) in their study of 169 staff members from 16 summer camp programs revealed that female gender was a higher predictor of risk of burnout. A similar finding was reported by Kozak, Kersten, Schillmoller, and Nienhaut (2013), which involved a much larger sample size of 409

professionals in residential settings. The CBI measure was utilized instead of the MBI measure used by the other five studies. Another study which used CBI to assess burnout risk in 276 caregivers identified that female employees were more likely to have a higher score on the Personal Burnout Scale (PBS) and the Work Burnout Scale (WBS) (Lin & Lin, 2013).

However, the Shaddock, Hill, and van Limbeek (1998) study found no significant differences in burnout rate based on gender. The study, which examined a sample of 173, was the earliest study done in this group and might not reflect current trends on the association between burnout and gender. In summary, the association between gender and burnout among ID/DD workers varies among studies and might require continuous inquiry. It might be possible that other factors than gender might be prevalent when it comes to potential burnout predictors. Some authors have questioned altogether the inclusion of gender as a variable in burnout studies. One of the arguments being made against gender representation is the highly skewed frequency of female response in burnout studies.

Religion. Not much focus has been given to the relationship between religious preference and risk of burnout in ID/DD literature since an early publication by Shaddock, Hill and van Limbeek (1998), which found a significant difference in burnout scores among those professing different religious affiliations. The burnout scores of respondents who were affiliated to a specific religion were significantly lower than those who did not.

Interpersonal Factors

Challenging Behavior. Various studies show that a client's challenging behavior is associated with the rate of burnout among ID/ DD staff. The Mills and Rose (2011) results showed that the higher the level of challenging behavior reported by staff, the higher the burnout reported. Likewise, challenging behaviors were found to significantly predict burnout among direct support workers in both the Vassos and Nankervis (2012) and Vassos, Nankervis, Skerry, and Lante (2013) studies. Also, Chung and Harding (2009) investigated burnout and the psychological well-being of staff working with people with intellectual disabilities and challenging behaviors and found challenging behaviors predict burnout subscales of emotional exhaustion and personal accomplishment. This result meant that the more a worker found a client's behavior challenging, the more the worker experienced emotional exhaustion and the less he or she felt a sense of personal accomplishment. Among the challenging behaviors studied, staff ratings of higher levels of physical and verbal aggression were significantly correlated with higher levels of emotional exhaustion. This suggests that the more verbal and physical aggression staff reported, the more emotional exhaustion they are likely to report. However, verbal aggression showed a positive correlation with personal accomplishment, suggesting that the more verbal aggression staff experience, the more personal accomplishment they are likely to report. (Howard et al., 2009).

However, a recent study, which examined the impact of exposure to aggressive, challenging behaviors on ID/DD staff, found no evidence of association between challenging behaviors and staff measures of burnout (Flynn et al., 2018). They asserted that burnout is more substantially influenced by the work environment than the other

variables. Notably, this study involved 189 staff who had some exposure to challenging behaviors, but neither the frequency nor level of severity of the challenging behaviors were examined.

Frequency of Challenging Behavior. Two studies identified a positive correlation between the frequency of a client's challenging behavior and burnout among ID/ DD staff. Ko, Lunskey, Hensel and Dewa (2012) found a significant positive relationship between the frequency of challenging behaviors and burnout. This indicated staff exposure to a high frequency of challenging behavior increased the risk of burnout. Likewise, Symth, Healy and Lydon (2015) found that predictors of burnout in the form of staff depersonalization from work included a greater frequency of challenging behaviors.

Severity of Challenging Behavior. The severity of challenging behaviors was identified as a predictor of burnout. Symth, Healy, and Lydon (2015) found that greater severity of challenging behaviors to which staff is exposed is a predictor of burnout (emotional exposure). A similar finding was reported in Ko, Lunskey, Hensel, & Dewa, (2012), which reported significantly positive correlations between perceived severity of challenging behaviors and emotional exhaustion, and negative associations with staff feelings of personal accomplishment. In a qualitative study by Capri and Buckle (2015), staff asserted that the client aggressive behaviors inflicted physical and psychological harm. Another study that investigated burnout among staff who work in hospitals and community settings found that the hospital staff were exposed to significantly more severe aggression of all types much more often, resulting in injury to self, others, or damage to property. The study reported higher hospital burnout rates compared with community groups (Hensel et al., 2013). Hensel, Lunskey and Dewa (2013) reached that

conclusion, even though staff exposure to any aggression did not significantly differ between the groups, 28% of community and 32% of hospital staff reporting exposure almost every day.

Emotional Response to Challenging Behavior. Burnout theory suggests that work stressors (e.g. challenging client behavior), staff emotional response to the stressors, and work and personal resources (e.g. positive organizational support and social support) will be related to burnout symptoms (Leiter 1993). Two studies examined the staff emotional response to the clients challenging behaviors and determined that the negative response to such behaviors increases the prevalence of burnout among staff.

Rose, Horne, Rose, and Hastings (2004) explored negative emotional reactions to challenging behavior and staff well-being (specifically, burnout) in two separate studies of 101 and 99 direct support workers, respectively. The analyses showed that negative emotions related to challenging behaviors was significantly, positively associated with MBI burnout scales of emotional exhaustion and depersonalization, meaning staff who reacted with negative emotion to the client's challenging behaviors did undergo emotional exhaustion and depersonalization in their job. Mills and Rose (2011) examined this relationship in 78 staff from a total of six organizations and concluded that when it comes to a staff's response to challenging behaviors, the fear of assault is significantly related to burnout. The greater the fear of assault, the greater the risk of emotional exhaustion and depersonalization from the job and the lower the feelings of personal accomplishment. The Symth, Healy and Lydon (2015) results indicated that both the frequency and severity of aggressive/destructive behavior experienced were related to the perceived stress of disability support workers. In that study, perceived stress was the

strongest predictor of emotional exhaustion and did predict depersonalization subscales in MBI. This suggests that the degree to which an individual regards events in their life as unpredictable, overwhelming, and uncontrollable, the higher the risk of burnout (i.e. emotional exhaustion and feelings of depersonalization from their work).

Nature of Interaction. The current literature indicates that when it comes to burnout among ID/ DD staff, the nature of interaction between staff and ID/ DD population matters. The Dennis and Leach (2007) study revealed that staff exhibited different levels of burnout (emotional exhaustion) in relationships with different clients, suggesting that among other variables, burnout is a reflection of interactional characteristics and the state of that specific relationship between client and staff.

Positive client-staff interaction has been associated with lower risk of burnout (Lawson & O'Brien, 1994), whereas perceived negative emotions in response to a client's challenging behavior is associated with higher emotional exhaustion and depersonalization of their work (Mills & Rose, 2011).

Another study examined the effects of reciprocal relationships between ID/ DD staff and clients, colleagues, and organizations on burnout. The study concluded that emotional exhaustion was significantly correlated with perceived reciprocity with clients, colleagues, and the organization on the measure (Thomas, & Rose, 2010). The study involving 95 direct care workers revealed that staff who felt their clients, colleagues and the organization did not reciprocate their relationships work, were at higher risk of burnout. Among the three relationships, the lack of reciprocal relationship with the clients had the weakest association with burnout. (Thomas, & Rose, 2010).

Social Support. The studies bear similar conclusions when it comes to the role of social support in predicting burnout among ID/DD staff. In general, positive social support negatively correlates with burnout and lack of social support has been linked to high risk burnout. Mutkins, Brown and Thorsteinsson (2011) reported that social support was positively correlated with the staff feelings of personal accomplishment. Also, the study, which involved staff who worked in community settings, found that staff who felt supported in their job from their family reported lower burnout scores (Mutkins et al. 2011). A similar outcome was reported by Shaddock, Hill, and van Limbeek (1998), which indicated that the more social support that was provided to staff, the higher their personal accomplishment.

Organizational Factors

Workplace Stressors. Various work-related factors have been identified in the ID/ DD literature to contribute to burnout risk. Judd, Doronzenko and Breen (2017) in part of their qualitative study explored direct support worker perceptions of enjoyable and challenging aspects of disability support work, sources of stress, and burnout. The staff interviewed described stress and burnout as negative aspects of disability support work perceived to outweigh the positives. Some of the factors cited that influenced burnout were lack of decision-making power, earning a low income, lack of management insight into the high expectations for care, and constant pressure due to staff shortages. Capri, Kruger and Tomlinson (2013) in their exploratory, descriptive study, interviewed 16 respondents who identified heavy workload and emotional fatigue as organizational factors that contributed to feelings of stress and burnout. The factors included inadequate staffing, inconsistent scheduling, low staff morale, and lack of organizational support.

Consistent with these views are empirical studies such as that by Aitkin and Schloss (1994) who assessed the levels of occupational stress and burnout among staff providing services to people with an ID in institutional and community settings. The study reported that higher levels of occupational stress are associated with role conflict, work overload, role ambiguity, and stress due to physical work environment.

Dyer and Quine (1998) investigated 80 direct support workers and found that burnout was positively correlated with role ambiguity and role conflict. Vassos and Nankervis (2012) examined burnout and organizational variables among direct support workers and found that low job status, role ambiguity, role conflict, and work-home conflict correlates inversely with burnout among ID/ DD staff.

Gray-Stanley and Muramatsu (2011) examined types of work stress as they are related to direct support worker burnout and reported that burnout was significantly associated with work stress, specifically to work overload, and low participation in decision-making among direct support workers. A similar study, which investigated work engagement and burnout among 258 direct support workers, found that predictors of burnout included high workload, role ambiguity, and low job status (Vassos et al., 2013). The results indicated that these factors were associated with staff emotional exhaustion and lower feelings of personal accomplishment. Hickey (2012) examined the phenomenon of 1,570 direct support workers and found that work overload had the most significant direct association on feelings of emotional exhaustion among staff. In a recent study, Finkelstein et al. (2018) examined the associations between personal, professional, and organizational characteristics and burnout in a sample of 199 ID/DD professionals

and concluded that burnout risk factors included work overload, role ambiguity, and that greater sense of job involvement are significant protective predictors of burnout.

In a recent qualitative study by Quilliam, Bigby, and Douglas (2018), the 29 respondents identified that intrusions into their physical and emotional space, and personal time resulted in stress and exhaustion. Similar results were found in Lin and Lin (2013) when they explored workplace or personal characteristics associated with burnout and discovered quantitative demands, role-conflicts, and emotional demands correlated with burnout. Also, Kozak et al. (2013) suggested emotional demands, work-privacy conflict, role conflict, and job security were positively associated with burnout. Other studies which reported on work variables among ID/ DD staff include Kowalski et al. (2010), which reported a high positive correlation between the staff-reported workload and emotional exhaustion.

Organizational Support. The extent to which DSPs feel supported by their employment organization has been determined to have effects on risk of burnout. Another study examined this phenomenon in 80 DSPs and found low organizational support to be associated with burnout symptoms (Mutkins et al., 2011). Also, an exploration study involving 36 direct support workers and senior officers identified a lack of teamwork and communication between staff members and superiors as significant stressors for at least 52.8% of participants (Mascha, 2007). An organization's social capital, defined as common values, supportiveness, and perceived mutual trust in the organization, is inversely correlated with burnout, suggesting lower staff perceived social capital in the organization, was associated with higher emotional exhaustion (Kowalski et al., 2010).

A research study found that staff who expressed a lack of reciprocity with service users, work colleagues, and the organization were more emotionally exhausted and felt more depersonalized (Rose et al., 2010). Thomas and Rose (2010) examined social support by looking at the concept of reciprocity — intra-personal comparisons regarding the equity between investments and outcomes in social exchange relationships — and found that a lack of reciprocity within the organization and colleagues are predictive of burnout. They asserted that both reciprocity within the organization and among colleagues significantly increased staff experience of emotional exhaustion and decreased feelings of personal accomplishment. However, among the two, reciprocity within the organization was the most significant predictor of burnout (Thomas & Rose, 2010).

Latitude in Decision-Making. The evidence indicates that there is a significant negative association between latitude in decision-making and burnout among ID/ DD staff. Shaddock, Hill and van Limbeek (1998) showed that staff who tended to agree with the statement “I am involved in decision making in my job” were more likely to have lower burnout scores (Shaddock, et al. 1998). This finding was affirmed in Kowalski et al. (2010), where latitude in decision-making is shown to be a predictor of burnout. Specifically, staff perceptions of their latitude in decision-making was inversely associated with emotional exhaustion (Kowalski et al., 2010).

A similar outcome prevailed in Kozak et al. (2013), who identified job feedback as a negative predictor of burnout, meaning staff who reported that they are able to give feedback at work reported lower risk of burnout. An investigation by Vassos and Nankervis (2012) into this issue found that job feedback was positively related to personal accomplishment and accounted for a large portion of variance within this

variable. Subsequent research into this relationship by Vassos, Nankervis, Skerry and Lante (2013) showed that the workplace resource of job feedback was consistently associated with burnout and work engagement scores, suggesting staff who scored high in feedback also reported high in work engagement levels and experienced less burnout.

Supervision. Supervisor support was identified to have an inverse relationship with burnout (Vassos et al., 2012), in that a lack of supervisor support was directly linked to higher risk of emotional exhaustion. Mascha (2007) investigated this relationship and reported that staff who were satisfied with the supervision levels provided to them also reported experiencing higher levels of role clarity and job satisfaction and lower levels of intended turnover and emotional exhaustion.

Job Status. Two studies reported varied outcomes on MBI subscales on part-time and full-time status and burnout among ID/ DD staff.

Vassos and Nankervis (2012) found significant differences between full-time and part-time workers for emotional exhaustion and depersonalization. The full-time workers reported significantly higher emotional exhaustion and depersonalization (indication of higher burnout rate) compared with part-time workers. In contrast, a previous study reported a significant association between full-time and part-time work status and burnout. Part-time workers reported lower feelings of personal accomplishment (i.e. higher burnout) than full-time workers (Devereux et al., 2009). Notably, both studies used the MBI scale, but each derived outcome was different in terms of group and respective MBI subscales. Further investigation is necessary to understand this discrepancy.

Occupational Groups. There have been documented relationships between burnout rates among various occupational groups who worked with the ID/DD population. Aitken and Schloss (1994) indicated differences in burnout levels across occupational groups (Management, Therapy and DSW) with managerial staff having a higher burnout rate than among direct care workers. Similarly, Edwards (1991) analyzed this phenomenon among 125 staff members working in community residential facilities and reported that the supervisory staff reported experiencing more intense feelings of burnout than the direct support workers.

Organizational Setting. A study examined the differences in burnout among ID/DD workers in inpatient hospitals and community settings and concluded that hospital staff were more likely to experience burnout than those in community settings (Hensel et al., 2013). Subsequent analysis by the researchers revealed that the severity of client challenging behavior was highest among hospital staff and was a significant mediator of burnout. Also, Aitkin and Schloss (1994) study compared community and institutional staff, and there was higher burnout risk among institutional staff.

The institutional staff had more negative and cynical attitudes toward the work environment. Comparisons between the staff in the two settings revealed institutional staff was more negative and cynical in attitudes toward the work environment and reported higher levels of occupational stress than staff who work in a community setting (Aitken & Schloss, 1994). Another study on burnout compared 51 staff from a public institution with 50 staff from a private charitable organization. Burnout risk was significantly higher among staff of government institutions than among charity organizations (Blumenthal et al., 1998). The public workers cited various reasons, such as

feelings of unappreciated feedback from staff, feelings that clients do not have a voice over their lives, unrealistic expectations of staff, and staff required to do unnecessary work, which contributed to their emotional exhaustion.

Literature on Secondary Traumatic Stress and ID/DD Workers

The literature search on STS among ID/DD workers yielded one study. It is a dissertation which relates to professionals or caregivers of ID/DD and STS (Keesler, 2016). The study utilized a cross-sectional design which explored individual and organizational factors in predicting direct support professional (DSP) quality of life indicators, such as compassion, satisfaction, burnout, and secondary traumatic stress, using Stamm's (2010) professional quality of life (ProQOL) scale. Other variables assessed in this study included adverse childhood experiences, (ACEs) defined as stressful or traumatic experiences that occur prior to the age of 18 (Felitti et al., 1998) and emotional intelligence (EI) defined as the ability to adaptively perceive, understand, manage, and harness emotions in the self and others (Salovey & Mayer, 1990; Schutte et al., 1998).

The regression analysis on the STS outcome variable indicated that across the four models, EI had a significant direct effect on STS scores. Also, physical intervention and injury (requiring first aid/medical attention) also had significant direct effects on STS scores. Higher EI predicted lower STS scores, while increased use of physical interventions and injury predicted higher STS scores. However, the relationship between emotional intelligence and STS scores was neither moderated by exposure to challenging behavior nor by organizational culture.

Literature on Secondary Traumatic Stress and Social Services Workers

The search was extended to include STS and social service workers from the year 2000 to 2019. Various factors were categorized into personal, interpersonal, and organizational factors. It must be noted that two studies in this literature included ID/DD in their sample. Lee, Gottfried & Bride (2018) included 8.3% of ID/DD workforce participants in their sample and Bride (2007) 1.1%. The percentages of ID/DD workforce participants represented in those studies were relatively small. In addition, none of the studies reported specific analysis pertaining to the ID/DD subsample. As a result, those studies were treated as part of the general studies involving social service workers.

Individual Factors

Worker's own Trauma History. In the theoretical underpinnings a significant fact is that STS/ VT could occur with or without preexisting characteristics or unresolved psychological conflicts to help describe a staff's responses (Hesse, 2002). However, a significant number of studies have shown a correlation between a social worker's personal history of trauma and the development of STS. Bauwens & Tosone (2014) examined how traumatic life events among social workers and clinicians related to primary and secondary trauma. The study examined this phenomenon among 244 social workers and clinicians, and found that clinicians experiencing a greater number of traumatic events had a stronger propensity toward primary trauma.

Similarly, the path from traumatic life events to secondary trauma was significant in the sample (Bauwens & Tosone, 2014). Similarly, the Brady (2017) study, which involved Internet Crimes Against Children (ICAC) task force personnel, came to the

same conclusion that respondents who reported a history of trauma were associated significantly with higher levels of STS (Brady, 2017).

Choi (2011a) and Choi (2017) investigated the influence of trauma history on STS symptoms among social workers who provided direct services to survivors of family violence or sexual assault, and they came to the same conclusion that past trauma is a predictor of STS. The results indicated that past trauma history is positively related to secondary traumatic stress (Choi, 2017) and that social workers who had experienced more types of personal traumatic events had more severe levels of STS (Choi, 2011a). Nelson-Gardell and Harris (2003) explored the relationship between childhood abuse history and secondary traumatic stress among child welfare workers. The study adopted the Childhood Trauma Questionnaire (CTQ), which inquired about five types of childhood maltreatment: emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect. The results found that all five CTQ scales significantly correlated with STS. All were statistically significant predictors of STS (Nelson-Gardell & Harris 2003).

Other findings suggest that a personal history of trauma does not relate to the development of STS symptoms. Benuto, Newlands, Ruork, Hooft, and Ahrendt (2018) explored STS among victim advocates to determine risk factors and found that a personal history of trauma was not related to the development of STS symptoms. Similar findings had been reported in previous studies such as the Owens (2014) dissertation, which found no statistically significant relationship between secondary traumatic stress and personal trauma history.

In another study, personal trauma history was significantly negatively correlated with secondary trauma scores among a sample of foster parents (Carew, 2016). In that study, only 2% ($n = 1$) of foster parents indicated that their personal trauma history negatively impacted their role as a foster parent. One of the explanations to the findings in the Benuto et al. (2018) study was that many victim advocates have a history of personal trauma and might use their work with victims as a mechanism of healing from personal trauma (Michalopoulos & Aparcio, 2012). However, a study among a similar population found contrasting results in that domestic violence advocates who are survivors of past abuse reported more symptoms of STS than those without abuse histories (Slattery & Goodman, 2009).

A meta-analysis by Hensel, Ruiz, Finney and Dewa (2015) found that when it comes to personal trauma history and STS, the type of trauma and the similarity with a client's traumatic experience and the severity of exposure could be important. They identified that staff whose traumatic experience was different or similar to the client's was positively related to STS in all of the 38 studies reviewed. Staff who had a past history of sexual or domestic abuse and worked with victims of similar trauma experiences had higher risks of STS. Similarly, staff with a history of childhood trauma who provided services to child trauma victims reported high effect sizes among the studies (Hensel et al., 2015).

Empathy and Emotional Response. According to Figley (2002), one of the factors that influence the development of STS is the worker's emotional experiences of client suffering and disengagement from the patient. Empathy is the social worker's

ability to understand and partake in the experiences of others, and to sympathize with the events that might happen to clients (Nelson-Gardell & Harris, 2003).

The staff's inability to manage this dyad appropriately might contribute to the risk of developing STS (Badger et al., 2008). Badger et al. (2008) explored the predictive contributions of empathy and emotional separation among social workers employed in trauma centers. The univariate results showed a strong correlation between emotional separation and risks of STS. Also, higher levels of empathy were weakly and positively associated with reported symptoms of STS.

However, results from multivariate analyses, which included occupational stress, years of work experience, and social support, found emotional separation to be significant but not empathy (Badger et al., 2008). The question of whether empathy is a pathway to the development of STS reaction needs further investigation. One school of thought suggests that how empathy is constructed and measured is important to determine its association with secondary traumatic symptoms (Marmaras, 2000; Electris, 2013; Gulin, 2017).

Personal Resilience. The role of personal resilience as a protective factor in predicting secondary trauma has been well studied. For example, Berger, Abu-Raiya, & Benatov, (2016) conducted a randomized controlled study among educators who were working with elementary school children exposed to the Canterbury earthquake in New Zealand and found that providing resources that enhanced personal resilience significantly reduced PTSD and STS symptoms. A correlational study that examined 102 Chinese soldiers who were rescuers in the 2008 Sichuan earthquake reported an inverse relationship between STS and rescuer resilience (Chang, & Taormina, 2011). This

suggested that rescuers who reported higher levels of personal resilience were associated with lower secondary trauma symptoms. Another study involving human service professionals explored the relationship between resilience, mindfulness, psychological distress, burnout, and secondary traumatic stress (Harker et al., 2016). The study result indicated that resilience was a significant predictor of low levels of secondary traumatic stress, accounting for 23.3% of the variance in STS. The nature of this relationship was such that, higher scores on resilience were associated with lower levels on secondary traumatic stress. Similar results were substantiated among psychiatrists, such that low personal resilience reported was linked to increases in STS symptomology (Teel et al., 2019).

Social Support. A significant number of studies suggest a link between social support and STS reaction among social workers. Badger, Royse and Craig (2008), conducted an investigation of 121 social workers employed in one of five trauma centers and found that perceived social support was weakly and negatively correlated with STS in this sample. However, social support was not significant in the regression analysis in this sample. A study which examined the risk of STS among 600 Internet Crimes Against Children (ICAC) task force personnel concluded that coping through outside social support (not necessarily marital) was strongly associated with lower STS scores (Bourke, & Craun, 2014). Brady (2017) reached a similar conclusion in that ICAC personnel who reported feeling supported outside of work were associated with lower levels of STS (Brady, 2017).

Two dissertation studies reached different outcomes on the relationship between social support and risk of STS among social workers. Carew (2016) explored this

phenomenon among foster parents and found perceived support as one of the strongest variables to predict STS. In that sample, social support negatively correlated with STS. In that study, support was not defined but rather left up to the respondents to determine their perception of the types of support needed in their foster parenting. Contrary to this finding, Kanno's (2010) dissertation explored predictive factors of secondary traumatic stress for social workers assisting Sept. 11, 2001, clients and found that among that sample more peer or personal support did not decrease the level of STS. The overwhelming nature of those terrorist attacks might have led to a minimization of the impact of any one coping strategy. A meta-analysis of 38 published studies examined 17 risk factors for STS among professionals indirectly exposed to trauma through their therapeutic work with trauma victims and found social support had a small but significant effect size in mitigating STS (Hensel et al., 2015). However, the results did not establish which source of support (social support or work support) is most valuable to mitigate STS. Others studies have asserted that the effect of social support in mitigating STS could be cumulative over time or most effective with higher reactions to trauma (Ozer et al., 2003).

Psychological Variables. The literature suggests that various psychological traits in staff and social worker response to exposure to trauma indirectly might increase risks of STS symptoms. Choi (2017) studied the relationship between psychological empowerment and secondary traumatic stress among social workers who provide services to family violence or sexual assault survivors. The results indicated that social workers who had higher levels of psychological empowerment had lower levels of secondary traumatic stress when controlling for the sociodemographic variables.

Psychological empowerment was defined in four domains: a fit between organizational goals or requirements and personal values and standards; competence or efficacy, belief in one's self to adequately perform requirements with skills; self-determination, autonomy and confidence to initiate and regulate choices and action; and impact, one's influence on organizational functioning and outcomes. Further examination into the four domains revealed that only having a sense of impact predicted secondary traumatic stress (Choi, 2017). A dissertation, in which the study examined the relationship between secondary traumatic stress and self-efficacy and outcome expectancy in therapists treating sexual abuse victims and sexual perpetrators, found a negative correlation between STS and therapist self-efficacy (Etling, 2017). The sample in that study concluded that as STS symptoms increased, therapist self-efficacy decreased.

Baugerud, Vangbæk and Melinder (2018) examined the prevalence of STS in a national sample of 506 child protective (CPS) workers and reported that attachment anxiety predicted symptoms of STS. This suggests that a CPS worker's personal history might have an impact when working with traumatized children and their families, potentially producing an increased risk of developing STS (Baugerud et al. 2018). Another study that examined potential risk factors for the development of STS among 195 students in a graduate social work training program identified that trauma exposures involving emotional responses, such as experiencing fear, hopelessness, or horror, were positively associated with STS symptoms. Butler, Carello, & Maguin (2016). This is an interesting finding in light of the indirect trauma reduction program developed by clinician, Brian Miller, who argues for the importance of supervision in helping clinicians

and child welfare workers quickly grapple with the negative emotions elicited in work with clients to move them to compassion (Miller, 2018).

Age. The age of the social worker as a factor reviewed in research studies for this dissertation showed that age, in general, is a predictor of STS. Hensel, Ruiz, Finney & Dewa (2015) conducted a meta-analysis of risk factors for STS in therapeutic work with trauma victims. They found those of a younger age more prone to STS but that the finding should be held with caution since it was most likely attributable to the large sample size in the study. In Kanno (2010), a dissertation study that involved 481 social workers found that among this sample, older social workers reported less STS symptoms. A similar conclusion was reached when a sample of Bachelor of Social Work students and their field instructors were assessed for the presence of indirect trauma, including STS. The findings suggested that when it comes to age and STS, younger students and those with less experience were at greater risk of developing STS reactions than older and more experienced workers. It must be noted that an early study by Nelson-Gardell & Harris (2003) identified that the age of the child welfare workers was a significant predictor in the regression analysis, even though years of experience was not. Moreover, when a worker's trauma history was controlled in the regression, the results indicate that age-predicted STS risk, older participants had lower STS risk scores than younger participants.

Gender. Gender as a factor associated with STS is debatable within the literature. Penix, Kim, Wilk, & Adler. (2019), in their recent study, found no association between gender and STS among 236 healthcare staff who worked with the military. Nelson-Gardell et al. (2003) reached a similar conclusion among child welfare workers,

concluding that gender had no significant effect on STS symptoms within that sample.

However, being a male worker was associated with lower levels of STS in Brady (2017).

Also, gender was found to be marginally related to STS, suggesting that there might be differences between females and males in their STS levels among social workers who provide direct services to survivors of family violence or sexual assault (Choi, 2011a).

Choi (2011a) asserted that female social workers in that study have higher STS levels compared with male counterparts.

Hensel et al. (2015) alluded to the possibility of interconnectedness between gender and a personal history of sexual assault and STS. They explained that high rates of sexual trauma among females who are disproportionately represented in the social services workforce means this type of exposure might contribute to a higher burden of STS, especially since personal history has been identified as an important factor which motivated many workers to enter into the helping profession (Jenkins et al., 2011). More research is needed to further understanding of this relationship and the role that gender might play in the development of STS among social service workers.

Race and Ethnicity. One study reported an association between race or ethnicity and STS symptoms. The Knight (2010) study involving 42 undergraduate students and 51 field instructors revealed that students who described themselves as white reported a greater risk of STS. However, no significant relationship was found among the sample of field instructors and STS symptoms in this study. This phenomenon needs further inquiry to elucidate any relationship that might exist between race or ethnicity and STS among workers.

Interpersonal Factors

Degree of Exposure to Traumatic Material. This construct can be defined as being directly subjected to the client's traumatic event and the constant sense of responsibility for the care of clients over an extended period of time (Figley, 2002).

Figley suggests that one of the reasons why social workers leave direct practice and seek employment as directors and supervisors, or eventually leave the field, is due to this emotionally exhaustive nature of the work. Hatcher, Bride, Oh, King and Catrett (2011) assessed the prevalence of STS among 118 juvenile justice education staff and concluded that staff who engaged in direct practice are highly likely to be exposed to indirect trauma. In that sample, 81.4% met at least one, 55.1% met two, and 39.0% met all three core diagnostic criteria for PTSD. Likewise, Kanno, Kim and Constance-Huggins (2016) examined predictive factors for secondary traumatic stress (STS) in social workers responding to earthquake victims. They found that social workers who counseled disaster victims exhibited higher levels of STS than those who did not counsel disaster victims. Likewise, the intensity of work with traumatized clients was found to be positively correlated (Owens, 2014). Bourke and Craun (2014) examined the risk of STS among 600 Internet Crimes Against Children (ICAC) task force personnel and indicated that self-reported difficulty viewing disturbing material was the strongest predictor of STS scores.

Frequency of Exposure to Trauma Material. Equally important to exposure to trauma in the development of STS reaction is the frequency of exposure to trauma material. The general consensus among the reviewed studies supports the notion that high frequency of exposure to trauma material is positively associated with STS. Benuto et al.

(2018) found that the number of hours worked per week and the number of direct hours worked with victims predicted STS among the sample of victim advocates in the study. The outcome indicated that cumulative trauma exposure acts as a risk factor to the development of STS. Another study, which examined risk factors of STS among Internet Crimes Against Children task force staff, identified that the frequency of exposure to this had the second-highest influence on a respondent's STS score (Bourke, & Craun, 2014).

Brady (2017) studied this sample and came to a similar conclusion — frequent indirect exposure to crimes against children was associated with higher STS. Also, social workers with the greatest percentage of contact time with traumatized clients did experience the most STS (Kanno, 2010). In addition, the study found that a greater number of trauma cases also led to a higher degree of STS. Similarly, Owens (2014) discovered a positive correlation between STS and the extent of work with trauma-exposed clients.

Organizational Factors

Workplace Stressors. The relationship between work-related stress and STS is supported in the existing literature. Work-related stress as a variable in various studies has been reported to have a positive relationship with the development of STS. For example, Badger, Royse and Craig (2008) found that work-related stress was strongly correlated with an increased likelihood of STS in hospital social workers. This result was validated in the final regression analysis in which the combination of work-related stress, emotional separation, and years worked in social work explained about 52 percent of the variance (adjusted $R^2 = .52$). Also, higher field or work-stress levels is known to be

associated with higher STS symptoms (Butler, Carello, & Maguin, 2016; Penix et al., 2019).

Specific work-stress factors identified in the literature include workload and work-family conflict (Baugerud et al., 2018). A study examined the relationship between work-related factors and STS among 236 workers of domestic violence services and concluded that the strongest risk factor in that study for STS was a provider's perception of having an unreasonable workload (Kulkarni, Bell, Hartman, & Herman-Smith, 2013). Similarly, Brady (2017) identified among child exploitation investigators that work-related stressors such as frequently feeling overwhelmed and low organizational support were related to a higher risk of STS.

Conversely, higher congruence with workload, workplace values, and community environment have an inverse relationship with STS and has the potential to lower the levels of psychological distress (Graham et al., 2016).

