

Intellectual and Developmental Disabilities

Prevalence of Secondary Traumatic Stress Among Direct Support Professionals in Intellectual and Developmental Disabilities Field

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ABSTRACT

Direct support professionals (DSPs) are deemed by existing literature as vital support to persons with intellectual or developmental disabilities (IDD). They may be exposed to the traumatic experiences of people with IDD with potential psychological implications. Secondary traumatic stress (STS) has been studied among related professionals across human services, but little is known among DSPs. The current study examines the prevalence of STS in a sample of DSPs. The results suggested that DSPs are exposed to traumatic experiences and exposure to a greater number of traumatized clients is significantly correlated with symptoms of STS. At least 12.4% of DSPs in this sample met the diagnostic criteria for experiencing PTSD symptoms. Also, results suggest STS differences in DSPs based on demographics.

*KEY WORDS: compassionate fatigue; PTSD; secondary trauma; vicarious trauma; IDD
workforce*

In 2017 approximately 7.4 million people in United States were diagnosed with an intellectual or developmental disability in the United States, including about 5.3 million children and 2 million adults (Larson et al., 2020). The data suggest a growing trend in developmental disabilities among children in the United States with some studies approximating that the number of children with developmental disabilities rose to 1 in 6 children (17%) between the ages of 3 to 17 between 2009 and 2017 (Zablotsky, et al, 2019). . It is estimated that as of June 30, 2017, about 1,478,425 IDD persons were known to or received services by state developmental disabilities program agencies in the United States (Larson et al., 2020). Direct support professionals are often considered a primary source of support for IDD individuals and their quality of life (DeWaele et al., 2009; Houseworth et al., 2020; Schuengel et al., 2010). The various supports IDD individuals receive from DSPs enables them to live in communities throughout the United States. 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; Nevill et al., 2021; Skirrow & Hatton, 2007). The job titles of DSPs include habilitation specialist, job coach, residential counselor, family care provider, and personal assistant among others. There are some DSPs work for state agencies, but a vast majority of them work in for-profit and nonprofit private agencies.

The Bureau of Labor Statistics does not keep records of DSPs who exclusively serve the IDD population, a report issued by the President's Committee for People with Intellectual Disabilities in 2017 estimated the total DSPs who supported IDD persons through state programs as of 2013 to be about 1.4 million. The report concluded further that this workforce is expected to grow yearly until 2030. The projected growth in demand for DSPs to support IDD persons is

attributed to the shift in service delivery in favor of deinstitutionalization and the fact that persons with IDD are living longer (Coppus, 2013) has resulted in high demand for workers.

Over the years, DSPs job descriptions have expanded, and workloads have increased (Braddock et al., 2011). Many are faced with poor working conditions such as low wages, limited benefits, and stressful working environments while trapped in a cycle of poverty with limited employment alternatives (Hewitt & Larson, 2007; Larson et al., 2003; Hewitt et al., 2015). A 2019 report issued by the National Association of State Directors of Developmental Disabilities Services, based on a survey of 26 states including the District of Columbia, showed that the median hourly wage of DSPs was \$12.00 compared to residential advisors, median hourly wage of \$14.16, psychiatric aides, hourly wage of 14.96 and nursing assistance, median hourly wage of \$14.96 (National Core Indicators, 2020). Thus, a high percentage of DSPs live below the poverty line and rely on public assistance to make ends meet despite the vital roles they play in supporting one of the most vulnerable groups of people in society (Larson & Hewitt, 2005). Recruitment and retention of DSPs has been difficult for organizations who support and serve IDD people (Hewitt & Larson, 2007; Schuengel et al., 2010). The rate of turnover was estimated to be 23.8% to 64.8% with the weighted average of 42.8% among DSP workforce (National Core Indicators, 2020). Other 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 et al., 2004). Pre- COVID 19 vacancy rate full-time DSP positions was between 4.1% and 13.7% and for part-time workers from 4.5% to 20.5% (National Core Indicators, 2020).

Literature Review Regarding Stress Effects on DSPs

Like other social services workers, DSPs are at risk of various occupational hazards. Two of these hazards that are well studied in the larger social service field are burnout and secondary traumatic stress. Burnout 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 the problems of others (Maslach, 1976, 1982). Burnout was first conceptualized 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). It usually entails deficient administrative support, insufficient compensation, persistent staffing problems, high caseloads, 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).

