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PTSD Symptoms Among Parents and Service Providers of Individuals With Significant
Disabilities

Bruna Fusco Gonçalves

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of
Master of Science

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ABSTRACT

PTSD Symptoms Among Parents and Service Providers of Individuals With Significant Disabilities

Bruna Fusco Gonçalves

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Master of Science

In conducting this study, the ultimate goal was to determine whether parents and other caregivers of individuals with disabilities are experiencing higher levels of Posttraumatic Stress Disorder (PTSD) symptoms as compared to the general population. Individuals with Autism Spectrum Disorder (ASD), intellectual disabilities and other disabilities are more likely to engage in aggressive behaviors such as hitting, kicking, biting, screaming, and self-injurious behavior. Research has also shown that parents of children with special needs have higher levels of stress, and special education teachers are leaving the field due to burnout. In addition to comparing PTSD levels of these caregivers with the general population, results of parents in this sample size were compared with the results of other caregivers. Using the PTSD Checklist – Civilian version (PCL-C), a self-report questionnaire, PTSD total scores, the three subscale scores which included re-experiencing, avoidance/numbing, and hyperarousal were analyzed. In total PCL-C scores and the subscale scores, the respondents' results were statistically significant, with a mean score of 46.7 as compared to 29 with the general population. In addition, results demonstrated that parents and other caregivers that worked with an individual with a disability who engaged in aggressive behavior had a higher mean score than those who didn't among this population. When divided into two groups, parents had a higher mean than the other caregivers. Future research can be done on PTSD treatments for this specific population without having to remove them from their environments in order to help reduce burnout and attrition among caregivers of individuals with disabilities.

Keywords: posttraumatic stress disorder, behavior, aggression, disabilities, autism spectrum disorder, parents, intellectual disabilities, mental health disorders

ACKNOWLEDGMENTS

I would like to acknowledge my mentor and supervisor, Dr. Ryan Kellems, who with his knowledge, expertise, wisdom, and patience has always guided me and given me so many opportunities. I also can't fail to recognize my committee members Dr. Lane Fischer and Dr. Blake Hansen who have taught me so much. Other former professors that I'd like to express my gratitude for are Cade Charlton, Katie Steed, and Christian Sabey, who have all inspired me in different ways. I'd also like to thank all the people who have taken the time to review this thesis and provide feedback. My mother, Marnie, has always been my source of encouragement and strength. My father, Aparicio, has always provided constant support and helped me see all that I can become. Felipe, my brother, has always lifted me up and made me laugh even when times are hard. Lastly and most importantly, I'd like to acknowledge my sister, Barbara, without whom I never would have felt such love and compassion for individuals with disabilities. I have accomplished all this thanks to her.

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CHAPTER 1

Introduction

Approximately 2-5% of the general population is affected by posttraumatic stress disorder, also known as PTSD (Stein et al., 2000). The American Psychiatric Association (APA; 2013) has defined PTSD as a condition in which an individual is exposed to a traumatic event, whether directly or indirectly, and then experiences significant distress which causes impairment in social interactions, capacity to work, and other areas of functioning. Diagnostic criteria include: (a) recurrent, involuntary, and intrusive recollections of the event; (b) avoidance of stimuli associated with the trauma; (c) negative alterations in cognitions or moods associated with the event or numbing (or both); (d) alterations in arousal and reactivity, including a heightened sensitivity to potential threat (APA, 2013). In a study done among prisoners of war from the Korean War, it was found that even after returning home, they experienced impaired cognitive functioning problems such as memory, tension, anxiety, irritability, depression, restlessness, and interpersonal distrust (Sutker et al., 1991). According to the American Psychiatric Association (2013), other criteria for being diagnosed with PTSD include: (a) directly experiencing the traumatic event; (b) witnessing in person, the event as it occurred to others; (c) learning that the traumatic event occurred to a close family member or close friend; (d) experiencing repeated or extreme exposure to aversive details of the traumatic event. While studies have been done to determine levels of PTSD among the population in general (Conybeare et al., 2012; Ruggiero et al., 2003), there is research lacking in the area of caregivers of individuals with disabilities in terms of PTSD.

The Individuals with Disabilities Education Improvement Act (IDEA) of 2004 states that having a disability does not diminish the right of an individual to participate in society and

receive appropriate education. IDEA also declares that children with disabilities must be ensured equality, independence, and self-sufficiency (IDEA, 2004). Similarly, the Americans with Disabilities Act Amendments Act (ADA) states that “physical or mental disabilities in no way diminish a person’s right to fully participate in all aspects of society” (American with Disabilities Act Amendments Act, 2008). One of the results of IDEA and ADA is that children with disabilities are entitled to a free and appropriate education (FAPE) modified to fit their specific needs. Special education arose as a career in order to better teach all individuals, no matter their disability. However, keeping teachers motivated to stay in the field has been a challenge (Gehrke & McCoy, 2007), and will continue to worsen throughout the years (McLeskey et al., 2004). In a study conducted by Boe et al. (1997), it was found that more special education teachers left their teaching assignments as compared to general education teachers, with many parts of the United States facing extreme shortages of special education teachers (McLeskey et al., 2004). Job stress is extremely high in the workplace and is a major contributing factor to attrition among special education teachers (Billingsley, 2004; Gersten et al., 2001). While special education teachers work with varying types of disabilities, one that has incidents of maladaptive behaviors is Autism Spectrum Disorder (ASD; American Psychiatric Association, 2013).

ASD is a neurodevelopment disorder that is seen in many special education classrooms. The prevalence of ASD has been found to be approximately one in every 54 children (Baio et al., 2018). Characteristics of ASD include difficulties with social communication, difficulty with social interaction and restricted and repetitive patterns in behaviors, interests, and activities as well as maladaptive behaviors (American Psychiatric Association, 2013). Some of these

maladaptive behaviors might include self-injurious behavior, aggression, and destruction of property (Shattuck et al., 2007).

Statement of the Problem

High rates of aggression and other challenging behaviors are prevalent among individuals with disabilities, especially those diagnosed with ASD (Shattuck et al., 2007) and intellectual disabilities (Embregts et al., 2009). Stress and burnout are high among special education teachers and are contributing factors to low retention rates and high attrition (Billingsley, 2004; Gersten et al., 2001; McLeskey et al., 2004). PTSD is a condition with a prevalence rate of 2-5% of the general population (Stein et al., 2000). Studies have shown that individuals with PTSD, or even partial PTSD, can be impaired functionally due to the condition (Stein et al., 1997). Little to no research has been conducted to discover whether there is a correlation between teachers, parents and other caregivers and higher levels of PTSD symptoms. This could be a condition that is affecting several professionals and caregivers and could be a major contributing factor to stress and burnout.

Statement of the Purpose

The purpose of this study is to determine whether higher levels of PTSD symptoms are being experienced among parents and other care providers of individuals with disabilities as compared to the general population. Another purpose is to determine whether there are significant differences between parents and other caregivers in terms of their measured levels of PTSD symptoms. In addition, we want to determine whether there are significant differences in terms of the sub scores as compared to the general population and between parents and other caregivers. Finally, we want to discover if experiencing aggression from an individual with a disability shows differences among the total PTSD score and the sub scores.

Research Questions

This study will address the following research questions:

1. Do the respondents to this survey show different levels of (a) PTSD total scores, (b) re-experiencing sub scores, (c) avoidance/numbing sub scores, or (d) hyperarousal sub scores than previous population estimates?
2. Is there a main effect between parents and other caregivers in terms of (a) PTSD total scores, (b) re-experiencing sub scores, (c) avoidance/numbing sub scores, or (d) hyperarousal sub scores?
3. Is there a main effect between caregivers with an aggressive child and those without an aggressive child in term of (a) PTSD total scores, (b) re-experiencing sub scores, (c) avoidance/numbing sub scores, or (d) hyperarousal sub scores?
4. Is there an interaction between caregiver status (parents vs. other caregivers) and aggression status (aggressive child vs. nonaggressive child) in terms of (a) PTSD total scores, (b) re-experiencing sub scores, (c) avoidance/numbing sub scores, or (d) hyperarousal sub scores?

CHAPTER 2

Review of Literature

Posttraumatic Stress Disorder Symptoms

A condition that is associated with fear and aggression is PTSD. The American Psychiatric Association (2013) has defined PTSD as the following, "a psychiatric disorder that can occur in people who have experienced or witnessed a traumatic event such as a natural disaster, a serious accident, a terrorist act, war/combat, rape or other violent personal assault" (271-272).