Supervision. The outcome on the influence of supervision on the risk of STS is mixed. For example, clinical supervision did not significantly predict the level of STS in a sample of disaster response social workers (Kanno, et al., 2016). However, positive supervisory support was strongly associated with lower STS among ICAC investigators (Bourke, & Craun, 2014). In fact, supervisory support had the strongest relationship to lower STS scores within that sample. It should be noted that Bourke and Craun (2014) measured social support from supervisors (supervisory social support, $\alpha = .85$), whereas Kanno, Kim and Constance-Huggins (2016) measured clinical supervision, which could explain the differences in outcome and might require further investigation.

Organizational Support. Linked to lower risks of STS in the literature is work social support. Having coworkers who can be relied upon was strongly associated with lower STS scores (Bourke, & Craun, 2014). Also, social workers who had more support from their superiors, peers, and work teams experienced lower levels of STS (Choi, 2011a). Hensel, Ruiz, Finney & Dewa (2015) in their meta-analysis found a small but insignificant effect size for supervision quality but noted that these variables were represented in few studies and some with substantial heterogeneity, partly due to variable measurement.

Impact of Burnout and Secondary Trauma on Outcomes

Occupational stress and indirect traumatic experiences have been documented to impact various outcomes. This section discusses the associations between burnout and secondary traumatic stress on organizational, client and staff outcomes.

Organizational outcomes examined include: work satisfaction and intent to quit or leave employment; client outcome include; client success; and staff outcomes, including life satisfaction and general health. These outcomes are examined as potential effects of burnout, secondary trauma among ID/DD workers. Generally, ID/DD staff stressors have been associated with staff outcomes (Hatton et al., 1999). Staff stress has been linked to work satisfaction, intent to leave, and job search behavior (Barbee et al. 2018; Hatton et al., 1999). Work related stress also has been linked to adverse health outcomes on workers (Ray et al., 2017).

Organizational Outcomes

Work Satisfaction. The current literature suggests a negative association between work satisfaction and burnout among ID/ DD staff (Hickey, 2012; Shaddock et al., 1998; Lin et al., 2013; Dyer & Quine, 1998). However, there is limited knowledge on the relationship between burnout and secondary trauma on ID/DD staff. Various studies have identified negative relationships between work satisfaction and secondary trauma among social service workers. (Graham et al., 2016; Middleton, 2011). The Middleton (2011) finding indicated that social service workers who experienced higher levels of secondary trauma were less likely to feel satisfied with their work. Other variables identified to predict work satisfaction in social service workers include work support, workplace congruence, participation in decision making, role ambiguity, role conflict, and worker expectations, (Dyer & Quine 1998; Graham et al., 2016) and racial identity (Ejaz et al., 2008).

Intent to Leave. It is estimated to cost organizations between 90% of 200% of an employee's annual pay to recruit, select, and train successors (Cascio, 2006; Mitchell et al., 2001). Non-tangible costs include loss of tacit knowledge, social capital, reduced client satisfaction, and turnover contagion (Rubenstein et al., 2018). Therefore, staff turnover is undoubtedly one of the challenges faced by organizations, including social services.

Although the intent to leave variable is not the same as actual turnover, it is a strong predictor of turnover (Rubenstein et al. 2018). Staff who have left their jobs contemplated leaving their jobs prior to doing it (Mor Barak et al., 2001). Among direct support workers who work with ID/DD population, work-related stress has been

associated with higher levels of intent to leave (Gray & Muramatsu, 2013)). A meta-analysis of antecedents to intent to leave among social service workers reported burnout as a predictor of staff intent to leave (Mor Barak, et al., 2001). Also, secondary trauma experienced by social workers has been identified to predict staff intent to leave organizations (Barbee et al. 2018).

Other variables which predict a social service worker's intent to leave a job include job satisfaction (Middleton, 2011), level of education, race (Acker, 2008), organizational commitment (Barbee, et al., 2018), and gender, age, and workplace congruence (Graham et al., 2016; Zaniboni et al., 2013). Mor Barak et al. (2001) conducted a review and meta-analysis of child welfare workers intent to leave and identified job satisfaction, organizational commitment, stress, social support, and physical discomfort as significantly better predictors of intent to leave than of actual turnover.

Client Outcomes

Client Success. A caregiver's perception of those supported has been touted as an important factor influencing treatment outcomes (Madon Guyll et al., 2013; Wurm et al., 2013). The concept known as "self-fulfilling prophecy" has been used in many fields to examine outcomes among adolescents in substance abuse treatment (Madon Guyll et al. 2013; Lamb, & Crano, 2014), mental health court participants (Canada & Epperson, 2014), and elderly care (Wurm et al., 2013). The research evidence suggests that a caregiver's negative perceptions of those supported usually translates into negative outcomes for those clients. Currently there is no evidence to suggest that such a phenomenon exists within the ID/DD workforce. Moreover, there is a lack of knowledge

on how burnout or STS could impact staff perceptions of client success. This phenomenon will be explored as one of the outcome variables in order to shed light on the potential effects of STS and burnout on staff feelings regarding a client's success.

Staff Outcomes

General Health. Work related stress has been linked to adverse health outcomes on workers (Ray et al., 2017). Higher burnout and secondary trauma levels have been associated with a decline in health status (Butler et al., 2017; Lee, Gottfried & Bride, 2018). Moreover, secondary trauma has been documented to mediate the effect of exposure to client trauma and adverse health effects among social service workers (Lee et al., 2018).

Lee, Gottfried and Bride (2018) found that social services exposure to traumatized clients had an indirect effect on their general health through secondary traumatic stress. The study found no direct link between exposure to traumatized clients and the health perception of the social worker. The path between exposures to general health was such that more secondary exposure to trauma was associated with higher levels of secondary traumatic stress symptoms, and higher levels of secondary traumatic stress resulted in lower general health perception (Lee et al., 2018). Also, physical health and job satisfaction has been associated in other studies (Ejaz et al., 2008)

Life Satisfaction. As previously discussed, specific client factors, such as frequency and severity of behaviors and the exposure of the client's traumatic material and symptoms, do impact staff and could create pathways to the development of burnout, or secondary trauma (Huitink et al., 2011). On the other hand, staff could react adversely

toward clients and in some cases dehumanize them (Maslach, 1978; Huitink et al., 2011). Overtime, ID/DD staff who are exposed to the client's challenging behaviors without adequate support could experience anger, frustration, guilt, and detachment (Flynn et al., 2018; Chung & Harding, 2009). Maslach (1978) found that staff reactions could take the form of treating clients by processing them in a standardized way, ignoring their pleas and demands, and judging them as somehow less capable and less worthy.

Other studies found a strong association between staff emotional reactions and interpersonal reaction with clients (Willems et al., 2016). Willems, Embregts, Hendriks and Bosman (2016) reported a strong relationship between staff emotional response (i.e. anxiety, fear, depression, anger) and negative interpersonal responses (i.e. higher assertive control behavior, higher hostile behavior, very strong higher support seeking behavior). However, staff positive emotions to a client's challenging behaviors (i.e. confident, relaxed, cheerful, and excited) were strongly associated with positive interpersonal behaviors. These interactions could have real treatment implications for both staff and clients. It will determine, among others, the health of the treatment milieu, staff turnover, placement determination, guardianship adjudication, and advocacy for rights restrictions. Given the vulnerability of the ID/DD population, exploring the impact of staff burnout and indirect traumatic reactions on staff-client interaction is of significant interest.

Summary

The existing literature widely supports the developmental pathways of burnout among ID/DD staff, but little is known based on the search about the pathways to the development of secondary trauma. Specifically, there is overwhelming evidence to

suggest that organizational factors such as work-related stress and lack of a support system to alleviate such stresses increases the risk of burnout among staff. Likewise, work overload, role ambiguity, role conflict, limited latitude in decision-making within the organization, among others, have positive associations with the risk of burnout among ID/DD staff. The staff-client interaction has been identified as a significant source of stress to staff with the potential risk of burnout. Also, the frequency, severity and the emotional responses such interactions elicit from staff have been linked as significant sources of stress for many staff and directly relates to burnout. How staff respond to these stressors is partly influenced by demographic and other factors such as personality traits and psychological state.

Also, organizational support in the form of workload, staff ability to provide feedback and positive social support have been identified to have mitigating effects on burnout. However, the role of personal resilience and supervisor support in buffering burnout among ID/DD workforce is not clear and needs further inquiry.

In contrast, the literature search did not reveal similar findings in secondary trauma among ID/DD workers. Based on the search, little is known about the pathways to the development of secondary trauma with this workforce. Three categories of factors have been identified that influence burnout in ID/DD field and secondary trauma among other related fields. They include personal factors, interactional factors, and organizational factors. A need exists to understand the developmental pathways through which secondary trauma manifests in ID/DD staff and whether they differ significantly from pathways of burnout.

Also, there is evidence to suggest that burnout and secondary traumatic stress could have a significant impact on outcomes. Five such outcomes – work satisfaction, intent to leave, client success, life satisfaction and general health – were discussed. The existing literature evidence indicates that while there are studies which do support the relationships between burnout and secondary traumatic stress in various social services fields, little is known in the ID/DD field on how these issues affect various outcomes. Therefore, the aim of the study is to bridge these gaps in the literature by examining: the prevalence of STS in DSPs who support persons diagnosed with ID/DD; and the risk and predictive factors of STS and burnout and how they impact organizational, client and staff outcomes. Based on the study results, various recommendations will be made for social work practice, education and research in the ID/DD workforce.

Problem Statement and Conceptual Model

Overview

People with an ID/DD diagnosis do experience significantly higher traumatic events compared with their peers (Hastings et al., 2004).) It is asserted that in general people with ID/DD experience prolonged and interpersonal trauma (Wigham & Emerson, 2015) and multiple trauma beginning from early childhood into adulthood through institutions (Mason-Roberts et al., 2018, Rittmannsberger et al., 2019).

The interface of cognitive and behavior theory provides an insight into how ID/DD clients express trauma. Post-traumatic stress disorder symptoms in people with ID/DD is a function of their cognitive ability and developmental ability and might be presented differently from what has been generally accepted (McCarthy, 2001). Due to the impairment in cognitive and adaptive skills, the ID/DD victim's ability to process

traumatic events is expected to be more difficult (Mevissen et al., 2016) and different from generally acceptable criteria (McCarthy, 2001). Existing literature suggests that in addition to the client challenging behavior, staff personal factors such as a worker's trauma history, psychological issues, and personality traits might be associated with trauma development. Additionally, organizational factors such as the nature of the working environment, the type of support network available to staff, latitude in decision-making, and the type and nature of supervision also have been linked to burnout and might affect indirect trauma development.

Based on the literature search, it is evident that a great deal of attention has been paid to burnout among DSP staff. The search generated almost 53 descriptive studies of predictors of burnout (Table 1). However, very little is known about the impact of burnout on staff work satisfaction, intent to leave the organization, personal health and well-being or staff-client interactions. More important, the literature has not focused on exposure to client trauma histories and the resulting challenging behaviors on the development of secondary trauma among the ID/DD staff. Likewise, there is limited insight on how staff resilience, organizational support and supervisor support could moderate the development of secondary trauma and if those pathways between mitigating factors and emotional reactions of staff differ between burnout and secondary trauma. Finally, there is limited knowledge on how secondary trauma will impact staff outcomes with regard to job satisfaction, organizational commitment, intent to leave the organization, personal health, or staff-client interactions.

Problem Statement

The current study seeks to: (a) explore the prevalence of secondary traumatic stress in DSPs who works with adults persons with ID/DD, (b) examine the risk and protective factors that affect STS and burnout among the DSPs and (c) investigate the impact of STS and burnout on work satisfaction, intent to leave, worker's feelings towards client success, worker's general health and life satisfaction. In an attempt to fill these gaps in the literature, four questions were proposed as the foundation of this research study:

1. How much trauma exposure reported by DSP staff will be associated with secondary traumatic stress symptoms?
2. What are the roles of resiliency, supervisor support and organizational support in buffering the development of secondary trauma in DPS?
3. Do secondary traumatic stress and burnout lead to outcomes of lower job satisfaction, greater intent to leave, lower personal health, lower life satisfaction or more negative views of client success? Is the impact of these two phenomena on outcomes (secondary trauma and burnout) similar or different?
4. What are the significant pathways to the development of burnout and secondary trauma among DSPs?

Conceptual Model

A conceptual model of how the ID/DD staff are impacted by the traumatic experience of their clients, based on the extant literature and the theoretical perspectives applied, is represented in Figure 1 below.

Figure 1

A Conceptual Model of Risk of Burnout and Secondary Trauma in ID/DD Staff and Impact on Staff Outcomes

The conceptual model depicts that exposure of the ID/DD staff to various factors (individuals, interpersonal, and organizational) unilaterally or in combination could create pathways to various outcome variables (burnout and secondary traumatic stress). The map suggests that a combination of specific personal factors, interpersonal factors, and organizational factors could either lead to the development of burnout or secondary trauma among DSPs. Personal factors include: staff demographics (age, race/ethnicity, gender, religious beliefs, level of education); psychological variables; personality traits; personal traumatic history; and years of work experience. Interpersonal factors include: exposure to client trauma and client challenging behaviors. Organizational factors

include: workplace stressors; organizational support; and supervision support. However, effective staff resilience, supervisor support, and organizational support could moderate the development of burnout and secondary trauma in DSPs.

The conceptual map suggests that burnout and secondary trauma could potentially mediate the development of staff outcomes. That is, staff who will experience burnout and indirect trauma are more likely to experience job dissatisfaction, intent to leave the organization, poor health and well-being outcomes, and adverse views of client success.

Implications of the Study to Social Work Practice, Education and Research

This exploratory study is aimed to advance the knowledge and conversation in areas of practice, education and research in the ID/DD workforce. The results from the study could potentially be used to influence policies and practices in the ID/DD field to help develop occupational culture which fosters growth and support through effective hiring and retention policies. Adaptation of appropriate prevention and mitigation efforts could be made to address occupational hazards associated with caregiving and improve the overall quality of care for persons diagnosed with ID/DD.

Also, the findings will be used to recommend educational and training programs to support and equip DSPs. Recommendations will be made on evidence-based training curriculum and educational programs to support workers helping one of the most vulnerable groups in society. The crucial role DSPs plays will be enhanced by providing tools to make them effective in their job functions. Lastly, the exploratory study has the potential to add to existing knowledge and open the door for future inquiry.

CHAPTER III

METHODOLOGY

Research Design

To explore the prevalence of secondary traumatic stress in DSPs who works with adults persons with ID/DD, examine the risk and protective factors that predict STS and burnout among the DSPs and investigate the impact of STS and burnout on work satisfaction, intent to leave, worker's feelings towards client success, worker's general health and life satisfaction, a correlational cross-section research was designed. A convenient survey methodology was used to gather DSP demographic information, STS and burnout measures, potential risk and protective predictors of STS and burnout, as well as outcome variables. The target was a minimum of 300 direct support professionals who worked with adult ID/DD persons in the Commonwealth of Kentucky. The data units were DSPs who worked for both state licensed public and private organizations that provide community-based services to ID/DD individuals. This data was analyzed to answer the research questions and hypotheses.

Research Questions and Hypotheses

Based on the literature and the theoretical underpinnings of secondary trauma the following questions will be explored:

1. How much trauma exposure reported by DSPs will associate with secondary traumatic stress symptoms?

H1: DSPs exposed to higher levels of client trauma experience will report higher levels of secondary trauma.

H2: DSPs who report higher levels of trauma history will report higher levels of secondary trauma.

H3: DSPs who are exposed to higher levels of a client's challenging behaviors will in general report higher levels of secondary trauma.

2. What role does personal resiliency, supervisor support and organizational support play in buffering the development of secondary trauma and burnout in DPS staff?

H4a: DSPs who are more resilient will experience lower levels secondary trauma and/or burnout.

H4b: DSPs who experience higher perceived supervisor support will report lower levels of burnout and/or secondary trauma.

H4c: DSPs who experience higher perceived organizational support will report lower levels of burnout and/or secondary trauma.

3. Do secondary traumatic stress and burnout lead to negative? staff outcomes such as work dissatisfaction, intent to leave, reduced client success, reduced life satisfaction and poor general health? Is the impact of these two phenomena on outcomes (secondary trauma and burnout) similar or different?

Organizational-Related Outcomes

H5: The experience of secondary trauma and burnout symptoms will be associated with reported lower job satisfaction among DSPs.

H6: The experience of secondary trauma and burnout symptoms will be associated with high intent among DSPs to leave their organization's employment.

Client-Related Outcome

H7: The experience of secondary trauma and burnout symptoms will be negatively associated with reported client success among DSPs.

Personal Staff-Related Outcomes

H8: The experience of secondary trauma and burnout symptoms will be associated with reported lower life satisfaction among DSPs.

H9: Experience of secondary trauma and burnout symptoms will be negatively associated with the overall health of DSPs.

4. What are the significant pathways to the development of burnout and secondary trauma among DSPs?

H10: A heavy workload that is also very demanding in terms of the kinds of problems that arise serving this population (e.g. challenging client behavior) will associate with to high burnout symptoms among DSPs.

H11: Exposure to client trauma, especially if one has experienced trauma in their life and is not resilient will be associated with high secondary traumatic stress symptoms among DSPs.

Participants

A power analysis was conducted using statistics software G*Power version 3.0.10. An estimated effect size $f^2 = 0.08$ (between small to medium range), p value = 0.05 and power level of 0.8, found that the minimum estimated DSPs required for analysis is estimated to be 290. The data for this study was collected from DSPs in public and private community-based organizations who worked with individuals diagnosed with intellectual and/or developmental disabilities in the Commonwealth of Kentucky.

Participants included those who worked with adult ID/DD persons in community-based settings, for example with Adult Day Training Centers, Community Access Services, Community Living Support Services, Community-based Residential Homes, and Family Homecare Providers.

Intellectual and Developmental Disability Services in Kentucky

In the state of Kentucky, services to persons with ID/DD are primarily offered through two Medicaid waiver programs as part of the 1915(c) HCBS Medicaid programs; the Support for Community Living (SCL) and Michelle P (MPW) waivers. The eligibility criteria to be enrolled in these programs are the same. To qualify, the applicant has to demonstrate that he or she has been deemed to have an intellectual disability or developmental disability prior to age 22, that the diagnosis is severe and lifelong, attributed to mental and/ or physical impairments and that the person would be admitted to an intermediate care facility for individuals with an intellectual disability (ICF-IID) or a nursing facility if they did not have waiver services. Also, the ID/DD diagnosis should result in substantial limitations in the ability of the person in performing 3 or more of the following activities: self-care, learning, mobility, comprehension and use of language, capacity for independent living and self-direction (Department for Medicaid Services [DMS], 2020). Lastly, the person has to meet Medicaid income limits. Currently state estimates of SCL and MPW recipients are 4,815 and 10,057 respectively (Lerza, 2020).

The services provided through SCL and MPW waivers are similar but with one major difference. Persons in SCL waiver program are eligible to receive residential support services which is not offered through the MPW program. Services offered through the SCL program include day training, behavior supports, case management, children's day habilitation, community living supports, occupational therapy, physical therapy, psychological services, residential supports, respite, speech therapy, and supported employment. Service recipients in the MPW could receive a combination of the following services up to 40 hours per calendar week: case management, personal

care, respite, homemaker, adult day healthcare, supported employment, behavior supports, adult day training, occupational therapy (over 21 only), physical therapy (over 21 only), speech therapy (over 21 only), minor home adaptations, community living supports and attendant care.

Direct Support Professionals in Kentucky

The Kentucky Cabinet for Health and Family Services (2019) records indicate that there were approximately 200 public and private licensed Support Community Living waiver and Michelle P. waiver providers who served individuals with ID/DD in the state. Currently, there is not an accurate estimate of DSPs in the state of Kentucky. Raw data from the state mandated training portal for DSPs based on the National Alliance for Direct Support Professionals (NADSP) credentialing indicates that there are 17,840 active accounts listed under the DSP job code (Chatelain, 2020) in Kentucky. However, this number does not mean the account holder is currently employed or still in the role of DSP. According to the Kentucky Association of Private Providers (KAPP) legislative report 2017, the average wage of a DSP in Kentucky was estimated to be \$10.00 per hour in 2015. The report estimated that Kentucky lost approximately 3,500 DSPs in 2015 due to turnover. This, in monetary terms, based on estimated cost for workers' replacement of \$3,500 means that, providers collectively lost over \$12 million due to staff turnover that year.

Data Collection

Data was collected from July 2019 through November 2019 using a convenience sampling. A list of providers from the Commonwealth of Kentucky were contacted through email to request access to DSPs to participate in the study. When an agency

agreed to participate, follow-up correspondence discussed the study in detail and instructions on how to administer the questionnaire. The majority of the respondents participated in the study by completing a paper survey. However, an electronic version was provided to agencies who preferred that option. All agencies were offered three options to disseminate the paper survey: (1) in-person, where the researcher was present on-site to answer questions while the survey was being completed; (2) onsite distribution, where survey and pre-stamped return envelopes were left at participating agencies for distribution or staff pick up, and participants then mailed packets back to the project office in pre-stamped envelopes when completed; and (3) mailed, where participating organization staffs were sent survey packets, and participants then returned completed surveys back to the project office in pre-stamped envelopes when completed. However, all the agencies who agreed to participate opted for the third option. The options that were offered to agencies who preferred the electronic version of the survey included: (1) an agency link share, where the participating agency supervisors disseminated the weblink of the survey to their staff through an email or text message list; (2) a project link share, where the email or text message list of a participating agency was given to the author to share the survey link. All the agencies who chose the online survey opted for the first process of dissemination. The online survey was completed on the Qualtrics^{XM} survey platform through the University of Louisville.

Every respondent was given an introductory letter, IRB consent preamble, a survey and an email to enter for the chance to win a \$25 Amazon.com gift card. One in every 50 participants had the opportunity to be randomly selected to receive a gift card. Staff participation in the survey and drawing was entirely voluntary.

Measures

A researcher-created demographics questionnaire was developed for the study. Appendix A includes a complete set of assessment instruments used in the study, and are described briefly below.

Demographic questions

The questionnaire included information related to participant education type and level, race, ethnicity, gender, age, marital status and work experience. Based on factors suggested to be relevant in the extant of literature and theoretical analysis, items regarding work experiences included: (a) work status (i.e. full-/part-time and 1st/2nd/3rd shift); (b) length of time working in the ID/DD field; (c) length of time working at the current agency; (d) length of time in current position; (e) type of program for current employment (e.g. residential and day services) and (f) job responsibility (e.g. supervisor). (See Appendix B).

Burnout

An abbreviated version of the Maslach Burnout Inventory (Maslach, & Leiter, 2008) was included. This version of the Maslach scale is a short nine item form of the longer Maslach Burnout Inventory and includes the three subscales of emotional exhaustion with a Cronbach Alpha of .72, depersonalization with a Cronbach Alpha of .81, and personal accomplishment with a Cronbach Alpha of .79. The assessment used a 7-point rating scale focused on frequency of experiences from 1 = every day to 7 = never. Examples of items include: “I deal very effectively with the problems of my clients;” “I

feel I treat some clients as if they were impersonal objects;” “I feel emotionally drained from my work;” and “I feel fatigued when I get up in the morning and have to face another day on the job.” (See Appendix C).

Secondary Trauma

The Secondary Traumatic Stress Scale (Bride et al., 2004) was developed by Brian Bride using the criteria for PTSD in the DSM-IVR. There are three sub-scales to assess the frequency of intrusion, avoidance and arousal symptoms associated with secondary trauma resulting from working with traumatized populations. Each item on the STSS corresponds to one of the 17 post-traumatic stress disorder symptoms as delineated in the Diagnostic and Statistical Manual of Mental Disorders (4th ed., text revision; DSM-IVTR). The Cronbach Alpha is routinely high, averaging .93.

The scale uses a 5-point Likert-type scaled responses (1 = never; 5 = always). Respondents are asked to think about the past seven days and how often they had these experiences. A sample of the 17 items are: “I feel emotionally numb;” “It seems as if I am reliving the trauma experienced by my client(s);” “I have trouble sleeping;” “I have little interest in being around others;” “I have disturbing dreams about my work with clients;” “I want to avoid working with some clients;” “I am easily annoyed;” and “I expect something bad to happen.” (See Appendix D)

Exposure to Secondary Trauma

This measure was created using a 26-item list of adverse experiences to which current clients have been exposed. The workers were asked to record the number of

current clients who were exposed to each of the events. A shorter version of this measure was used by (Cieslak et al., 2013) consisting of a list of 10 events including natural disasters, transportation accidents, other serious accidents, physical assaults, sexual assaults, other life-threatening crimes, military combat or exposure to a war zone, life-threatening illness or injury, sudden death of someone close, and a global category of “other.”

The scale used in this study had four categories: (1) Disaster/Accident — “natural disaster,” “fire or explosion,” “transportation accident,” “other type of serious accident at work, home or during recreational activity,” and “exposure to toxic substance.” (2) Assault/ Violence — “physical assault by a relative, acquaintance, stranger,” “assault with a weapon,” “sexual assault,” “other unwanted or uncomfortable sexual experience,” “combat or exposure to a war zone,” “captivity,” “severe human suffering,” and “bullied.” (3) Adverse Childhood Experiences — “severe neglect,” “no one in the family loved them or thought they were important or special, Or the family didn’t look out for each other, feel close to each other, or support each other,” “saw or heard someone being beaten up, stabbed, shot at, threatened with a knife in real life,” “parents were separated or divorced,” “mother, father or guardian died,” “lived with anyone who was a problem drinker or alcoholic, or who used street drugs,” “a household member went to jail or prison,” “a household member was depressed or mentally ill, or a household member attempted suicide,” and “a parent guardian or other household member threatened to, or actually abandoned them or threw them out of the house.” (4) Other Traumatic Experiences — “life threatening illness or injury,” sudden violent death,” “serious injury,

harm or death they caused to someone else,” and “any other extremely stressful event or experience.”

DSPs were asked to record how many of their current clients they have knowledge of who experienced each of these events. The same question was asked about past clients. (See Appendix E)

Worker’s Own Trauma History

DSP past traumatic experience was measured by a single question. The participants were asked to review the 26 adverse events used for the exposure to secondary trauma and record how many of such experiences they had been personally exposed to by asking, “How many of these types of traumatic events listed have you experienced (0-26)?” A similar scale was used in Cieslak et al., (2013) to assess a respondent’s direct exposure to trauma. In that study, participants examined the list of 10 potentially traumatic events included in the Secondary Trauma Exposure Scale, and a respondent was asked: “How many of the types of traumatic events listed above have you personally experienced?” (See Appendix F)

Challenging Behavior

Behavior Problems Inventory (BPI-01; Rojahn et al., 2001). The Aggressive/Destructive Behavior subscale of the BPI-01 was adopted. This subscale consists of 12 items assessing a variety of commonly observed topographies of aggressive and destructive behavior. The scale includes: “hitting others,” “kicking others,” “pushing others,” “biting others,” “grabbing and pulling others,” “scratching

others,” “pinching others,” “spitting on others,” “being verbally abusive with others,” “destroying things,” and “other.” Participants are asked to rate the frequency of each behavior on a four-point rating scale ranging from (0 =Never; 4 = Hourly), and if the behavior has occurred, to rate the severity on a three-point rating scale ranging from (1= Slight; 3 = Severe).

The validity and reliability of the BPI-01 has been demonstrated in a number of studies (González et al., 2009; Rojahn et al., 2001; Rojahn, Wilkins et al., 2010). Gonzales et al. (2009) evaluated its reliability (internal consistency, inter-rater and re-test reliabilities) using ID/DD and adults and found the Aggression/Destruction Behavior subscale had an internal consistency of 0.86 and 0.76 for frequency and 0.87 and 0.78 for severity, respectively, across the two samples of data collection. (See Appendix G)

Workload

A short workload scale (Hollinshead, 2018) utilized by the Kempe Center at the University of Colorado-Denver. Denver, Colorado, was included in the survey. The scale has demonstrated reliability in studies. A Cronbach Alpha range from .924 to .936 has been reported. The scale uses a 7-point Likert type rating (1 = strongly disagree; 7 = strongly agree). The five-item scale includes the following: “Even working overtime, I cannot finish all of my work,” “My caseload is too high,” “I have too many cases to do a good job, yet I am expected to do so,” “I cannot spend enough time with my clients,” and “It is difficult for me to keep up with agency policies and guidelines.” (See Appendix H)

Personal Resilience

The Brief Resilience Scale (BRS; Smith et al., 2008) has a Cronbach Alpha ranging from .80 to .91. The scale uses a 5-point rating scale ranging from strongly disagree (1) to strongly agree (5). The six items in the scale are: “I tend to bounce back quickly after hard times,” “I have a hard time making it through stressful events (R),” “It does not take me long to recover from a stressful event,” “It is hard for me to snap back when something bad happens (R),” “I usually come through difficult times with little trouble,” and “I tend to take a long time to get over set-backs in my life (R).” (See Appendix I)

Perceived Supervisor Support

The supervisor support measure used is a subscale of the Comprehensive Organizational Health Assessment (COHA) measure at the University of Denver (Potter et al., 2016). The validation test of the scale throughout a number of years has consistently reported the Cronbach Alpha as .97. Participants rate the items on a 5-point scale (1 = strongly disagree; 5 = strongly agree). The scale includes six items: “My supervisor genuinely cares about me,” “My supervisor gives me help when I need it,” “My supervisor supports me in difficult case situations,” “My supervisor helps me learn and improve,” “My supervisor values and seriously considers my opinions in case decision making,” and “My supervisor helps me prevent and address burnout.” (See Appendix J).

Organizational Support

The Organizational Support Scale consists of nine items largely drawn from the original 36-item measure created by Eisenberger, Huntington and Sowa (1986) and shortened by Eisenberger, Fasolo and Davis-LaMastro (1990) with a Cronbach Alpha ranging from .74 to .80. The scale uses a 7-point rating scale (1 = strongly disagree; 7 = strongly agree). It includes these items: “The organization shows very little concern for me (R),” “The organization really cares about my well-being,” “The organization cares about my general satisfaction at work,” “The organization cares about my opinions,” “The organization is willing to extend itself in order to help me perform my job to the best of my ability,” “Even if I did the best job possible, the organization would fail to notice (R),” “The organization takes pride in my accomplishments at work,” “The organization strongly considers my goals and values,” and “Help is available from the organization when I have a problem.” (See Appendix K)

Work Satisfaction

Work Satisfaction was measured by a single item which asked respondents to indicate how satisfied they were with their work, “I am satisfied with the work I do with ID/DD clients.” Participants rated their level of satisfaction based on a 5-point rating scale (1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree). Using a single item to measure work satisfaction is supported strongly in literature (e.g. Nagy, 2002; Wanous et al., 1997). (See Appendix L)

Client Success

Items were created for this study of staff feelings regarding a client's success. The scale is comprised of five items which assess staff feelings regarding how their efforts contribute to client success. Participants rated each question on a 5-point rating scale (1 = never; 2 = seldom; 3 = sometimes; 4 = usually; 5 = always). The items include: "How often do you feel successful in helping clients make positive changes in their lives?"; "How often do you feel you are successful in helping clients achieve case goals?"; "How often do you feel you are successful in helping clients remain safe?"; and "How often do you feel your efforts have contributed to the physical, mental, and social well-being of your clients?" (See Appendix M).

Withdrawal cognitions/Intent to Leave

The scale is similar to one being used by the Quality Improvement Center on Workforce Development (Paul, 2018) that is comprised of eight items. The version used in this study is a composite of three 5-point and two 7-point Likert scales (total of 5 items) represented in Table 22. The five items were distributed at random to assess worker intent to leave current employment. One item, "How often do you think about leaving your work with ID/DD clients?" uses a never (1) to always (5) rating scale. Another item is: "I often think about leaving my work with ID/DD clients," using the rating scale strongly disagree (1) to strongly agree (5) rating. Three items were used: "I intend to leave my job in the next six months," "I will probably look for a new job in the next six months," and "I intend to leave my job in the next six months," using a rating scale of strongly disagree (1) to strongly agree (7). (See Appendix N)

General Health

General health was measured by a single item which required respondents to check a box that best described their general health based on the statement: “In general, would you say your health is...” The score was coded for 1 to denote “Not Applicable” and 8 to mean “Excellent.” It is part of a larger measure of health (Ware & Sherbourne, 1992) (See Appendix O).