Secondary traumatic stress (STS) describes the immediate adverse reactions people can have to trauma survivors that they are helping. Figley (1983) defined secondary trauma as the emotional duress experienced by persons having close contact with a trauma survivor. It is a natural response as helpers identify and empathize with a survivor's traumatic experiences (Figley & Kleber, 1995). The symptoms of STS are the same as those experiencing direct trauma and post-traumatic stress disorder (Bride, 2007) and include heightened arousal, avoidance and intrusive thoughts, although in the case of STS the arousal is due to exposure to the trauma of others (e.g., being upset by reminders of work with clients) and the avoidance and intrusive thoughts focus specifically on wishing to avoid client pain (e.g., avoiding people, places or things that remind them of work with clients) and being unable to keep worried thoughts about

clients out of mind (e.g., reliving the trauma experienced by clients, having disturbing dreams about work with clients, having unintended thoughts about work with clients). In fact, the more recent version of the American Psychiatric Association Diagnostic Statistical Manual-DSM-V (2013) includes as the first criterion for PTSD (followed by the symptoms described above) as “exposure to actual or threatened death, serious injury, or sexual violence in one or more of the following ways: 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, or 4) experiencing repeated or extreme exposure to aversive details of the traumatic event(s) such as in the role of a first responder collecting human remains, police officers repeatedly exposed to details of child abuse, etc.” Thus, if those who work with traumatized clients are exposed to the details of their trauma and also meet the criteria regarding experiences of symptoms laid out in the DSM as a result of such work, then they meet four out of six criteria to be diagnosed with PTSD, via the secondary traumatic stress route.¹

Hence, an occupational hazard of working with traumatized clients may be secondary trauma which has the same symptoms of PTSD and which, if symptoms last more than 6 months or impair functioning, could impair their ability to work effectively with clients. Secondary trauma has been associated with subsequent physical health problems (Lee, Gottfried, & Bride, 2018) and an unwillingness to remain in these high stress positions (e.g., Barbee, et al., 2018).

Although the initial presentation of these terms (burnout and STS) shows conceptual overlap and similarities, a significant number of studies have highlighted their distinctions (Canfield, 2005; Schauben & Frazier, 1995). Various studies have attempted to examine the points of convergence and divergence between burnout and STS (Deville et al., 2009). The

¹ Excluded are criterion E- duration of symptoms and criterion F- impairment due to symptoms.

convergence of burnout and STS constructs rely on the belief that they share common theoretical underpinnings. This means that in the helping profession they may both emanate from exposure to and engagement of emotionally fragile clients via interpersonally demanding jobs and represent debilitation that can obstruct a provider's services (Jenkins & Baird, 2002). However, the constructs should be no more than moderately related because burnout can happen in jobs outside of the helping professions and often involves reactions to workplace structural strains such as exposing staff to long hours, high caseloads, role overload, role stress, injustice, bureaucratic processes, and other forms of occupational stress leading to reductions in a sense of personal accomplishment, emotional exhaustion from overwork and depersonalization of others. This is in contrast to the impact of exposure to the traumatic experiences of clients repeatedly while also devoting much time to trying to help them overcome their adversity in some way, which may lead to STS- (Schauben & Frazier, 1995; Jenkins et al., 2002).

The prevalence of burnout among the IDD workforce has been well studied (e.g., Finkelstein et al., 2018) and the rates are similar or slightly lower compared to workers of other types of human serve organizations (e.g., Dennis & Leach, 2007; Lin & Lin, 2013) and range between 25% and 35% among DSPs. However, a very limited number of studies have examined STS among IDD workers. A dissertation study explored individual and organizational factors in predicting DSPs' professional quality of life using Professional Quality of Life (ProQOL) assessment tool. The 30-item instrument is made compassionate satisfaction, burnout and secondary traumatic stress subscales Stamm, 2010). However, the study did not report the levels of STS among DSPs in terms of frequency of symptoms at which symptoms met the diagnostic criteria of symptoms of PTSD (Keesler, 2016). However, Keesler reported that 23% of the respondents had standardized scores in the top quartile for STS, 29% scored in the top quartile

for burnout, and 23% scored in the bottom percentile for compassionate satisfaction. Moreover, 9% of the participants scored high for STS but low for burnout symptoms and 15% recorded high burnout score but low STS scores. About 12% of participants recorded high scores for both STS and burnout. Also, two studies in this literature included DSPs in their sample: Lee et al. (2018), with 8.3% of IDD workforce participants in their sample and Bride (2007), with 1.1%. However, the percentages of IDD workforce participants represented in those studies were relatively small. In addition, neither of these studies reported specific analysis pertaining to the IDD workforce subsample.