PTSD was first known among military combat veterans, and in World War I, the disorder was known as "shell shock" (Monson et al., 2007). Many believed the condition to be a result of damage to the brain (Friedman, n.d.). Some characteristics of shell shock included flashbacks and panic attacks that were evoked by situations or stimuli that were similar to their traumatic experiences (Monson et al., 2007). In World War II, shell shock became known as Combat Stress Reaction (CSR) or also called "battle fatigue" (Friedman, n.d.). As the concept of PTSD evolved through the years, the greatest change was in the recognition that the etiological agent was a traumatic event outside of the individual, not as a result of an individual's weakness, as was considered at the time of WWI and WWII (Friedman, n.d.).

Another important finding throughout the years has been that PTSD is not only found among combat veterans but also occurs in the general population. Approximately 4 out of every 100 American men and 10 out of 100 American women can be diagnosed with PTSD (Friedman, n.d.). The prevalence of PTSD has been found to be 1.2% for men and 2.7% for women (Stein et al., 1997), with 2-5% of the general population being affected (Stein et al., 2000). It is predicted that one in 11 people will be diagnosed with PTSD in their lifetime, with

women being twice as likely to experience the symptoms than men (American Psychiatric Association, 2013).

Symptoms of PTSD include intrusive thoughts, nightmares, hypervigilance, generalized and specific anxiety and depressive symptoms (APA, 2013). However, PTSD can result in some form of functional impairment (Stein et al., 1997). Those suffering from this condition have been found to experience deficits in executive functioning and perform poorly on tasks of attention and memory. They also experienced deficits in initial learning of auditory-verbal and visual-spatial information (Vasterling et al., 1998). When certain executive functioning skills such as these are impaired, individuals struggle with self-care, working independently, establishing social relationships (Lezak et al., 2004), and have an increase in substance abuse (Brown et al., 2000). PTSD can lead to other mental disorders such as Major Depressive Disorder, Generalized Anxiety Disorder, Phobia, Dysthymic Disorder, and Panic Disorder (Brown et al., 2000).

Research has also shown that those who experience PTSD and anxiety have higher rates of attempted suicide. Among the 63 participants from the Harvard/Brown Anxiety Disorder Research program that were diagnosed with PTSD, 30% had attempted suicide (Warsaw et al. 1993). In this same study, among the 122 subjects that did not have PTSD, 16% had attempted some form of suicide. Other studies have established a correlation between conditions in comorbidity with PTSD and higher rates of suicidal ideation (Galatzer-Levy et al., 2013). Studies determined that PTSD can be experienced among the population in general (Conybeare et al., 2012; Ruggiero et al., 2003); however, there is research lacking in whether caregivers of individuals with disabilities experience PTSD symptoms at the same level.

Special Education

Free and Appropriate Public Education

IDEA states that having a disability does not diminish the right of an individual to participate in society and receive appropriate education. IDEA also declares that children with disabilities must be ensured equality, independence, and self-sufficiency (IDEA, 2004). Under IDEA, individuals with disabilities are entitled to a FAPE. The law states, “A free appropriate public education must be available to all children residing in the State between the ages of 3 and 21, inclusive, including children with disabilities who have been suspended or expelled from school” (34 CFR § 300.101). This includes children who display maladaptive behaviors, such as many with ASD (Shattuck et al., 2007) and intellectual disabilities (Embregts et al., 2009). One potential cause of trauma among individuals is exposure to aggressive behavior.

Prevalence of Disabilities and Aggression

ASD is a neurodevelopment disorder that is seen in many special education classrooms. Researchers conducted observations in several states including Arizona, Arkansas, Colorado, Georgia, Maryland, Minnesota, Missouri, New Jersey, North Carolina, Tennessee, and Wisconsin to discover the prevalence of ASD. Results indicated that approximately one in 54 children of 8 years of age were diagnosed with this disorder (Baio et al., 2018). This same study done by Baio et al. also estimates that approximately one in 54 children are identified as having ASD (2018). In addition, researchers collected data on 60% of the participants regarding intellectual functioning. Of these children, 33% were also found to have a co-occurring intellectual disability and 24% were on the borderline range (Maenner et al., 2020). Maulik et al. (2011) conducted a meta-analysis on the prevalence of intellectual disabilities. Through their analysis, they discovered that the rate of intellectual disability to be 10.37/1000 population.

Individuals with disabilities, especially those diagnosed with ASD or intellectual disabilities, are likely to engage in maladaptive behaviors that interfere with daily activities (Shattuck et al., 2007). In a sample taken from 1,380 individuals with disabilities, 68% engaged in some form of aggression towards caregivers and 49% to non-caregivers. This study defined physical aggression as hitting, biting, or violence including the use of implements (Kanne & Mazurek, 2011). In interviews conducted with both special education teachers and students with emotional and behavioral needs, it was the mutual feeling that the role of teacher went beyond that of a professional, extending to being a caregiver to the students as well (Luna & Medina, 2001). A study also showed that children with ASD use behaviors such as hitting, screaming, biting, and self-injury in order to gain attention or to escape a demand (Frea et al., 1999). Individuals with intellectual disabilities have also been known to have aggressive tendencies (Embregts et al., 2009), and these kinds of behaviors have been shown to be more common among individuals with disabilities than their typical peers (Holden & Gitleson, 2006). In a study by Rojahn et al. (2001), it was shown that from 432 participants with intellectual disabilities, 73% had at least one challenging behavior. These problematic behaviors can have impacts on their caregivers and service providers (Hastings & Brown, 2002; Innstrand et al., 2002; Mitchell & Hastings, 2001; Moor & Cooper, 1996).

Effects of Aggression

Aggression among individuals with disabilities is a major concern among professionals because of the potential for physical harm to the individual, their caretakers, and to their non-caregivers and can be a major contributing factor to stress (Kanne & Mazurek, 2011). Aggressive behaviors of individuals with disabilities can have negative effects on a staff's well-being by increasing the amount of stress being experienced and causing burnout (Hastings & Brown,

2002; Innstrand et al., 2002; Mitchell & Hastings, 2001; Moor & Cooper, 1996). Behaviors that increase parent and teacher stress include destructive behaviors, attack on other caregivers, self-mutilation, and violent outbursts (Hastings, 2002a).

Professionals in special education settings who work with students with challenging behaviors such as self-injury, physical and verbal aggression, and sexually inappropriate behaviors, are much more likely to experience psychological effects ranging from minor irritation to extreme fear and anxiety (Hastings, 2002b). Researchers conducted a meta-analysis to determine if there is correlation between child behavior and physical abuse and neglect from their parents. They found that parent perception of the child as a problem can lead to child abuse and neglect (Stith et al., 2009).

One of the impacts of problem behaviors is decreased academic performance. A longitudinal study examined aggression and academic achievement among low-income families. Three-hundred children were observed over time to analyze their social behavior and academic progress. Some instruments included teacher questionnaires, the Child Behavior Scale to measure aggression, and the Teacher Rating Scale of School Adjustment to determine academic engagement. Researchers discovered that changes in the child's aggression predicted changes in their academic achievement leading to lower achievement in general (Stipek & Miles, 2008).

Disruptive behaviors can interfere with not only the education of the specific child, but also other students in the classroom (Scattone et al., 2002). A study including 614 children examined the effects of problem behaviors on the individual's peers. Researchers implemented the Peer Nomination Inventory, Normative Beliefs Approving of Aggression, the Child Behavior Checklist, and observations of student and teacher behavior. Results indicated that increased disruptive behaviors led to increased peer rejection (Henry et al., 2000). In addition, other

researchers observed 4,907 students and found that exposure to aggression in the classroom showed higher levels of aggression in children (Thomas et al., 2006). These interactions with aggressive individuals can lead to increased stress among teachers and parents (Hastings & Brown, 2002).

Stress

Teacher Stress

Stress is defined for teachers by Kyriacou (2001) as “the experience by a teacher of unpleasant, negative emotions, such as anger, anxiety, tension, frustration or depression, resulting from some aspect of their work as a teacher” (p. 28). Stress is prevalent among teachers, especially among special education teachers. Ferguson et al. (2012) researched predictors of teacher stress. In Ontario, 274 teachers filled out a self-report teacher stress questionnaire in which they answered questions on a five-interval scale ranging from *no stress* to *extreme stress*. Researchers measured stress as well as indicators for stress among this sample. Results showed that the greatest factors for stress, depression, and anxiety were workload and student behaviors. These findings demonstrated that stress could lead to low job satisfaction (Ferguson et al., 2012).