Life Satisfaction

Life satisfaction was measured by a single item which asked respondents to indicate how satisfied they were with their life, “I am satisfied with my life.” Participants rated their level of satisfaction based on a 5-point rating scale (1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree) (See Appendix P).

Social Desirability

A Social Desirability Scale (Hays et al., 1989) consisted of a set of socially desirable responses composed of 5-point rating scale (1 = definitely true to 5 = definitely false). Five items were used: “I am always courteous even to people who are disagreeable,” “There have been occasions when I took advantage of someone R,” “I sometimes try to get even rather than forgive and forget R,” “I sometimes feel resentful when I don’t get my way R” and “No matter who I am talking to, I’m always a good listener.” (See Appendix Q). The full survey is in Appendix R.

Data Analysis Strategy

All data was analyzed using IBM SPSS Statistics software version 26. Items and scales were examined for outliers, out-of-range values and missing data using univariate analyses (i.e. frequency distributions). An alpha level of .05 was used for all analyses, except when otherwise stated. Descriptive analyses were conducted on the dependent variables of interest (i.e., secondary traumatic stress, burnout) to determine how participants in the sample compared with those in previous research. Means and standard deviations were calculated for each predictor and dependent variable to quantify the prevalence and severity of these conditions within various subgroups in the data. Bivariate analyses were conducted and a correlation matrix of all relationships among variables was created. In the case of dichotomous variables, phi coefficients were calculated.

After examination of the correlation matrix, a series of multiple regression analyses were conducted to examine likely predictors of burnout and secondary trauma (given the pattern of correlations) and between secondary trauma and burnout and outcomes. Finally, Structural Equation Modeling (SEM) analysis was used to examine the paths from predictor variables to STS and burnout, and to a major outcome variable, intent to leave the agency.

Confidentiality and Human Subjects Considerations

The investigator has completed CITI Human Subjects Protection Training to ensure participant safety, confidentiality, and ethical behavior. To ensure subject confidentiality, no names, places of residence, or personal information that could identify a respondent was collected. No information was asked of respondents that could potentially link them

to a questionnaire. Organizational names were reported on the question for sampling purposes. All data was analyzed at an aggregate level. Original surveys were mailed to the researcher with the exception of three surveys that were scanned and emailed to the researcher. Electronic surveys were downloaded from Qualtrics^{XM} and uploaded into SPSS software. Paper surveys will remain in a locked cabinet at the researcher's office for up to five years after publication of all data, after which they will be destroyed. Any data will remain password protected in an electronic device. Any issues related to potential conflicts of interest in this study were mitigated. Specifically, researcher is affiliated with an agency that works with individuals diagnosed with ID/DD. The staff of this agency were excluded from participating in this study.

CHAPTER IV

RESULTS

Sample Description

A total of 1,083 surveys went to workers in 20 agencies serving clients with intellectual and/or developmental disabilities (ID/DD) throughout the Commonwealth of Kentucky. At the beginning of data analysis, 396 (36.5%) surveys were either returned through the mail or completed online. The response rates varied considerably among agencies with the highest 94% and the lowest at 1%. Overall, agencies that administered the survey onsite had relatively higher response rates, ranging between 17% to 94%. Online surveys recorded the lower response rate. The two lowest response rates — 1% and 17% — were both agencies that only participated online. Table 5 represents the sample agencies and corresponding response rates for each agency. The overall survey response rate was 37% which is acceptable for survey research across multiple agencies (Dillman et al., 2009).

Seventeen agencies requested mailing paper versions of the surveys to a designated person for distribution and collection. These agencies provided a count of the number of direct support professionals (DSP) who were eligible to participate. The surveys were printed and mailed to the designated agency representatives for distribution. Instructions on how to administer the survey were provided in written and verbal formats to the designated representatives. Two agencies opted to participate through an online portal. The researcher emailed a link and instructions for the survey on the Qualtrics^{XM}

survey platform through the University of Louisville to the agency-designated person. The person then disseminated the link with the instructions to potential respondents through email.

One agency adopted a combination of the paper and online options for reaching the staff. Specifically, Adult Day Training and Supported Employment staff (28 respondents) who worked in congregate settings participated in an onsite paper survey administration. The agency provided a mailing list of Family Homecare Providers (FHP) and Respite providers (n = 96) in order to mail surveys. An introductory letter, consent preamble, and a paper copy of the survey were mailed out to all 96 DSPs. In addition, three follow-up letters were sent within a two-month period as a reminder. Out of the 96 surveys mailed, six were returned and marked “return to sender.” The agency’s designated representative also posted a link to the survey on a DSPs private group Facebook account in order for staff to complete the survey online.

In all, 365 paper surveys were returned by the respondents through the mail to the researcher which constituted about 92% of all the returned surveys. Three surveys were scanned and emailed to the researcher (1%) and a total of 28 surveys (7%) were returned through Qualtrics^{XM}.

Table 5*List of Agencies Sampled*

Agency	Sampled	Returned	Response Rate (%)	Mode of Dissemination
Life Skills	124	40 ¹	32	Onsite/ Mail/ Print and Online
BRADC	18	13	72	Onsite/ Print
New Vista	33	13	39	Onsite/ Print
Destiny ACFS	30	5	16	Onsite/ Print
HPSS	20	10	50	Onsite/ Print
Redwood	72	22	30	Onsite/ Print
Zoom Group	42	7	17	Online
BGADD	185	2	1	Online
Serenity	18	17	94	Onsite/ Print
STAR	12	6	50	Onsite/ Print
APSE	116	57	48	Onsite/ Print
CAKY	24	5	21	Onsite/ Print
Pathways	27	22	81	Onsite/ Print
Dream W	90	33	37	Onsite/ Print
D + S	100	66	66	Onsite/ Print
Faith Harbor	30	14	47	Onsite/ Print
ATAAction	20	8	40	Onsite/ Print
Puzzle Pieces	50	20	40	Onsite/ Print
TACK	12	4	33	Onsite/ Print
Finck	60	19	32	Onsite/ Print
Unknown	-	13 ²		Online
TOTAL	1083	396	37	

¹Six out of the 39 returned surveys were online²Completed online without specifying affiliated agency

Outliers and Missing Data

Overview

A total of 22 respondents (5.5%) were deleted from the sample. Of the total sample (n=396), 7 (6 online, 1 paper) respondents (2%) did not complete a single item on the survey. One participant completed one item out of the 181 total items.

In addition, 14 respondents (3.5%) who did not complete at least one of the main outcome variable scales (Burnout and STS) were deleted from the dataset. So that the final number of participant surveys after this first examination of missing data was 374.

Outliers

Outliers have been noted to bias statistical estimates and lead to underestimated or overestimated results (Kwak & Kim, 2017). On the other hand, getting rid of outlier cases has been noted to have considerable impact on loss of the total data set and statistical power (Raaijmakers, 1999; Tsikriktsis, 2005). Hence, the approach used to address outliers was to review each variable and examine the extent to which items were missing for each scale so as to balance statistical power and data integrity concerns. One variable required transformation of the outliers. The exposure to client trauma variable contained a significant number of outliers. This is partly due to the nature of the measure, which asked workers to identify how many of their current and past clients had been exposed to a list of 26 items of traumatic events. The statistics of exposure to client trauma variables were: Exposure to current client trauma was mean = 60.92 (SD = 172.54), and the score range was 0 to 1,538; exposure to past client trauma variable mean was 124.39 (SD = 454.00), and the score range was 0 to 5301; and total client trauma exposure variable mean was = 186.64 (SD = 572.71) and the score range was 0 to 5925. The standard scores of the variables were computed and scores which exceeded z score of 3.29 ($p < 0.001$, two-tailed test) were identified as outliers (Tabachnick & Fidell, 2013). In all, eight cases identified as outliers were removed from the dataset. The statistics of the variable after the deletion of the various outliers were: exposure to current client trauma variable mean was = 39.74 (SD = 90.76), and the score range was 0 to 617; exposure to past client trauma variable mean was = 69.88 (SD = 156.46), and the score range was 0 to 1064; and total client trauma exposure variable mean was = 106.14 (213.79), and the

score range was 0 to 1670. Thus, the total number of respondents included in the final analysis was 366.

Missing Data

The literature on the appropriate way to address missing data did not indicate clear guidelines on how much missing data is too much (Gorelick 2004; Musil et al., 2002; Tsikriktsis 2005; Kristman et al., 2004). For example, Tabachnick and Fidell (2013), Roth and Switzer (1995), and Schafer (1999) asserted that a missing rate of 5% or less is inconsequential. Cohen and Cohen (1983) suggested that up to 10% of cases have missing data on a given variable is not extensive, hence the variable should be retained and the missing data should be treated. Finally, a figure of 15% was suggested by Hertel (1976).

Based on consideration of varying guidelines in the literature, the parameters to address missing data in this study were set at a threshold of 15%. For variables with 15% or more missing values, only descriptive statistics were reported. Table 6 contains information about various measures, items, percentage of missing data for each variable, and actions taken to address missing values. Items with 5% or less of missing values were not treated. For items with numeric attributes which had more than 5% to 15%, missing values were treated by replacing them with the item mean. Missing data in items with symbolic attributes (nominal) were not replaced. The range of missing values in the rest of the data was 0% to 12.8%. The missing values were replaced by item means. It is important to note that imputation of missing values by using the item mean has been noted to have potential to underestimate effects by imputing values at the center of the

distribution (Penny and Atkinson, 2011). The extent of the loss of variance is dependent on the amount of data replaced (Tabachnick and Fidell, 2013). This might have an impact on some of the estimates, especially those with a large portion of missing values replaced. It is important to note that data missing values replacement were imputed for 4 variables. Mean replacement was computed for 4 variables, including 3 demographic measures and one outcome variable (Intent to Leave; 1.4% to 6.6% items missing range). All the variables excluded from the analysis were demographic variables.

Table 6*Measures with Percentage of Missing Values*

Measure		Number of Items	Percentage of Missing Values
Action Taken			
Work Satisfaction	1	0.8	None
Perceived Supervisor Support	6	0.3 - 1.1	None
Life Satisfaction	1	0.5	None
Intent to Quit	5	1.4 - 6.6	Replaced with item mean
Brief Resilience Scale	6	1.1 - 2.7	None
Workload	5	0.3 - 2.2	None
Organizational Support	9	0.3 - 1.4	None
Client Success	5	0.0 - 0.8	None
Secondary Traumatic Stress Scale	17	0.0 - 1.4	None
General Health	1	1.4	None
Abbreviated Maslach Burnout Inventory	9	1.4 - 3.8	None
Total Clients	1	20.5	Not Included in the analysis
Social Desirability	5	0.3 – 2.2	None
Current Clients Trauma Exposure ^a	26	N/A	None
Past Clients Traumatic Exposure ^a	26	N/A	None
Workers Past Trauma ^a	1	N/A	None
Challenging Behavior Frequency Inventory ^a	11	N/A	None
Challenging Behavior Severity Inventory ^a	11	N/A	None
Education	1	6.6	Categorical Variable
Employment Classification	1	22.1	Not included in analysis
ID/DD Relative or Love One	1	34.7	Not included in analysis
Job Title	1	7.9	Categorical variable
Total Current Clients	1	15.8	Not included in analysis
Direct Working Hours Per Week	1	29.8	Not included in analysis
Indirect Working Hours Per Week		35.5	Not included in analysis
Work Shift	1	12.6	Categorical Variable
Hispanic or Latina Origin	1	62.8	Not included in analysis
Race	1	7.7	Categorical Variable
Age	1	21.6	Not included in analysis
Gender	1	6.3	Categorical Variable
Years of ID/DD Field Experience	1	11.2	Replaced with series mean
Years of Organizational Experience	1	12.8	Replaced with series mean
Years in Current Position	1	15.8	Not included in analysis
Average Weekly Work Hours in Past Six Months	1	9.0	Replaced with series mean

^aThe question required only respondents who have experience the event to answer. Refusal to answer did not constitute missing values

Missing Data and Challenging Behavior. The client challenging behavior scale recorded significant differences between the two subscales — frequency of challenging behavior (n = 318) and severity of challenging behavior (n = 197). Although this variable required respondents who answered the frequency of challenging behavior questions to simultaneously answer the severity of challenging behavior question, a sizeable number of respondents skipped the severity of challenging behavior questions due to faulty questionnaire design. The difference in respondent tallies between the two subscales was 121 respondents (23.5%). Specific measures were taken to address this issue by using variable mean replacement to impute the replacement for the missing values in the severity of challenging behavior subscale of variables for which the frequency of challenging behavior subscale was scored. However, given the high level of missing values in the Challenging Behavior Severity subscale and potential impact mean replacement could have on the variance, Challenging Behavior Frequency subscale was used in the multivariate analysis.

Demographics of the Sample

Sample demographics including gender, age, race, ethnicity, and education are displayed in Table 7. The sample was predominantly female (75%) and non-Hispanic white (73%). Black participants constituted 15% of the sample with only 1.5% identified as Latinx descent. There were few participants of mixed race (3%) or Native American (1%) descent. Compared with the percentage of Kentucky residents who identify as Black (8.4%), there was nearly double the number of Black participants who worked with the ID/DD population (U.S. Census Bureau, 2020). Table 7 represents the racial composition of the respondents by their respective organizations.

Table 7*Personal Demographics: Percentage of Participants in Each Dimension*

<u>Gender</u>			<u>Race</u>				<u>Ethnicity</u>		<u>Age</u>								<u>Education</u>					
<u>F</u>	<u>M</u>	<u>Unid</u>	<u>White</u>	<u>Black</u>	<u>AI/NA</u>	<u>Multi</u>	<u>Latinx</u>		<u>10s</u>	<u>20s</u>	<u>30s</u>	<u>40s</u>	<u>50s</u>	<u>60s</u>	<u>70s</u>		<u><HS</u>	<u>HS</u>	<u>Assoc</u>	<u>BA</u>	<u>MA</u>	<u>Other</u>
7	16	2	73	15	1	3	1.5		2	26	21	21	19	8	3		5	51	9	18	8	6

F = Female

M = Male

Unid = Unidentified

AI/NA = American Indian, Native American

Multi = Mixed race

10s = teenager aged 18-19

20s = people in their 20s

< HS = No High School diploma

HS = High School diploma

Assoc = Associates Degree

BA = Bachelor's Degree

MA = Master's Degree

Table 8*Race of Respondents by Organizations*

	<u>AI/NA</u>	<u>Black</u>	<u>White</u>	<u>Mixed-Race</u>	<u>Other</u>
LifeSkills	3% (n = 1)	21.2% (n = 7)	72.7% (n = 24)	3% (n = 1)	0% (n = 0)
BRADC	8.3% (n = 1)	8.3% (n = 1)	66.7% (n = 8)	8.3% (n = 1)	8.3% (n = 0)
New Vista	0% (n = 0)	33.3% (n = 4)	66.7% (n = 8)	0% (n = 0)	0% (n = 0)
Destiny ACFS	0% (n = 0)	50% (n = 2)	50% (n = 2)	0% (n = 0)	0% (n = 0)
HPSS	10% (n = 1)	70% (n = 7)	20% (n = 2)	0% (n = 0)	0% (n = 0)
Redwood	0% (n = 0)	0% (n = 0)	100% (n = 22)	0% (n = 0)	0% (n = 0)
Zoom Group	0% (n = 0)	20% (n = 1)	80% (n = 4)	0% (n = 0)	0% (n = 0)
BGADD	0% (n = 0)	0% (n = 0)	100% (n = 1)	0% (n = 0)	0% (n = 0)
Serenity	7.1% (n = 1)	0% (n = 0)	92.9% (n = 13)	0% (n = 0)	0% (n = 0)
STAR	0% (n = 0)	0% (n = 0)	00% (n = 6)	0% (n = 0)	0% (n = 0)
APSE	0% (n = 0)	13% (n = 7)	3.3% (n = 45)	3.7% (n = 7)	0% (n = 0)
CAKY	0% (n = 0)	0% (n = 3)	40% (n = 2)	0% (n = 0)	0% (n = 0)
Online	0% (n = 0)	0% (n = 0)	100% (n = 3)	0% (n = 0)	0% (n = 0)
Pathways	0% (n = 0)	4.5% (n = 1)	95.5% (n = 21)	0% (n = 0)	0% (n = 0)
Dream WW	0% (n = 0)	20% (n = 4)	75% (n = 15)	5% (n = 1)	0% (n = 0)
D+S	1.6% (n = 0)	0% (n = 0)	95.2% (n = 60)	1.6% (n = 1)	1.6% (n = 1)
Faith Harbor	0% (n = 0)	42.9% (n = 6)	50% (n = 7)	7.1% (n = 1)	0% (n = 0)
ATAAction	0% (n = 0)	4.3% (n = 1)	85.7% (n = 6)	0% (n = 0)	0% (n = 0)
Puzzle Pieces	0% (n = 0)	5.3% (n = 1)	78.9% (n = 15)	15.8% (n = 3)	0% (n = 0)
TACK	0% (n = 0)	0% (n = 0)	100% (n = 4)	0% (n = 0)	0% (n = 0)
TOTAL	1.5% (n=5)	13.6% (n = 45)	81.2% (268)	3% (n = 10)	0.6% (n = 2)

AI = American Indian

NA = Native American

The racial composition of the respondents was not representative across the agencies. A cross tabulation of the agencies by race indicated that respondents from six of the agencies and all who participated in electronic survey (constituting about 30% of survey sites) were identified as White. To examine differences in race and gender, chi-square tests were performed. To meet the assumption of no more than 20% of the expected frequencies were less than five and no single expected frequency were less than one, the variables were recoded.

Race was recoded to include only White and Black participants. Also, gender was recoded to include female and male. Chi-square test results reported in Table 9 indicated that for these respondents, approximately 86% of females were identified as White, while 14% of all the females were Black. Males of White identity constituted 74%, whereas males of the African American race constituted 26% of the sample. This difference was significant ($X^2_{(1)} = 4.73, p = .03$). The results suggest that women overwhelmingly dominate the ID/DD direct support professional field given that the latest estimate of females who live in the state is 50.7% as of 2019 (U.S. Census Bureau, 2020). Also, among the men in the field, the Black male representation was relatively high (three times higher than what would be expected) given that the percentage of Blacks is only 8.4% according to 2019 estimates by the Census Bureau.

Table 9

Chi-square of Race by Gender

Gender	Race	
	Black	White
Female	13.9%	86.1%
Male	25.9%	74.1%

$$\chi^2 (1) = 4.73, p = 0.028$$

The age range of the DSP sample was 18 years to 78 years. The majority of DSPs fell within the age group of 20 to 29 years (26%). Twenty-one percent of DSPs were between the ages of 30 to 39 years and 40 to 49 years range. In addition, 19% were within the ages of 50 to 59 years and staff who were 60 to 78 years or older constituted 11% of the sample. Only 2% of the staff were born on or after the year 2000 (18 and 19 years). More than half (51%) of the workforce had a high school diploma or educational equivalency with only 8% with a Master's degree.

Information pertaining to employment demographics are found in Table 10. Eighty-eight percent of the total sample worked full time. Forty-eight percent of DSPs worked first shift, 4% worked second shift and 3% worked third shift. A large proportion (45%) of the workers worked nontraditional shifts. These included those who worked multiple or varied shifts and odd shifts such as respite and family home providers who worked as needed to support individuals. Ninety percent of the DSPs worked 40 hours or less in a week, and the rest worked more than 40 hours a week. Approximately 85% of the sample worked at least 20 hours of indirect support (non-direct contact with clients) every week and 14% provided more than 20 hours in indirect support. Almost a third of

the participants worked in multiple job capacities (29%) and a quarter (25%) worked in adult day training centers.

Table 10

Employment Demographics: Percentage of Participants in Each Dimension

<u>Employment Classification</u>			<u>Job Titles</u>										<u>Dir Wk Hrs</u>	<u>Indir Wk Hrs</u>	<u>Work Shift</u>				
<u>F. Time</u>	<u>P. Time</u>	<u>N/A</u>	<u>ADT</u>	<u>CLS</u>	<u>CA</u>	<u>ES</u>	<u>RP</u>	<u>FHP</u>	<u>Res</u>	<u>BSS</u>	<u>OT</u>	<u><=40</u>	<u>>40</u>	<u><=20</u>	<u>>20</u>	<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>OS</u>
88	9	3	25	5	3	12	2	8	15	1	29	90	10	85.5	14.5	48	4	3	45

F. Time = Full Time

P. Time = Part Time

ADT = Adult Day Training staff

CLS = Community Living Support staff

CA = Community Access staff

ES = Employment Specialist

RP = Respite provider

FHP = Family Home Provider

Res = Residential staff

BSS = Behavior Support Specialist

OT = Other Job Titles (Combination of job titles and other titles not represented)

Dir Wk Hours = Direct Weekly Hours

Indir Wk Hrs = Indirect Weekly Hours

OS = Other Shift (Combination of shifts and non-traditional shift schedules such as respite and family home providers schedules)

Additional demographics describing employment experiences are in Table 11.

This sample of DSP field experience in the ID/DD service ranged from less than one year to 40 years (Mean = 8.7; SD = 8.6). Almost half (47%) of the workers have at least five years of work experience in the ID/DD field. Also, DSPs reported a range of years of experience with their current organization — from less than a year to 35 years (Mean = 4.9; SD = 6.3). However, more than two-thirds (71%) reported being with their current agencies for five years or less with about one-third (27%) being there a year or less. This demonstrates that actual turnover rates of front-line DSPs may be as high as 27% a year. About 13% of the workers had more than 10 years of experience with their current

organization compared with 25% of workers with 10 years of experience in the ID/DD field. A significant portion of the staff worked in their current position for 10 years or less (89%) with about 2% being in their current position for more than 20 years. The mean years in current position was 4.4 (SD = 6.0).

Table 11

Employment Experiences: Percentage of Participants in Each Dimension

<u>Years of IDDD Field Experience</u>									
<u><1</u>	<u>1-5</u>	<u>6-10</u>	<u>11-15</u>	<u>16-20</u>	<u>21-25</u>	<u>26-30</u>	<u>31-35</u>	<u>36-40</u>	
14	33	21	8	9	3	3	1	1	
<u>Years with Current Organization</u>									
<u><1</u>	<u>1-5</u>	<u>6-10</u>	<u>11-15</u>	<u>15-20</u>	<u>21-25</u>	<u>26-30</u>	<u>31-35</u>		
27	44	16	6	4	1	2	<1		
<u>Years in Current Position</u>									
<u><1</u>	<u>1-5</u>	<u>6-10</u>	<u>11-15</u>	<u>15-20</u>	<u>21-25</u>	<u>26-30</u>	<u>31-35</u>	<u>36-40</u>	
29	47	13	4	4	<1	<1	<1	<1	

The majority of the staff indicated that for the past six months their average hours of work had been between 40 and 49 hours (47%) with 17% working 70 or more hours. About one-fifth (20%) of the staff worked less than 40 hours a week on average within the past six months. Seventy-one percent of the DSPs reported current caseloads of 20 clients or less. On average, staff current caseloads for the sample was 26 (Mean = 26.3, SD = 49.8) and the distribution varied significantly among workers (1 to 400). The wide range of cases exemplifies the diversity in services provided to ID/DD clients. Some of the services requires one-to-one staff ratio — for example community living support (CLS) services — whereas others work in areas such as adult day training (ADT) centers, allowing staff to support multiple clients in a congregate setting. Eight-eight percent of

the workers reported their current caseload as 50 or less and five reported more than 100 cases on their current caseload. In addition, staff reported the career caseload to average approximately 81 clients (Mean = 81.4, SD = 176.5) with a distribution range of 1 to 1,800 clients. Approximately half (49%) of the DSPs have worked with more than 50 clients during their career span. The staff were evenly split when it came to a relative or loved one with an ID/DD diagnosis. So, while this was a motivator for half of the staff to enter this field, such experience was not overwhelmingly influential in this regard. Table 12 below represents statistics on DSPs average work week, current case load, career caseload and those who had an ID/DD relative or loved one.

Table 12

Percentages of Participants Average Work Week, Current Caseload, Career Caseload and Participant of ID/DD relative or Love One

<u>Average Work Week</u>					<u>Current Caseload</u>				<u>Career Caseload</u>				<u>ID/DD Relative</u>	
<u><39</u>	<u>40-49</u>	<u>50-59</u>	<u>60-69</u>	<u>70</u>	<u><=20</u>	<u>21-50</u>	<u>51-100</u>	<u>100+</u>	<u><=20</u>	<u>21-50</u>	<u>51-100</u>	<u>100+</u>	<u>YES</u>	<u>NO</u>
20	47	11	4	17	59	30	6	5	71	17	7	6	49	51

Descriptive Analysis of Key Variables

Secondary Traumatic Stress

The Secondary Traumatic Stress (STS) scale is comprised of 17 items using a 1 (Never) to 7 (Always) scale. The items are congruent with the DSM-IV-TR (APA, 2000) criteria for PTSD. The scale is made up of three subscales; Avoidance Symptoms, Intrusive Symptoms and Arousal Symptoms. The composite STS and the subscales were computed using the sum function of the specified items. Table 13 represents the statistical information about the variable. The mean of the composite STS scale was 27.66 (SD =

10.23) and scores ranged from 14 to 76, indicating moderately low levels of secondary traumatic stress in this group. The mean scores of the three cluster of symptoms were: Avoidance Symptoms Mean = 10.96 (SD = 4.49), and the score ranged from 3 to 31; Intrusive Symptoms Mean = 7.90 (SD = 3.09), and the scores ranged from 3 to 22; and Arousal Symptoms Mean = 8.80 (SD = 3.74), and the scores ranged from 4 to 23. Internal consistency of total scores of the STS scale was calculated using the current data set and the Cronbach's alpha coefficient was 0.92, demonstrating excellent reliability. Also, internal consistency was computed for the three subscales. The Cronbach's alpha reports for Avoidance Subscale was 0.85, the Intrusion Subscale was 0.71 and Arousal Subscale was 0.81, demonstrating good reliability.

Table 13

Secondary Traumatic Stress Scale

	<i>n</i>	Mean	SD	Minimum	Maximum	α
Secondary Traumatic Stress Disorder (17)¹	366	27.66	10.23	14	76	0.92
Avoidance Symptoms (5) ¹	366	10.96	4.49	3	31	0.85
Intrusive Symptoms (7) ¹	366	7.90	3.09	3	22	0.71
Arousal Symptoms (5) ¹	366	8.80	3.74	4	23	0.81

¹ Number of items in each scale

n = Frequency

SD = Standard Deviation

α = Cronbach's Alpha

Using Bride's (2007) criteria for STS diagnosis (based on the DSM IV-TR), the cutoff score for clinical levels of STS was computed. A dichotomous STS variable with zero indicated that the cutoff score for diagnostic criteria for PTSD was not met, and a score with one endorsed that the cutoff score for diagnostic criteria for PTSD was met or exceeded. A statistical summary of endorsement of criteria for the three symptom clusters and full STS percentages are represented in Table 14. Approximately 13% (Mean = 0.13,

SD = 0.34) of the respondents of the sample met the cutoff for pathological levels of Secondary Traumatic Stress. About 55% endorsed the full cluster of Intrusive Symptoms (Mean = 0.55, SD = 0.50), and 31% endorsed high levels of Arousal Symptoms, which was higher than what Bride (2007) found in social workers. However, endorsement of the full cluster of Avoidance Symptoms was low (17%) compared with professionals in related fields (Mean = 0.18, SD = 0.38).

Table 14

Frequency of Diagnostic Criteria Secondary Traumatic Stress

Criteria Met	n	%	Mean	SD
Intrusive Symptoms (B)	196	55	0.55	0.50
Avoidance Symptoms (C)	63	17	0.18	0.38
Arousal Symptoms (D)	114	31	0.32	0.47
STS Symptoms (B + C + D)	46	13	0.13	0.34

n = Frequency

% = Percentage

SD = Standard Deviation

Burnout

The brief Maslach Burnout Inventory (MBI: Maslach, & Leiter, 2008) measures perceived levels of burnout in respondents. The scale consisted of nine items with three items per subscale using a 1 (never) to 7 (every day) scale. The three subscale scores were computed using the sum of respective items. An overall score was not calculated for this measure. The three subscales, Emotional Exhaustion (EE), Depersonalization (DP), and Personal Accomplishment (PA) have a possible maximum score of 21 each. Higher scores on EE and DP and lower scores on PA are associated with a higher likelihood of burnout. Standard deviations and ranges of the three subscales are displayed in Table 15. The Burnout Subscale EE registered was Mean = 7.36 (SD = 4.41, and the range = 2 -

21). A lower level of Mean = 3.93 (SD = 2.29, and range = 2-20) was reported for DP while PA recorded a high mean = 16.19 (SD = 4.36, and range = 3-21). Internal consistency of the three scales was calculated using the current data set and Cronbach's alpha coefficients were EE = 0.79, DP = 0.52 and PA = 0.60. The EE scale demonstrated good reliability, but the DP and PA demonstrated fair to low reliability in this sample.

Table 15

Burnout: Brief Maslach Burnout Inventory

	<i>n</i>	Mean	SD	Min	Max	α
Emotional Exhaustion (3) ¹	362	7.36	4.41	2	21	0.79
Depersonalization (3) ¹	362	3.93	2.29	2	20	0.52
Personal Accomplishment (3) ¹	362	16.19	4.36	3	21	0.60

¹ Number of items in each scale

n = Frequency

SD = Standard Deviation

Min = Minimum

Max = Maximum

α = Cronbach's Alpha

Workload

The Workload scale is a composite scale of five items (Hollinshead, 2018). The scale was computed using a sum function of the values of the five items. A representation of the mean, standard deviation and range of scores is shown in Table 16. The mean score of the scale was 11.70 (SD = 7.07), and the range of scores was from 1 to 35. A high score is an indication of high Workload. In general, staff expressed moderately low Workload within this sample. Internal consistency of this scale was calculated using the current data set and Cronbach's alpha coefficient was 0.88, demonstrating good reliability.

Table 16*Workload Scale*

	<i>n</i>	Mean	SD	Min	Max	α
Workload (5)¹	366	11.70	7.07	1	35	0.88
Even working overtime, I cannot finish all my work	365	2.36	1.82	1	7	n/a
My caseload is too high I have many cases to do a good job, yet I am expected to do so	360	2.30	1.67	1	7	n/a
I cannot spend enough time with my clients	358	2.29	1.68	1	7	n/a
It is difficult for me to keep up with agency policies and guidelines	365	2.64	1.82	1	7	n/a
	362	2.25	1.66	1	7	n/a

¹ Number of items in each scale

n = Frequency

SD = Standard Deviation

Min = Minimum

Max = Maximum

n/a = Not Applicable

α = Cronbach's Alpha

Exposure to Secondary Trauma Experienced by Clients

This measure was created using a 26-item list of adverse experiences to which current clients have been exposed. The scale was modelled after one used in Cieslak, Anderson, Bock, Moore, Peterson and Benight (2013). However, the scale used in this study had more items. The workers were asked to record the number of current clients who were exposed to each of the events. The exposure to current client trauma measured was Mean = 39.75 (SD = 90.77), and the scores ranged from 0 to 617. Internal consistency of this measure was calculated using the current data set and Cronbach's alpha coefficient was 0.88, demonstrating good reliability. The measure was comprised of

sub-categories of traumatic events. These subscales included: Current Client Disaster/Accidents Exposure (Mean = 4.24; SD = 13.64; range 0 – 125), and Cronbach's alpha of 0.77, demonstrating good reliability; Current Client Assault/Violence (Mean = 11.12; SD = 25.29; range 0 – 200), and Cronbach's alpha of 0.75, demonstrating good reliability; Current Client Adverse Childhood Experiences (Mean = 19.64; SD = 52.44; range 0 – 542), and Cronbach's alpha of 0.90, demonstrating good reliability; Current Client Other Traumatic Experiences — life-threatening illness or injury, sudden violent death, serious injury, harm or death they caused to someone else, and any other extremely stressful event or experience — Mean = 7.15; SD = 22.14, range 0 – 220, and Cronbach's alpha of 0.50, demonstrating weak reliability.