There is evidence to indicate that STS is prevalent among professionals in other human service fields using the STS scale which specifically ties the symptoms of post-traumatic stress with helping clients (STSS; Bride et al., 2004). For example, using the STSS in various studies, the results concluded that 15% of both master's level social workers (Bride, 2007) and clinical social workers (Lee et al., 2018), 12% of foster parents (Carew, 2016), 21% of professionals helping survivors of family violence or sexual assault (Choi, 2011), 19% of alcohol and drug addiction counselors (Bride et al., 2009), 39% of juvenile justice education staff experience (Hatcher et al., 2011), 49% of victim advocates (Benuto et al., 2018) and 50% of child welfare workers (Conrad & Kellar-Gunther, 2006) met the diagnostic criteria for clinical levels of PTSD symptoms due to exposure to traumatized clients.

Prevalence of Trauma Among Individuals with IDD

In order for DSPs to experience STS, they must be exposed to descriptions of and/or the effects of client trauma. Notably, the literature indicates that individuals with IDD are believed to be at a higher chance of experiencing traumatic adverse events due to their increased vulnerability (Hastings et al., 2004; Wigham et al., 2011). Persons with IDD are exposed to

significant traumatic adverse events from childhood through adulthood. Current evidence indicates that children diagnosed with IDD 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). A meta-analysis on trauma among children diagnosed with IDD concluded that approximately 25 percent of children with disabilities experience child maltreatment (Jones et al., 2012). Also, the result shows that children with IDD are 3.7 times more at risk of being victims of abuse than their peers without disabilities. Jones et al. (2012) estimated that children with IDD were 4.3 times more at risk of being victims of family violence and 4.6 times at higher risk of suffering sexual violence than their peers without disabilities.

In addition to multiple trauma experiences in the early stages of life, the IDD population also experiences prolonged and interpersonal trauma (Wigham & Emerson, 2015). Evidence suggests that the IDD population is at a higher risk of interpersonal violence 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 IDD individuals who are injured by caregivers and family members (Fogden et al. 2016; Wigham & Emerson, 2015). Studies have found that people with IDD — more than people without an IDD diagnosis — experience: sexual or physical abuse; emotional abuse (Reiter et al., 2007); institutionalization (Wigham & Emerson, 2015); life threatening illness or injury; parental divorce (Hatton & Emerson, 2004), healthy lifestyle barriers, higher health risks, and higher prevalence of mental health illnesses (Charlot & Beasley, 2013; Evans et al., 2012).

Studies have documented that exposure to adverse events when assessed at a lower developmental level is associated with higher and more severe trauma symptoms (e.g., Mevissen

et al., 2014). 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). This suggests that cognitive impairment and other vulnerabilities could exacerbate the risks of IDD individuals to traumatic events and associated psychological reactions.

Given traumatization among those with IDD, it is likely that DSPs are, in fact, exposed to traumatized IDD clients and may learn of the traumatic events their clients have faced in life through record reviews, stories from family members, other staff or the people with IDD themselves. Yet, very little has been done to investigate the prevalence rate of STS or the types of STS symptoms DSPs experience as a result of working with the IDD population. Therefore, the purpose of the present study was to investigate the prevalence of STS in a sample of the IDD workforce by the frequency of individual symptoms, the frequency with which diagnostic criteria for symptoms of PTSD due to exposure to traumatized clients are met, and the severity of STS levels among these workers.

METHODS

Data Collection

Data was collected from July 2019 through December 2019 using a convenience sampling method. Twenty-one agencies serving individuals with IDD who employed DSPs in the Commonwealth of Kentucky agreed to either pass along the link to the survey to their employees or allowed direct access to DSPs in their agencies. A total of 1,243 surveys/survey links were sent to workers in those 21 agencies. At the beginning of data analysis, 442 (35.6%) surveys were either returned through the mail (n = 413), completed online on the Qualtrics^{XM} survey platform through the university (n = 28) or scanned and emailed (n = 3). A total of 21

respondents were excluded from analysis because of extensive missing data ($n = 421$) and outlier² scores on critical item ($n = 5$), resulting in an effective response rate of 33.5% ($n = 416$). This response rate is within the normal range of other studies that utilize data collected in collaboration with organizations (Baruch, & Holtom, 2008).³

Instruments

Questions and scales included in this study were drawn from a larger questionnaire examining workforce issues among DSPs. For the current analysis, questions included those related to participant exposure to clients with trauma histories and secondary trauma.