In addition to low job satisfaction, stress in the work environment is often correlated with anxiety and depression (Melchior et al., 2007). Individuals that experienced high psychological job demands such as excessive workload and time pressures were twice as likely to have major depressive disorder and generalized anxiety disorder (Melchior et al., 2007). Among Chinese university teachers, it was shown that teacher burnout and physical and mental health are closely correlated. Using the Occupation Stress Indicator-2, Maslach Burnout Inventory–General Survey, Beck Depression Inventory, and Health Survey, researchers

discovered that job stress contributed to health conditions and depression through burnout (Zhong et al., 2009).

Working with students with special needs is a major contributing factor of physical and mental illness among teachers. Among 67 special education teachers working in seven different special schools in Turkey, burnout levels were measured. Researchers used a descriptive approach to analyze burnout levels and implemented the Maslach Burnout Inventory and the Personal Information Form, as well as interviews to collect data. The results of the study indicated that all the participants were facing burnout. Another study done by Hasting and Mitchell (2004) evaluated 184 staff members working directly with individuals with intellectual disability. Also using the Maslach Burnout Inventory, results demonstrated high emotional exhaustion and low personal accomplishment.

Some factors that contribute to burnout among these teachers included aggression among students, teachers feeling a lack of personal accomplishment, and exhaustion (Küçüksüleymanoglu, 2011). Other factors of high stress include, role ambiguity, students posing complex behavioral and academic challenges, and large caseloads, among other things (Griffin et al., 2003).

Not only can stress be a leading factor of burnout, but it can also impact job performance. In one study, 133 employees in a university participated in a survey. For this study, job performance was defined as, “the total output that employees give to the organization.... It is the sum total of abilities, opportunities and motivation.” The results showed a 22.8% variation in job performance that is explained through stress. The contributing factors of stress in this study were workload, role conflict, and inadequate monetary rewards (Warraich et al., 2014).

Stress also has an impact on hormones, brain function, and immune function. Researchers have suggested that increases in stress hormones can have negative impacts on cognitive function, in turn causing impairments in learning and memory (Lupien et al., 2007). Chronic stress has led to elevated levels of stress hormones which can suppress immunity and lead to other diseases and conditions (Schneiderman et al., 2005). Chronic stress' impact on immunity can lead to slower wound healing, slow recovery from surgery, poorer antibody responses to vaccinations, and increased vulnerability to viral infections (Kiecolt-Glaser et al., 2002).

The IDEA was put into action in order to provide all children, no matter their ability level, access to a FAPE (IDEA, 2004). Special education arose from the need for teachers to be more highly qualified in order to provide instruction to individuals of varying ability levels. Special education teachers must be proficient in modifying curriculum and making accommodations to make sure that each child is receiving instruction based on their individual needs.

Unfortunately, along with stress, special education is also known for exhaustion, low job satisfaction, and teacher burnout (Sari, 2004). Burnout entails emotional exhaustion and feeling a lack of personal accomplishment (Hastings & Brown, 2002). Several studies have shown that teachers of students needing special education have higher burnout and stress (Eichinger, 2000), higher rates of attrition, and lower rates of retention as compared to those in general education (Billingsley, 2004; Gersten et al., 2001; Katsiyannis et al., 2003; McLeskey et al., 2004).

In a study with teachers of students with emotional disturbance, attrition was found to be as high as 48% (Lawrenson & McKinnon, 1982). Attrition is most common among novice teachers, with 9.3% leaving the field after their first year of teaching and 7.4% changing over to general education annually (Boyer & Gillespie, 2000). Among new special education teachers,

only half stated their intent to stay with the other half being considered at risk for attrition (Billingsley et al., 2004). In a meta-analysis spanning 10 years, Billingsley (2004) researched special educator attrition and retention and stated that work environment can lead to negative reactions such as high levels of stress and low levels of job satisfaction which will eventually lead to withdrawal and attrition.

Parent Stress

Stress is prevalent among parents of children with disabilities. According to Bitsika and Sharpley (2004), more than 90% of parents struggled to deal with their child's behavior, half experienced severe anxiety, and two-thirds were clinically depressed. In a study conducted with 170 mothers, it was found that anxiety and depression are much higher among this population of mothers as compared to mothers with a typically developing child. Researchers used the Beck Depression Inventory, State-Trait Anxiety Inventory, and the Nottingham Health Profile to assess mental health and quality of life. Results showed higher levels of depression and anxiety among the mothers that had children with disabilities. This in turn affected the mothers' quality of life in areas such as sleep, pain, social isolation, energy levels, and emotional reactions. (Bumin et al., 2008).

Baker et al. (2003), found that a major contributing factor of this high rate of mental illness is the amount of aggression that is dealt with among this population. Some behavior challenges that individuals with disabilities might engage in include self-injurious behavior, aggression, and destruction of property (Shattuck et al., 2007). The participants in Baker's (2003) study included 112 families with children that exhibited internalizing behaviors, externalizing behaviors, and no problem behaviors. The Child Behavior Checklist was used to assess behaviors, and the Family Impact Questionnaire, Parenting Daily Hassles Scale, Beck

Depression Inventory, Symptom Checklist-90, and the Dyadic Adjustment Scale were used to measure the amount of stress in mothers. Results showed that externalizing behaviors among children was correlated with high parent stress. In another study conducted with individuals with intellectual disabilities and their mothers, Hassall et al. (2005) also discussed the children's increased behavioral difficulties as being a major factor of increased stress in their mothers.

Challenging behaviors can have negative effects on the whole family. Baker et al. (2003), involved 203 families in a 2-year longitudinal study. Families included children with and without disabilities. Researchers used the Bayley Scales of Infant Development II, Child Behavior Checklist for Ages 1.5-5, and the family impact questionnaire to assess child behavior problems and the impact on family. Results showed high levels of stress and negative impact on families that had a child with a disability and behavior problems. Consequences of high parent stress impact the whole family and their functioning (Smith et al., 2001).

The stress among parents may be a factor in diminished parent-child relationships (Smith et al., 2001), a lower threshold of tolerance for behavioral problems, and a more negative focus on behavior problems (Morgan et al., 2002). Hastings (2002a) noted that increased parental stress due to child problem behavior leads to negative parental reactions and parental behavior. This can thus increase behavior problems in their children, turning into a harmful cycle. High stress levels of parents can impact the child's academic achievement, development (Lessenberry & Rehfeldt, 2004) and psychological health (Kobe & Hammer, 1994). Other factors that contribute to parental stress include reduced intellectual functioning, physical limitations, deficits in self-care skills, and limited social skills (Lessenberry & Rehfeldt, 2004).

Limited research indicates parents of children with disabilities also experience a higher rate of divorce. Three-hundred and ninety-one parents of children with ASD participated in a

study to discover the risk and timing of divorce among this population. The prevalence of divorce among these participants were compared to another sample of 391 parents of children without a disability. Results showed that parents of children with ASD had a rate of 23.5% of divorce, while the comparison groups of parents of children without a disability was 13.8%. The researchers suggested that this high rate of divorce is a direct result of the increased levels of stress among these families (Hartley et al., 2010).

CHAPTER 3

Methods

Participants/Setting

Over 440 participants were part of this study and consisted of teachers, parents, paraprofessionals, caregivers, related service providers, and Applied Behavior Analysis (ABA) service providers of people with disabilities. Of these respondents, 95% were female and 5% were male. While we had at least one participant from each state, over 46% of the participants were from Utah. The participants included those who have interacted with individuals with disabilities that may or may not display challenging behaviors such as hitting, kicking, biting, screaming, self-injurious behavior, and other forms of aggression.

Participants were recruited through a video posted on social media. In order to participate in the study, individuals needed to be at least one of the following:

- certified/alternate route to licensure (ARL) special education teacher
- paraprofessional in a special education classroom
- related service provider (occupational therapist, physical therapist, speech language pathologist, adapted physical education teacher, etc.)
- applied behavior analysis (ABA) service provider
- parent of a child with a disability
- sibling (over the age of 18) or other caregiver of an individual with a disability

Of the 440 participants in this study, 328 classified themselves as parents. As a result of this, we decided to break the participants up into two groups in order to analyze the results. The two groups were parents of individuals with disabilities and other caregivers. Table 1 shows the number of participants and their primary roles.