The statistical information regarding exposure to the current client trauma measure and the subscales are represented in Table 17. The composite scale and subscales were calculated using the sum function of the variables. Among the subscales, workers reported that adverse childhood experiences (ACEs) were the highest reported exposed client trauma.

Additionally, staff reported exposure information about trauma of past clients (as opposed to current clients) experienced using the same 26 traumatic experience items. A composite score was calculated using the sum function of the items to represent exposure to past client trauma. A third variable, exposure to total client trauma, was computed by combining the current and past client trauma variables. The mean of the exposure to past client trauma scale was 69.88 (SD = 156.46), and the scores ranged from 0 to 1,064 with a Cronbach alpha of 0.93, demonstrating good reliability. The exposure to total client

trauma was Mean = 106.15 (SD = 213.80), and the scores ranged from 0 to 1,670 with Cronbach's alpha of 0.94, demonstrating good reliability.

Table 17

Secondary Trauma Exposure

Items	<i>n</i>	Mean	SD	Max	Min	α
Current Client Exposure Scale (26)¹	279	39.75	90.77	0	617	0.91
Disaster/ Accident (5)	266	4.24	13.64	0	125	0.77
1. Natural disaster	246	0.89	3.72	0	28	n/a
2. Fire or explosion.	251	0.50	2.24	0	25	n/a
3. Transportation accident.	254	1.47	4.73	0	50	n/a
4. Other type of serious accident at work, home or during recreational activity.	246	0.91	4.50	0	50	n/a
5. Exposure to toxic substance	243	0.77	4.03	0	40	n/a
Assault/ Violence (8)	264	11.12	25.95	0	200	0.75
6. Physical assault by a relative, acquaintance, stranger.	245	2.19	6.18	0	50	n/a
7. Assault with a weapon	242	0.40	1.94	0	25	n/a
8. Sexual assault	242	1.99	5.24	0	40	n/a
9. Other unwanted or uncomfortable sexual experience	241	1.57	4.22	0	40	n/a
11. Combat or exposure to a war zone	241	0.22	1.75	0	25	n/a
12. Captivity	241	0.22	1.76	0	25	n/a
13. Severe human suffering.	237	0.41	2.09	0	25	n/a
16. Were bullied	248	4.98	12.77	0	100	n/a
Adverse Childhood Experiences (9)	265	19.64	52.44	0	542	0.90
18. Severe neglect	245	2.25	7.34	0	70	n/a
19. No one in the family loved them or thought they were important or special? OR The family didn't look out for each other, feel close to each						

other, or support each other.	239	2.57	8.16	0	100	n/a
20. Saw or heard someone being beaten up, stabbed, shot at, threatened with a knife in real life	238	1.40	7.48	0	100	n/a
21. Parents were separated or divorced.	234	4.39	13.16	0	150	n/a
22. Mother, father or guardian died.	247	3.85	9.48	0	100	n/a
23. Lived with anyone who was a problem drinker or alcoholic or who used street drugs.	243	2.27	7.35	0	75	n/a
24. A household member went to jail or prison.	243	1.34	4.21	0	50	n/a
25. A household member was depressed or mentally ill or did a household member attempt suicide?	236	2.41	11.16	0	100	n/a
26. A parent, guardian, or other household member threatened to, or actually abandoned them or threw them out of the house	245	1.15	3.94	0	40	n/a
Other Traumatic Experiences (4)	255	7.15	22.14	0	220	0.50
10. Life threatening illness or injury.	244	1.62	7.62	0	100	n/a
14. Sudden violent death.	242	0.19	1.64	0	25	n/a
15. Serious injury, harm or death they caused to someone else.	239	0.47	2.08	0	25	n/a
17. Any other extremely stressful event or experience.	239	5.31	17.72	0	200	n/a
Past Client Trauma Exposure	261	69.88	156.46	0	1064	0.93
Total Client Trauma Exposure	250	106.15	213.80	0	1670	0.94

n – Frequency

SD = Standard Deviation

Max = Maximum

Min = Minimum

n/a = Not Applicable

Worker's Own Trauma History

DSP past traumatic experience was measured by a single question. The participants were asked to review the 26 adverse events used for the client trauma exposure and record how many of such experiences to which they had been personally exposed. The representation of the mean, standard deviation and range of the scores are shown in Table 18.

The Personal Trauma Measure was Mean = 5.18 (SD = 5.44), and the range of 0 to 24, indicating that staff who responded to this question on the average endorsed about five items on the list as their history of traumatic experiences.

Table 18

Workers' Own Trauma History

	<i>n</i>	Mean	SD	Minimum	Maximum	α
Personal Trauma (1) ¹	246	5.18	5.44	0	24	n/a

¹ Number of items in each scale

n – Frequency

SD = Standard Deviation

n/a = Not Applicable

α = Cronbach's Alpha

Client Challenging Behavior

The Challenging Behavior Scale composed of 22 items is represented in Table 19 (BPI-01: Rojahn et al., 2001). The scale was comprised of two subscales: behavior frequency, and behavior severity. The subscales were computed using the sum function of each scale. The mean of the frequency of challenging behavior subscale was 7.31 (SD = 7.79), and the scores ranged from 0 to 34. The mean of the severity of challenging behavior severity subscale was 8.94 (SD = 4.62), and the scores ranged from 0 to 33. The

composite variable challenging behavior scale was computed for respondents who endorsed both the behavior frequency and behavior severity. The mean of the composite scale was 16.26 (SD = 11.05), and the scores ranged from 1 to 58. Internal consistency of this composite scale and subscales were calculated using the current data set, and Cronbach's alpha coefficients were: the client challenging behavior scale was 0.97; the frequency of challenging behavior subscale was 0.95; and the severity of challenging behavior subscale was 0.98, demonstrating good reliability across all the scales.

Table 19

Challenging Behavior Scale

	<i>n</i>	Mean	SD	Min	Max	α
Challenging Behavior Scale (22)¹	318	16.26	11.05	1	58	0.97
Behavior Frequency subscale (11) ¹	318	7.31	7.79	0	34	0.95
Behavior Severity subscale (11) ¹	366	8.94	4.62	0	33	0.98

¹ Number of items in each scale

n – Frequency

SD = Standard Deviation

Max = Maximum

Min = Minimum

α = Cronbach's Alpha

Personal Resilience

The Brief Resilience Scale composite was a 5-point rating scale of six items represented in Table 20 (BRS; Smith et al., 2008). The ratings of the scale were opposite of the original scale in the survey, hence a higher score suggested lower Resilience. To correct this issue, items 1, 3, and 5 were reversed instead of items 2, 4 and 6 in the original scale (Smith, et al. 2008). The composite scale was computed using the sum function of the items. The mean score of the scale was 20.42 (SD = 4.89), and the scores ranged from 2 to 30. The Resilience level among DSPs on average was moderately high.

Internal consistency of the Resilience scale was calculated using the current data set and Cronbach's alpha coefficient was 0.72, demonstrating good reliability.

Table 20

Personal Resilience

	<i>n</i>	Mean	SD	Minimum	Maximum	α
Brief Resilience Scale (6)¹	365	20.42	4.89	2	30	0.72
I tend to bounce back quickly after hard times (R) ²	362	3.64	1.21	1	5	n/a
I have a hard time making it through stressful events	362	3.54	1.23	1	5	n/a
It does not take me long to recover from a stressful event (R) ²	356	2.96	1.31	1	5	n/a
It is hard for me to snap back when something bad happens	361	3.67	1.19	1	5	n/a
I usually come through difficult times with little trouble ((R) ²	361	3.04	1.26	1	5	n/a
I tend to take a long time to get over set-backs in my life	362	3.82	1.19	1	5	n/a

¹ Number of items in each scale

² Score was reversed

n – Frequency

SD = Standard Deviation

n/a = Not Applicable

α = Cronbach's Alpha

Perceived Supervisor Support

The Perceived Supervisor Support scale is a composite scale of six items. Each item was scored on a 5-point rating scale (Potter et al., 2016). The composite scale was computed using the sum function of the items. Statistical information on the scale is shown in Table 21. In general, staff expressed high satisfaction with their supervisor support, the Mean = 26.50 (SD = 4.97), and the scores ranging from 6 to 30.

Internal consistency of this scale was calculated using the current data set, and Cronbach's alpha coefficient was 0.96, demonstrating good reliability.

Table 21

Perceived Supervisor Support

	<i>n</i>	Mean	SD	Min	Max	α
Perceived Supervisor Support Scale (6)¹	365	26.50	4.97	6	30	0.96
My supervisor genuinely cares about me	365	4.48	0.85	1	5	n/a
My supervisor gives me help when I need it	364	4.51	0.83	1	5	n/a
My supervisor supports me in difficult case situations	364	4.51	0.86	1	5	n/a
My supervisor helps me learn and improve	364	4.46	0.87	1	5	n/a
My supervisor values and seriously considers my opinions in case decision making	363	4.41	0.92	1	5	n/a
My supervisor helps me prevent and address burnout	362	4.22	1.02	1	5	n/a

¹ Number of items in each scale

n – Frequency

SD = Standard Deviation

Max = Maximum

Min = Minimum

n/a = Not Applicable

α = Cronbach's Alpha

Organizational Support

The General Organizational Support scale composed of a 7-point rating scale of nine items represented in Table 22 (by Eisenberger et al.,1986) and shortened by Eisenberger, Fasolo and Davis-LaMastro (1990)). Two items were scored in reverse (items 1 and 6). The composite scale was computed using the sum function of the items. The mean score of the scale was 47.21 (SD = 12.36), and the scores ranged from 9 to 63. The high average score is indicative of moderately high levels of general organizational support, as reported by the workers. Internal consistency of this scale was calculated using the current data set and Cronbach's alpha coefficient was 0.92, demonstrating good reliability.

Table 22*Organizational Support*

	<i>n</i>	Mean	SD	Minimum	Maximum	α
Organizational Support Scale (9)¹	365	47.21	12.36	9	63	0.92
The organization shows very little concern for me (R) ²	363	5.67	1.67	1	7	n/a
The organization really cares about my well-being	361	5.22	1.80	1	7	n/a
The organization cares about my general satisfaction at work	363	5.34	1.67	1	7	n/a
The organization cares about my opinions	361	5.19	1.76	1	7	n/a
The organization is willing to extend itself in order to help me perform my job to the best of my ability	363	5.16	1.69	1	7	n/a
Even if I did the best job possible, the organization would fail to notice (R) ²	365	5.19	1.90	1	7	n/a
The organization takes pride in my accomplishments at work	364	5.15	1.77	1	7	n/a
The organization strongly considers my goals and values	364	5.13	1.75	1	7	n/a
Help is available from the organization when I have a problem	363	5.41	1.71	1	7	n/a

¹ Number of items in each scale² Score was reversed*n* – Frequency

SD = Standard Deviation

n/a = Not Applicable

 α = Cronbach's Alpha***Work Satisfaction***

Work satisfaction was measured by a single item which asked the staff to indicate how satisfied they were with their work (Nagy, 2002; Wanous et al., 1997).

Participants rated their level of satisfaction based on a 5-point rating scale with a higher scale corresponding with higher satisfaction. Table 23 represents the mean, standard deviation, and the scores of the measure. An overwhelming majority of the respondents (93%) either agreed or strongly agreed that they were satisfied working with ID/DD clients (Mean = 4.54, SD = 0.70). Only about 1% indicated that they either disagreed or strongly disagreed with that statement. This indicated that the DSPs in this sample are highly satisfied with their work.

Table 23

Work Satisfaction Measure

	n	Mean	SD	Min	Max	α
I am satisfied with the work						
I do with ID/DD clients	363	4.54	0.70	1	5	n/a
Strongly Disagree (1) ¹	3					
Disagree (2)	1					
Neutral (3)	22					
Agree (4)	108					
Strongly Agree (5)	229					

¹ Score associated with the response

n – Frequency

SD = Standard Deviation

Max = Maximum

Min = Minimum

n/a = Not Applicable

α = Cronbach's Alpha

Life Satisfaction

Staff Life Satisfaction was measured by a single item which used a 5-point Likert scale to respond to a statement “I am satisfied with my life.” The frequency distribution, mean, and standard deviation of the measure is represented in Table 24. Slightly more than half of the respondents (54%) strongly agreed with the statement and an additional

31% agreed. Approximately 11% of the staff expressed neutrality as to satisfaction with their life, whereas 4% indicated that they were not satisfied. The mean for the Life Satisfaction measure was 4.33 (SD = 0.89), suggesting that the workers in this sample were highly satisfied with their life.

Table 24

Life Satisfaction Measure

	<i>n</i>	Mean	SD	Min	Max	α
I am satisfied with my life	364	4.33	0.89	1	5	n/a
Strongly Disagree (1) ¹	6					
Disagree (2)	10					
Neutral (3)	39					
Agree (4)	113					
Strongly Agree (5)	196					

¹ Score associated with the response

n – Frequency

SD = Standard Deviation

Max = Maximum

Min = Minimum

n/a = Not Applicable

α = Cronbach's Alpha

General Health

General Health was measured by a single item which used an 8-point Likert-type scale to respond to the question, “In general, would you say your health is...”. The score was coded for 1 to denote “Not Applicable” and 8 to mean “Excellent” health. Table 25 represents the mean, standard deviation, and the scores of the measure. The variable was reversed from the original scale, so a higher score is an indication of better overall health. The mean for general health measure was 6.16 (SD = 1.11) with a score range of 2 to 8. Approximately 77% of the staff rated their health condition from good to excellent, while

21% indicated that their health was either fair or poor. Approximately 2% of the workers did not know their health status or refused to answer the question.

Table 25

General Health Measure

	<i>n</i>	Mean	SD	Min	Max	α
In general, would you						
say your health is	361	6.16	1.11	2	8	n/a
Not Applicable (1) ¹		-				
Refuse to Answer (2) ¹		5				
Don't Know (3) ¹		3				
Poor (4) ¹		9				
Fair (5) ¹		67				
Good (6) ¹		145				
Very Good (7) ¹		94				
Excellent (8) ¹		38				

¹ Score associated with the response

n – Frequency

SD = Standard Deviation

Max = Maximum

Min = Minimum

n/a = Not Applicable

α = Cronbach's Alpha

Intent to Leave

The intent to Leave employment was measured by a composite of three 5-point and two 7-point Likert scales of five items represented in Table 26. The five items were randomly placed in the survey to assess a worker's intent to leave current employment. The composite scale was computed using the sum function of the items in the scale. The score range was 3 to 31 with higher scores indicative of staff intent to leave the organization. For this sample, the scale was Mean 9.41 (SD = 5.62), suggesting that staff intent to leave their job was moderately low. Internal consistency of this scale was

calculated using the current data set and Cronbach's alpha coefficient was 0.87, demonstrating good reliability.

Table 26

Intent to Leave Scale

	<i>n</i>	Mean	SD	Minimum	Maximum	α
Intent to Leave Scale (5)¹	366	9.41	5.62	3	31	0.87
I often think about quitting my work with ID/DD clients	359	2.06	1.31	1	5	n/a
I intend to leave my job in the next six months	366	1.88	1.57	1	7	n/a
I will probably look for a new job in the next six months	361	1.90	1.53	1	7	n/a
I intend to leave my job in the next six months	361	1.81	1.06	1	5	n/a
How often do you think about quitting your work with ID/DD clients?	366	1.88	1.57	1	5	n/a

¹ Number of items in each scale

n – Frequency

SD = Standard Deviation

n/a = Not Applicable

α = Cronbach's Alpha

Client Success

The Client Success scale composed of 5-point rating scale of five items created for this study to assess staff feelings regarding their client success. The sum function of the items was used to compute the scale. The mean score, standard deviation, and range of scores for this scale are shown in Table 27. A high score is an indication of high feelings of contribution to client success. The score of the scale Mean 21.17 (SD = 2.87) with score range from 9 to 25, suggesting a high overall sense of contribution toward client success among respondents. Internal consistency of this scale was calculated using

the current data set and Cronbach's alpha coefficient was 0.76, demonstrating good reliability.

Table 27

Client Success Scale

	<i>n</i>	Mean	SD	Min	Max	α
Client Success Scale (5)¹	366	21.17	2.88	9	25	0.61
How often do you feel successful in helping clients make positive changes in their lives?	366	4.25	0.78	2	5	n/a
How often do you feel you are successful in helping clients achieve case goals?	365	4.18	0.77	1	5	n/a
How often do you feel you are successful in helping clients remain safe?	366	4.65	0.61	1	5	n/a
How often do you feel your efforts have contribute to the physical, mental, and social well-being of your clients?	363	4.46	0.66	2	5	n/a
How often do you receive thanks or expressions of gratitude from clients you have worked with or their families?	364	3.71	1.09	1	5	n/a

¹ Number of items in each scale

n – Frequency

SD = Standard Deviation

Max = Maximum

Min = Minimum

n/a = Not Applicable

α = Cronbach's Alpha

Social Desirability

The socially desirable response set-5 was composed of 5-point rating scale of five items and is used as a control variable to evaluate a respondent's tendency to give socially desirable responses (Hays et al., 1989). The extreme scores for each item were scored 1 and all other responses were scored 0. A sum function of the items was used to compute the scale.

The mean score, standard deviation, and range of scores for this scale are shown in Table 28. A high number of socially desirable responses might be an indication of a respondent concerned with social approval and could impact the accuracy of survey responses. The score of the composite scale was Mean 3.24 (SD = 1.46) with scores range from 0 to 5, suggesting a moderately high social desirability in the sample. Internal consistency of this scale was calculated using the current data set, and Cronbach's alpha coefficient was 0.60, demonstrating fair reliability. The Cronbach's alpha report in Hays et al. (1989) was 0.66 and 0.68 in two different samples.

Table 28

Social Desirability Scale

	<i>n</i>	Mean	SD	Min	Max	α
Social Desirability Scale (5)¹	366	3.24	1.49	0	5	0.61
I am always courteous even to people who are disagreeable ^a	361	4.16	1.03	1	5	n/a
There have been occasions when I took advantage of someone ^b	365	1.24	0.71	1	5	n/a
I sometimes try to get even rather than forgive and forget ^b	366	1.33	0.80	1	5	n/a
I sometimes feel resentful when I don't get my way ^b	364	1.50	0.83	1	5	n/a
No matter who I am talking to, I'm always a good listener ^a	362	4.11	1.10	1	5	n/a

¹ Number of items in each scale

^a A score of 5 (Always) indicates the direction of the extreme SDRS response, scored 1. All other responses are scored 0.

^b A score of 1 (Never) indicates the direction of the extreme SDRS response, scored 1. All other responses are scored 0.

n – Frequency

SD = Standard Deviation

Max = Maximum

Min = Minimum

n/a = Not Applicable

α = Cronbach's Alpha

Correlational Analysis between STS and Demographic Variables

A Pearson's *r* coefficient was calculated to determine the relationships between the STS continuous variable and each of the continuous level demographic variables.

These variables included, years of field experience, and years of organizational experience. The result of the correlation matrix is represented in Table 29. The results indicated none of the variables were significantly correlated with STS.

Table 29

Correlation for STS and Demographics (continuous variables)

Variable	1	2	3
1 STS	–		
2 Field Exp	0.085	–	
3 Org Exp	0.093	.640**	–

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

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

STS = Secondary Traumatic Stress

Field Exp. = Field Experience

Org. Exp. = Years of Organizational Experience

Group Difference of STS in Demographic Variables

Various demographic variables were recoded into dichotomous variables for analysis with the composite STS variable: gender was recoded into female and male; race was recoded into White and non-Whites; and educational level was recoded into high school or less and beyond high school level. In addition, work shift was recoded into: traditional (1st, 2nd, 3rd shifts); non-traditional (mixed shifts and odd shifts such as respite and family home provider); and average weekly work hours during the past six months was recoded into less than 40 hours, and 40 hours or more.

A series of one-way between ANOVAs was used to test if differences occurred between various dichotomous demographic variables and the STS continuous variable. The results of the ANOVAs are represented in Table 30. The results indicated significant differences in educational levels of DSPs. The mean for workers with high school or less

educational level was 25.52 and for more than high school was 29.55, indicating that workers with more than high a school degree were at higher risk of STS. The result was significant at $F_{1,340} = 14.69, p = 0.001$. Also, there were significant differences among those with different job titles as DSPs. The mean STS levels for community-based workers was 27.86 and for residential setting staff was 25.12, indicating that workers who worked in community-based settings were at higher risk of STS than those who worked in residential settings. The result was significant at $F_{1,235} = 4.60, p = 0.033$. Significant differences existed in identified race of DSPs as well. The mean for workers identified as White was 28.01 and for workers identified as non-White was 24.11, indicating that workers who identified as racially White were at higher risk of STS. The result was significant at $F_{(1, 336)} = 9.05, p = 0.003$.

Lastly, there were significant differences in the hours DSPs have worked in the past six months and STS. The mean for workers who worked less than 40 hours a week was 24.45 and for workers who worked more than 40 hours a week was 28.36, indicating that workers who worked more than 40 hours a week in the past six months were at a higher risk of STS. The result was significant at $F_{1, 364} = 8.04, p = 0.005$.

Table 30

ANOVAs for continuous STS and Demographics (dichotomous variables)

Variable	Overall Mean	Standard Deviation	F	Sig.
Education	27.31	9.87	14.69	0.001**
Job Title	26.79	9.64	4.60	0.033*
Work Shift	27.44	9.85	0.034	0.85
Race	27.20	9.76	9.05	0.003**
Gender	27.19	9.67	0.48	0.49
Ave Wk Hrs	27.31	9.84	7.06	0.008**

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

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

STS = Secondary Traumatic Stress

Ave Wk Hrs = Average weekly work hours in the last 6 months

Correlational Analysis between STS and Potential Predictor Variables

A Pearson's r coefficient was calculated to determine the relationships between STS and each of the potential predictor variables. The result of the correlation matrix is represented in Table 31. The results suggest a positive relationship between STS and the following variables: workload, a worker's own trauma history, exposure to current client trauma, and frequency of challenging behavior. Also, there was a statistically significant negative relationship between STS and personal resilience, organizational support and perceived supervisory support. There was no statistically significant relationship between STS and exposure to past client trauma or exposure to total client trauma.

Table 31

Secondary Traumatic Stress and Predictive Variables

Variables	1	2	3	4	6	7	8	9	10	11	12
1 STS	-										
2 WkL	.551**	-									
3 Wkers' Trauma	.353**	.248**	-								
4 Resil	-.273**	-.270**	-0.08	-							
7 C CTE	.161**	.186**	.203**	0.067	.291**	-					
8 P CTE	0.072	0.087	.155*	-0.092	.375**	.525**	-				
9 T CTE	0.111	0.117	.209**	-0.008	.375**	.797**	.932**	-			
10 C CB F	.269**	.295**	.297**	-0.087	0.07	.170**	.192**	.198**	-		
11 Org S	-.391**	-.405**	-0.02	.264**	-0.064	-0.105	0.009	-0.043	-.159**	-	
12 PSS	-.188**	-.247**	-0.074	.154**	-0.062	-.138*	-0.059	-0.09	-0.095	.476**	-

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

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

STS = Secondary Traumatic Stress

WkL = Workload

Wkers' Trauma = Workers' Own Trauma History

C CTE = Exposure to Current Client Traumatic Events

P CTE = Exposure to Past Client Traumatic Events

T CTE = Exposure to Total Client (Past and Current) Traumatic Events

C CB F = Client Challenging Behavior Frequency

Org S = Organizational Support

PSS = Perceived Supervisor Support

Correlational Analysis between STS and Outcome Variables

A Pearson's r coefficient was calculated to determine the relationships between STS and each of the outcome variables. The result of the correlation matrix is represented in Table 32. The results suggest a positive relationship between STS and EE, DP, and intent to leave employment. There were statistically significant negative relationships between STS and work satisfaction, life satisfaction, general health, and client success. The relationship between STS and PA was not statistically significant.

Table 32

Correlation for Study STS, Burnout on Staff Outcome Variables

		1	2	3	4	5	6	7	8	9
1	STS	-								
2	Work Sat	-.272**	-							
3	Life Sat	-.398**	.472**	-						
4	Intent to Leave	.431**	-.304**	-.281**	-					
5	Client Success	-.347**	.278**	.228**	-.198**	-				
6	EE	.717**	-.262**	-.365**	.475**	-.351**	-			
7	DP	.452**	-0.07	-.120*	.207**	-.217**	.437**	-		
8	PA	-0.023	.139**	0.015	-.138**	.181**	-0.002	-0.069	-	
9	GenHR	-.356**	0.034	.154**	-.153**	.219**	-.269**	-.169**	0.024	-

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

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

STS = Secondary Traumatic Stress

Work Sat = Work Satisfaction

Life Sat = Life Satisfaction

EE = Emotional Exhaustion

DP = Depersonalization

PA = Personal Accomplishments

GenHR = General Health

Correlational Analysis between Burnout (EE, DP, PA) and Demographic Variables

A Pearson's r coefficient was calculated to determine the relationships between EE, DP and PA and each of the continuous level demographic variables. The result of the

correlation matrix is represented in Table 33. The results indicated there was no significant relationship between any of the burnout subscales and the demographic variables.

Table 33

Correlation for Burnout and Continuous Level Demographic Variables

Variable	1	2	3	4	5
1 EE	–				
2 DP	.437**	–			
3 PA	-0.002	-0.069	–		
4 Field Exp	0.019	0.1	0.026	–	
5 Org Exp	0.061	0.069	-0.052	.640**	–

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

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

EE = Emotional Exhaustion

DP = Depersonalization

PA = Personal Accomplishment

Field Exp. = Field Experience

Org. Exp. = Years of Organizational Experience

Group Difference of Burnout (EE, DP, PA) in Demographic Variables

A series of one-way between ANOVAs was used to test if there were differences between various dichotomous demographic variables and EE. The results of the ANOVAs are represented in Table 34. The results indicated significant differences with regard to educational levels of DSPs. The mean for workers with high school or less educational level was 6.73, and the mean for workers with more than a high school diploma was 8.00, indicating that workers with more than a high school degree were at higher risk of emotional exhaustion. The result was significant at $F_{(1, 338)} = 7.33, p = 0.007$. Also, there were significant differences among those who held different job titles as DSPs. The mean level of EE for community-based workers was 7.79 and for residential setting staff was 6.09, indicating that workers who worked in community-based settings were at higher risk of emotional exhaustion than those in the residential

settings. The result was significant at $F_{(1,234)} = 9.27, p = 0.003$. There were significant differences among different races of DSPs in EE. The mean for workers identified as White was 7.52 and for workers identified as non-White was 6.36, indicating that workers who identified as racially White were at higher risk of emotional exhaustion. The result was significant at $F_{(1,334)} = 3.97, p = 0.047$.

Table 34

ANOVAs for EE and Demographics (dichotomous variables)

Variable	Mean	Standard Deviation	F	Sig.
Education	7.30	4.33	7.33	0.007**
Job Title	7.13	4.27	9.27	0.003**
Work Shift	7.30	4.36	0.23	0.63
Race	7.28	4.32	3.97	0.047*
Gender	7.26	4.29	0.13	0.72
Ave Wk Hrs	7.33	4.34	0.77	0.38

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

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

EE = Emotional Exhaustion

Ave Wk Hrs = Average weekly work hours in the last 6 months

Also, one-way between ANOVAs were used to test if there were differences between various dichotomous demographic variables and DP. The results of the ANOVAs are represented in Table 35. The results indicate that there were significant differences with regard to gender of DSPs. The mean for females was 3.82 and for males was 4.42, indicating that workers who identified their gender as males rather than female were at higher risk of depersonalization.

Table 35*ANOVAs for DP and Demographics (dichotomous variables)*

Variable	Mean	Standard Deviation	F	Sig.
Education	3.96	2.33	0.58	0.45
Job Title	3.94	2.41	0.99	0.32
Work Shift	3.93	2.33	0.14	0.71
Race	3.96	2.33	0.021	0.88
Gender	3.95	2.34	4.35	0.038*
Ave Wk Hrs	3.96	2.35	2.66	0.10

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

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

DP = Depersonalization

Ave Wk hrs = Average weekly work hours in the last 6 months

Also, one-way between ANOVAs were used to test if there were differences between various dichotomous demographic variables and PA. The results of the ANOVAs are represented in Table 36. The result indicated that there was no significant difference in PA and any of the dichotomous demographic variables.

Table 36*ANOVAs for PA and Demographics (dichotomous variables)*

Variable	Mean	Standard Deviation	F	Sig.
Job Title	15.78	4.43	0.95	0.33
Work Shift	16.23	4.33	3.24	0.07
Race	16.20	4.39	2.33	0.13
Gender	16.14	4.41	1.07	0.30
Ave Wk Hrs	16.21	4.35	1.43	0.23

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

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

PA = Personal Accomplishment

Ave Wk hrs = Average weekly work hours in the last 6 months

Correlational Analysis between Burnout (Emotional Exhaustion, Depersonalization and Personal Accomplishment) and Potential Predictor Variables

A Pearson's r coefficient was calculated to determine the relationships between Burnout (EE, DP and PA) and each of the potential predictor variables. The result of the correlation matrix is represented in Tables 37.

The results suggested a positive relationship between EE and the following variables: workload; a worker's own trauma history; and frequency of challenging behaviors. Also, there was a statistically significant inverse relationship between EE and personal resilience, organizational support and perceived supervisory support. However, the relationships between EE and exposure to current, past and total client trauma was not statistically significant.

The results indicated a statistically significant, positive relationship between DP and workload, a worker's own trauma history and frequency of challenging behavior. There were significant inverse relationships between DP and personal resilience and organizational support. There were no statistically significant relationships between DP and exposure to current, past or total client trauma, and perceived supervisor support.

The results indicated a significant positive relationship between PA and personal resilience, exposure to past client trauma, exposure to total client trauma, client challenging behavior, and organizational support. There were no significant relationships between PA and workload, workers own trauma history, exposure to current client trauma, frequency of challenging behavior and perceived supervisor support.

Table 37*Correlation for Burnout and Predictive Variables*

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1 EE	-											
2 DP	.437**	-										
3 PA	-0.002	-0.069	-									
4 Workload Workers'	.511**	.312**	-0.011	-								
5 Trauma	.149*	.184**	0.124	.248**	-							
6 Resilience Current	-.206**	-.170**	.193**	-.270**	-0.08	-						
7 CTE	0.107	0.112	0.113	.186**	.203**	0.067	-					
8 Past CTE Total	0.003	-0.048	.126*	0.087	.155*	-0.092	.525**	-				
9 CTE Client CB	0.027	-0.005	.145*	0.117	.209**	-0.008	.797**	.932**	-			
10 Frequency Org	.210**	.247**	0.096	.295**	.297**	-0.087	.170**	.192**	.198**	-		
11 Support	-.383**	-.227**	.161**	-.405**	-0.02	.264**	-0.105	0.009	-0.043	-.159**	-	
12 PSS	-.172**	-0.071	0.07	-.247**	-0.074	.154**	-.138*	-0.059	-0.09	-0.095	.476**	-

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

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

EE = Emotional Exhaustion

DP = Depersonalization

PA = Personal Accomplishment

Workers Trauma = Workers' Own Trauma History

Current CTE = Exposure to Current Client Traumatic Events

Past CTE = Exposure to Past Client Traumatic Events

Total CTE = Exposure to Total Client (Past and Current) Traumatic Events

Client CB Frequency = Client Challenging Behavior Frequency

Org Support = Organizational Support

PSS = Perceived Supervisor Support

Correlational Analysis between Burnout (Emotional Exhaustion, Depersonalization, Personal Accomplishment) and Outcome Variables

Pearson's r coefficients were calculated to determine the relationships between Burnout (EE, DP, PA) and each of the outcome variables.