Demographic questions

To describe the sample, participant education type and level, race, ethnicity, gender, age, and some work experience variables are included. Items regarding work experiences was also an indicator of possible exposure to traumatized clients and included all items that had ever been asked in the STS literature with regards to length of and type of employment. All items were included for thoroughness, even though there was a likelihood that these items would be highly correlated or tap into similar exposure dynamics: (a) length of time working in the IDD field; (b) length of time working at the current agency; (c) length of time in current position and (d) type of program for current employment (e.g., residential and day services).

² Outliers were calculated for exposure to client's traumatic events. Frequency in excess of z score of 3.29 ($p < 0.001$, two-tailed test) were deleted (Tabachnick & Fidell, 2013).

³ Baruch and Holtom (2008) examined response rates for surveys used in organizational research among 480 studies published in refereed academic journals covering more than 100,000 organizations and 400,000 respondents. The average response rate for studies that utilized data collected from organizations was 35.7% with a standard deviation of 18.8.

Exposure to Client Trauma Experiences

For a more direct measure of exposure to clients with trauma histories, participants were asked to estimate the number of past and current clients who had experienced any of 26 traumatic events (subcategorized into disaster/ accident; assault/ violence; adverse childhood experiences; other traumatic experiences) separately. The composite measure of current client trauma exposure is a summation of all the number of people with IDD to whom the DSP currently provides support who has experienced any of the traumatic event and the composite measure of past client trauma exposure is a summation of all the number of past people with IDD to who DSP has supported who experienced any of the traumatic events. The composite measure for the total client trauma exposure is a summation of the number of people with IDD both currently and in the past who experienced any of the traumatic events. Thus, for each worker this exposure measure included a self-reported estimate of people with IDD the DSP supported, in the past and currently, who they knew had been exposed to at least one traumatic event. The mean number of current and past people with IDD who DSPs estimated to have experienced at least one traumatic event in the sample was 105 with a standard deviation of 227 and the Cronbach's alpha coefficient for this sample was 0.96. While this measure is not an objective measure of worker's exposure to client trauma, it does speak to each worker's perception of the number of exposures to past and present client's traumatic experiences. This perception may be more important than the precise number of traumatized clients because that is the impression that they carry with them that may fuel STS symptoms.

Secondary Trauma

The Secondary Traumatic Stress Scale (Bride et al., 2004; Bride, 2007)⁴ was developed by Brian Bride using the criteria for PTSD symptoms in the Diagnostic and Statistical Manual of Mental Disorders (4th ed., text revision; DSM-IVTR; APA 2000). As part of the longer survey on working with IDD clients and experiences in the workplace, participants indicated the frequency with which they experienced 17 symptoms over the past seven days. The items comprise three sub-scales to assess the frequency of intrusion, avoidance and arousal symptoms associated with secondary trauma resulting from working with traumatized populations. For example, items include “It seemed as if I was reliving the trauma(s) experienced by my client(s);” “I have trouble concentrating;” “Reminders of my work with clients upset me;” “I avoided people, places or things that reminded me of my work with clients;” “I am easily annoyed;” “I noted gaps in my memory about client sessions.” Each item on the STSS corresponds to one of the 17 post-traumatic stress disorder symptoms as delineated in the DSM IVTR² and is rated using a 1 (Never), 2 (Rarely), 3 (Occasionally), 4 (Often), 5 (Very Often) scale. The factorial validity of the STSS was addressed through the use of confirmatory factor analysis using SEM techniques. In addition, the Cronbach’s α for the STSS in the validation study was 0.93 as were Alphas for subscales of .80 for Intrusion, .87 for Avoidance and .83 for Arousal. Convergent validity showed that STS as measured in the STSS was highly correlated with depression ($r = .50$), anxiety ($r = .55$), and extent ($r = .26$) and frequency ($r = .23$) of exposure to and intensity of work with clients regarding their trauma. Discriminate validity in the same study showed STS was not correlated with age, ethnicity or income (Bride et al., 2004).

⁴ For more information on the STSS, review Bride et al., (2004) and Bride (2007).

The Cronbach's α of the STSS for this sample was 0.92 and the Cronbach's α reported for Avoidance Subscale was 0.85, the Intrusion Subscale was 0.74 and Arousal Subscale was 0.81, demonstrating robust reliability with the current sample.