Table 1*Primary Role of Participants*

Primary Roles	Frequency	Percent	Valid Percent	Cumulative Percent
Licensed Special Education Teacher	34	7.7	7.7	7.7
Licensed General Education Teacher	3	.7	.7	8.4
Paraprofessional	11	2.5	2.5	10.9
Parent	328	74.5	74.5	85.5
Caretaker	34	7.7	7.7	93.2
Registered Behavior Technician	6	1.4	1.4	94.5
Other	24	5.5	5.5	100.00
Total	440	100	100	

Recruitment Plan/Sampling

This project was approved by the Institutional Review Board (IRB) of Brigham Young University. For more details on the approval, see Appendix A. This study used a single sample snowballing approach. Participants were recruited via the social media sites Facebook and Instagram. Groups for special education teachers and for parents of children with disabilities were targeted, as well as groups for paraprofessionals, caregivers, service providers, and board-certified behavior analysts and registered behavior technicians. A welcome video, which script can be found in Appendix B, was created which explained the study and was posted on several Facebook and Instagram pages. In addition, individuals may have shared the video on their own

individual pages. Participants were also reached out to via email, which was accessed through public school records. If individuals were interested in participating, a link was provided which directed them to a consent document and the questionnaire. Those who volunteered to participate had the opportunity to click on a different link at the end of the survey to enter a drawing in which they had a chance to win a \$25 gift card as compensation.

Instruments/Measures

The instrument used for this study was the Posttraumatic Stress Disorder Checklist – Civilian Version (PCL-C) from the Diagnostic and Statistical Manual of Mental Disorders 4th Edition (DSM-IV) (Weathers et al., 1994). The checklist is a self-reporting measure that includes 17 items in which participants can score on a five-point scale from *not at all* to *extremely*. The PCL-C takes approximately 5-10 minutes to complete. Additional demographic data such as gender, race, occupation, number of years in profession, socioeconomic level, level of education/training, school setting (for teachers) was also collected. Other demographic information included the severity of the disability the individual encounters and the level of aggression they experience if any. The full questionnaire can be seen in Appendix C.

Walker et al. (2002) conducted a study to discover the efficacy of the PCL and found it to be a useful instrument in screening for PTSD. According to Conybeare et al. (2012), the PTSD self-report questionnaire for civilians (PCL-C) can be used to rapidly screen individuals for PTSD and has a diagnostic efficiency of .96 (Ruggiero et al., 2003).

Reliability

Reliability for the PCL-C has been found to be very high. In a study done with 471 undergraduates enrolled in a psychology course, Conybeare et al. (2012) found internal

consistency to be .94 for initial administration and .92 for the retest. These participants were not preselected based on trauma. Another study by Ruggiero et al. (2003) with college students found that test-retest correlation coefficients for total scores on the PCL-C were .92 for those who retested immediately, .88 for those who took the test again after a 1-week interval, and .68 for those who had a 2-week retest interval.

Validity

Conybeare et al. (2012), examined convergent validity and found that the PCL-C was closely correlated with the Civilian Mississippi Scale ($r = .82$). The study conducted by Ruggiero et al. (2003) found correlations ($r > .75$) between the PCL-C, the Impact of Event Scale, the Mississippi Scale – Civilian Version, and the History of Psychosocial Stressors. Ruggiero et al. (2003) also discovered support for discriminant validity in that the PCL-C showed higher correlation with the Mississippi Scale – Civilian Version than with the Symptom Checklist 90 – Revised (SCL-90-R), and the Center for Epidemiological Studies – Depressed Mood Scale.

Procedure/Data Collection

If the individual chose to participate, they would click a link that had been posted and access a secure electronic form of the questionnaire via Qualtrics. Participants remained anonymous and were not asked to add any personally identifiable information. Before individuals could participate in the study, they needed to agree to an implied consent document which can be seen in Appendix A. Information concerning potential risks was provided, and before individuals could participate in the study, they had to give consent by clicking “yes” to the first question. This was included on the first page of the survey. Once the participant gave consent, they could continue. If consent was not given, the individual did not have access to the rest of the questionnaire. Only questionnaires that were filled out in their entirety were analyzed.

At the end of the survey, participants were provided with links and resources about PTSD that they could access if they felt any discomfort while participating.

Data Analysis

The total symptom severity score of the PCL-C was obtained by summing all the responses from each of the 17 items on the checklist. The score can range from 17-85. This was then compared to an estimated population mean to determine if the total symptom severity score exceeded the expected mean. A college sample with 392 participants between the ages of 18 and 44 had an average score of 29.4. This study also included the means of all three of the subscales which will also be used in our study. These include re-experiencing scale: $m = 9.5$, avoidance scale: $m = 11.9$, hyperarousal scale: $m = 8.0$ (Ruggiero et al., 2003). This study was chosen because it included participants from various backgrounds and had a mean score for the total score and all three subscale scores.

In order to respond to research question one, we conducted four single sample t tests comparing our sample to the population estimates noted above. To make the comparison, we used the study conducted by Ruggiero et al. (2003), which included 392 participants in a nonclinical setting that had no prior diagnoses of PTSD in order to reflect the general population. We compared our mean with the mean from the Ruggiero et al. study (2003) which showed a mean score of 29.4 for the total score and re-experiencing scale: $m = 9.5$, avoidance scale: $m = 11.9$, hyperarousal scale: $m = 8.0$ for the subscales. To respond to research questions two through four, we conducted a series of factorial ANOVA. The factorial ANOVA generate a main effect for parent status, a main effect for aggression status, and the interaction between parent status and aggression status. For the purpose of this study, aggression was defined as hitting, biting, screaming, kicking, scratching, and self-injurious behavior.

CHAPTER 4

Results**Total PCL-C Scores Compared to the General Population**

The total symptom severity score of the PCL-C was obtained by summing all the responses from each of the 17 items on the checklist. Table 2 shows the different total scores that participants received as well as how many received each score. The total score of the PCL-C can range from 17-85. Scores from our participants ranged from 17.0 to 80.0. Table 3 shows that the mean of the total score was 46.71. Figure 1 shows the range of total scores and a standard deviation score of 14.632.

Table 2*Participant Gender*

	Frequency	Percent	Valid Percent	Cumulative Percent
Female	418	95.0	95.0	95.0
Male	22	5.0	5.0	5.0
Total	440	100.0	100.0	

Table 3*PTSD PCL-C Total Scores*

Total Score	Frequency	Percent	Valid Percent	Cumulative Percent
17.00	2.0	0.5	0.5	0.5
20.00	2.0	0.5	0.5	0.9
21.00	3.0	0.7	0.7	1.6

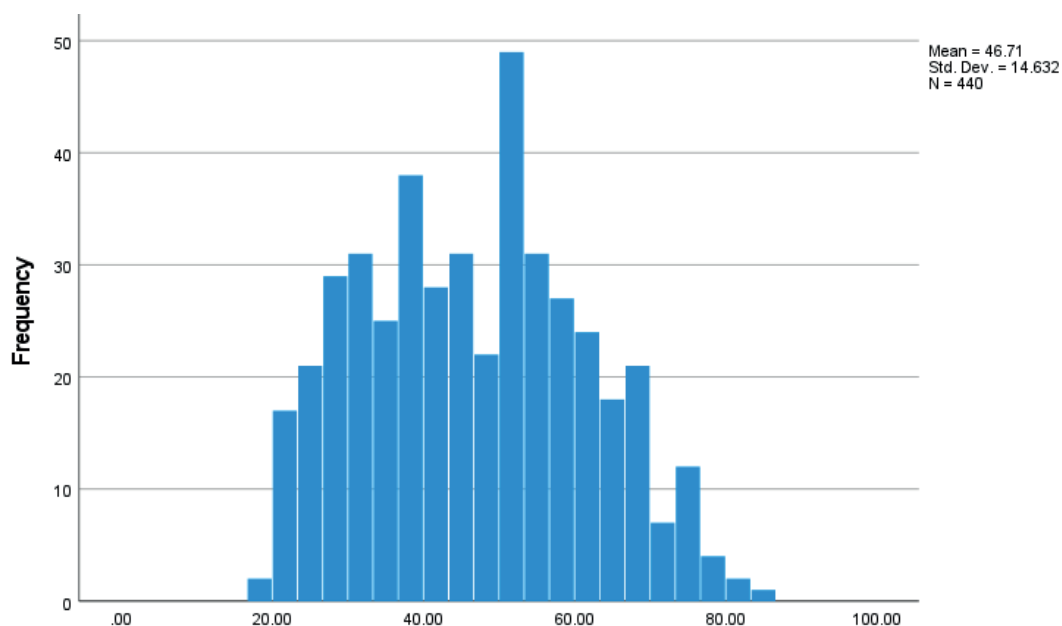
Total Score	Frequency	Percent	Valid Percent	Cumulative Percent
22.00	2.0	0.5	0.5	2.0
23.00	10.0	2.3	2.3	4.3
24.00	4.0	0.9	0.9	5.2
25.00	10.0	2.3	2.3	7.5
26.00	7.0	1.6	1.6	9.1
27.00	5.0	1.1	1.1	10.2
28.00	2.0	0.5	0.5	10.7
29.00	12.0	2.7	2.7	13.4
30.00	10.0	2.3	2.3	15.7
31.00	10.0	2.3	2.3	18.0
32.00	11.0	2.5	2.5	20.5
33.00	10.0	2.3	2.3	22.7
34.00	7.0	1.6	1.6	24.3
35.00	12.0	2.7	2.7	27.0
36.00	5.0	1.1	1.1	28.2
36.34	1.0	0.2	0.2	28.4
37.00	13.0	3.0	3.0	31.4
38.00	10.0	2.3	2.3	33.6
39.00	10.0	2.3	2.3	35.9
40.00	5.0	1.1	1.1	37.0
41.00	6.0	1.4	1.4	38.4
42.00	13.0	3.0	3.0	41.4
43.00	9.0	2.0	2.0	43.4