The results of the correlation matrix are represented in Table 32, suggesting that EE has a significant positive relationship with STS, DP and intent to leave. Emotional exhaustion negatively correlated statistically with work satisfaction, life satisfaction, client success, and general health. However, the relationships between EE and PA was not significant.

The results indicated significant positive correlations between DP and STS, intent to leave and EE. Also, DP had significant negative relationships with life satisfaction, client success and general health of workers. However, the relationships between DP and work satisfaction and PA were not significant.

The results indicated significant positive correlations between PA and work satisfaction and client success. Also, PA had a statistically negative relationship with intent to leave. However, the relationships between PA and STS, life satisfaction, EE, DP, and general health were not significant in this sample.

Regression Analysis

Social Desirability and STS Criterion and Predictor Variables

To examine the impact of social desirability, a correlational analysis was conducted to examine the relationship between the social desirability score and the STS dependent variable and potential predictor variables. The result of the Pearson's r coefficient test is represented in Table 38. The results indicated a significant relationship between social desirability and STS, perceived supervisor support, personal resilience and organizational support. Social desirability did not correlate significantly with a worker's own trauma history, exposure to current client trauma, and challenging behavior frequency.

Subsequently, stepwise regression analysis was conducted by specifying social desirability in the first step, and all the predictor variables on the second step. The models were examined to see if social desirability consumed a disproportionate share of the overlapping variance. The results indicated that both models were statistically significant

in predicting STS. The ANOVA showed that Model 1 was statistically significant ($F_{(1, 205)} = 49.90, p < 0.001, R^2 = 0.20$, adjusted $R^2 = 0.19$) and Model 2 was statistically significant ($F_{(7, 199)} = 19.83, p = 0.001, R^2 = 0.41$, adjusted $R^2 = 0.39$). Change in $R^2 = 0.21$. Based on the analysis, it was hypothesized that since social desirability will not make much of a difference in the regression, as social desirability may be tapping into a positive dispositional trait, rather than proneness of deception. To test this hypothesis, social desirability was control variable in the second regression models.

Table 38

Correlation for Social Desirability, STS and Predictor Variables

Variable	1	2	3	4	5	6	7	8
1 STS								
2 Workers' trauma	.353**							
3 PSS	-.188**	-0.074						
4 Resilience	-.273**	-0.080	.154**					
5 Org Sup	-.391**	-0.020	.476**	.264**				
6 Current CTE	.161**	.203**	-.138*	0.067	-0.105			
7 Client CB Freq.	.269**	.297**	-0.095	-0.087	-.159**	.170**		
8 SD	-.400**	-0.123	.182**	.202**	.251**	-0.036	-0.108	-

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

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

Workers' Trauma = Workers' Own Trauma History

Current CTE = Exposure to Current Client Traumatic Events

Client CB Freq = Challenging Behavior Frequency

Org Support = Organizational Support

PSS = Perceived Supervisor Support

STS = Secondary Traumatic Stress

SD = Social Desirability

STSS and Predictor Variables

The subjective workload scale with items such as “Even working overtime, I cannot finish all my work,” “My caseload is too high,” “I have many cases to do good job, yet I am expected to do so,” “I cannot spend enough time with my clients,” and “It is difficult for me to keep up with agency policies and guidelines,” do overlap with many

of the independent variables. As a result of the overlap, the inclusion of subjective workload in the regression model created multicollinearity, and therefore, it was excluded from the regression analysis.

A multiple regression analysis was performed to investigate if the variance in secondary traumatic stress could be attributed to variables with which it correlated highly. These included: exposure to current client trauma; a worker's own trauma history; frequency of client challenging behavior; perceived supervisor support; personal resilience; and organizational support. It must be noted that exposure to current client trauma variable was transformed to correct moderate positive skewness using square root transformation. This resulted in slight improvement in the performance of the variable in the model, but it remained insignificant. The result of this regression analysis is represented in Table 39. The table contained two models. Model 1 did not include social desirability as a control variable. The R^2 statistic of the Model 1 was statistically significant ($F_{(6, 200)} = 16.395, p < 0.001, R^2 = 0.33, \text{adjusted } R^2 = 0.31$), $R^2 = 0.33$, indicating that 33% of the variance in the score on the levels of Secondary Traumatic Stress can be attributed to the predictor variables. In this model, a worker's own trauma history and frequency of client challenging behaviors contributed significantly and positively to the prediction of STS. Also, personal resilience and organizational support contributed significantly negatively to the prediction of STS. However, exposure to current client trauma and perceived supervisor support did not contribute significantly to the prediction of STS in this model. However, the overall performance of the model improved. The current Model 2 controlled for social desirability. The result was statistically significant ($F_{(7, 199)} = 20.178, p < 0.001, R^2 = 0.42, \text{adjusted } R^2 = 0.40$), $R^2 =$

0.42, indicating that 42% of the variance in the score on the levels of Secondary Traumatic Stress can be attributed to the predictor variables, a change in R square of about 0.09. For this model, a worker's own trauma history and frequency of client challenging behaviors contributed significantly toward the prediction of STS. Also, personal resilience and organizational support contributed statistically negatively to the prediction of STS. The exposure to current client trauma experiences contribution to the prediction of STS was insignificant.

Social desirability was significant in this model. However, the inclusion of social desirability does not alter the understanding of predictors of STS.

Table 39

Regression Coefficients of Predictor Variables and STS

Variable	Model 1			Model 2		
	<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>
Constant	41.05**		4.02	43.80**		3.79
Workers' own trauma history	0.45**	0.23	0.12	0.41**	0.21	0.12
Exposure to current client trauma	0.213	0.10	0.13	0.20	0.10	0.12
Challenging behavior Freq ^a .	0.27**	0.20	0.09	0.23**	0.17	0.08
Perceived supervisor support	0.11	0.05	0.15	0.17	0.08	0.14
Resilience	-0.46**	-0.21	0.14	-0.35**	-0.16	0.13
Organizational support	-0.26**	-0.30	0.06	-0.23**	-0.27	0.06
Social desirability ^a				-2.18**	-0.31	0.41
R ²		0.33		0.41		
ΔR^2				0.08		

* $p < 0.05$. ** $p < 0.01$

^aChallenging Behavior Frequency

Social Desirability, Burnout (Emotional Exhaustion, Depersonalization, Personal Accomplishment) and Predictor Variables

To examine the impact of social desirability on burnout, a correlational analysis was conducted between social desirability and the predictor variables to be introduced

into the burnout regression model. The result of the Pearson's r coefficient tests is represented in Table 40. The results indicated a significant relationship between social desirability and EE and DP but not in PA. Also, social desirability did not correlate significantly with any of the additional predictor variables. Subsequently, stepwise regression analysis was conducted by specifying social desirability in the first step and all the predictor variables in the second step. The models were examined to see if social desirability consumed disproportionate share of the overlapping variance. For the EE analysis, the results indicated that both models were statistically significant in predicting EE. The ANOVA showed that Model 1 was statistically significant ($F_{(1, 228)} = 20.953, p < 0.001, R^2 = 0.08, \text{adjusted } R^2 = 0.08$) and Model 2 was statistically significant ($F_{(6, 223)} = 13.987, p < 0.001, R^2 = 0.27, \text{adjusted } R^2 = 0.25$). Change in $R^2 = 0.19$. Based on the analysis, it was determined that inclusion of the social desirability measure as a control variable in the analysis will not make significant difference in the regression equation for EE. For the DP analysis, the results indicated that both models were statistically significant in predicting DP.

The ANOVA showed that Model 1 was statistically significant ($F_{(1, 228)} = 29.678, p < 0.001, R^2 = 0.12, \text{adjusted } R^2 = 0.11$) and Model 2 was statistically significant ($F_{(7, 223)} = 11.693, p < 0.001, R^2 = 0.21, \text{adjusted } R^2 = 0.19$). Change in $R^2 = 0.09$. Based on the analysis, it was determined that the inclusion of the social desirability measure as a control variable in the analysis will the predictors of DP. For the PA analysis, the results indicated that both models were statistically significant in predicting PA. The ANOVA showed that Model 1 was not statistically significant ($F_{(1, 257)} = 1.026, p = 0.312, R^2 = 0.004, \text{adjusted } R^2 = 0.000$) and Model 2 was statistically significant ($F_{(4, 254)} = 4.766, p$

= 0.001, $R^2 = 0.070$, adjusted $R^2 = 0.06$). Change in $R^2 = 0.066$. Based on the analysis, it was determined that the inclusion of the social desirability measure as a control variable in the analysis will not significantly change the model.

Table 40

Correlation for Social Desirability, Burnout and Predictor Variables

Variable	1	2	3	4	5	6
1 SD	–					
2 EE	-.295**	–				
3 DP	-.280**	.437**	–			
4 PA	0.064	-0.002	-0.069	–		
5 Past CTE	-0.049	0.003	-0.048	.126*	–	
6 Total CTE	-0.028	0.027	-0.005	.145*	.932**	–

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

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

SD = Social Desirability

EE = Emotional Exhaustion

DP = Depersonalization

PA = Personal Accomplishment

Past CTE = Exposure to Past Client Traumatic Events

Total CTE = Exposure to Total Client (Past and Current) Traumatic Events

Burnout and Predictor Variables

Emotional Exhaustion and Predictor Variables. A multiple regression analysis was performed to investigate if the variance in EE could be attributed to a worker's own trauma history, frequency of client challenging behaviors, perceived supervisor support, personal resilience and organizational support. The first regression included all the predictor variables named above. The result of this regression model is represented in Table 41. The table contains two models. Model 1 did not include social desirability as a control variable.

The R^2 statistic of the Model 1 was statistically significant ($F_{(5, 224)} = 12.75$, $p < 0.001$, $R^2 = 0.25$, adjusted $R^2 = 0.23$), $R^2 = 0.25$, indicating that 25% of the variance in the

score on the levels of emotional exhaustion can be attributed to the predictor variables. Frequency of client challenging behaviors contributed significantly and positively to the prediction of EE. Also, organizational support contributed significantly negatively to the prediction of EE. However, the other variables did not contribute significantly to the prediction of EE in this model. Model 2 controlled for social desirability. The result was statistically significant ($F_{(6, 223)} = 13.987, p < 0.001, R^2 = 0.27$, adjusted $R^2 = 0.26$), $R^2 = 0.27$, indicating that 27% of the variance in the score on the levels of emotional exhaustion can be attributed to the predictor variables, a change in R square of about 0.02. As in the previous model, only frequency of client challenging behaviors contributed significantly positively toward the prediction of EE. Whereas, only organizational support contributed statistically negatively to the prediction of EE. Also, social desirability was significant in the model. However, the inclusion of social desirability measure did not significantly impact the predictive model of EE.

Table 41

Regression Coefficients of Predictor Variables and EE

Variable	Model 1			Model 2		
	<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>
Constant	14.86**		1.974	15.66**		1.74
Workers' own trauma history	0.06	0.08	0.05	0.05	0.06	0.05
Challenging behavior Freq ^a	0.12**	0.22	0.04	0.11**	0.19	0.04
Perceived supervisor support	0.01	0.01	0.06	0.02	0.03	0.06
Resilience	-0.10	-0.11	0.06	-0.09	-0.10	0.06
Organizational support	-0.14**	-0.37	0.03	-0.13**	-0.36	0.03
Social Desirability				-0.53**	-0.17	0.19
R^2		0.25			0.27	
ΔR^2					0.02	

* $p < 0.05$. ** $p < 0.01$

^aChallenging Behavior Frequency

Depersonalization and Predictor Variables. A multiple regression analysis was performed to investigate if the variance in DP could be attributed to a worker's own

trauma history, frequency of client challenging behaviors, personal resilience and organizational support. The first regression included all the predictor variables named above. The result of this regression model is represented in Table 42. The table contains two models.

Model 1 did not include social desirability as a control variable. The R^2 statistic of the Model 1 was statistically significant ($F_{(4, 225)} = 9.852, p < 0.001, R^2 = 15$, adjusted $R^2 = 0.13$), $R^2 = 0.15$, indicating that 15% of the variance in the score on the levels of depersonalization can be attributed to the predictor variables. A worker's own trauma history and frequency of challenging behaviors contributed significantly positively to the prediction of DP. Also, organizational support and personal resilience contributed significantly negatively to the prediction of DP. Model 2 controlled for social desirability. The result was statistically significant ($F_{(5, 224)} = 11.693, p < 0.001, R^2 = 21$, adjusted $R^2 = 0.19$), $R^2 = 0.21$, indicating that 21% of the variance in the score on the levels of depersonalization can be attributed to the predictor variables, a change in R square of about 0.06. In this model, a worker's own trauma history and frequency of challenging behavior contributed statistically positively toward the prediction of depersonalization. Also, organizational support contributed statistically negatively to the prediction DP. However, the contribution of personal resilience to the prediction of DP was insignificant. Social desirability was not significant in the model.

Table 42*Regression Coefficients of Predictor Variables and DP*

Variable	Model 1			Model 2		
	<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>
Constant	6.33**		0.87	7.22**		0.87
Workers' own trauma history	0.70*	0.15	0.03	0.06*	0.13	0.03
Challenging behaviors Freq ^a	0.07**	0.20	0.02	0.06**	0.17	0.02
Resilience	-0.07*	-0.13	0.03	-0.05	-0.10	0.03
Organizational support	-0.04*	-0.17	0.01	-0.03*	-0.13	0.01
Social Desirability				-0.43**	-0.25	0.10
R^2		0.15			0.21	
ΔR^2					0.06	

* $p < 0.05$. ** $p < 0.01$ ^aChallenging Behavior Frequency

Personal Accomplishment and Predictor Variables. A multiple regression analysis was performed to investigate if the variance in PA could be attributed to exposure to past client trauma experiences, resilience and organizational support. The first regression included all the predictor variables named above. The result of this regression model is represented in Table 43.

The table contains two models. Model 1 did not include social desirability as a control variable. The R^2 statistic of the Model 1 was statistically significant ($F_{(4, 255)} = 6.376, p < 0.001, R^2 = 0.07$, adjusted $R^2 = 0.06$), $R^2 = 0.07$, indicating that 7% of the variance in the score on the levels of personal accomplishment can be attributed to the predictor variables. Exposure to past client trauma, personal resilience and organizational support was significantly positively to predicted PA. Model 2 controlled for social desirability. The result was statistically significant ($F_{(4, 254)} = 4.766, p = 0.001, R^2 = 0.07$, adjusted $R^2 = 0.06$), $R^2 = 0.07$, indicating that 7% of the variance in the score on the levels of Personal Accomplishment can be attributed to the predictor variables, a change in R square of about 0.00. Similarly, exposure to past client traumatic experience, personal resilience and organizational support contributed statistically positively to the

prediction of Personal Accomplishment. Social desirability was not significant in this model.

Table 43

Regression Coefficients of Predictor Variables and PA

Variable	Model 1			Model 2		
	<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>
Constant	11.05**		1.36	11.03**		1.38
Exposure to past client trauma	0.004*	0.14	0.002	0.004*	0.14	0.002
Resilience	0.13**	0.15	0.05	0.13*	0.15	0.06
Organizational support	0.05*	0.14	0.02	0.05*	0.14	0.02
Social Desirability				0.19	0.01	0.18
R ²		0.070			0.70	
ΔR^2					0.001	

* $p < 0.05$. ** $p < 0.01$

Social Desirability and Outcomes Variables and Predictor Variables

Prior analysis indicated the existence of significant correlations between social desirability and secondary trauma as well as burnout variables. Hence, a correlational analysis was conducted to examine the impact of social desirability on all outcome variables: organizational outcomes (work satisfaction, intent to leave); client outcomes (client success); and staff outcomes (life satisfaction general health). The results of the Pearson's r coefficient tests are represented in Table 44. The results indicated a significant relationship between social desirability and work satisfaction, life satisfaction, client success and general health, intent to leave employment, and staff-client interpersonal behaviors.

Subsequently, stepwise regression analysis was conducted by specifying social desirability in the first step, and all the predictor variables (STS, EE, DP and PA) on the second step. The models were examined to see if social desirability consumed disproportionate share of the overlapping variance.

For the work satisfaction analysis, the results indicated that both models were statistically significant in predicting work satisfaction. The ANOVA showed that Model 1 was statistically significant ($F_{(1, 357)} = 15.114, p < 0.001, R^2 = 0.04, \text{adjusted } R^2 = 0.04$) and Model 2 was statistically significant ($F_{(5, 353)} = 9.432, p < 0.001, R^2 = 0.12, \text{adjusted } R^2 = 0.11$). Change in $R^2 = 0.08$. Based on the analysis, it was determined that to include the social desirability measure as a control variable in the analysis might not impact the model.

For the intent to leave analysis, the results indicated that both models were statistically significant in predicting intent to leave. The ANOVA showed that Model 1 was statistically significant ($F_{(1, 360)} = 6.918, p = 0.01, R^2 = 0.02, \text{adjusted } R^2 = 0.02$), and Model 2 was statistically significant ($F_{(5, 356)} = 25.382, p < 0.001, R^2 = 0.26, \text{and adjusted } R^2 = 0.25$). Change in $R^2 = 0.24$. Based on the analysis, it was determined that the inclusion of the social desirability measure as a control variable in the analysis will not significantly impact the final model.

For the client success analysis, the results indicated that both models were statistically significant in predicting client success. The ANOVA showed that Model 1 was statistically significant ($F_{(1, 360)} = 64.631, p < 0.001, R^2 = 0.15, \text{adjusted } R^2 = 0.15$), and Model 2 was statistically significant ($F_{(5, 356)} = 22.598, p < 0.001, R^2 = 0.24, \text{adjusted } R^2 = 0.23$). Change in $R^2 = 0.09$. Based on the analysis, it was determined that the inclusion of the social desirability measure as a control variable in the analysis might impact the outcome of the model.

For the general health analysis, the results indicated that both models were statistically significant in predicting general health. The ANOVA showed that Model 1

was statistically significant ($F_{(1, 356)} = 10.298, p = 0.001, R^2 = 0.03$, adjusted $R^2 = 0.03$), and Model 2 was statistically significant ($F_{(5, 352)} = 9.787, p < 0.001, R^2 = 0.12$, adjusted $R^2 = 0.11$). Change in $R^2 = 0.09$. Based on the analysis, it was determined that the inclusion of the social desirability measure as a control variable in the analysis may not have significant impact the results.

For the life satisfaction analysis, the results indicated that both models were statistically significant in predicting work satisfaction. The ANOVA showed that Model 1 was statistically significant ($F_{(1, 358)} = 20.541, p < 0.001, R^2 = 0.05$, adjusted $R^2 = 0.05$) and Model 2 was statistically significant ($F_{(5, 354)} = 16.448, p < 0.001, R^2 = 0.19$, adjusted $R^2 = 0.18$). Change in $R^2 = 0.13$. Based on the analysis, it was determined that to include the social desirability measure as a control variable in the analysis might not impact the model.

Table 44

Correlation for Social Desirability on Outcomes

Variable	1	2	3	4	5	6
1 Social Desirability	—					
2 Work Satisfaction	.201**	—				
3 Life Satisfaction	.234**	.472**	—			
4 Intent to Leave	-.142**	-.304**	-.281**	—		
5 Client Success	.396**	.278**	.228**	-.198**	—	
6 General Health	.188**	0.034	.154**	-.153**	.219**	—

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

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

Organizational Related Outcomes and Predictor Variables

Work Satisfaction and Predictor Variables. A multiple regression analysis was performed to investigate if the variance in work satisfaction could be attributed to STS, EE, DP and PA. The first regression included the predictor variables named above. The

result of this regression model is represented in Table 45. The table contains two models. Model 1 did not include social desirability as a control variable. The R^2 statistic of the Model 1 was statistically significant ($F_{(4, 354)} = 10.59, p < 0.001, R^2 = 0.11$, adjusted $R^2 = 0.10$), $R^2 = 0.11$, indicating that 11% of the variance in the score on work satisfaction can be attributed to the predictor variables. Personal accomplishment contributed significantly positively to the prediction of work satisfaction. Also, secondary traumatic stress and emotional exhaustion contributed significantly negative to the prediction of work satisfaction. However, depersonalization did not contribute significantly to the prediction of work satisfaction in this model. Model 2 controlled for social desirability. The result was statistically significant ($F_{(5, 353)} = 9.24, p < 0.001, R^2 = 0.12$, adjusted $R^2 = 0.11$), $R^2 = 0.12$, indicating that 12% of the variance in the score on work satisfaction can be attributed to the predictor variables, a change in R squared of about 0.01. In this model, personal accomplishment contributed statistically positively toward the prediction of work satisfaction. Also, emotional exhaustion contributed significantly negatively to the prediction of work satisfaction. However, STS contribution to work satisfaction was not significant. Unlike the majority of the models formerly reported, social desirability was significant in the model.

Table 45*Regression Coefficients of STS, EE, DP and PA on Work Satisfaction*

Variable	Model 1			Model 2		
	<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>
Constant	4.60*		0.17	4.35**		0.21
STS	-0.01*	-0.19	0.01	-0.01	-0.15	0.01
EE	-0.03*	-0.17	0.01	-0.03*	-0.17	0.01
DP	0.03	0.10	0.02	0.03	0.1i	0.02
PA	0.02**	0.14	0.01	0.02**	0.14	0.01
Social Desirability				0.05*	0.12	0.01
R^2		0.11			0.12	
ΔR^2					0.01	

* $p < 0.05$. ** $p < 0.01$

STS = Secondary Traumatic Stress

EE = Emotional Exhaustion

DP = Depersonalization

PA = Personal Accomplishment

Intent to Leave Employment and Predictor Variables. A multiple regression analysis was performed to investigate if the variance in a worker's intent to leave employment could be attributed to STS, EE, DP and PA. The first regression included the predictor variables named above. The result of this regression model is represented in Table 46. The table contains two models. Model 1 did not include social desirability as a control variable. The R^2 statistic of the Model 1 was statistically significant ($F_{(4, 357)} = 31.50, p < 0.001, R^2 = 0.261$, adjusted $R^2 = 0.25$), $R^2 = 0.26$, indicating that 26% of the variance in the score on intent to leave employment can be attributed to the predictor variables. Secondary traumatic stress and emotional exhaustion contributed significantly positively to the prediction of a worker's intent to leave employment. Also, personal accomplishment contributed significantly negatively to prediction of a worker's intent to leave employment. However, depersonalization did not contribute significantly to the prediction of a worker's intent to leave employment in this model. Model 2 controlled for social desirability. The result was statistically significant ($F_{(5, 356)} = 25.38, p < 0.001, R^2 = 0.263$, adjusted $R^2 = 0.25$), $R^2 = 0.26$, indicating that 26% of the variance in the score on workers intent to leave employment can be attributed to the predictor variables, a

change in R square of about 0.002. In this model, secondary traumatic stress and emotional exhaustion contributed statistically positive toward the prediction of a worker's intent to leave employment. Also, personal accomplishment contributed significantly negatively to the prediction of workers intent to leave employment. However, the contribution by depersonalization was not statistically significant.

Table 46

Regression Coefficients of STS, EE, DP and PA on Intent to Leave

Variable	Model 1			Model 2		
	<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>
Constant	6.40**		1.25	5.55**		1.53
STS	0.11**	0.19	0.04	0.11**	0.21	0.04
EE	0.46**	0.36	0.09	0.46**	0.36	0.09
DP	-0.11	0.04	0.13	-0.10	-0.04	0.13
PA	-0.18**	0.14	0.06	-0.18**	-0.14	0.06
Social Desirability				0.18	0.05	0.19
R ²		0.261			0.263	
ΔR^2					0.001	

* $p < 0.05$. ** $p < 0.01$

STS = Secondary Traumatic Stress

EE = Emotional Exhaustion

DP = Depersonalization

PA = Personal Accomplishment

Client-Related Outcomes

Client Success and Predictor Variables. A multiple regression analysis was performed to investigate if the variance in a worker's feelings about the success of clients could be attributed to STS, EE, DP and PA. The first regression included the predictor variables named above. The result of this regression model is represented in Table 47. The table contains two models. Model 1 did not include social desirability as a control variable. The R^2 statistic of the Model 1 was statistically significant ($F_{(4, 357)} = 18.44$, $p < 0.001$, $R^2 = 0.17$, adjusted $R^2 = 0.16$), $R^2 = 0.17$, indicating that 17% of the variance in the score on work satisfaction can be attributed to the predictor variables. Personal accomplishment contributed significantly positively to the prediction of a worker's

feelings on client success. Also, secondary traumatic stress and emotional exhaustion contributed significantly negatively to the prediction of a worker's feeling about client success. However, depersonalization did not contribute significantly to the prediction of a worker's feeling on client success in this model. Model 2 controlled for social desirability. The result was statistically significant ($F_{(5, 356)} = 22.60, p = 0.001, R^2 = 0.24$, adjusted $R^2 = 0.23$), $R^2 = 0.24$, indicating that 24% of the variance in the score on a worker's feelings about client success can be attributed to the predictor variables, a change in R squared of about 0.07. In this model, personal accomplishment contributed statistically positively toward the prediction of a worker's feelings about client success. Also, emotional exhaustion contributed significantly negatively to the prediction of a worker's feelings about client success. As in the previous model, the contribution of depersonalization to a worker's feeling about client success was not significant. However, the secondary traumatic stress contribution was not statistically significant when controlling for social desirability.

Table 47

Regression Coefficients of STS, EE, DP and PA on Client Success

Variable	Model 1			Model 2		
	<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>
Constant	21.81**		0.68	19.18**		0.79
STS	-0.05*	-0.16	0.02	-0.02	-0.06	0.02
EE	-0.14**	-0.22	0.05	-0.15**	-0.22	0.04
DP	-0.04	-0.04	0.07	0.00	0.00	0.07
PA	0.12**	0.18	0.03	0.11**	0.16	0.03
Social Desirability				0.56**	0.29	0.10
R^2		0.17			0.24	
ΔR^2					0.02	

* $p < 0.05$. ** $p < 0.01$

STS = Secondary Traumatic Stress

EE = Emotional Exhaustion

DP = Depersonalization

PA = Personal Accomplishment

Worker-Related Outcomes

General Health and Predictor Variables. A multiple regression analysis was performed to investigate if the variance in a worker's reported general health could be attributed to STS, EE, DP and PA. The first regression included the predictor variables named above. The result of this regression model is represented in Table 48. The table contains two models.

Model 1 did not include social desirability as a control variable. The R^2 statistic of the Model 1 was statistically significant ($F_{(4, 353)} = 12.16, p < 0.001, R^2 = 0.11$, adjusted $R^2 = 0.$), $R^2 = 0.121$, indicating that 12% of the variance in the score on a worker's reported general health can be attributed to the predictor variables. Secondary traumatic stress contributed significantly negatively to the prediction of a worker's general health. However, emotional exhaustion, depersonalization and personal accomplishment did not contribute significantly to the prediction of a worker's reported general health this model. Model 2 controlled for social desirability. The result was statistically significant ($F_{(5, 352)} = 9.79, p = 0.001, R^2 = 0.12$, adjusted $R^2 = 0.11$), $R^2 = 0.122$, indicating that 12% of the variance in the score on a worker's general health can be attributed to the predictor variables, a change in R squared of 0.001. Similarly, only secondary traumatic stress contributed statistically negatively toward the prediction of workers reported general health. The contributions of emotional exhaustion, depersonalization and personal accomplishment to a worker's reported general health were not significant in this model. Social desirability was not significant in this model.

Table 48*Regression Coefficients of STS, EE, DP and PA on General Health*

Variable	Model 1			Model 2		
	<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>
Constant	7.12**		0.27	7.01**		0.33
STS	-0.03**	-0.31	0.01	-0.03**	-0.30	0.01
EE	-0.01	-0.04	0.02	-0.01	-0.04	0.02
DP	-0.002	-0.01	0.00	-0.001	-0.004	0.03
PA	0.004	0.02	0.04	0.004	0.02	0.01
Social Desirability				0.04	0.03	0.04
R^2		0.12			0.12	
ΔR^2					0.001	

* $p < 0.05$. ** $p < 0.01$

STS = Secondary Traumatic Stress

EE = Emotional Exhaustion

DP = Depersonalization

PA = Personal Accomplishment

Life Satisfaction and Predictor Variables. A multiple regression analysis was performed to investigate if the variance in life satisfaction could be attributed to STS, EE, DP and PA. The first regression included the predictor variables named above. The result of this regression model is represented in Table 49. The table contains two models. Model 1 did not include social desirability as a control variable.

The R^2 statistic of the Model 1 was statistically significant ($F_{(4, 355)} = 19.51, p = 0.001, R^2 = 0.18, \text{adjusted } R^2 = 0.17$), $R^2 = 0.18$, indicating that 18% of the variance in the score on life satisfaction can be attributed to the predictor variable. Secondary traumatic stress and emotional exhaustion contributed significantly negatively to prediction of life satisfaction. However, depersonalization and personal accomplishment did not contribute significantly to the prediction of life satisfaction in this model. Model 2 controlled for social desirability. The result was statistically significant ($F_{(5, 354)} = 16.45, p = 0.001$), $R^2 = 0.19$, indicating that 19% of the variance in the score on life satisfaction can be attributed to the predictor variables, a change in R square of about 0.01. In this model, depersonalization contributed statistically positively toward the prediction of life

satisfaction. Also, secondary traumatic stress and emotional exhaustion contributed significantly negatively to the prediction of life satisfaction. However, the contribution of personal accomplishment toward the prediction of life satisfaction was not significant in this sample. Social desirability was not significant in this model.

Table 49

Regression Coefficients of STS, EE, DP and PA on Life Satisfaction

Variable	Model 1			Model 2		
	<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>
Constant	5.16**		0.20	4.88**		0.26
STS	-0.03**	-0.31	0.01	-0.03**	-0.28	0.01
EE	-0.04**	-0.18	0.01	-0.04**	-0.20	0.01
DP	0.04	0.10	0.02	0.05*	0.12	0.02
PA	0.003	0.01	0.01	0.02	0.01	0.01
Social Desirability				0.06	0.10	0.03
R ²		0.18			0.19	
ΔR^2					0.01	

* $p < 0.05$. ** $p < 0.01$

STS = Secondary Traumatic Stress

EE = Emotional Exhaustion

DP = Depersonalization

PA = Personal Accomplishment

Structural Equation Model of STS, Burnout (Emotional Exhaustion) and Intent to Leave

Based on the preceding analysis, a structural equation model (SEM) was specified to examine the significant pathways of the various predictors to STS and Burnout, and the pathways from Burnout and STS to intent to leave. Future analysis of the data will include SEM modeling for other organizational, client and staff outcomes.

For this model the emotional exhaustion (EE) subscale of the MBI was used. Future analysis of the data will include models for DP and PA and predictive variables. Other studies (example Kowalski et al, 2010) have used EE subscale of the MBI scale exclusively as a variable of analysis. The hypothesized model can be found in Figure 2.

The rectangles represented measured variables and a line connecting variables implies a pathway with the direction of the arrow indicative of the hypothesized direction of the path. The regression analysis of STS indicated that a worker's own trauma history, frequency of client challenging behaviors, personal resilience and organizational support were all significant in predicting STS. Likewise, the regression models of EE indicated that frequency of challenging behavior and organizational support were significant predictors of EE. Also, STS and EE were both significant predictors of intent to leave. Social desirability was not included in the SEM model given that it did not make much difference in the regression models. Also, the social desirability measure might probably reflect a sunny disposition rather than deception in this sample, and therefore, it might not be appropriate to use a control measure in the SEM. A correlational matrix of the SEM variables is represented in Table 50. The results from the table indicated a strong correlation between STS and EE ($r = 0.72, p = 0.01$), organizational support and intent to leave ($r = -0.54, p = 0.01$), a worker's own trauma history and frequency of challenging behavior ($r = 0.30, p = 0.01$), and personal resilience and organizational support ($r = 0.26, p = 0.01$). Also, there was strong correlation between frequency of challenging behavior and organizational support ($r = -0.16, p = 0.01$).