Data Analysis Strategy

Using IBM SPSS Statistics software version 26, descriptive analyses were computed on the demographic variables. Frequency, means, and standard deviations were calculated for the dependent variable (i.e., secondary traumatic stress) to quantify frequency of individual symptoms, the frequency with which diagnostic criteria for PTSD symptoms are met, and the severity of STS levels.

RESULTS

Sample Characteristics

Sample demographics including gender, age, race, ethnicity, and education are displayed in Table 1. The sample was mostly between the ages of 25 and 55, predominantly female (79.5%) and non-Hispanic white (79.4%). More than half (54.2%) of the workforce had a high school diploma or educational equivalency.

This sample of DSP field experience in the IDD service ranged from less than one year to 40 years with the mean years of 8.5 (SD = 8.5). A little less than half (46%) of the workers had five years or less in IDD field experience. Also, DSPs reported a range of years of experience with their current organization — from less than a year to 36 years with a mean of 4.9 (SD = 6.2) years. Also, more than two-thirds (69%) reported being with their current organization for five years or less with about one-third (33%) being there a year or less. A significant portion of the

staff worked in their current position for 10 years or less (89%) with about 3% being in their current position for more than 20 years. The mean years in current position was 4.4 (SD = 5.9).

About 41% of the respondents worked in a day services setting (adult day training, community living support, community access, homemaker, supported employment and behavior support services) while 28% worked in residential setting (staff residence, family home provider and respite services) and 31% of the respondents worked in other areas such as combination of day program and residential as well as administration positions.

Secondary Traumatic Stress

The composite STS and the subscales were computed using the sum function of the specified items. Table 2 represents the statistical information about the variable. In the validation study of the STSS, the Mean overall STSS score was 29.49, the Mean Intrusion score was 8.11, the Mean Avoidance score was 12.49 and the Mean Arousal score was 8.89. By comparison to this norm, the mean of the full STS scale for this sample was 27.2 (SD = 10.1), with an observed range of 17 – 76, indicating moderately low levels of secondary traumatic stress in this group. The mean scores of the three cluster of symptoms were: Intrusion Symptoms mean was 7.9 (SD = 3.1), Avoidance Symptoms mean was 10.9 (SD = 4.4), and Arousal Symptoms mean was 8.7 (SD = 3.6), all three falling just below the standard Mean.

Individual Symptoms and Subscale Means

In accordance with Bride (2007) and based on criteria in the DSM-IVTR manual (2000), an STS symptom was considered to be endorsed if the respondent indicated that the symptom was experienced "occasionally," "often," or "very often" in the preceding seven days. Table 3, contains descriptive statistics of the various items as they relate to the three cluster symptoms; intrusion symptoms, avoidance symptoms and arousal symptoms. For the intrusion thoughts

subscale, 17.96% of participants reported elevated levels (e.g., a 3,4 or 5 on the scale). Of the five intrusion symptoms the most endorsed symptom was “I thought about my work with clients when I didn’t intend to” (43.8%). For the avoidance subscale, 16% of participants reported elevated levels. The top endorsed avoidance symptom was “I feel discouraged about the future.” For the arousal subscale, 20.66% of participants reported elevated levels. The top symptom was “I experience trouble sleeping” (36.4%) constituting the second highest symptom endorsed of the 17 STSS items overall.

Meeting the Cutoff for a Diagnosis of PTSD Symptoms Due to Secondary Exposure

The diagnostic criteria for PTSD symptoms due to exposure to traumatic events through their clients (secondary trauma) was examined as indicated in the APA DSM-IVTR (2000) for PTSD Criteria B, C and D as they relate to intrusive thoughts, avoidance and arousal. A detailed explanation of the STS diagnostic criteria for symptoms can be found in Bride (2007). Bride shared with our research team the statistical syntax he uses to calculate which participants in a study reach the cutoff level for PTSD symptoms due to secondary exposure to client trauma. In this sample, 83% of participants had been exposed to current or past clients with a trauma history.

A statistical summary of endorsement of criteria for the three symptom clusters and full STS percentages are represented in Table 4. Approximately 12.4% of the respondents of the sample met the exposure criteria (PTSD Criteria A) and the additional three core diagnostic criteria for PTSD symptoms due to secondary exposure to client trauma. About 54.2% endorsed enough items to meet the criteria of intrusion symptoms (PTSD Criteria B), 16.3% met the diagnostic criteria for avoidance symptoms (PTSD Criteria C), and 28.8% endorsed diagnostics

levels of arousal symptoms (PTSD Criteria D). It is important to note that 40.4% of the respondents did not meet any of the three core criteria for PTSD symptoms.