Total Score	Frequency	Percent	Valid Percent	Cumulative Percent
44.00	10.0	2.3	2.3	45.7
45.00	10.0	2.3	2.3	48.0
46.00	11.0	2.5	2.5	50.5
47.00	9.0	2.0	2.0	52.5
47.15	1.0	0.2	0.2	52.7
48.00	2.0	0.5	0.5	53.2
49.00	10.0	2.3	2.3	55.5
50.00	14.0	3.2	3.2	58.6
51.00	11.0	2.5	2.5	61.1
52.00	10.0	2.3	2.3	63.4
53.00	14.0	3.2	3.2	66.6
54.00	6.0	1.4	1.4	68.0
55.00	15.0	3.4	3.4	71.4
56.00	10.0	2.3	2.3	73.6
57.00	10.0	2.3	2.3	75.9
58.00	11.0	2.5	2.5	78.4
59.00	6.0	1.4	1.4	79.8
60.00	8.0	1.8	1.8	81.6
61.00	5.0	1.1	1.1	82.7
62.00	2.0	0.5	0.5	83.2
62.40	1.0	0.2	0.2	83.4
63.00	8.0	1.8	1.8	85.2
64.00	7.0	1.6	1.6	86.8

Total Score	Frequency	Percent	Valid Percent	Cumulative Percent
65.00	4.0	0.9	0.9	87.7
65.76	1.0	0.2	0.2	88.0
66.00	6.0	1.4	1.4	89.3
67.00	6.0	1.4	1.4	90.7
68.00	12.0	2.7	2.7	93.4
69.00	3.0	0.7	0.7	94.1
70.00	3.0	0.7	0.7	94.8
71.00	1.0	0.2	0.2	95.0
72.00	2.0	0.5	0.5	95.5
73.00	1.0	0.2	0.2	95.7
74.00	2.0	0.5	0.5	96.1
75.00	4.0	0.9	0.9	97.0
76.00	6.0	1.4	1.4	98.4
77.00	2.0	0.5	0.5	98.9
78.00	1.0	0.2	0.2	99.1

Table 4*PTSD PCL-C Total Scores*

	N	Mean	Std. Deviation	Std. Error Mean
PTSD Total	440	46.71	14.63227	0.69757

Figure 1*Histogram of PCL-C Total Scores***Single Sample *t* test**

Using a single sample *t* test, we analyzed the mean of the total scores and the sub scores of the participants and compared it to the general population. The subscale scores can be seen in Table 4 and Figures 2-4. The participants in our study had a total score mean of 46.71 as is shown in Table 4. The means of the sub scores were the following: re-experiencing $m = 12.9$, avoidance/numbing $m = 18.8$, and hyperarousal $m = 14.9$. As seen in Table 5, based on the *t* test, the probability of receiving a type 1 error was less than 0.001 in the total score and in all three sub scores.

Table 5*PCL-C Subscale Scores*

	Re-Experiencing Trauma	Avoidance/Numbing	Hyperarousal
Mean	12.9585	18.8040	14.9458
Median	12.5000	18.5000	15.0000
Std. Deviation	4.68795	6.53886	4.90705
Skewness	0.491	0.169	-0.002
Std. Error of Skewness	0.116	0.116	0.116
Minimum	5.00	7.00	5.00
Maximum	25.00	35.00	25.00

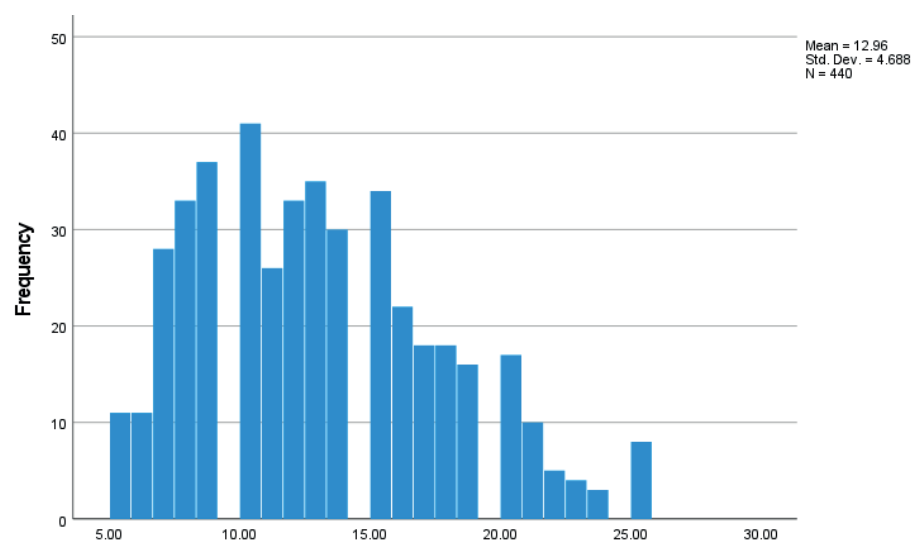
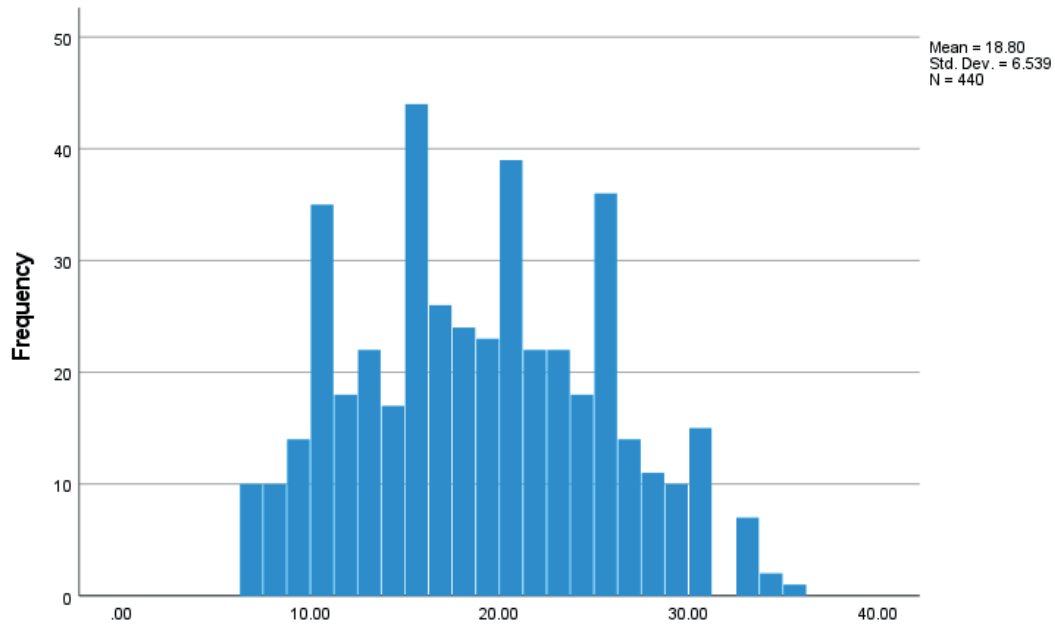
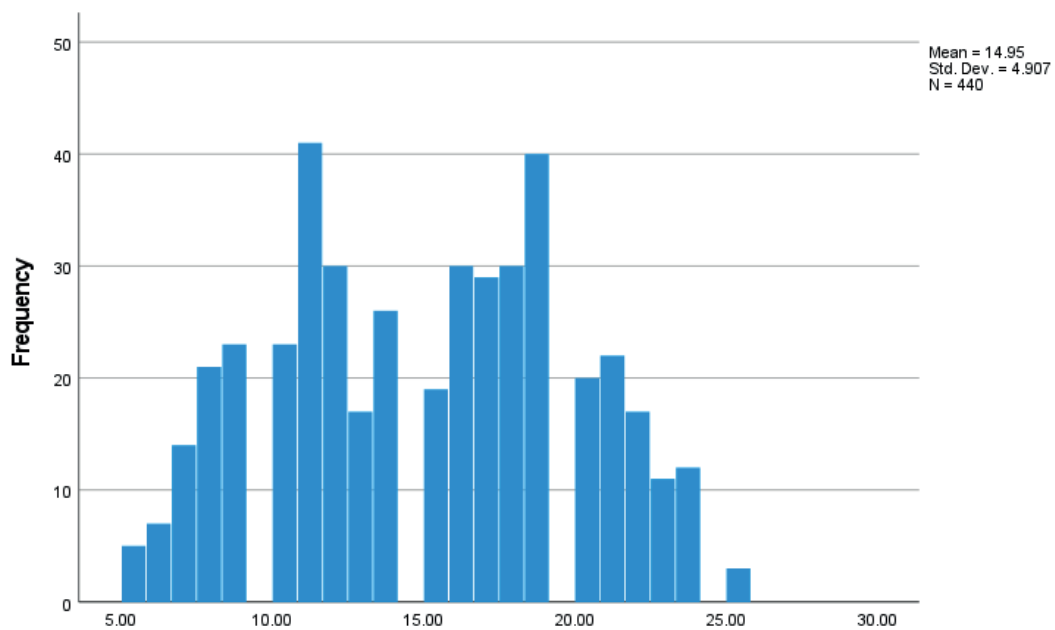
Figure 2*Histogram of Re-Experiencing Subscale*