Table 50*Correlational Matrix of SEM Variables*

Variable	1	2	3	4	5	6	7
1 Worker's Trauma	-						
2 Intent to Quit	0.040	-					
3 STS	.353**	.431**	-				
4 EE	.149*	.475**	.717**	-			
5 Challenging Behavior Freq	.297**	.181**	.269**	.210**	-		
6 Resilience	-0.080	-.134*	-.273**	-.206**	-0.087	-	
7 Org Sup	-0.020	-.541**	-.391**	-.383**	-.159**	.264**	-

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

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

STS = Secondary Traumatic Stress

EE = Emotional Exhaustion

Challenging Behavior Freq = Challenging Behavior Frequency

Org Sup = Organizational Support

Based on the results of the correlational and regression analysis, it is hypothesized that STS is directly predicted by a worker's own trauma history, frequency of client challenging behaviors, organizational support and personal resilience. Additionally, it is hypothesized that EE is directly predicted by frequency of client challenging behaviors and organizational support. Also, it is hypothesized that organizational support, STS and EE directly will predict intent to leave. Lastly, it is hypothesized that STS will directly predict EE. The model was estimated using maximum likelihood estimation in IBM SPSS AMOS version 26 software. An estimate means and intercepts function was adopted due to the presence of missing values in the data.

The hypothesized model fit the data well — χ^2 (8, N = 366) = 12.27, $p = 0.14$, Robust CFI = 0.99, and RMSEA 0.038. Modification was made to the model to improve the fit by removing insignificant paths. These included the path from frequency of client challenging behaviors to EE ($\beta = 0.007$, S.E. = 0.023, $p = 0.857$) and STS to intent to leave ($\beta = 0.087$, S.E. = 0.033, $p = 0.147$). The modified model has a slightly better fit

than the hypothesized model $\chi^2 (10, N = 366) = 14.41, p = 0.16$, Robust CFI = 0.99, RMSEA 0.035. The hypothesized and modified models are represented in Figure 2 and 3.

Figure 2

Hypothesized SEM Model

Figure 3

Modified SEM Model

The results from the structural equation model, which examined the pathways of predictors of STS and EE, and from STS and EE to intent to leave, are provided in Tables 50 and 51. The results showed significant direct pathways from a worker's own trauma history and frequency of client challenging behaviors to the prediction of STS. A worker's own trauma history and frequency of client challenging behaviors were

positively related to STS. Also, there were significant direct paths from personal resilience and organizational support in predicting STS. The result showed inverse relationships between STS and personal resilience, and between STS and organizational support. The model showed a significant inverse path from organizational support to EE as well. However, the pathway between frequency of client challenging behaviors and EE was not significant.

For the prediction of intent to leave in this model, EE and organizational support had significant direct paths to the prediction of intent to leave. There was a positive relationship between EE and intent to leave, and an inverse relationship between organizational support and intent to leave. However, the path from STS to intent to leave was not significant. Lastly, the model indicated a significant path from STS to EE. Secondary traumatic stress had an impact on EE.

Table 51

Unstandardized, Standardized, and Significant Levels for Model in Figure 2 (Standard Errors in Parenthesis; N = 366)

Parameter Estimate	Unstandardized	S.E.	Standardized	p
Organizational Support → STS	-0.26	0.04	-0.32	0.000
Resilience → STS	-0.35	0.10	-0.17	0.000
Worker's Own Trauma History → STS	0.53	0.10	0.028	0.000
Challenging Behavior Frequency → STS	0.17	0.07	0.13	0.010
Organizational Support → EE	-0.44	0.01	-0.12	0.002
STS → EE	0.29	0.02	0.67	0.000
Challenging Behavior Frequency → EE	0.004	0.02	0.007	0.857
Organizational Support → Intent to Quit	-0.19	0.02	-0.41	0.000
EE → Intent to Quit	0.33	0.08	0.26	0.000
STS → Intent to Quit	0.05	0.03	0.09	0.147
Covariance Organization Support and Resilience	15.27	3.23	0.25	0.000
Covariance Worker Own Trauma and Challenging Behavior Frequency	11.32	2.74	0.27	0.000
Covariance Organizational Support and Challenging Behavior Frequency	-12.69	5.09	-0.13	0.013
Variance in Organizational Support	151.53	11.22		0.000
Variance in Resilience	23.82	1.77		0.000
Variance in Worker's Own Trauma	29.03	2.61		0.000
Variance in Challenging Behavior Frequency	60.64	4.81		0.000
Variance in e1	9.171	0.68		0.000
Variance in e2	73.47	5.69		0.000
Variance in e3	19.450	1.44		0.000

Note: χ^2 (12, N = 366) = 12.27, p = 0.140; CFI = .99; NFI = .98; RMSEA = .038

Table 52

Unstandardized, Standardized, and Significant Levels for Model in Figure 3 (Standard Errors in Parenthesis; N = 366)

Parameter Estimate	Unstandardized	S.E.	Standardized	<i>p</i>
Organizational Support → STS	-0.26	0.04	-0.32	0.000
Resilience → STS	-0.35	0.10	-0.17	0.000
Worker's Own Trauma History → STS	0.53	0.10	0.028	0.000
Challenging Behavior Frequency → STS	0.17	0.07	0.13	0.010
Organizational Support → EE	-0.43	0.01	-0.12	0.002
STS → EE	0.29	0.02	0.67	0.000
Organizational Support → Intent to Quit	-0.19	0.02	-0.41	0.000
EE → Intent to Quit	0.44	0.06	0.31	0.000
Covariance Organization Support and Resilience	15.27	3.23	0.25	0.000
Covariance Worker Own Trauma and Challenging Behavior Frequency	11.32	2.74	0.27	0.000
Covariance Organizational Support and Challenging Behavior Frequency	-12.71	5.09	-0.13	0.013
Variance in Organizational Support	151.53	11.22		0.000
Variance in Resilience	23.82	1.77		0.000
Variance in Worker's Own Trauma History	29.03	2.61		0.000
Variance in Challenging Behavior Frequency	60.64	4.81		0.000
Variance in e1	9.17	0.68		0.000
Variance in e2	73.47	5.69		0.000
Variance in e3	19.60	1.45		0.000

Note: χ^2 (12, N = 366) = 14.41, $p = 0.16$; CFI = .99; NFI = .98; RMSEA = .035

Research Questions and Hypotheses

1. How much trauma exposure reported by DSPs will result in secondary traumatic stress symptoms?

H1: DSPs who are exposed to higher level of a client's trauma will report higher levels of secondary trauma.

The results from correlational analysis suggest that exposure to current client trauma correlated positively to secondary traumatic stress ($r = 0.161$, $p = 0.01$), suggesting that staff exposed to higher levels of current client trauma were more likely to experience secondary trauma. However, in the final regression analysis reported on Page 31, exposure to current client trauma was not a statistically significant predictor in the model. This result continued to be not significant even when social desirability was controlled for in the regression model. Therefore, H1 was only partially supported.

H2: DSPs who reported higher levels of trauma history will report higher levels of secondary trauma.

The results from correlational analysis indicate a positive relationship between a worker's own trauma history and secondary traumatic stress ($r = 0.353$, $p = 0.01$). This suggests that workers who reported higher levels of their own trauma history were more likely to experience secondary trauma. In the final regression analysis, a worker's own trauma history was a significant predictor of secondary trauma. The result indicates that a worker's own trauma history is a risk factor in predicting secondary trauma among ID/DD workers in this sample. This result was supported when social desirability was controlled for in the regression model as well. Finally, the path from a worker's own trauma history to STS was significant in the SEM model. So, H2 was supported.

H3: DSPs who are exposed to higher levels of a client's challenging behaviors will in general report higher levels of secondary trauma.

The results from correlational analysis found a positive relationship between the frequency of client challenging behaviors and secondary traumatic stress ($r = 0.152$, $p = 0.01$). This suggests that workers who experienced higher frequency of a client's challenging behaviors were more likely to experience secondary trauma. In the final regression analysis, frequency of challenging behavior was a significant predictor of secondary trauma. The result indicates that frequency of challenging behavior is a risk factor in predicting secondary trauma among ID/DD workers in this sample. This result was supported when social desirability was controlled for in the regression model as well. Finally, in the SEM analysis, the path from frequency of a client's challenging behaviors to STS was significant. So, H3 was supported.

2. What role does personal resiliency, supervisor support and organizational support play in buffering the development of secondary trauma and burnout in DPS staff?

H4a: DSPs who are more resilient will experience lower levels of secondary trauma and/or burnout.

The results from the correlational analysis found an inverse relationship between personal resilience and secondary traumatic stress, suggesting workers who were more resilient were less likely to experience secondary trauma ($r = -0.273, p = 0.01$). In the final regression analysis, personal resilience was negatively related to secondary trauma.

This result indicates that a worker's personal resilience is a protective factor in preventing secondary trauma among ID/DD workers in this sample. This result was supported when social desirability was controlled for in the regression model as well. Finally, the SEM analysis found the path from personal resilience to STS was significant.

The correlational analysis result for the Burnout scale indicated that EE correlated negatively with personal resilience ($r = -0.206, p = 0.01$), suggesting that workers who were more resilient were less likely to experience emotional exhaustion. In the final regression analysis, personal resilience was not significant in predicting emotional exhaustion. This same result was found when social desirability was controlled for in the regression model. Also, DP correlated negatively with personal resilience ($r = -0.170, p = 0.01$), suggesting workers who were more resilient were less likely to experience depersonalization. In the final regression analysis, personal resilience was not

significantly related to depersonalization. This result was replicated when social desirability was controlled for in the regression model. The results found that PA correlated positively with personal resilience ($r = 0.193, p = 0.01$), suggesting workers who were more resilient were more likely to experience personal accomplishment. In the final regression analysis, personal resilience was not significant in predicting personal accomplishment. This result also was replicated when social desirability was controlled for in the model. And, in the SEM analysis the path from personal resilience to EE was not significant. Thus, H4a was supported for STS but not Burnout.

H4b: Staff who experience higher perceived organizational support will report lower levels of burnout and/ or secondary trauma.

The results from the correlational analysis found an inverse relationship between organizational support and secondary traumatic stress ($r = -0.391, p = 0.01$), suggesting workers who perceived their organizations to be more supportive were less likely to experience secondary trauma. In the final regression analysis, organizational support was significant in predicting less secondary trauma. This result indicates that organizational support is a protective factor in preventing secondary trauma among ID/DD workers in this sample. This result was replicated when social desirability was controlled for in the regression model. And in the SEM analysis, the path from organizational support to STS was significant in that less organizational support led to more STS.

The correlational analysis result for the Burnout scale indicated that EE correlated negatively with organizational support ($r = -0.383, p = 0.01$), suggesting workers who perceived their organizations to be more supportive were less likely to experience

emotional exhaustion. In the final regression analysis, organizational support was significant in preventing emotional exhaustion among ID/DD workers in this sample. This result was replicated when social desirability was controlled for in the regression model. And in the SEM analysis, the path from organizational support to EE was significant in that less organizational support led to more EE. Also, DP correlated negatively with organizational support ($r = -0.227, p = 0.01$), suggesting workers who perceived their organization to be supportive were less likely to experience depersonalization. In the final regression analysis, organizational support was significant in predicting less depersonalization.

This result indicates that organizational support is a protective factor in preventing depersonalization among ID/DD workers in this sample. This result was replicated when social desirability was controlled for in the regression model. The results found PA correlated positively with organizational support ($r = 0.161, p = 0.01$), suggesting workers who perceived their organizations to be more supportive were more likely to experience a sense of personal accomplishment. In the final regression analysis, organizational support was significant in predicting personal accomplishment. This result indicates that organizational support is a protective factor in predicting personal accomplishment among ID/DD workers in this sample. This result was replicated when social desirability was controlled for in the model. Thus, H4b was supported for STS and Burnout (EE, PA and DP).

H4c: DSPs who experience higher perceived supervisor support will report lower levels of burnout and/ or secondary trauma.

The results from correlational analysis found an inverse relationship between perceived supervisory support and secondary traumatic stress ($r = -0.188, p = 0.01$), suggesting workers who perceived their supervisors as more supportive were less likely to experience secondary trauma. In the final regression analysis, perceived supervisory support was not significant in predicting secondary trauma. This result was the same when social desirability was controlled for in the regression model.

The correlational analysis result for the Burnout scale indicated that EE correlated negatively with perceived supervisor support ($r = -0.172, p = 0.01$), suggesting workers who perceived their supervisors as more supportive were less likely to experience emotional exhaustion.

In the final regression analysis, perceived supervisor support was not significant in predicting emotional exhaustion. This result was the same when social desirability was controlled in the regression model. The correlation between DP and perceived supervisor support was not statistically significant. Also, the relationship between PA and perceived supervisor support was not statistically significant. H4c was not supported. It may be that the organizational support variable absorbed all the variance in the regression analysis or perhaps organizational support is more important in ID/DD work than is someone's relationship with a particular supervisor.

3. Do secondary traumatic stress and burnout lead to staff outcomes of job dissatisfaction, intent to leave, client success, life satisfaction and poor personal health? Is the impact of these two phenomena (secondary trauma and burnout) on outcomes similar or different?

Organization-Related Outcomes

H5: Experience of secondary trauma and burnout symptoms will be associated with reported lower job satisfaction among DSPs.

The results from correlational analysis found an inverse relationship between secondary traumatic stress and job satisfaction ($r = -0.272$, $p = 0.01$), suggesting workers who experienced higher levels of secondary trauma were less likely to be satisfied with their work. For Burnout, EE correlated negatively with job satisfaction ($r = -0.262$, $p = 0.01$), whereas PA correlated positively with job satisfaction ($r = 0.139$, $p = 0.01$), indicating that workers who experienced higher levels of emotional exhaustion were less likely to be satisfied with their jobs and those who felt more personal accomplishment were more likely to be satisfied with their jobs.

The correlation between depersonalization and job satisfaction was not statistically significant. In the final regression model, secondary trauma, emotional exhaustion and personal accomplishment were significant in predicting job satisfaction. This result indicates that secondary trauma and emotional exhaustion are risk factors, whereas personal accomplishment is a protective factor in predicting job satisfaction among ID/DD workers in this sample. When controlling for social desirability in the

model, emotional exhaustion remained as a risk factor and personal accomplishment as a protective factor. However, the relationship between STS and work satisfaction was not significant in the regression analysis. Depersonalization was not statistically significant in predicting job satisfaction in the model, either. So, H5 was partially supported. While STS correlated with job satisfaction along with EE and PA, only the latter variables remained significant predictors of job satisfaction in regression analysis. Future analysis will examine the paths to job satisfaction using SEM analysis.

H6: Experience of secondary trauma and burnout symptoms will be associated with high intention of DSPs to leave their organization of employment.

The results from the correlational analysis found a positive relationship between secondary traumatic stress and intent to leave the organization of employment ($r = 0.431$, $p = 0.01$), suggesting workers who experienced higher levels of secondary trauma were more likely to express their intent to leave their organization of employment. Burnout, EE and DP correlated positively with a worker's intent to leave the organization, whereas PA negatively correlated with a worker's intent to leave employment ($r = 0.475$, $p = 0.01$, $r = 0.207$, $p = 0.01$, $r = -0.138$, $p = 0.01$, respectively), indicating that workers who experienced higher levels of emotional exhaustion and/or depersonalization had higher levels of intent to leave.

Contrary to that finding, those who felt more personal accomplishment were less likely to want to leave their organization of employment. In the final regression model, secondary trauma, emotional exhaustion and personal accomplishment were significant in predicting intent to leave. This result indicated that secondary trauma and emotional

exhaustion are risk factors in predicting intent to leave, whereas personal accomplishment was a protective factor in predicting a worker's intent to leave the organization of employment among ID/DD workers in this sample. When the analysis controlled for social desirability in the model, secondary trauma, and emotional exhaustion remained risk factors. However, depersonalization became a protective factor in addition to personal accomplishment. In the SEM analysis, only STS and EE along with organizational support were specified to have direct effects on intent to leave. While both organizational support and EE directly impacted intent to leave, STS indirectly impacted intent to leave through EE. Thus, H6 was supported with some interesting caveats, given the results of the SEM analysis.

Client-Related Outcome

H7: Experience of secondary trauma and burnout symptoms will be associated with negative reported Client Success among DSPs.

The results from a correlational analysis found an inverse relationship between secondary traumatic stress and client success ($r = -0.347, p = 0.01$), suggesting workers who experienced higher levels of secondary trauma were less optimistic about the success of their clients. For Burnout, EE and DP correlated negatively with client success, whereas PA correlated positively with client success ($r = -0.351, p = 0.01, r = -0.217, p = 0.01, r = 0.181, p = 0.01$, respectively), indicating that workers who experienced higher levels of emotional exhaustion and DP were less like to be optimistic about the success of their clients.

To the contrary, those who felt more personal accomplishment were more optimistic about the success of their clients. In the final regression model, secondary traumatic stress, emotional exhaustion and personal accomplishment were significant in predicting secondary trauma. This result indicated that secondary trauma and emotional exhaustion are risk factors in predicting client success, whereas personal accomplishment is a protective factor in predicting staff feelings about a client's success among ID/DD workers in this sample. When the analysis controlled for social desirability in the model, emotional exhaustion remained a risk factor and personal accomplishment as a protective factor. However, secondary trauma was not a significant predictor in that model. Thus, H7 was partially supported in that burnout but not STS significantly predicted optimism about client success. In the future, SEM analysis will be conducted to better understand what predicts perceptions of client success.

Personal Staff-Related Outcomes

H8: Experience of secondary trauma and burnout symptoms will be associated with reported lower life satisfaction among DSPs.

The results from a correlational analysis found an inverse relationship between secondary traumatic stress and life satisfaction ($r = -0.398, p = 0.01$), suggesting workers who experienced higher levels of secondary trauma were less likely to be satisfied with their lives. For Burnout, EE and DP correlated negatively with life satisfaction ($r = -0.365, p = 0.01$ and $r = -0.120, p = 0.01$, respectively), indicating that workers who experienced higher levels of emotional exhaustion and depersonalization were less like to

be satisfied with their lives. The correlation between personal accomplishment and life satisfaction was not statistically significant.

In the final regression model, secondary trauma and emotional exhaustion were significant in predicting life satisfaction. This result indicated that secondary trauma and emotional exhaustion were risk factors in predicting life satisfaction among ID/DD workers in this sample. When controlling for social desirability in the model, secondary trauma and emotional exhaustion remained as risk factors in predicting life satisfaction. However, depersonalization became a significant protective factor in predicting life satisfaction. Thus, H8 was supported. In the future, SEM analysis will be conducted to assess what best predicts life satisfaction.

H9: Experience of secondary trauma and burnout symptoms will be associated with negative reported overall health of DSPs.

The results from the correlational analysis found a positive relationship between secondary traumatic stress and a worker's poor general health ($r = -0.356, p = 0.01$), suggesting that workers who experienced higher levels of secondary trauma were more likely to report poor general health outcomes. For Burnout, EE and DP, both correlated positively with workers general poor health ($r = -0.269, p = 0.01, r = -0.169, p = 0.01$), indicating that workers who experienced higher levels of emotional exhaustion and depersonalization were more likely to have poor health outcomes. The correlation between a worker's personal accomplishment and general health outcomes was not statistically significant. In the final regression model, only secondary trauma was

significant in predicting general health. This result indicates that secondary trauma is a risk factor in predicting worker general health among ID/DD workers in this sample.

This result was supported when social desirability was controlled in the regression model as well. Thus, H9 was partially supported in that STS is a predictor of poorer health in DSP workers.

4. What are the significant pathways to the development of burnout and secondary trauma among DSPs?

H10: A heavy workload that is also very demanding in terms of the kinds of problems that arise serving this population (e.g. challenging client behavior) will relate to high burnout symptoms among DSPs.

Because the caseload variable had more than 15% missing data, analysis to test that part of this hypotheses could not be conducted.

Frequency of challenging client behaviors was also positively related to STS ($r = 0.210, p = 0.01$), suggesting workers exposed to frequency of clients challenging behaviors experienced more STS. For Burnout, EE and DP, both correlated positively with client challenging behaviors ($r = 0.210, p = 0.01, r = 0.247, p = 0.01$), indicating that exposure to more challenging behaviors from clients led to more emotional exhaustion and depersonalization. The correlation between personal accomplishment and frequency of challenging behaviors was not significant. In the final regression model, frequency of challenging behaviors was a significant predictor of STS ($\beta = 0.20, S.E. = 0.09, p < 0.01$). Similarly, in a regression model, frequency of challenging behaviors was

a significant predictor of EE ($\beta = 0.22$, S.E. = 0.04. $p < 0.01$ and DP ($\beta = 0.20$, S.E. = 0.02. $p < 0.01$).

However, the results from the SEM analysis found no significant path from challenging behaviors to EE, only STS ($\beta = 0.004$, S.E. = 0.02. $p = 0.857$; $\beta = 0.13$, S.E. = 0.07. $p = 0.01$, respectively). Thus, H10 was not supported for frequency of challenging behavior and EE but what was found is that client challenging behaviors contributed to STS in all levels of analysis.

H11: Exposure to client trauma, especially if someone has experienced trauma in his or her life and has not developed a set of coping skills that promote resilience, will be associated with high secondary traumatic stress symptoms among DSPs.

The results from the SEM analysis found a strong significant direct relationship between a worker's own trauma history and STS ($\beta = 0.53$, S.E. = 0.10. $p < 0.001$), suggesting workers who experienced higher levels of trauma in their own life are more likely to develop secondary traumatic stress symptoms. Conversely, a strong significantly negatively relationship was found between personal resilience and STS ($\beta = -0.35$, S.E. = 0.10. $p < 0.001$), suggesting workers who developed higher levels of personal resilience were less likely to develop secondary traumatic stress symptoms. This suggests that higher levels of a worker's own trauma history, without corresponding higher levels of person resilience, will more likely increase the risk of high secondary traumatic stress symptoms among DSPs. But exposure to a client's trauma experiences was not significant in regressions analysis, so it was not included in the SEM analysis. Thus, H11

was partially supported in that one's own trauma history and personal resilience predicted STS, but exposure to client trauma was not significant in this sample.

CHAPTER V

DISCUSSION

Summary of Findings

The present study examined the prevalence of secondary trauma among ID/DD workers and what factors contribute to the development of STS and burnout in this population. In addition, the study assessed the impact of STS and burnout on organizational, client and staff outcomes. The results indicated that 13% met all three core diagnostic criteria for PTSD., suggesting that ID/DD workers, like other professionals in the social services and working with vulnerable populations, do experience secondary trauma as an occupational hazard. This result indicated that approximately 13% scored at or above the suggested clinical cut off of 38, an indicator of clinical levels of symptoms equivalent to PTSD in the DSM IV.

The study hypothesized that DSPs with higher levels of exposure to client traumatic experiences, their own trauma histories and the presence of more challenging behaviors among clients would experience higher levels of STS. The results showed that all three factors correlated with secondary trauma such that the higher the levels of each of those factors experienced by the worker, the higher the likelihood of experiencing STS. Subsequently, these factors (among others that were significant in the correlational analysis) were put into a predictive model to examine their ability to predict STS. The model outcome indicated that when it comes to predicting STS in DSPs, a worker's own trauma history and frequency of client challenging behaviors were significant risk factors.

However, in this study, a worker's exposure to client traumatic experiences did not predict STS.

Furthermore, inquiry into the role of personal resilience, perceived supervisor support and organizational support in buffering STS and burnout were examined. The results indicated that all three variables correlated negatively with STS. This means that when personal resilience, organizational support and perceived supervisor support were higher, STS was lower.

The predictive model for STS indicated that both personal resilience and organizational support were significant predictors of STS, suggesting that the two variables are protective factors in reducing levels of STS. So, more resilient workers and those who experienced higher levels of organizational support were less likely to experience secondary traumatic stress. However, perceived supervisor support did not predict STS.

The Brief Maslach Burnout Inventory was used as a measure of burnout. The inventory consisted of three subscales: emotional exhaustion (EE), depersonalization (DP) and personal accomplishment (PA). In this sample, the mean for the EE, DP and PA were 7.36, 3.93 and 16.19 respectively. The correlational analysis showed that EE correlated positively with a worker's own trauma history and frequency of challenging behaviors and negatively with personal resilience, organizational support and perceived supervisor support. The results from the predictive model indicated that frequency of challenging behaviors was a risk predictor of EE, but not personal trauma history. So, staff who experienced higher levels of frequency in client challenging behaviors were more likely to experience emotional exhaustion. Also, organizational support had an

inverse relationship in predicting EE, suggesting that organizational support is a protective factor in predicting EE. This implies that workers who felt supported by their organization were less likely to experience emotional exhaustion. However, personal resilience and perceived supervisory support were not significant predictors of EE.

Depersonalization correlated positively with a worker's own trauma history and frequency of challenging behavior, and negatively with personal resilience and organizational support. The results from the regression model showed that both frequency of challenging behaviors and personal history with trauma were risk factors in the prediction of DP. This suggested that staff who experienced higher frequency of client challenging behaviors and higher levels of personal trauma experiences were more likely to detach emotionally from their work with ID/DD individuals. In predictive Model 1 for DP, both personal resilience and organizational support were protective factors in predicting DP.

This indicates that both personal resilience and organizational support served as buffers in protecting workers in this population from DP. However, personal resilience was not significant in Model 2, when social desirability was controlled.

Personal accomplishment correlated positively with personal resilience, exposure to past client trauma and organizational support. The predictive model indicated that exposure to past client traumatic events, personal resilience and organizational support were direct predictors of PA. This finding implies that the workers with higher levels of personal resilience, rates of exposure to past client traumatic experiences, and feeling supported by their organization were more likely to have a higher sense of personal accomplishment from their work with the ID/DD population.

The burnout results suggest that frequency of challenging behaviors is a proxy for the challenges ID/DD workers could experience at the workplace. Frequency of challenging behaviors seems to be a strong risk factor for both EE and DP, suggesting that staff who experienced higher levels of work-related stress might be at a higher risk of emotional exhaustion and detached from the work with ID/DD clients. Also, personal resilience predicted PA, suggesting that higher levels of personal resilience were associated with higher levels of a worker's feelings of personal accomplishment. Additionally, organizational support was a predictor in all three burnout subscales, suggesting that an increase in organizational support was associated with a decrease in emotional exhaustion and depersonalization, and an increase in personal accomplishment. This means that an increase in organizational support will reduce a worker's levels of emotional exhaustion and depersonalization from their work and increase a sense of personal accomplishment. The results from this study indicate some similarities in STS and burnout. The common risk factors for STS and burnout were frequency of challenging behaviors by a client's and a worker's own trauma history, while common protective factors were personal resilience and organizational support. Furthermore, correlational analysis of the variables showed a strong correlation between STS and both EE ($r = 0.72, p = 0.01$) and DP ($r = 0.45, p = 0.01$) but not PA.

The current study also examined the relationships between the STS, burnout and various outcomes. The correlational analysis showed a positive relationship between STS and intent to leave, and poor health outcomes, as well as a negative relationship between STS and work satisfaction, life satisfaction, and client success. Emotional exhaustion correlated positively with intent to leave and negatively with work satisfaction, life

satisfaction and client success. Depersonalization correlated positively with intent to leave, and negatively with life satisfaction and client satisfaction. Personal accomplishment correlated negatively with intent to leave, and positively with work satisfaction and client success. The results from the regression models showed that STS was a significant predictor of a DSP's work satisfaction, intent to leave employment, feelings about client success, general health, and life satisfaction. However, when social desirability was controlled, the predictive relationship was only significant for workers intent to leave, general health and life satisfaction, but not for work satisfaction or client success. The results indicated that, STS is a risk factor in predicting a worker's intention to leave a place of employment, lowering general health and lowering overall life satisfaction. This means that there are deleterious impacts of secondary traumatic stress on both the organization and the worker's well-being. Turnover also disrupts the worker-client relationship and can have an adverse impact on clients as well.

For burnout, the results showed that EE is a predictor of DSP's work satisfaction, intent to leave employment, feelings about client success and life satisfaction but not general health. The result was the same when controlling for socially desirable responses. This result implied that emotional exhaustion is a risk factor in lowering worker satisfaction with work and increasing the intent to leave employment, as well as for suppressing positive feelings regarding client success, and lowering life satisfaction. So, emotional exhaustion impacts the organization, clients and workers adversely. The depersonalization subscale did not predict any of the outcomes in the predictive model. However, when controlling for socially desirable responses, depersonalization predicted life satisfaction.

Ironically, the result suggested that depersonalization was a protective predictor of life satisfaction. This means that workers who depersonalized clients were more likely to be satisfied with their life. This detachment might help them avoid taking the stress of the job into their personal lives, and thus enhance life satisfaction, but the result will need to be replicated and studied further to understand exactly how this relationship works. Lastly, the personal accomplishment subscale was a predictor of a DSP's work satisfaction, intent to leave employment, and feelings about client success, but not about general health or life satisfaction. This result indicated that personal accomplishment was a protective factor in predicting greater satisfaction with the jobs, less intent to leave employment and greater positive feelings about client success.

The SEM analysis revealed a complex relationship among the variables assessed in this study. A worker's own trauma history and frequency of challenging client behavior both led to more STS, whereas the paths from personal resilience and organizational support reduced STS, indicating they serve as protective factors. Additionally, organizational support prevented EE and the intent to leave. However, frequency of challenging behaviors did not have a significant direct effect on EE. But since it did increase STS, which in turn increased emotional exhaustion, the effect of challenging client behaviors was more indirect. However, emotional exhaustion did have a direct effect on staff intent to leave, but contrary to the regression analysis examining STS's (but not burnout) impact on intent to leave, secondary traumatic stress did not have a direct effect on intent to leave. As noted, the SEM model indicated a direct relationship from STS to EE, suggesting that higher levels of secondary traumatic stress lead to higher risk of emotional exhaustion.

Lastly, the result from the SEM model showed indirect effect from a worker's own trauma history, frequency of challenging behaviors, personal resilience and organizational support to EE. The indirect relationship between EE and a worker's own trauma history and frequency of challenging behavior was positive, suggesting that the two risk predictors indirectly impact EE.

Also, personal resilience and organizational support had an inverse relationship with EE, which suggests that personal resilience and organizational support indirectly serve as buffers to the development of EE. Additionally, STS, frequency of challenging behaviors, and a worker's own trauma history had positive indirect effect on intent to leave in the model. The indirect relationships between intent to leave and personal resilience and organizational support were inverse.

Discussion of Findings

Prevalence of STS

The present study explored the prevalence of secondary trauma among DSPs using the Secondary Traumatic Scale (Bride et al. 2004). The results indicated that approximately 13.2% of the DSPs met the cutoff for diagnostic criteria for Secondary Traumatic Stress. This level of STS is in line with findings in other studies of social workers and first responders (Bride, 2007; Lee et al. 2018; Hatcher, et al. 2011). Studies have found the rate of endorsement of STS symptoms severe enough to be diagnosed as post-traumatic stress disorder to be around 15% of social workers (Bride, 2007; Lee et al., 2018; Hatcher et al. 2011) and 19% of substance abuse counselors (Bride et al., 2009). However, other studies have reported much higher levels of STS in various

professionals such as: 32% to 50% among child welfare workers (Choi, 2011b; Bride et al., 2007; Conrad & Keller-Gunther, 2006); 33% of emergency department nurses (Dominguez-Gomez & Rutledge, 2009); and 39% of juvenile justice workers. In another study, close to half of the domestic violence advocates (47.3%) had clinical level symptoms of secondary traumatic stress (Slattery and Goodman, 2009).