Correlational Analysis between STS and Demographic Variables

A Spearman rank order coefficient was calculated to determine the relationships between the STS continuous variable and each of the continuous level demographic variables. These variables included, age, years of field experience, years with current organization, years in current position and exposure to client trauma. The result of the correlation matrix is represented in Table 5. The results indicated a positive correlation between STS and years of field experience (Spearman's $\rho = 0.168$, $p = 0.002$), years with current organization (Spearman's $\rho = 0.166$, $p = 0.002$), years in current position (Spearman's $\rho = 0.114$, $p = 0.038$) and exposure to client's trauma (Spearman's $\rho = 0.273$, $p = 0.001$).

Group Difference of STS in Demographic Variables

To examine group differences in various demographic variables, gender was recoded into female and male; race was recoded into White and non-White; and educational level was recoded into high school or less and beyond high school level. The result from one-way ANOVAs is represented in Table 6. The mean for workers with less education was 25.37 (SD = 8.84) and for more education was 29.26 (10.80), indicating that workers with more education were at higher risk of STS, $F_{1,336} = 13.13$, $p = 0.001$. Also, there were significant differences among those with different job titles. The mean STS levels for day services workers was 27.55 (SD = 9.74) and for residential setting staff was 24.69 (SD = 8.73), indicating that those who worked in day services were at higher risk of STS than those who worked in residential settings, $F_{1,252} = 5.68$, $p = 0.018$. Significant differences existed in identified race of DSPs as well. The mean for workers

identified as White was 27.57 (SD = 10.03) and for workers identified as non-White was 24.46 (SD = 7.37), indicating that workers who identified as racially White were at higher risk of STS, $F_{(1, 364)} = 6.38, p = 0.012$. There was no significant difference between females and males in STS.

DISCUSSION

The present study explored staff exposure to traumatized clients and the prevalence of secondary trauma symptoms among DSPs using the Secondary Traumatic Stress Scale (Bride et al. 2004). The results indicated that while 83% of staff were exposed to clients with a trauma history, and the correlation between the exposure and STS was significant, only 12.4% of the DSPs met the cutoff for diagnostic criteria for PTSD symptoms. This level of STS is in line with findings in other studies of foster parents, social workers and first responders (Bride, 2007; Carew, 2016; Lee et al., 2018; Hatcher, et al., 2011). Studies have found the rate of endorsement of STS symptoms severe enough to meet four of six criteria for a diagnosis of post-traumatic stress disorder to be around 15% of social workers (Bride, 2007; Lee et al., 2018; Hatcher et al., 2011). However, as noted earlier other studies have reported much higher levels of STS in various professionals such as: 32% to 50% among child welfare workers (e.g., Choi, 2011), domestic violence advocates (Slattery & Goodman, 2009), emergency department nurses (Dominguez-Gomez & Rutledge, 2009), and juvenile justice workers.

The relatively lower levels of STS among IDD than other social services professionals may be due to the nature of exposure to client trauma. For instance, child welfare and domestic violence workers are usually exposed to the trauma contemporaneously or shortly after it has occurred, experience the outcomes while working with the client and families and in some cases have to interact with the perpetrators. The impact of these types of daily exposures to client

trauma across multiple families may present a much more profound psychological effect. Therapists may have a bit more STS than IDD 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 elevation of STS symptoms. To the contrary, most of the abuse exposure in the IDD workforce may relate to past instances of traumatic events and only when they read client case files (which may be at the beginning of the time working with a client and not repeatedly). Conversations with clients, coworkers or client family members about trauma may be minimal. It is likely that IDD workers may experience the effects of past trauma more in the form of client challenging behaviors, but even then, most of the work with their clients is not focused on treating the trauma or its outcomes directly.

An examination of the three STS symptoms (intrusion, avoidance, and arousal), found that the IDD workers in the current study experienced more symptoms of intrusion than the other two symptoms. This pattern of symptoms is consistent with the Lee et al. (2018) study of clinical social workers, but lower than the symptoms found in Bride (2007) among master's level social workers. 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).

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.

Some clues as to which DSP workers are more prone to STS was found in additional analyses. The results found that the longer a worker was in the IDD field the higher the likelihood of developing STS, likely due to greater chance of exposure to traumatized clients. Also, there were differences in workers in terms of their educational level, racial identity, and type of employment. None of these findings are intuitive and further research is needed to understand why people with more education, who are White and working in community settings would experience more STS than others.