Figure 3*Histogram of Avoidance/Numbing Subscale***Figure 4***Histogram of Hyperarousal Subscale*

Parents vs. Other Service Providers

Next, Factorial Analysis of Variance (ANOVA) tests in terms of the total score were conducted among our subjects to determine the differences of the mean scores between parents and the other service providers. Table 6 shows that parents had a mean score of 48 while the other caregivers had a mean of 41.

Table 6

PTSD PCL-C Total and Subscale Scores: Participants vs. General Population

	t	df	p	Mean Difference
PTSD Total	24.812	439	$p < 0.001$	17.30830
Re-Experiencing	15.475	439	$p < 0.001$	3.45855
Trauma				
Avoidance/Numbing	22.147	439	$p < 0.001$	6.90395
Hyperarousal	29.691	439	$p < 0.001$	6.94580

Table 7 demonstrates the mean scores of each individual subscale under parents and other caregivers. Similar to the total scores, parents showed to have a higher mean than other caregivers in all the three subgroups. This suggests that parents on average had higher scores in all three categories as compared to the rest of the participants. Both groups had higher scores in the numbing and avoidance subscale as compared to the other subscales.

Table 7*PCL-C Total Scores: Parents vs. Other Caregivers*

	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Parent	48.085	0.779	46.555	49.615
Other	41.305	1.389	38.574	44.035

In order to explore the effect of aggression on the PTSD total and subscale scores of the parents as compared with other service providers, we used the factorial ANOVA tests of between subjects to determine the main effects. Table 8 demonstrates the differences between parents and other caregivers who indicated they either did or did not work with an individual who displayed aggression (i.e., hitting, biting, screaming, self-injury, kicking, scratching, etc.) and their different mean subscale scores.

Table 8*PCL-C Mean Subscale Scores: Parents vs. Other Caregivers*

	Re-Experiencing	Avoidance/Numbing	Hyperarousal
Parent	13.175	19.419	15.492
Other	11.983	16.399	12.923

Table 9 shows the results of the factorial ANOVA in terms of caregiver status and aggression status for the total score. This table shows that both status of aggression and caregiver status had a significant main effect of less than 0.001. However, there was no interaction

between caregiver status and aggression status with the main effect being less than 0.754 which can be seen in Figure 5.

Table 9

Mean Total Score of Parents vs. Other Caregivers and Aggression/No Aggression

Do you work with an individual that engages in aggressive behavior?		Mean	Std. Error
Parent	Yes	51.213	1.081
	No	44.958	1.121
Other	Yes	44.931	1.661
	No	37.679	2.228

Parents had a higher mean score than other caregivers, even those who did not deal with problematic behavior. Both groups showed higher means when interacting with a person who demonstrated aggression. We went through the same process for all three subscales and found similar results. The results for the re-experiencing subscale can be seen in Tables 10 and 11 and Figure 6; avoidance/numbing can be seen in Tables 12 and 13 and Figure 7; and hyperarousal results can be found in Tables 14 and 15 and Figure 8. As seen in Table 16, caregiver status and aggression status had main effects of less than 0.05 and there was no interaction between the two.

Table 10*PCL-C Total Scores: Test of Between Subjects Effects*

	Type III Sum of Squares	df	Mean Square	F	<i>p</i>
Caregiver Status	3598.947	1	3598.947	18.126	<i>p</i> <0.001
Aggression Status	3570.033	1	3570.033	17.980	<i>p</i> <0.001
Caregiver x Aggression Interaction	19.450	1	19.450	0.098	<i>p</i> =0.754

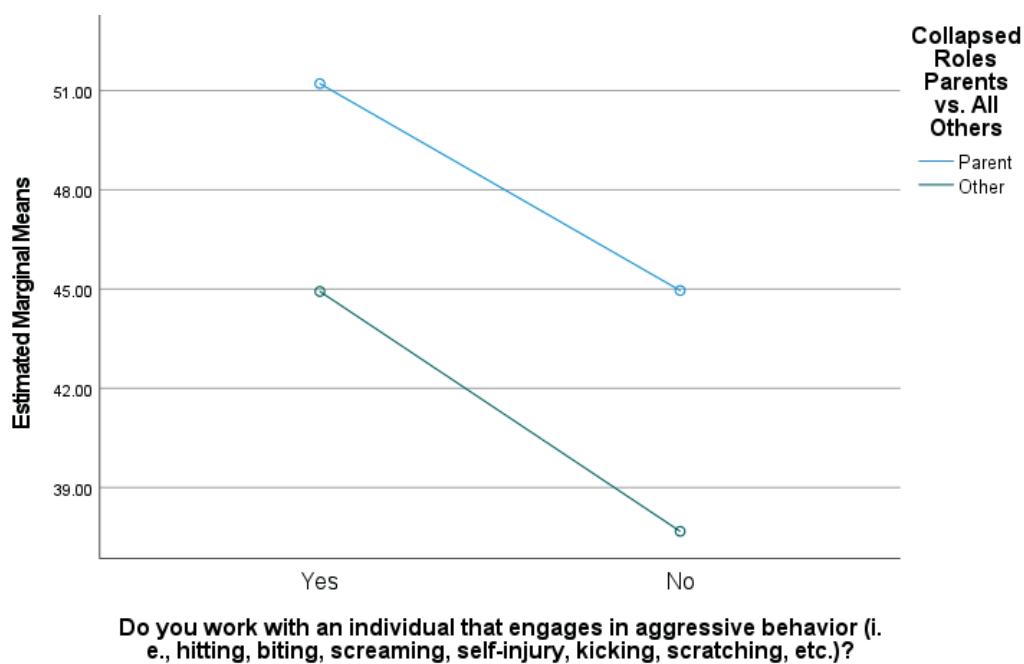
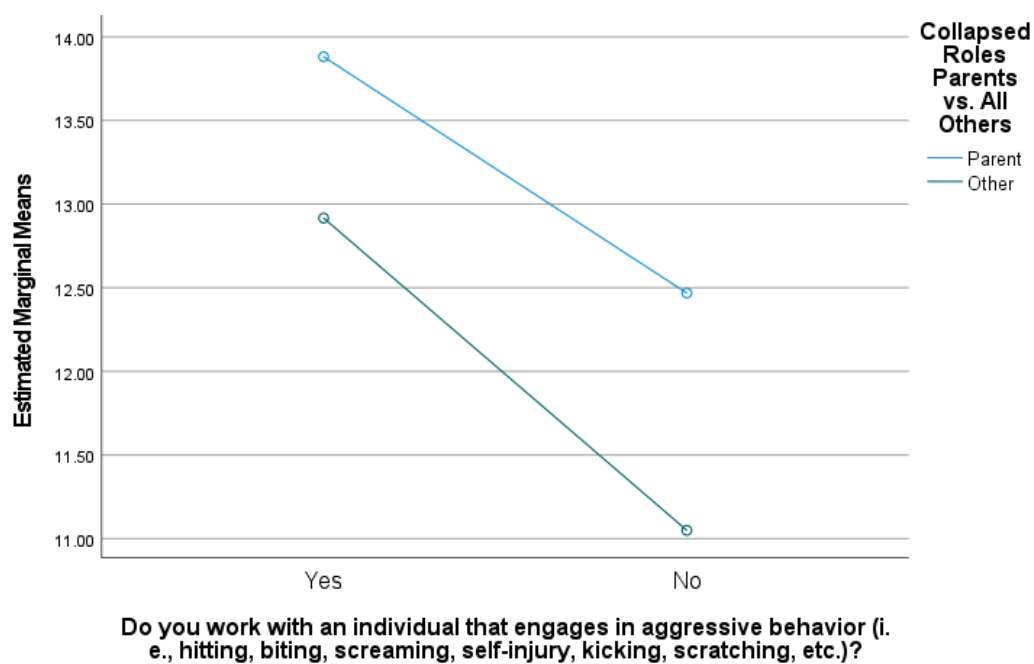
Figure 5*PTSD Total Score Caregiver x Aggression Status*