The relatively lower levels of STS among ID/DD than other social services professionals such as child welfare workers, domestic violence workers and abuse therapists may be due to the type of abuse and the nature of exposure to client trauma. For instance, child welfare and domestic violence workers are usually exposed to the trauma contemporaneously or shortly thereafter it has occurred, experience the outcome while working with the client and families and in some cases have to interact with the perpetrators. The impact of these types of exposures to client trauma may present a much more profound psychological effect. Therapists may have a bit more STS than ID/DD workers, because even though the trauma may have happened in the client's past, the client is verbally processing the trauma with the therapist which could lead to some STS. Therapists may have less STS than child welfare workers because most of the trauma occurred in the past and they don't have to confront perpetrators, so their exposure is lower. To the contrary, most of the abuse in the ID/DD workforce may have occurred in the past and so they may be exposed to the knowledge that these folks experienced trauma in their lives through reading documentations, conversations with coworkers or with client family members. However, ID/DD workers may experience the effects of past trauma in the form of client challenging behaviors, but even so, most of the work with their clients is not focused on treating the trauma or its outcomes directly. While STS has

some impact (13% traumatized staff), it is more like results for a general group of social workers who may know about client's traumatic experiences but do not have to provide the immediate intervention in addressing such trauma.

Table 13 shows the frequency with which specific STS symptoms were endorsed by participants. An examination of the three STS symptoms (intrusion, avoidance, and arousal), found that the ID/DD workers in the current study experienced more symptoms of intrusion than the other two symptoms. More than one half of the ID/DD workers (55.2%) reported intrusion symptoms.

Arousal was the second most frequently reported symptom (31.7%) followed by avoidance symptoms (17.6%). This pattern of symptoms is consistent with the Lee, et al. (2018) study of clinical social workers. The percentage of DSPs who endorsed avoidance symptoms (17.6%) was comparable to what was found (16.6%) in Lee, et al. (2018) among clinical social workers, but lower than the 25.2% and 33.77 % found in Bride (2007) among master's level social workers and Choi (2011b) among social workers who work with survivors of family or sexual violence, respectively. In addition, equivalent intrusion symptoms were found in the current sample of DSPs as in the Choi (2011b) study (57.14%) but higher than the 45.4% reported in Bride (2007) and 40.4% in the Lee, et al. (2018) study.

The relatively low avoidance symptoms might reflect the lower level of pathological STS found among DSPs than those in fields that deal daily with trauma (e.g. child welfare and domestic violence). This phenomenon might suggest that while DSPs do experience the psychological impact of secondary trauma, it is mostly through heightened emotion and cognitive intrusion, rather than shutting down. But this is only

the second study to even assess STS among this type of workforce and the first to examine prevalence. Certainly, replication of these findings in other states or with a nationally representative sample is warranted.

Predictors of STS

The Role of Worker Trauma History, Exposure to Client Trauma, and Client Challenging Behaviors. It is important to note that individuals diagnosed with intellectual and/or developmental disabilities may not likely engage in conversations regarding traumatic events to DSPs. However, this information could be acquired through documents and in conversation with other stakeholders such as other staff, guardians, and family members. What is even more likely is that DSPs may share “horror stories” with one another about individuals who have exhibited challenging behavior (Keesler, 2016). These experiences were hypothesized to influence the development of STS (Bride et al., 2007; Jenkins and Baird, 2002) likely because the symptoms are similar to PTSD and client challenging behaviors may sometimes pose a threat to the workers, eliciting these types of fears. As a result, both long periods of time with indirect contact with client information in the form of reviewing documents and in meetings elucidating the traumatic experiences of ID/DD individuals along with times of feeling threatened by the challenging behaviors of clients may be the primary ways that DSPs become at-risk of STS/PTSD symptoms. This notion was supported in this study in that while exposure to client trauma did correlate positively with STS, it was not a significant risk factor in predicting STS in the regression or SEM analyses. However, client challenging behaviors did directly increase symptoms of STS/PTSD. While the result regarding exposure to client trauma history information is contrary to previous studies with other types of social

service workforces that identified exposure to client trauma to be associated with higher levels of STS (Lee, et al. 2018), the fact that exposure to client challenging behaviors did enhance STS symptoms might mean that what is called STS is really PTSD symptoms as a result of feeling traumatized by client violence or other threatening behavior. However, there have been hints in the literature that such direct exposure to client trauma might not always lead to STS. For example, Devilly, Wright and Varker (2009) studied 152 mental health professionals and found that exposure to a client's traumatic material did not affect STS. Rather, work-related stressors best predicted therapist distress. Also, Van, and Keijser (2000) conducted a controlled study of trauma therapists and non-trauma therapists and concluded that exposure to client trauma did not contribute to significant differences in PTSD-like symptoms, although the advanced education and careful supervision of therapists during training, the licensure process and beyond may have given them healthy ways to cope with the stresses associated with exposure to client trauma. This is something members of other workforces that interact with traumatized clients are not afforded.

The typical DSPs do not have an advanced education, and although they initially receive variety of training prior to working with individuals with ID/DD, there are no indications that training focuses on impact of trauma on their psychological well-being. Other possible reasons why exposure to client trauma did not predict STS in this sample might be because of the relatively high turnover rates (about 27% in this sample) among ID/DD workers. So, it may be possible that some of those who could be significantly impacted by such exposure may have left the field before it could arise. Also, workers may have developed ways to cope with exposure to client trauma through their work with

ID/DD individuals. But given the other finding that client challenging behaviors did predict STS symptoms, it could be that for this workforce, such direct threats to safety may be stronger than whatever they are exposed to regarding client trauma exposure. Nevertheless, more research is warranted to better understand the dynamics between exposure to client trauma, challenging client behaviors and the development of secondary trauma in DSP and other social service workforces, such as residential child welfare workers, that have so much direct contact with volatile clients on a day-to-day basis.

The theoretical underpinning of STS suggests that it could occur with or without preexisting characteristics or unresolved psychological issues (Hesse, 2002). However, a staff member's own trauma histories have been shown to result in the individual experiencing re-traumatization, which has been linked to higher risk of STS (Butler et al. 2016). The present study found a positive relationship between a DSP's own trauma histories and STS, suggesting that the greater the number of traumatic events ID/DD that workers reported to have experienced personally, the stronger their propensity to develop STS. A similar outcome was found in other studies (Bauwens & Tosone, 2014; Choi, 2011b; Choi, 2017; Butler et al., 2016). For example, in the Choi (2011b) study, social workers who reported a higher number of personal traumatic events had higher levels of STS. Similarly, the Brady (2017) study involving Internet Crimes Against Children (ICAC) task force personnel, reached the same conclusion. Respondents who reported a history of trauma were significantly associated with higher levels of STS (Brady, 2017). Other studies investigated the influence of trauma history on STS symptoms among social workers who provide direct services to survivors of family violence or sexual assault and found that a staff member's own trauma history was a predictor of STS (Choi,

2017), and that social workers who had experienced more types of personal traumatic events had more severe levels of STS (Choi, 2011b). On the contrary, other findings suggested that a worker's own trauma history did not relate to the development of STS symptoms (Benuto et al., 2018; Owen, 2014). Interestingly, a meta-analysis on the relationship between a worker's own trauma history and STS demonstrated that the type of trauma, its similarity with a client's traumatic experience, and the severity of exposure may be important (Hensel et al., 2015). The study identified differences and similarities of staff's own trauma and those of their clients do impact the prevalence of STS in all of the 38 reviewed. For instance, staff who had a past history of sexual or domestic abuse or a history of childhood trauma and who worked with victims of similar trauma experiences had higher risks of STS. In the current study, the correlation between past trauma history and exposure to current client traumatic experience was significantly directly correlated ($r = 0.203$, $p = 0.01$). However, the current study did not explore the similarities between a staff member's own trauma history and client trauma experiences. This is an area for possible exploration.

But as noted above, given the nature of the clients being served by DSP workers, the likelihood of running into clients who exhibit challenging behaviors (such as attempting to flee the premises, physically struggling with staff when needing to take medications or becoming overwhelmed with emotion and uncontrollable physically at unexpected times) is very high and might contribute even more to STS or PTSD than exposure to client history of trauma but might make those with their own history of trauma even more nervous. The impact of challenging behaviors replicates findings of the Keesler (2016) study of ID/DD workers (the only other study that examines STS), which

found that exposure to client challenging behaviors was associated with secondary traumatic stress.

In a recent study, researchers examined the relationship between teachers who have been exposed to classroom aggression (challenging behaviors) and exposed to school shooting media coverage (exposure to a secondary traumatic event) and STS. The study concluded that both challenging behaviors and exposure to client traumatic events significantly correlated with secondary trauma (Stevens et al. 2020).

Notably, there is a high prevalence of aggressive behaviors within the ID/DD field (Benson & Brooks 2008; Cooper et al., 2009; Baguley et al., 2006). Depending on how aggression is defined across studies, the range of DSPs exposure to client aggressive behavior is estimated between 30% and 90% (Hensel et al. 2013; Hensel et al. 2014; Lundstrom et al. 2007). This result in the current study adds to existing knowledge by suggesting that client challenging behaviors create work-related stress and contribute to secondary trauma or simply create PTSD symptoms, since the threat is direct rather than indirect. The nature of the interaction between client challenging behaviors, worker history of trauma, client history of trauma and STS or PTSD in the ID/DD workforce will need further study. There are a number of questions that researcher may want to address.

First, are the effects of challenging behaviors of clients different based on factors such as frequency or severity? The current study identified that the correlation between frequency of challenging behaviors and STS was supported in the regression analysis and SEM. However, due to methodological challenges the relationship between severity of challenging behavior and the composite of frequency and severity of challenging behaviors were not explored. Researchers may also want to investigate whether

challenging behaviors at a certain frequency or severity may translate into how services are delivered, especially when STS or PTSD symptoms manifest. Also, a qualitative follow-up study may help elucidate the mechanisms by which dealing with such challenging behaviors interacts with their own trauma histories and/or the client's trauma histories and how all of that leads to more STS.

The current study has demonstrated that frequency of challenging behavior does have a significant psychological impact on ID/DD workers. Therefore, it is important for the organizations serving ID/DD clients to take measures to decrease the number of challenging behaviors exhibited by clients through organizational structures, culture and climate adjustment, and worker training so as to reduce the adverse impact on the workforce. Other results in the current study give some clues as to the importance of organizational factors in reducing STS, especially in light of the challenging behaviors clients exhibit.

Potential Protective Factors. Results found that when organizational support was high, workers experienced less STS. Most of the literature has framed these variables in terms of negative organizational characteristics but drew similar findings. For example, Brady (2017) concluded that low organizational support was associated with higher STS. Most of the literature has instead focused on perceived supervisory support as a buffer for STS. In the current study with DSPs, although perceived supervisor support was negatively correlated STS, it was not significant in predicting STS in regression analysis. This could be due to the fact that organizational support absorbed the variance and that in this type of direct-care work with workers who receive less clinical type supervision, perceived organizational supports are more important. Another possible

reason may be more systemic. There has been a push to put policies in place to deinstitutionalize ID/DD care, which led to a major shift toward increased community-based, supportive services and programs. Many of the staff surveyed provide community-based support to improve independent living skills and community integration or inclusion. Even ID/DD individuals who live in residential settings and those who attend adult day-training services might have specific goals related to community involvement and/or employment. Also, family home providers serve to a great extent as adult foster homes for ID/DD individuals who live as members of the family and participate in family-oriented activities.

In such circumstances, direct supervision may not be readily available support necessary to meet the needs of the staff. However, broader organizational support in the form of training, client information, and who to contact in case of emergency might be more important. As a result, staff could look for a broader scope of support beyond what their immediate supervisors offer. These types of supports may involve a more comprehensive effort within the organizations to offer support to meet the needs of workers who continuously operate semi-autonomously. Inevitably, DSPs who felt that their organization cared about their wellbeing and opinions and were willing to offer support when needed were better able to cope and manage feelings of STS.

Another factor believed to reduce STS was personal resilience. In this study, personal resilience did reduce STS symptoms. The result of the current study is in line with studies such as Harker, Pidgeon, Klaassen, and King, (2016), which found personal resilience to be a significant buffer to secondary traumatic stress in human service workers. This finding has implications for hiring and the nature of supports needed to

prevent STS and ultimately, turnover. It is important for ID/DD organizations and policy makers to develop policies, programs and strategies that will foster the capacity to respond to and recover from personal and work-related challenges. Investing the time and resources into such programs could have the potential to build resilient and sustainable ID/DD workforces. This finding is a unique addition to the literature, so certainly it will need to be replicated.

Predictors of Burnout

More of the previous literature on the ID/DD workforce studied burnout. The most prevalent risk factor of burnout in this study in correlational and regression analysis was client challenging behaviors. Client challenging behaviors positively correlated with EE and negatively correlated with PA. Also, the frequency of client challenging behavior had a positive effect on depersonalization.

These results are consistent with other studies among ID/DD workers (Ko et al., 2012; Mills & Rose, 2011; Chung & Harding, 2009; Symth, et al. 2015; Vassos & Nankervis, 2012). However, when STS was added to the mix in the SEM analysis, the relationship between client challenging behaviors and EE dissolved, but the impact of STS on EE was strong. Thus, by studying both STS and burnout in the same study, the SEM analysis suggests that challenging behaviors lead to STS symptoms (which may be a proxy for PTSD) which in turn led to EE. Again, this unique finding will need replication, but it is an interesting outcome.

The overarching theme is that client challenging behavior poses significant distress in DSPs that leads to burnout and intent to leave the organization. Therefore, it is

important to seek remedies to address this issue. The current study found that more organizational support led to more PA and less EE and DP. This finding replicates another research. For example, Lin and Lin (2013) emphasized the need to strengthen institutional support and a healthy work environment for DSPs in order to decrease burnout. A similar argument was expounded on by Mutkins, Brown and Thorsteinsson (2011), who argued that organizational support may strengthen a worker's feelings of accomplishment and serve as a buffer against emotional exhaustion. Various aspects of organizational support identified to lower burnout included, teamwork and communication between staff members and superiors (Mascha, 2007). Investment in social capital, defined as common values, supportiveness, and perceived mutual trust in the organization, lowered burnout as well (Kowalski et al., 2010). Organizations that serve the ID/DD population should identify and develop support systems to meet the needs of their workers and be tailored to suit the service delivery structures of the ID/DD field.

STS, Burnout and Outcomes

Organization-Related Outcomes. The current study found that those with more STS were also less satisfied with their jobs although that relationship became nonsignificant when social desirability was added to the regression model.

The correlational result was in line with other studies (Bride & Kintzle, 2011; Bauwens & Tosone, 2014). Various studies have identified a negative relationship between job satisfaction and secondary trauma among social service workers. Job satisfaction was identified to have an inverse relationship with secondary traumatic stress symptoms among social service workers (Graham, Shier & Nicholas, 2016; Middleton,

2011) and social workers (Bauwens & Tosone, 2014). Similarly, Bride and Kintzle, (2011) studied substance abuse counselors and concluded that higher levels of STS led to lower job satisfaction. That study also found that job satisfaction fully mediated the relationship between STS and occupational commitment. Future studies should also add a measure of social desirability to ensure that relationships among variables hold up when accounting for this dynamic. This is a common flaw in survey research and all cross-sectional studies on these workplace dynamics.

For burnout, those who experienced more EE and less PA (but not more DP) were less satisfied with their jobs. In the final regression model, secondary trauma, emotional exhaustion and personal accomplishment were significant in predicting job satisfaction. When controlling for social desirability in the model, depersonalization became a significant protective factor in predicting job satisfaction in that model. These results largely replicate those in the larger ID/DD workforce literature. Burnout has been documented to have an inverse relationship with job satisfaction (Hickey, 2012; Shaddock et al., 1998; Lin & Lin, 2013; Dyer & Quine, 1998; Mascha, 2007). The results of the current study suggest that addressing the risks of both STS and burnout will improve job satisfaction among ID/DD workers. Job satisfaction has been linked to organizational benefits such as lowering turnover rates. As such, ID/DD organizations could reduce the turnover rate and associated cost by implementing measures that will reduce STS and Burnout risks. This is especially significant because the forecast for the industry suggests higher future labor demand but a shortage in supply of workers.

Those who experienced more STS felt less satisfied with their jobs, and they expressed a greater intent to leave the job.

Studies of other social service professionals find similar results. For instance, secondary trauma experienced by child welfare workers has been identified to predict staff intent to leave their organization and actual turnover (Barbee et al. 2018).

Similarly, those who experienced more EE and DP and less PA also intended to leave their organizations. A meta-analysis of antecedents to intent to leave among social service workers reported burnout as a predictor of staff intention to leave (Mor Barak, et al., 2001). Among ID/DD workers, work-related stress has been associated with higher levels of intention to leave (Gray, & Muramatsu, 2013). So, the current study replicated the literature in both ID/DD settings and other social service settings, indicating that burnout is a problem for staff retention.

Although staff intent to leave their organization is not a measure of actual turnover, it is known to be a strong predictor (Mor Barak et al., 2001; Rubenstein et al. 2018). The ID/DD field is known to be associated with a high labor turnover rate. High turnover rates are associated with higher operational costs and adverse effects on quality of service. Therefore, insight into factors that contribute to potential turnover provides an opportunity for stakeholders to adopt pro-retention strategies that focus on reducing secondary trauma and burnout among DSPs in the ID/DD field.

Client-Related Outcomes. Those who experienced more STS were less optimistic about their success with clients. Similarly, those with more EE and DP, and less PA also were less hopeful with regard to client success. In the final regression model, secondary traumatic stress, emotional exhaustion and personal accomplishment were significant in predicting less optimism about client success. So, experiencing more STS and being emotionally exhausted lowers optimism about client success, whereas PA is a

protective factor that enhances the belief that clients will be successful. However, when social desirability was added to the model, STS dropped out as significant.

Given the importance of staff perception about the success of clients, it is important for future studies to explore in more depth how staff perceive their client success and more about the mechanisms that undermine or enhance such perceptions. This result demonstrates in general that staff who are experiencing burnout will be more pessimistic about client's success in the future, which could lead to a self-fulfilling prophesy and negative outcomes (Madon, Gyll et al., 2013; Lamb, & Crano, 2014; Wurm et al., 2013; Glover et al., 2016). Conversely, addressing burnout in ID/DD staff might improve staff feelings about client success. So, this adds a unique finding to the already large bank of literature on the effects of burnout on outcomes when working with the ID/DD population.

Staff-Related Outcomes. Workers in this study who experience more STS, more EE and more DP were less satisfied with their jobs and with life overall. In the final regression model, secondary trauma and emotional exhaustion were significant in predicting life satisfaction, even when controlling for social desirability. However, with the addition of social desirability came a surprising impact, depersonalization. The more people depersonalized, the better their life satisfaction became. Past studies have found similar patterns among social workers (Graham et al., 2016; Hombrados-Mendieta, & Cosano-Rivas, 2013). Graham Shier, & Nicholas, (2016) found that lower levels of psychological distress and secondary traumatic stress predicted higher levels of overall life satisfaction. Similarly, Hombrados-Mendieta, & Cosano-Rivas, (2013) found negative effects of burnout on life satisfaction among social workers. Life satisfaction has

been identified to have material impact on both the staff and the organization. For example, lower life satisfaction has been associated with high healthcare utilization and potential high healthcare costs (Goel et al., 2018). Such costs may be borne by the DSP, the organization or both. Given that in general ID/DD workers are low-paid employees, such additional healthcare costs and the cost of missing work could have an adverse impact on their finances and the organization's bottom line.

Likewise, the cost of healthcare personnel management may increase the operational cost of the organizations. Therefore, important consideration should be given to proactive measures that could reduce the risk of STS and burnout to improve a worker's life satisfaction. This finding adds to the literature of the impact of STS on DSP staff well-being and should be replicated in future research.

The current study also found that more STS, EE and DP were associated with reports of poorer general health. However, in the final regression model, only secondary trauma was significant in predicting general health, even when controlling for social desirability. This result indicates that secondary trauma is a risk factor for worker health. Some studies found higher burnout and secondary trauma levels have been associated with a decline in health status (Butler et al., 2017; Lee et al., 2018), but none examined this with DSP workers. Thus, this is another unique contribution of this study to the understanding regarding the impact of STS on the workforce serving ID/DD clients.

The Use of Social Desirability in This Study

Social desirability measures the perceived pressure to project an image that supports a positive self-presentation (Hays et al., 1989). It could potentially affect the

validity of self-report data by underreporting the socially undesirable behaviors or overreporting socially desirable behaviors (Camerini & Schulz, 2018). Social desirability has been used widely in social sciences research (Krumpal, 2013). A five-item measure of socially desirable responses (SDRS-5; Hays et al., 1989) was used in this study. The correlational matrix indicated that social desirability interacted significantly with many of the variables in this study. Secondary traumatic stress, emotional exhaustion, and depersonalization had inverse significant relationships with social desirability. This suggested that workers may have underreported their response to these variables. Also, perceived supervisor support, personal resilience and organizational support were positively related with social desirability. This suggested that workers may have overreported their response to these variables. Social desirability was significant in the regression model for STS, EE, DP but not PA. Importantly, the control of social desirability in these regression analyses impacted the predictor factors for DP, as personal resilience became nonsignificant. Also, for the outcome variables, work satisfaction, client success, general health and life satisfaction had positive relationships with social desirability in the correlational matrix. This means that respondents may have overreported their response to these variables. Whereas, intent to leave had an inverse relationship with the social desirability measure, indicating possible underreporting of responses. When controlling for social desirability in the predictive models, it was significant in two of the five models (work satisfaction and client success). In in both models, STS was not significant predictor in the model that included the social desirability measure although it was significant in the first models without social desirability controlled. It is important to note that, although social desirability was not

statistically significant in the life satisfaction when social desirability was added, DP became a statistically significant predictor.

The relationship between social desirability and the variables may suggest some biases in the self-reported data due to the desire of respondents to appear in a positive light. However, caution must be taken when interpreting the role of social desirability in this data. Specifically, there is no evident to suggest that the social desirability scale utilized has been validated among ID/DD workers. Psychometric analysis involving ID/DD workers will be necessary to examine the validity and reliability of the social desirability scale. Also, there are existing studies that have found the social desirability measure to be unstable based on setting sample characteristics such as, educational level (Haberecht et al., 2015), personality dimensions (Perinelli & Gremigni, 2016), cultural differences (Verardi et al., 2010), age and gender (Beretvas, Meyers, & Leite, 2002). Therefore, a socially desirable response should not be perceived as an act of deception on the part of the respondents but an indication of potential bias which needs further investigation. Furthermore, the fact that most predictor variables in the regression analyses held up when controlling for social desirability means that the findings in the study are fairly robust in spite of any tendency for participants to lean towards projection of a positive self while completing the survey.

Implications for Social Work Practice, Education and Research

Overall, this study suggests that individual (for example, a worker's own trauma history and personal resilience), interpersonal (client challenging behaviors) and organizational (organizational support) characteristics are determinants of STS in the ID/DD workforce, while burnout is more influenced by interpersonal and organizational

factors. Both STS and burnout do impact outcomes of work satisfaction, intent to leave employment, client success, staff-client interaction, and life satisfaction while only STS affected worker health. These research findings have implications for the roles of secondary traumatic stress and burnout on the ID/DD workforce.

Implications for Practice

Direct support professionals are vital in the intellectual and/or developmental disabilities service delivery system. Although, many studies examined factors that contribute to burnout in this workforce, very little was known about the prevalence of STS or factors that influenced STS for this workforce type. The study illustrates that among ID/DD there is a prevalence of secondary trauma stress equivalent to general social workers. Direct support workers can gather valuable information from these research findings. In particular, they can evaluate how their own trauma history and personal resilience may contribute to STS and seek ways to deal with those traumatic experiences through counseling, support groups and/or self-care. Equally important is the understanding how other factors such as client challenging behaviors and organizational support contribute to the development of STS and burnout. This study provides useful information to administrators in managing workers. For instance, organization leaders and supervisors should systematically incorporate ways: to manage challenging behaviors by assessing the impact of challenging behaviors on staff; to make changes in order to equitably distribute the burden of care associated with challenging behaviors; and to find ways to mitigate such behaviors through better client emotion management and creating safer environmental settings to lower injury should a client get out of control. This might require hiring additional staff to reduce caseloads and/or investing in more staff training

on how to deal with and manage clients to prevent and manage challenging behaviors effectively. In addition, the knowledge gathered here can be used to institute organizational supports for providers. It is important to emphasize that any cost associated with building and sustaining the DSP workforce has the potential to improve the quality of care for ID/DD population and reduce organizational costs related to hiring and retention.

The study results also indicated that STS and burnout led to less job satisfaction and higher intent of workers to leave employment. The profession cannot afford to lose competent professionals given the high demand for DSPs and the projected shortage in DSPs to meet growing demand (BLS, 2019). Therefore, it may be in the interest of the organizations to adopt policies and strategies to reduce the cost of search and recruitment associated with high rates of turnover and invest in programs that will improve retention. One policy area that could make a significant difference is for policy makers to adopt trauma-informed policies within the ID/DD field.

The ethical justification for such a measure centers on the fact that a higher percentage of ID/DD individuals have experienced multiple traumas over a long period of time compared with the general population (Boyle et al. 2011; Mevissen & de Jongh, 2010; Wigham & Emerson, 2015). The emerging trauma-informed practices in the field so far have been centered around practice (Keesler, 2016). There is a need to embrace policy initiatives that focus on expansion of trauma-informed care within the field. Such initiatives should aim at providing trauma-informed care to service recipients and healing organizational environment for traumatized workers.

Implications for Education

It is important for social work educational programs to include in the curriculum information that addresses the needs of DSPs. Although the current research showed that more than half of the DSPs have a high school diploma or less, many do have college degrees, sometimes in social work. This workforce provides care for one of the most vulnerable population groups. Their training includes certification programs, associate's degrees and four-year degrees. Perhaps schools of social work could offer certifications and specializations to build a foundation for competency in ID/DD practice. State and university partnerships, such as those in the child welfare field, could also be developed with incentive structures built into federal funding associated with services to this population and the workforce to reduce the burden from being absorbed solely by the DSPs and organizations. Also, social work programs may also want to include continuing education on secondary trauma and burnout reactions for this segment of the workforce in their array of offerings. At all levels — federal, state and organizational — administrators should require continuing education on secondary traumatic stress and burnout prevention, and intervention for workforces dealing with traumatized clients including ID/DD clients. The training guidelines should require that workers understand the determining factors, signs of STS and burnout, and the availability of resources for support.

It is important to frame secondary traumatic stress and burnout as being organizational and occupational hazards with very real direct and indirect impacts on the organizations, workers and quality of care for ID/DD persons.

The right solutions and interventions to address STS and burnout could result in healthier and more sustainable workforces, with a net economic benefit to the organizations and improved quality of care for service recipients. Therefore, it is in the best interest of policymakers, organizational leaders and direct support workers to address these issues.

Implications for Research

The study results support the growing concern about STS as an occupational hazard in the social services field. Moreover, the results demonstrated that the predictive factors of STS in DSPs involve individual (e.g. workers own trauma history and personal resilience), interpersonal factors (e.g. client challenging behavior) and organizational factors (e.g. organizational support). These findings are significant because a growing but still small amount of research exists in this area. Hence, the need for more research to replicate the study is paramount. For example, a follow-up to this study with a national sample of ID/DD workers would increase the generalizability of the results. Moreover, an expanded project should include a qualitative dimension, such as semi-structured interviews. A qualitative study design of this group of participants could reveal factors related to STS not accessible from quantitative data.

Also, the current study result indicated a significant difference in STS and EE based on job classification (between community-based and residential settings), education (high school diploma or less and higher than high school diploma) and race (non-Hispanic Whites and Blacks) among ID/DD workers in this sample. Future research using a national sample stratified by workplace (residential vs community based), race, regions (NE, South, Midwest, Northwest, West) and education to investigate how STS

and burnout may influence workplace outcomes will be a laudable step in expansion of knowledge in this field.

Equally important to the findings of this study is the relationship between STS and organizational outcomes (job satisfaction, intention to leave employment), client outcomes (client success) and personal outcomes (life satisfaction, general health). These results shed a light on some of the real costs of STS to the organization, clients and the staff, and highlighted the fact that there may be a net benefit for policymakers and organizations to begin to take serious measures to address STS in this workforce.

The challenging labor shortage in the sector threatens the federal initiative to deinstitutionalize ID/DD individuals. A sustainable community-based placement option is predicated on having a healthy and sustainable workforce to provide supportive services and to maintain a high quality of care. Although this study showed some interesting findings, there is a need to expand the inquiry using longitudinal methodologies to study these phenomena over time, so as to truly better understand these relationships. Moreover, more mixed methodology studies paired with more representative samples would likely replicate and expand results from this study, offering a more detailed understanding of these relationships between STS and the various outcomes.

Study results validate a large amount of literature that shows that burnout is also an occupational hazard significantly influenced by increased demands from the job without adequate support. Specifically, EE and DP were directly affected by frequency of challenging behaviors and organizational support. DP also was influenced by a worker's own trauma history, and PA was influenced by personal resilience, organizational support

and exposure to past trauma traumatic experiences. The variations in the predictors of burnout among the subscales suggest that additional inquiry is necessary to further understand the differences in predictor factors associated with burnout in DSPs in ID/DD field. Additionally, there are some significant differences in how the burnout inventory impacted organizational outcomes: (EE and PA affected job satisfaction and intent to leave employment); client outcomes (EE and PA affected client success); and staff outcomes (EE and DP affected life satisfaction). Building on this study to examine these interactions between EE, DP and PA will provide valuable insight that will continue to inform policy and training priorities to address the burdens of care experienced by DSPs. An interesting dynamic also warranting further investigation is the relationship between DP and life satisfaction. The results in this study suggested that staff depersonalization had a direct relationship with their satisfaction in life. Staff who were able to emotionally distance themselves from their work seemed to report higher satisfaction in life.

In as much as this may be a healthy response to cope with work stress, it may have a negative impact on their work performance and client relationships, something that may be worthy for future inquiry.

Study Limitations

While this research used rigor statistics to uncover important factors related to STS and burnout in DSPs and their impacts on various outcomes, there are expectedly various limitations that need to be addressed in future studies. First, the treatment of missing values in the analysis could have impacted the results. Items with missing values of more than 15% were used in descriptive statistics using listwise deletion. These

variables were demographic variables and the reported data may not reflect characteristics of ID/DD workers. So, care must be taken when interpreting such results. Also, mean replacement was computed for variables with 5% to 15% missing values. The impact of using item mean replacement to address missing values has the potential for causing values to be pulled toward the center of the distribution, thereby resulting in underestimation of effects. Given that Tabachnick and Fidell, (2013) argues that the extent of the loss of variance is dependent on the amount of data replaced, it is important that only one variable be used [Intent to leave (1.4% to 6.6% items missing range)] in multivariate analysis. Nonetheless, care must be taken when interpreting the results involving this variable for which mean replacement was computed to replace the missing values.

Second, the study used correlational research methods to address the research goals. While the method is deemed appropriate, it limits the ability to make directional causal statements about the variables of interest. Also, the study utilized a cross sectional design, which further reinforces the need to be cautious in drawing causality conclusions because it offers a point in time measure of association of the variables. Hence, the need for confirming the results by more rigorous studies or by replicating this study in different samples.

Another way to increase the prospect of strengthening the findings could be to use mixed methods as well as longitudinal research methods. Mixed methods have been touted to bring results that address the relationship between variables and in-depth insight into why this relationship exists in that direction (Bergman, 2008).

Third, although our sample included a relatively high number of participants from different professionals, it was not randomly selected nor was it necessarily representative of the ID/DD workforce in the commonwealth or nationally. However, it was derived from various institutions located in different ID/DD provider agencies throughout all geographical areas in one state. But since Kentucky is not a microcosm of the U.S., the sample population may not be fully representative of this DSP population in terms of demographics and therefore limits the generalizability of the results.