Certainly, replication of these findings in other states or with a nationally representative sample using a purposeful sampling method that is representative of the workforce is warranted to determine if the results will hold. In addition, future studies could examine why various demographic groups differ and whether there exist risk and protective factors in understanding the effects of STS among DSPs in the IDD field.

Study Limitations

First, the study utilized a cross sectional design, hence the need to be cautious in drawing conclusions because it offers a point in time measure of STS. Therefore, the need for confirming the results through a longitudinal design and replicating this study in different samples is warranted.

Second, although our sample included a relatively large number of DSPs, it was not randomly selected nor was it necessarily representative of the IDD workforce in the Commonwealth or nationally. However, it was derived from various institutions located in different types of IDD 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.

Third, 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 symptoms 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 symptoms presented in this study should be considered as positive screens but not confirmed cases of PTSD since additional criteria of duration and impairment needed for a diagnosis of PTSD were not included in the measure nor verified by a clinician. However, in this study, the frequency of composite scales of STS supported the previous findings using the STSS in that both showed STS to be moderately low in DSPs.

Finally, the measure of exposure to client trauma was simple. Participants were asked how many of their current and past clients had experienced any of 26 traumatic events. We did not ask participants to indicate for each of the clients, which of the traumatic events they had experienced, thus, we do not have a measure of the intensity of trauma experienced by each of the IDD clients to which each participant was exposed. Future research may want to assess intensity more carefully to ensure that exposure is more fully assessed and understood.

Conclusion

In spite of the limitations discussed above, this study advances knowledge and understanding of the occupational hazards that can 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 populations in our society may be hampered by the potential risks of STS. To that end, the current study indicated that in addition to a high likelihood of DSPs endorsing at least one of symptoms of STS, about 12% may meet the diagnostic criterion for PTSD symptoms. Existing evidence has linked STS to negative staff work satisfaction (Graham et al., 2016), intent to leave (Barbee et al. 2018), and poor general health (Lee et al., 2018) in various human services fields with significant implications on client care and organizational workforce recruitment and replacement costs.

It will be important for future studies to explore the implications of STS on DSPs, the persons they support and their employment organizations. Also, the current study did not explore psychological or experiential factors that could contribute to STS among DSPs. However, this study is the first to document the prevalence of STS, at diagnostic and sub diagnostic levels, among DSPs who support IDD individuals.

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Tables

Table 1: Demographic and Professional Characteristics of DSPs

ITEM	n	Mean	SD	%
Age	321	41.0	14.6	
Years of Experience in IDD Field	361	8.5	8.5	
Years of Experience in Current Organization	351	4.9	6.2	
Years of Experience in Current Position	338	4.3	6.0	
Exposure to Client Trauma (Past and Current)	326	105.1	227.3	
Race				
American Indian/ Alaskan Native	5			1.3
Black/ African American	58			15.3
Native Hawaiian/ other Pacific Islander	1			0.3
Non-Hispanic White/ Caucasian	301			79.4
Biracial/ Multiracial	10			2.6
Other	4			1.1
Ethnicity: Hispanic				
Yes	5			3.2
No	149			96.8
Gender				
Female	306			79.5
Male	67			17.4
Prefer to self-describe	2			0.5
Prefer not to say	10			2.6
Education				
Less than high school diploma	8			2.1
High school diploma or equivalency	208			54.2
Associate degree	38			9.9
Bachelor's degree	70			18.2
Master's degree	28			7.3
Other	32			8.3
Type of Program for Current Employment				
Day services	158			41.4
Residential services	106			27.7
Other	118			30.9

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Table 2: Means, Standard Deviation and Ranges for the Intrusion, Avoidance and Arousal Subscales and the Full STS

	n	Mean	SD	Possible Range	Observed Range	α
Intrusion Subscale (5) ¹	404	7.9	3.1	5 – 25	5 - 24	0.74
Avoidance Subscale (7) ¹	406	10.9	4.4	7 – 35	7 - 31	0.85
Arousal Subscale (5) ¹	409	8.7	3.6	5 – 25	5 – 23	0.81
STS Full (17) ¹	396	27.2	10.1	17 – 85	17 – 76	0.92

¹Number of items in each scale

SD = Standard Deviation

α = Cronbach's Alpha

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Table 3: Frequency of Secondary Traumatic Stress Symptoms Reported by Direct Support Professionals