Table 11*Mean Re-Experiencing Score of Parents vs. Other Caregivers and Aggression vs. No Aggression*

Do you work with an individual that engages in aggressive behavior (i.e., hitting, biting, screaming, self-injury, kicking, scratching, etc.)?		Mean	Std. Error
Parent	Yes	13.881	0.355
	No	12.468	0.368
Other	Yes	12.917	0.545
	No	11.050	0.731

Table 12*PCL-C Re-Experiencing Scores: Tests of Between Subjects Effects*

	Type III Sum of Squares	df	Mean Square	F	<i>p</i>
Caregiver Status	111.094	1	111.094	5.197	<i>p</i> <0.023
Aggression Status	210.439	1	210.439	9.845	<i>p</i> <0.002
Caregiver x Aggression Status	4.035	1	4.035	.189	<i>p</i> =0.664

Figure 6*Re-Experiencing Graph Caregiver x Aggression Status***Table 13***Mean Avoidance/Numbing Score of Parents vs. Other Caregivers and Aggression vs. No**Aggression*

Do you work with an individual that engages in aggressive behavior (i.e., hitting, biting, screaming, self-injury, kicking, scratching, etc.)?		Mean	Std. Error
Parent	Yes	20.873	0.482
	No	17.964	0.500
Other	Yes	17.972	0.741
	No	14.825	0.994

Table 14

PCL-C Avoidance/Numbing Scores: Tests of Between Subjects Effects

	Type III Sum of Squares	df	Mean Square	F	<i>p</i>
Caregiver Status	713.896	1	713.896	18.046	<i>p</i> <0.001
Aggression Status	717.705	1	717.705	18.142	<i>p</i> <0.000
Caregiver x Aggression Status	1.113	1	1.113	0.028	<i>p</i> =0.867

Figure 7

Avoidance/Numbing Graph Caregiver x Aggression Status

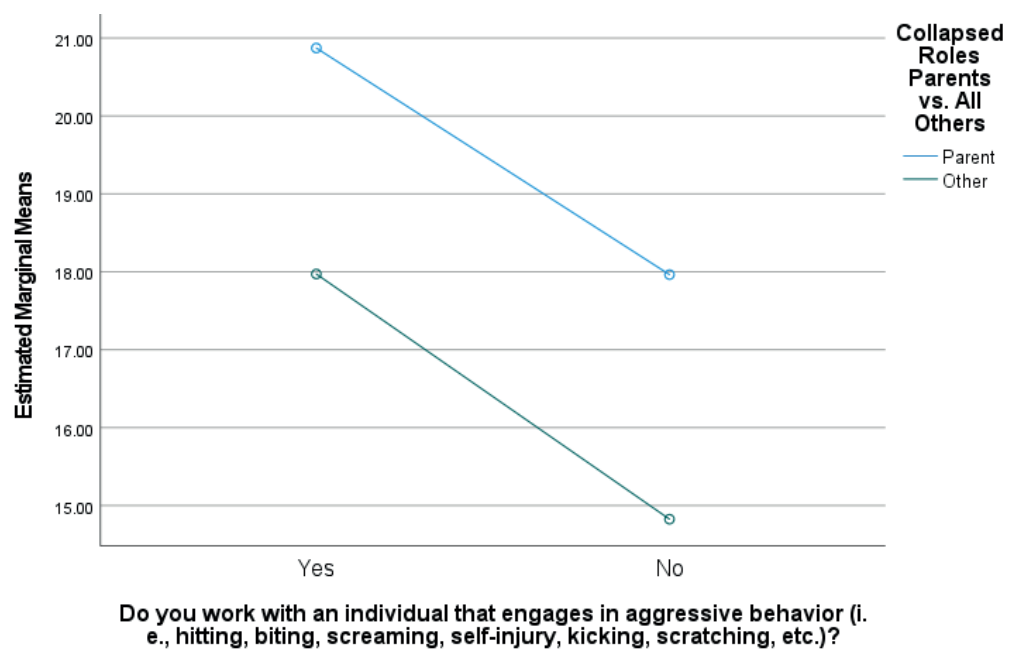
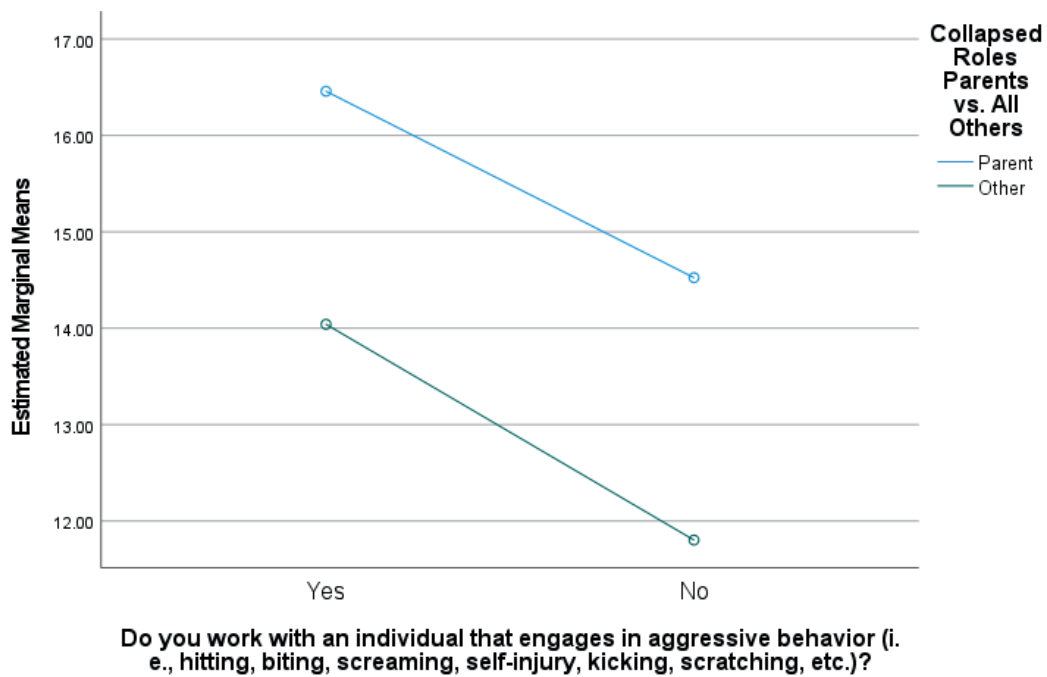


Table 15*Mean Hyperarousal Score Parents vs. Other Caregivers Aggression vs. No Aggression*

Do you work with an individual that engages in aggressive behavior (i.e., hitting, biting, screaming, self-injury, kicking, scratching, etc.)?		Mean	Std. Error
Parent	Yes	16.459	0.362
	No	14.525	0.375
Other	Yes	14.042	0.556
	No	11.804	0.746

Table 16*PCL-C Hyperarousal Scores: Test of Between Subjects Effects*

	Type III Sum of Squares	df	Mean Square	F	<i>p</i>
Caregiver Status	516.757	1	516.757	23.228	<i>p</i> <0.001
Aggression Status	340.522	1	340.522	15.306	<i>p</i> <0.001
Caregiver x Aggression Status	1.813	1	1.813	.082	<i>p</i> =0.775

Figure 8*Hyperarousal Subscale Caregiver x Aggression Status*

CHAPTER 5

Discussion

The purpose of this study was to determine whether higher levels of PTSD symptoms are being experienced among parents and other care providers of individuals with disabilities as compared to the general population. Stress and burnout are high among special education teachers and are contributing factors to low retention rates and high attrition (Billingsley, 2004; Gersten et al., 2001; McLeskey et al., 2004). Parents of children with disabilities also have higher levels of stress and increased risk of mental health disorders such as anxiety and depression which can affect their quality of life (Bumin et al., 2008). Aggression can be high among individuals with disabilities (Shattuck et al., 2007). This in turn can have negative effects on parents and professionals and can be a major contributing factor to stress and other mental health disorders. (Kanne & Mazurek, 2011). One example is PTSD, which is a condition with a prevalence rate of 2-5% of the general population (Stein et al., 2000).