Fourth, some of the study variables such as life satisfaction and work satisfaction relied on one item questions using self-report data for these characteristics. This may have affected reliability and validity of the instruments used. Although, the higher levels of staff satisfaction and work satisfaction reported in this data may mean that DSPs in this sample may be happy with the direct work with clients but not the work environment. Also, various measures have been taken to ensure comprehension by ensuring that the survey questions and instructions were clear and void of jargon, it is nevertheless conceivable that subjects did not fully understand questions or were unable to fully reflect on their situations. Also, exposure to a client's traumatic experience was based on subjective estimates reported by workers, hence the reliability and validity of the measure may be affected. Lastly, the client success scale and the intent to leave scale used in this study demonstrated good reliability based on the Cronbach's alphas, but they need to be re-tested in other studies to ensure adequate reliability and validity.

Fifth, it should be noted that a self-report questionnaire was used to assess STS instead of clinical interviews diagnosing psychopathology. This may be problematic since diagnosis of psychopathology usually involves some form of interview. However,

the study relies on a reliable and valid STS screening measure, the STSS, to estimate the prevalence of PTSD due to secondary exposure in the study sample.

It is important to note that, the sensitivity and specificity of the STSS has not been established against a “gold standard” PTSD clinical interview (Rauch et al., 2012). As a result, the estimates of clinical level of STS presented in this study should be considered as positive screens but not confirmed cases of PTSD. In this study, the composite scale of STS was used in all the bivariate and multivariate analyses.

Conclusion

In spite of the limitations discussed above, this study advances knowledge and understanding of the occupational hazards that confront direct support professionals who work with individuals diagnosed with intellectual and/or developmental disabilities. The unique contributions of the dedicated workforce whose career is to support one of the most vulnerable population in our society may be hampered by the potential risks of STS and burnout. To that effect, the current study has explored factors that could influence STS and burnout in this workforce and have laid to bear the potential impact on organizational, staff and client outcomes. These results have the prospect of far reaching implications to practice, education, policy and research, hence the need exists to expand and replicate the study.

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APPENDICES

Appendix A

Table Containing List of Variables and Scales

Variable	Measure	Citation
Burnout	Abbreviated Version of Maslach Burnout Inventory Human Services Survey	Maslach & Leiter, 2008
Secondary Trauma	Secondary Traumatic Stress Scale	Bride et al. 2004
Demographic Information	Questionnaire	Researcher Created
Workers' Own Trauma History	26 Adverse Event List	Researcher Created similar to Cieslak et al. 2013
Indirect Exposure to Trauma	Single Question Item	Researcher Created similar to Cieslak et al. 2013
Challenging Behavior	Behavior Problems Inventory (BPI-01)	Rojahn et al. 2001
Workload	A short workload scale	Hollinshead, D. (2018). The Kempe Center. University of Colorado-Denver. Denver, CO.
Organizational Support	Organizational Support Scale	Eisenberger et al. 1990

Perceived Supervisor Support and Quality	Comprehensive Organizational Health Assessment (COHA) measure	Potter et al. 2016
Resilience	The Brief Resilience Scale	Smith et al. 2008
Job satisfaction	Job Satisfaction Scale	Wanous et al. 1997
Client Success	Client Success Scale	Researcher Created
Intent to Quit	Intent to Quit Scale	Researcher Created
General Health	Single Item Measure	Researcher Created
Social Desirability	Social Desirability Scale	Hays, Hayashi and Stewart, 1989

Appendix B

Researcher Questionnaire

Today's Date _____ Site _____

your current highest level of education? Check all that apply.

Less than High School Diploma ☐ High School Diploma ☐ Associate Degree ☐
Bachelor's Degree ☐ Master's Degree ☐ Other _____

your employment classification? ☐ Part time ☐ Full time ☐ Not Applicable

have a relative member or a love one who is diagnosed with Intellectual or Developmental Disability? ☐ Yes ☐ No

your current job title? Check all that apply

Adult Day Training Staff ☐ Homemaker Provider ☐ Family Home Provider
Community Living Support Staff ☐ Employment Specialist ☐ Residential Staff
Community Access Staff ☐ Respite Provider ☐ Behavior Support Specialist
☐ Other _____ (Describe?)

total number of clients you are serving currently relationship?

total number of your work hours involve one-on-one services with clients every week?

total number of your work hours involve indirect services such as paper work and meetings?

o you work (Check all that apply): ☐ 1st shift ☐ 2nd Shift ☐ 3rd Shift ☐ Other _____ (Specify)

of Hispanic/Latina/o origin? ☐ Yes ☐ No

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

American Indian or Alaska Native ☐ Black or African American ☐ Native Hawaiian or Other Pacific Islander
Asian ☐ Caucasian/White ☐ Other _____ (Please specify)

racial/Multiracial (Please list) _____

the year you were born? _____

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

your gender?

male ☐ Non-binary/third gender ☐ Prefer to self-describe _____
ale ☐ Prefer not to say

ng have you worked in the field of ID/DD? Years _____ Months _____

ng have you worked for the organization you are working in now? Years _____ Months _____

ng have you worked in your current position? Years _____ Months _____

currently in a long-term commitment relationship? ☐ Yes ☐ No

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

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

Appendix C

Abbreviated Maslach Burnout Inventory

STEP 1: Complete the Abbreviated Maslach Inventory

For each statement, mark the box that most accurately reflects your response:

	<i>Everyday</i>	<i>A few times a week</i>	<i>Once a week</i>	<i>A few times a month</i>	<i>Once a month or less</i>	<i>A few times a year</i>	<i>Never</i>
I deal very effectively with the problems of my patients							
I feel I treat some patients as if they were impersonal objects							
I feel emotionally drained from my work							
I feel fatigued when I get up in the morning and have to face another day on the job							
I've become more callous towards people since I took this job							
I feel I'm positively influencing other people's lives through my work							
Working with people all day is really a strain for me							
I don't really care what happens to some patients							
I feel exhilarated after working closely with my patients							

STEP 2: Determine your score for the Abbreviated Maslach Inventory

Use this sheet to determine your score for the statements filled out on the previous page. Then, add up your scores by color, and refer to the descriptions below. Categories are rated on a scale from 0- 18.

	<i>Everyday</i>	<i>A few times a week</i>	<i>Once a week</i>	<i>A few times a month</i>	<i>Once a month or less</i>	<i>A few times a year</i>	<i>Never</i>
I deal very effectively with the problems of my patients	6	5	4	3	2	1	0
I feel I treat some patients as if they were impersonal objects	6	5	4	3	2	1	0
I feel emotionally drained from my work	6	5	4	3	2	1	0
I feel fatigued when I get up in the morning and have to face another day on the job	6	5	4	3	2	1	0
I've become more callous towards people since I took this job	6	5	4	3	2	1	0
I feel I'm positively influencing other people's lives through my work	6	5	4	3	2	1	0
Working with people all day is really a strain for me	6	5	4	3	2	1	0
I don't really care what happens to some patients	6	5	4	3	2	1	0
I feel exhilarated after working closely with my patients	6	5	4	3	2	1	0

Red = Emotional Exhaustion Total: _____ (0-18)

Higher scores indicate greater emotional exhaustion, and greater burnout.

Blue = Depersonalization Total: _____ (0-18)

Higher scores indicate greater depersonalization, and greater burnout.

Green = Personal Accomplishment Total: _____ (0-18)

Higher scores indicate greater personal accomplishment, and less burnout.

Source: Maslach, C. & Leiter, M. P. (2008). Early predictors of job burnout and engagement. *Journal of Applied Psychology*, 93(3) 498-512.

Appendix D

SECONDARY TRAUMATIC STRESS SCALE

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

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

	Never/ Rarely/ Occasionally/ Often/ Very Often				
1. I felt emotionally numb.....	1	2	3	4	5
2. My heart started pounding when I thought about my work with clients.....	1	2	3	4	5
3. It seemed as if I was reliving the trauma(s) experienced by my client(s).....	1	2	3	4	5
4. I had trouble sleeping.....	1	2	3	4	5
5. I felt discouraged about the future.....	1	2	3	4	5
6. Reminders of my work with clients upset me.....	1	2	3	4	5
7. I had little interest in being around others.....	1	2	3	4	5
8. I felt jumpy.....	1	2	3	4	5
9. I was less active than usual.....	1	2	3	4	5
10. I thought about my work with clients when I didn't intend to.....	1	2	3	4	5
11. I had trouble concentrating.....	1	2	3	4	5
12. I avoided people, places, or things that reminded me of my work with clients.....	1	2	3	4	5
13. I had disturbing dreams about my work with clients.....	1	2	3	4	5
14. I wanted to avoid working with some clients.....	1	2	3	4	5

1. I wanted to avoid working with some clients.....	1	2	3	4	5
2. I was easily annoyed.....	1	2	3	4	5
3. I expected something bad to happen.....	1	2	3	4	5
4. I noticed gaps in my memory about
client sessions.....	1	2	3	4	5

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

Bride, B.E., Robinson, M.R., Yegidis, B., & Figley, C.R. (2004). Development and validation of the Secondary Traumatic Stress Scale. *Research on Social Work Practice*, 14, 27-35.

Appendix E

Secondary Trauma Exposure Inventory

Secondary Trauma Exposure. To control for the respondent's indirect exposure to trauma, we asked a question referring to the list of 26 potentially traumatic events: "List how many CURRENT clients experienced the trauma" and "List how many PAST clients experienced the trauma".

Secondary Trauma Exposure

Event
Natural disaster (for example, flood, hurricane, tornado, earthquake)
Fire or explosion
Transportation accident (for example, car accident, boat accident, train wreck, plane crash)
Other type of serious accident at work, home or during recreational activity
Exposure to toxic substance (for example dangerous chemicals, radiation)
Physical assault (being attacked, hit, slapped, kicked, beaten up) by a relative, acquaintance, stranger
Assault with a weapon (being shot, stabbed, threatened with a knife, gun, bomb)
Sexual assault (rape, attempted rape, made to perform any type of sexual act)
Other unwanted or uncomfortable sexual experience
Life threatening illness or injury
Combat or exposure to a war zone (in military or as a civilian)
Captivity (kidnapped, abducted, held hostage, prisoner of war)
Severe human suffering
Sudden violent death
Serious injury, harm or death they caused to someone else
Were bullied
Any other extremely stressful event or experience
Severe neglect (didn't have enough to eat, had to wear dirty clothes, had no one to protect them)?
No one in the family loved them or thought they were important or special? OR The family didn't look out for each other, feel close to each other, or support each other
Saw or heard someone (a parent, a friend, anyone) being beaten up, stabbed, shot at, threatened with a knife in real life
Parents were separated or divorced
Mother, father or guardian died
Lived with anyone who was a problem drinker or alcoholic or who used street drugs
A household member went to jail or prison
A household member was depressed or mentally ill or did a household member attempt suicide?
A parent, guardian, or other household member threatened to, or actually abandoned them or threw them out of the house

Appendix F

Workers' Own Trauma History

In reference to the list of 26 potentially traumatic events included in the Secondary Trauma Exposure Inventory, respondents were asked:

How many of these types of traumatic events listed have you experienced (0-26)?

Appendix G

Appendix H

AGGRESSIVE/DESTRUCTIVE BEHAVIOR

Generic definition: Aggressive or destructive behaviors are offensive actions or deliberate overt attacks directed towards other individuals or objects. They occur repeatedly in the same way over and over again, and they are characteristic for that person.

	Never	Monthly	Weekly	Daily	Hourly	Slightly	Moderate	Severe
Hitting others	0	1	2	3	4	1	2	3
Kicking others	0	1	2	3	4	1	2	3
Pushing others	0	1	2	3	4	1	2	3
Biting others	0	1	2	3	4	1	2	3
Grabbing and pulling others	0	1	2	3	4	1	2	3
Scratching others	0	1	2	3	4	1	2	3
Pinching others	0	1	2	3	4	1	2	3
Spitting on others	0	1	2	3	4	1	2	3
Being verbally abusive with others	0	1	2	3	4	1	2	3
Destroying things (e.g., rips clothes, throws chairs, smashes tables)	0	1	2	3	4	1	2	3
Being mean or cruel (e.g., grabbing toys or food from others, bullying others)	0	1	2	3	4	1	2	3
Other:	0	1	2	3	4	1	2	3

Subscale of Behavior Problems Inventory (BPI-01; Rojahn, Matson, Lott, Esbensen, & Smalls, 2001)

Appendix H

A Short Workload Scale

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly Agree
Even working overtime, I cannot finish all of my work.	1	2	3	4	5	6	7
My caseload is too high.	1	2	3	4	5	6	7
I have too many cases to do a good job, yet I am expected to do so.	1	2	3	4	5	6	7
I cannot spend enough time with my clients.	1	2	3	4	5	6	7
It is difficult for me to keep up with agency policies and guidelines.	1	2	3	4	5	6	7

Source: Hollinshead, D. (2018). The Kempe Center. University of Colorado-Denver. Denver, CO.

Appendix I

Brief Resilience Scale (BRS)

	Please respond to each item by marking <u>one box per row</u>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
BRS 1	I tend to bounce back quickly after hard times	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
BRS 2	I have a hard time making it through stressful events.	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
BRS 3	It does not take me long to recover from a stressful event.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
BRS 4	It is hard for me to snap back when something bad happens.	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
BRS 5	I usually come through difficult times with little trouble.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
BRS 6	I tend to take a long time to get over set-backs in my life.	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1

Scoring: Add the responses varying from 1-5 for all six items giving a range from 6-30. Divide the total sum by the total number of questions answered.

My score: _____ item average / 6

Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The brief resilience scale: assessing the ability to bounce back. *International journal of behavioral medicine*, 15(3), 194-200.

Appendix J

Perceived Supervisor Support

Circle the number that corresponds to your level of agreement with each statement

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
My supervisor genuinely cares about me.	1	2	3	4	5
My supervisor gives me help when I need it.	1	2	3	4	5
My supervisor supports me in difficult case situations.	1	2	3	4	5
My supervisor helps me learn and improve.	1	2	3	4	5
My supervisor values and seriously considers my opinions in case decision-making.	1	2	3	4	5
My supervisor helps me prevent and address burnout.	1	2	3	4	5

Source: A subscale of the Comprehensive Organizational Health Assessment (COHA) measure at the University of Denver (Potter, Leake, Longworth-Reed, Altschul, & Rienks, 2016).

Appendix K

Organizational Support Scale

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly Agree
The organization shows very little concern for me.	1	2	3	4	5	6	7
The organization really cares about my well-being.	1	2	3	4	5	6	7
The organization cares about my general satisfaction at work.	1	2	3	4	5	6	7
The organization cares about my opinions.	1	2	3	4	5	6	7
The organization is willing to extend itself in order to help me perform my job to the best of my ability.	1	2	3	4	5	6	7
Even if I did the best job possible, the organization would fail to notice.	1	2	3	4	5	6	7
The organization takes pride in my accomplishments at work.	1	2	3	4	5	6	7
The organization strongly considers my goals and values.	1	2	3	4	5	6	7
Help is available from the organization when I have a problem.	1	2	3	4	5	6	7

Source: Eisenberger, R., Fasolo, P., & Davis-LaMastro, V. (1990). Perceived organizational support and employee diligence, commitment, and innovation. *Journal of Applied Psychology*, 75(1), 51–59.

Appendix L

Job Satisfaction Scale

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I am satisfied with my job.	1	2	3	4	5

Appendix M

Client Success Scale

How often do you feel: Circle your answer using the new scale below:

	Never	Seldom	Sometimes	Usually	Always
How often do you feel successful in helping clients make positive changes in their lives?	1	2	3	4	5
How often do you feel you are successful in helping clients achieve case goals?	1	2	3	4	5
How often do you feel you are successful in helping clients remain safe?	1	2	3	4	5
How often do you feel your efforts have contributed to the physical, mental, and social well-being of your clients?	1	2	3	4	5
How often do you receive thanks or expressions of gratitude from clients you have worked with or their families?	1	2	3	4	5

Appendix N
Intent to Leave Scale

Withdrawal Cognition

	Never	Seldom	Sometimes	Usually	Always
How often do you think about quitting your work with ID/DD clients	1	2	3	4	5
	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I often think about quitting my work with Id/DD clients	1	2	3	4	5

Intent to Leave

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly Agree
I intend to leave my job in the next six months.	1	2	3	4	5	6	7
I will probably look for a new job in the next six months	1	2	3	4	5	6	7
I intend to leave my job in the next six months.	1	2	3	4	5	6	7

Appendix O

General Health Measure

In general, would you say your health is:

- ☐ Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor
- ☐ Don't know ☐ Refuse to Answer ☐ Not Applicable

Appendix P

Job Satisfaction Scale

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I am satisfied with my life	1	2	3	4	5

Appendix Q

Social Desirability. A Social Desirability Scale

	Definitely True	Mostly True	Don't Know	Mostly False	Definitely False
I am always courteous even to people who are disagreeable.	1^a	2	3	4	5
There have been occasions when I took advantage of someone.	1	2	3	4	5^a
I sometimes try to get even rather than forgive and forget.	1	2	3	4	5^a
I sometimes feel resentful when I don't get my way	1	2	3	4	5^a
No matter who I am talking to, I'm always a good listener.	1^a	2	3	4	5

Note. Shown above is the contiguous, block-format approach to administration of the SDRS-5. The items can also be randomly mixed with other items using the same response format.

^a Indicates the direction of the extreme SDRS response, scored 1. All other responses are scored 0.

Source: Hays, R. D., Hayashi, T. & Stewart, A. L. (1989). A five-item measure of socially desirable response set. *Educational and Psychological Measurement*, 49, 629-636.

Appendix R

Survey Questions

Today's Date _____ Organization _____

Circle the number that corresponds to your level of agreement with each statement

	1.Strongly Disagree	2.Disagree	3.Neutral	4.Agree	5.Strongly Agree
I am satisfied with the work I do with ID/DD clients.	1	2	3	4	5
My supervisor genuinely cares about me.	1	2	3	4	5
My supervisor gives me help when I need it.	1	2	3	4	5
My supervisor supports me in difficult case situations.	1	2	3	4	5
My supervisor helps me learn and improve.	1	2	3	4	5
My supervisor values and seriously considers my opinions in case decision making.	1	2	3	4	5
My supervisor helps me prevent and address burnout.	1	2	3	4	5
I am satisfied with my life	1	2	3	4	5
I often think about quitting my work with ID/DD clients	1	2	3	4	5

	1.To a very great extent	2.To a considerable extent	3.To a moderate extent	4.To a limited extent	5.Not at all
Indicate how you have felt over the past month.					
I tend to bounce back quickly after hard times.	1	2	3	4	5
I have a hard time making it through stressful events.	1	2	3	4	5
It does not take me long to recover from a stressful event.	1	2	3	4	5
It is hard for me to snap back when something bad happens.	1	2	3	4	5
I usually come through difficult times with little trouble.	1	2	3	4	5
I tend to take a long time to get over setbacks in my life.	1	2	3	4	5

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

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

Please answer the following questions about your work environment

I intend to leave my job in the next 6 months.	1	2	3	4	5	6	7
Even working overtime, I cannot finish all of my work	1	2	3	4	5	6	7
My caseload is too high	1	2	3	4	5	6	7
I have too many cases to do a good job, yet I am expected to do so.	1	2	3	4	5	6	7
I cannot spend enough time with my clients.	1	2	3	4	5	6	7
It is difficult for me to keep up with agency policies and guidelines.	1	2	3	4	5	6	7
I will probably look for a new job in the next six months	1	2	3	4	5	6	7
I intend to leave my job in the next six months.	1	2	3	4	5	6	7
The organization (where the survey is being administered) shows very little concern for me.	1	2	3	4	5	6	7
The organization really cares about my well-being.	1	2	3	4	5	6	7
The organization cares about my general satisfaction at work.	1	2	3	4	5	6	7
The organization cares about my opinions.	1	2	3	4	5	6	7
The organization is willing to extend itself in order to help me perform my job to the best of my ability.	1	2	3	4	5	6	7
Even if I did the best job possible, the organization would fail to notice.	1	2	3	4	5	6	7
The organization takes pride in my accomplishments at work.	1	2	3	4	5	6	7
The organization strongly considers my goals and values.	1	2	3	4	5	6	7
Help is available from the organization when I have a problem.	1	2	3	4	5	6	7

How often do you feel: Circle your answer using the new scale below							
1 Never	2 Seldom	3 Sometimes	4 Usually	5 Always			
How often do you feel successful in helping clients make positive changes in their lives?	1	2	3	4	5		
How often do you feel you are successful in helping clients achieve case goals?	1	2	3	4	5		
How often do you feel you are successful in helping clients remain safe?	1	2	3	4	5		
How often do you feel your efforts have contributed to the physical, mental, and social well-being of your clients?	1	2	3	4	5		
How often do you receive thanks or expressions of gratitude from clients you have worked with or their families?	1	2	3	4	5		
How often do you think about quitting your work with ID/DD clients?	1	2	3	4	5		
In the past 7 days how often have you had these EXPERIENCES:							
I feel emotionally numb.	1	2	3	4	5		
My heart starts pounding when I think about my work with clients.	1	2	3	4	5		
It seemed as if I am reliving the trauma experienced by my clients(s).	1	2	3	4	5		
I have trouble sleeping.	1	2	3	4	5		
I feel discouraged about the future.	1	2	3	4	5		
Reminders of my work with clients upset me.	1	2	3	4	5		
I have little interest in being around others.	1	2	3	4	5		
I feel jumpy.	1	2	3	4	5		
I am less active than usual.	1	2	3	4	5		
I thought about my work with clients when I did not intend to.	1	2	3	4	5		
I have trouble concentrating.	1	2	3	4	5		
I avoid people, places, or things that remind me of my work with clients	1	2	3	4	5		
I have disturbing dreams about my work with clients.	1	2	3	4	5		
I want to avoid working with some clients.	1	2	3	4	5		
I am easily annoyed.	1	2	3	4	5		
I expect something bad to happen.	1	2	3	4	5		
I notice gaps in my memory about client sessions.	1	2	3	4	5		
I am always courteous even to people who are disagreeable.	1	2	3	4	5		
There have been occasions when I took advantage of someone.	1	2	3	4	5		
I sometimes try to get even rather than forgive and forget.	1	2	3	4	5		
I sometimes feel resentful when I don't get my way.	1	2	3	4	5		
No matter who I am talking to, I'm always a good listener.	1	2	3	4	5		
In general, would you say your health is:							
? Excellent	? Fair	? Refuse to Answer					
? Very Good	? Poor	? Not Applicable					
? Good	? Don't Know						
Using the scale below, circle the number that most accurately reflects your response.							
1. Never 2. A few times a year 3. Once a month 4. A few times a month 5. Once a week 6. A few times a week 7. Every day							
I deal very effectively with the problems of clients.	1	2	3	4	5	6	7
I feel I treat some clients as if they were objects (things) instead of people.	1	2	3	4	5	6	7
I feel emotionally drained from my work.	1	2	3	4	5	6	7
I feel fatigued (tired) when I get up in the morning and have to face another day on the job.	1	2	3	4	5	6	7
I have become more callous (hard hearted) towards people since I took this job.	1	2	3	4	5	6	7
I feel I am positively influencing other people's lives through my work.	1	2	3	4	5	6	7

Working with people all day is really a drain for me.	1	2	3	4	5	6	7
I do not really care what happens to some clients.	1	2	3	4	5	6	7
I feel exhilarated after working closely with clients.	1	2	3	4	5	6	7

Approximately how many ID/DD clients have you worked with during your entire career? _____

PLEASE READ THE FOLLOWING LIST OF TRAUMATIC EVENTS

- List how many **CURRENT** clients experienced the trauma
- List how many **PAST** clients experienced the trauma.

	Current Clients	Past Clients
1. Natural disaster (for example flood, hurricane, tornado, earthquakes)	#__	#__
2. Fire or explosion	#__	#__
3. Transportation accident (for example car accident, boat accident, train wreck, plane crash)	#__	#__
4. Other type of serious accident at work, home or during recreational activity	#__	#__
5. Exposure to toxic substance (for example dangerous chemicals, radiation)	#__	#__
6. Physical assault (being attacked, hit, slapped, kicked, beaten up) by a relative, acquaintance, stranger	#__	#__
7. Assault with a weapon (being shot, stabbed, threatened with a knife, gun, bomb)	#__	#__
8. Sexual assault (rape, attempted rape, made to perform any type of sexual act)	#__	#__
9. Other unwanted or uncomfortable sexual experience	#__	#__
10. Life threatening illness or injury	#__	#__
11. Combat or exposure to a war zone (in military or as a civilian)	#__	#__
12. Captivity (kidnapped, abducted, held hostage, prisoner of war)	#__	#__
13. Severe human suffering	#__	#__
14. Sudden violent death	#__	#__
15. Serious injury, harm or death they caused to someone else	#__	#__
16. Were bullied	#__	#__
17. Any other extremely stressful event or experience	#__	#__
18. Severe neglect (didn't have enough to eat, had to wear dirty clothes, had no one to protect them)?	#__	#__
19. No one in the family loved them or thought they were important or special? OR The family didn't look out for each other, feel close to each other, or support each other	#__	#__
20. Saw or heard someone (a parent, a friend, anyone) being beaten up, stabbed, shot at, threatened with a knife in real life	#__	#__
21. Parents were separated or divorced	#__	#__
22. Mother, father or guardian died	#__	#__
23. Lived with anyone who was a problem drinker or alcoholic or who used street drugs	#__	#__
24. A household member went to jail or prison	#__	#__
25. A household member was depressed or mentally ill or did a household member attempt suicide?	#__	#__
26. A parent, guardian, or other household member threatened to, or actually abandoned them or threw them out of the house	#__	#__

How many of these types of traumatic events listed have you experienced (0-26)? _____

For each behavior, indicate

- 1) How **OFTEN** your clients engaged in the behavior (never to hourly) and
- 2) How **SEVERE** was the consequence of the behavior (slightly to severe).

	Never	Monthly	Weekly	Daily	Hourly	Slightly	Moderate	Severe
Kicking others	0	1	2	3	4	1	2	3
Pushing others	0	1	2	3	4	1	2	3
Biting others	0	1	2	3	4	1	2	3
Grabbing and pulling others	0	1	2	3	4	1	2	3
Scratching others	0	1	2	3	4	1	2	3

Pinching others	0	1	2	3	4	1	2	3
Spitting on others	0	1	2	3	4	1	2	3
Being verbally abusive with others	0	1	2	3	4	1	2	3
Destroying things (e.g., rips clothes, throws chairs, smashes tables)	0	1	2	3	4	1	2	3
Being mean or cruel (e.g., grabbing toys or food from others, bullying others)	0	1	2	3	4	1	2	3
Other: _____	0	1	2	3	4	1	2	3

How often do you feel: Circle your answer using the new scale below									
	1 Completely inapplicable	2 Somewhat applicable	3 Neutral	4 Somewhat applicable	5 Completely Applicable				
I handle my rules in a strict manner					1 2 3 4 5				
I go my own way despite critique from this client					1 2 3 4 5				
I impose strict demands upon this client					1 2 3 4 5				
I impose my will irrespective of what s/he/they may think					1 2 3 4 5				
I act correctively towards this client					1 2 3 4 5				
I act prohibitively towards her/him/they					1 2 3 4 5				
I take the lead when I am with this client					1 2 3 4 5				
I protest with this client when I do not agree with her/him/they					1 2 3 4 5				
I state my opinion directly to her/him/they					1 2 3 4 5				
I let her/him/they see my anger					1 2 3 4 5				
I grumble at this client					1 2 3 4 5				
I value this client					1 2 3 4 5				
I like to communicate with her/him/they					1 2 3 4 5				
I like doing something with this client					1 2 3 4 5				
I can work well with this client					1 2 3 4 5				
I often feel nice with this client					1 2 3 4 5				
I can handle everything better when this client supports me					1 2 3 4 5				
I need encouragement from her/him/they					1 2 3 4 5				

What is your current highest level of education? Check all that apply.

- ☐ Less than High School Diploma
 ☐ High School Diploma
 ☐ Associate Degree
☐ Bachelor's Degree
 ☐ Master's Degree
 ☐ Other _____

What is your employment classification? ☐ Part time ☐ Full time ☐ Not Applicable

Do you have a relative member or a love one who is diagnosed with Intellectual or Developmental Disability? ☐ Yes ☐ No

What is your current job title? Check all that apply

- ☐ Adult Day Training Staff
 ☐ Homemaker Provider
 ☐ Family Home Provider
☐ Community Living Support Staff
 ☐ Employment Specialist
 ☐ Residential Staff
☐ Community Access Staff
 ☐ Respite Provider
 ☐ Behavior Support Specialist
☐ Other _____ (Describe?)

____ Total number of clients you are serving currently (across all jobs with ID/DD clients you hold)?

____ Total number of your work hours involve one-on-one services with ID/DD clients every week?

____ Total number of your work hours involve indirect services such as paper work and meetings?

____ Do you work (Check all that apply): ☐ 1st shift ☐ 2nd Shift ☐ 3rd Shift ☐ Other _____ (Specify)

Are you of Hispanic/Latina/o origin?

? Yes ? No

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

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

What is the year you were born? _____

What is your gender?

? Female	? Non-binary/third gender	? Prefer to self-describe _____
? Male	? Prefer not to say	

How long have you worked in the field of ID/DD? Years _____ Months _____

How long have you worked for the organization (survey one) you are working in now? Years _____ Months _____

How long have you worked in your current position (org where survey occurring)? Years _____ Months _____

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

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

***** WHEW!! Thank you for your time in completing this survey *****

CURRICULUM VITA

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EDUCATION

& TRAINING: B.A., (Hon) Economics & Geography
Kwame Nkrumah University of Science and Technology, Ghana
1996-2000

M.A., Economics
University of Waterloo, Canada
2001-2002

M.S., Social Work
University of Louisville, USA
2007-2009

Ph.D., Social Work
University of Louisville, USA
2012-2020

AWARDS: Dean's Citation Award
University of Louisville
2020

NAACP Ambassador of Education – Higher Education Award,
Bowling Green, KY
2019

Bridge to Light Awards for Outstanding Achievement in General
Behavioral Health & Counseling
Kentucky
2018

Dean's Citation Award
University of Louisville
2009

Stan Frager Student Community Award
University of Louisville
2009

PROFESSIONAL SOCIETIES: National Association of Black Social Workers

PUBLICATIONS:

Adedoyin, A. C., Moore, S. E., Robinson, M. A., Clayton, D. M., **Boamah D. A.** & Harmon, D. K. (2019). The dehumanization of Black males by police: Teaching social justice—Black life really does matter! *Journal of Teaching in Social Work*, (39) 2, 111-131.

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PRESENTATIONS

Boamah, D.A. & Boamah, I.A. (2019). *Building and Sustaining a Healthy ID/DD Workforce: How to Manage Burnout and Secondary Trauma in a Challenging and Traumatized Environment*. Kentucky APSE Conference, Human Development Institute – University of Kentucky

Boamah, D. A. (2019). *Mental Health/Substance Abuse: Refugee Screening and Interventions*. Refugee Health Summit, Western Kentucky University

Moore, S. E. & **Boamah, D. A.** (2015). *Hands Up - Don't Shoot: Police Shooting of Young Black Males: Implications for Social Work and Human Services*. 43rd annual Dr. Joseph H. McMillan National Conference on the Black Family in America, University of Louisville, February 27.

Faul, A.C., Lawson, T. R., D'Ambrosio, J.G., **Boamah, D.A.**, Cotton, S., Alkohaiz, M., Smith, L.C., Lewis, S.N., Brown, L. & Zheng, Y. (2014). *Collaborative Teaching and Learning as a Tool to Ignite the Spark in Students*. 2014 Celebration of Teaching and Learning, University of Louisville, Delphi Center for Teaching & Learning, Louisville, Kentucky, February 7.

Faul, A.C., Gordon, B., D'Ambrosio, J.G., Ferrell, G., Tucker, M., Schapmire, T.J., Morgan, F., Thompson, J., Oak, C.S., Miller, J.D., Rhema, S., **Boamah, D.A.**, Brown, L., Boes, R.C., Zheng, Y., Lawson, T.R. (2013). *Academia and the Aging Network*. 38th Annual N4A Conference and Tradeshow, Louisville, KY, July 27-31.

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