Criterion (Item No.)	Never n (%)	Rarely n (%)	Occasionally n (%)	Often n (%)	Very Often n (%)	<i>M</i>	<i>SD</i>
Criterion B – Intrusion symptoms							
Cued physiological reaction (2)	272(65.7)	64(15.5)	54(13.0)	16(3.9)	8(1.9)	1.6	1.0
Sense of reliving clients' trauma (3)	299(72.7)	49(11.9)	43(10.5)	12(2.9)	8(1.9)	1.5	0.9
Cued psychological distress (6)	308(74.2)	67(16.1)	31(7.5)	5(1.2)	4(1.0)	1.4	0.8
Intrusive thoughts about clients (10)	156(37.9)	76(18.4)	114(27.7)	48(11.7)	18(4.4)	2.3	1.2
Disturbing dreams about clients (13)	357(86.2)	33(8.0)	13(3.1)	8(1.9)	3(0.7)	1.2	0.7
Criterion C – Avoidance symptoms							
Emotional Numbing (1)	233(56.0)	94(22.6)	73(17.5)	9(2.2)	7(1.7)	1.7	0.9
Foreshortened future (5)	226(54.3)	89(21.5)	76(18.4)	16(3.9)	6(1.5)	1.8	1.0
Detachment from others (7)	287(69.0)	77(18.6)	39(9.4)	9(2.2)	3(0.7)	1.5	0.8
Diminished activity level (9)	226(54.7)	96(23.2)	63(15.3)	23(5.6)	5(1.2)	1.7	1.0
Avoidance of people, places things (12)	329(79.1)	47(11.3)	33(7.9)	6(1.4)	1(0.2)	1.3	0.7
Avoidance of clients (14)	277(67.2)	60(14.6)	55(13.3)	12(2.9)	8(1.9)	1.6	1.0
Inability to recall client information (17)	324(78.5)	54(13.1)	23(5.6)	9(2.2)	3(0.7)	1.3	0.7
Criterion D – Arousal symptoms							
Difficulty sleeping (4)	182(43.8)	78(18.8)	84(20.2)	45(10.8)	24(5.8)	2.2	1.3
Easily startled (8)	290(69.7)	70(16.8)	38(9.1)	14(3.4)	2(0.5)	1.5	0.8
Difficulty concentrating (11)	193(46.4)	105(25.2)	87(20.9)	21(5.0)	8(1.9)	1.9	1.0
Irritability (15)	221(53.1)	119(28.6)	56(13.5)	10(2.4)	8(1.9)	1.7	0.9
Hypervigilance (16)	286(68.8)	83(20.0)	28(6.7)	11(2.6)	5(1.2)	1.5	0.8

M = Mean

SD = Standard Deviation

SECONDARY TRUAMA IN DIRECT SUPPORT PROFESSIONALS

Table 4: Frequency of Diagnostic Criteria of PTSD of Direct Support Professionals

Criteria Met*	n	%
None	160	40.4
Intrusion (B)	219	54.2
Avoidance (C)	67	16.5
Arousal (D)	124	30.3
Intrusive + Avoidance (B + C)	59	14.9
Intrusive + Arousal (B + D)	98	24.5
Avoidance + Arousal (C + D)	56	13.9
Intrusive + Avoidance + Arousal (B + C + D)	49	12.4

* In addition to the exposure criteria (criterion A).

SECONDARY TRUAMA IN DIRECT SUPPORT PROFESSIONALS

Table 5: Correlation for STS and Demographics (continuous variables)

	1	2	3	4	5	6
1 STS	--					
2 Exposure to Clients Trauma	.273**	--				
3 Age	0.024	0.067	--			
4 Years in IDD Field	.168**	.254**	.544**	--		
5 Years with current organization	.166**	.128*	.490**	.677**	--	
6 Years in current position	.114*	0.090	.449**	.642**	.863**	--

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

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

STS = Secondary Traumatic Stress

SECONDARY TRUAMA IN DIRECT SUPPORT PROFESSIONALS

Table 6: ANOVAs for continuous STS and Demographics (dichotomous variables)

Variable	Mean	SD	F	Sig.
Education	27.00	10.8	13.13	0.000**
Type of employment	26.43	9.44	5.68	0.018*
Race	26.92	9.61	6.38	0.012*
Gender	26.95	9.56	1.56	0.21

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

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

STS = Secondary Traumatic Stress