Another purpose was to determine whether there are significant differences between parents and other caregivers in terms of their measured levels of PTSD symptoms. In addition, we wanted to determine whether there are significant differences in terms of the subscale scores as compared to the general population and between parents and other caregivers. Finally, we wanted to discover if experiencing aggression from an individual with a disability shows differences among the total PTSD score and the sub scores.

Research Question 1

Research has shown that parents of children with disabilities and special education teachers tend to have higher levels of stress which can lead to further problems such as mental and physical health issues. (Billingsley, 2004; Bumin et al., 2008; Gersten et al., 2001;

McLeskey et al., 2004). In conducting this study, an unexpected result of the sampling procedure yielded higher numbers of parents participating in the study than other service providers. While an analysis of the participants' rationale for participating in the study is beyond the scope of this work, one could conjecture that parents were not only drawn to Facebook groups where recruitment was conducted, but also that they related to the study. One could also hypothesize that parenting groups have a higher online participation presence.

Our sample had a mean total score of 46, as compared to the study one by Ruggiero et al. (2003) in which the mean was 29. This already shows that this population is at risk for elevated levels of PTSD symptoms. In answer to our research question, this study suggests that teachers, parents, and related service providers of individuals with disabilities do indeed experience higher levels of PTSD symptoms as compared to the general population.

The *t* test results indicated a large effect size with a score of less than 0.001. Research has already shown that working with individuals with disabilities can increase stress burnout (Hastings & Brown, 2002; Innstrand et al., 2002; Mitchell & Hastings, 2001; Moor & Cooper, 1996). This study also suggests that working with individuals with disabilities may contribute to PTSD symptomology. This might explain why attrition rates among special education teachers are already extremely high as compared to general education (Billingsley, 2004; Gersten et al., 2001; Katsiyannis et al., 2003; McLeskey et al., 2004).

The subscales within the PCL-C include re-experiencing trauma, numbing and avoidance, and hyperarousal. The participants in this study scored significantly higher in all three subscales as compared to the general population and these *t* test results also showed a main effect of less than 0.001 in all three subscales. The subscale in which the subjects scored the highest was the numbing and avoidance. This could suggest that parents and other service providers often engage

in behaviors to avoid similar situations that they have faced in their home or workplace. Avoidance could be a contributing factor to the high burnout and low retention rates among special education teachers as well as the increased level of stress, depression, and anxiety among parents (Billingsley, 2004; Bitsika & Sharpley, 2004; Gersten et al., 2001; Katsiyannis et al., 2003; McLeskey et al., 2004)

Research Question 2

The subjects were divided into two groups which included a) parents and b) other caregivers. Our results showed that parents had a higher mean in terms of total score as compared to other caregivers, with a main effect size of less than 0.001. This can suggest that even among this sample, which already has increased levels of PTSD symptoms as compared to the general population, parents suffer from even higher levels of symptoms. This could be due to the fact that parents typically spend more time with the individual as compared to professionals who only spend a few hours a day with the individual, or who can switch with other staff members. It could also be related with the fact that due to the increased stress; parents are already more at risk for mental health difficulties (Bitsika & Sharpley, 2004). In either case, the results of this study suggest that parents are the ones who suffer the most in terms of PTSD symptoms. In all three subscales of the PCL-C, parents had higher mean scores than other service providers. This can suggest that parents experience higher levels of PTSD in the areas of re-experiencing, numbing and avoidance, and hyperarousal as compared to other service providers.

Research Question 3

In order to answer this research question, we asked the following on the survey, “Do you work with an individual that engages in aggressive behavior (i.e., hitting, biting, screaming, self-

injury, kicking, scratching, etc.)?” Participants could reply either “yes” or “no.” Using the factorial ANOVA, we compared parents who said yes and parents who said no with other caregivers who said yes and those who said no. We did this test for the total scores as well as all three subscale scores.

Research has already shown that aggression can contribute to a higher rate of mental illness (Baker et al., 2003). We also saw this correlation as those who indicated “yes” had a higher PTSD total score than those who answered “no” to the questions regarding aggression. We saw that both caregiver status and aggression status had significant main effects of less than 0.001. This can suggest that working with an individual with disabilities that displays aggression or being a parent of an individual with disabilities can lead to even higher levels of PTSD symptoms.

Research Question 4

In total scores and in all three subscale scores we tested to see if there was an interaction between caregiver status and aggression status. Our results show that there was no interaction between caregiver and aggression status. This suggests that parents are struggling the most from PTSD symptoms even if they do not deal with aggression; however, if they do, their symptoms are even more elevated.

Limitations

There were several limitations to this study. First, this was a self-report questionnaire and as a result, there was no way to control for setting or other events. Second, it is difficult to determine whether each participant’s PCL-C score was directly related to their work with an individual with a disability or another traumatic event that happened in their life. Third, it could be that those who volunteered to participate were interested because they were already

experiencing some symptoms. In addition, the study done by Ruggiero et al. (2003) that was used as a comparison recruited only college students and could have an impact on results as most of our participants were parents. Fifth, 74% of the participants were parents while the other 26% was made up of other caregivers and service providers such as teachers, therapists, siblings, etc. This may have had an impact on the mean scores for the whole sample size since parents had higher scores in general. Additionally, it should be taken into account that it is possible that many parents seek out Facebook groups with other parents as a result of already having higher levels of PTSD or other mental health issues which could have an impact on the data. More limitations were also some demographic information from the participants such as gender, with 95% of the subjects being female, and location, with 46% being from Utah. As a result, it is important to use caution as this study may not be entirely generalizable.

Implications for Future Research

Future research could focus on determining whether the elevated levels of PTSD symptoms among parents and service providers of individuals with disabilities is directly related to their work or from some other trauma in their life. Research regarding the role of faith in dealing with stress could be conducted in the future as a large percentage of the sample size came from Utah. Further research could also be done to compare results from this population with PTSD scores with military veterans and analyze similarities and differences. In addition, research on the differences in age groups could be done to see if there is a particular age group that has a higher rate of PTSD symptoms. Finally, research should be continued on treatments for those who are suffering from these symptoms but cannot leave the environment, which acts as a trigger. This could in turn help lower the rates of attrition and raise the rates of retention

among teachers. Parents would also benefit from treatments in order to decrease their stress, rates of mental illness, and give them a better quality of life.

Parents who are struggling with increased PTSD symptoms and other mental health issues might be having a more difficult time with parenting. Therefore, by helping parents and caregivers have a better quality of life and increased mental health, we are also helping the individual with the disability to receive better instruction and parenting and to become more independent.

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APPENDIX A

IRB Approval Letter and Implied Consent

Institutional Review Board Approval Letter

**Memorandum**

To: Ryan Kellems
Department: BYU - EDUC - Counseling, Psychology, & Special Education
From: Sandee Aina, MPA, HRPP Manager
Wayne Larsen, MAcc, IRB Administrator
Bob Ridge, PhD, IRB Chair
Date: September 02, 2020
IRB#: IRB2020-290
Title: PTSD Symptoms Among Teachers and Caretakers of Individuals with Disabilities

Brigham Young University's IRB has approved the research study referenced in the subject heading as exempt level, Category 2.

This category does not require an annual continuing review. Each year near the anniversary of the approval date, you will receive an email reminding you of your obligations as a researcher and to check on the status of the study. You will receive this email each year until you close the study.

The study is approved as of 09/02/2020. Please reference your assigned IRB identification number in any correspondence with the IRB.

Continued approval is conditional upon your compliance with the following requirements:

1. A copy of the approved informed consent statement can be found in iRIS. No other consent statement should be used. Each research subject must be provided with a copy or a way to access the consent statement.
2. Any modifications to the approved protocol must be submitted, reviewed, and approved by the IRB before modifications are incorporated in the study.
3. All recruiting tools must be submitted and approved by the IRB prior to use.
4. Instructions to access approved documents, submit modifications, report adverse events, can be found on the IRB website, iRIS guide: http://orca.byu.edu/irb/iRIS/story_html5.html
5. All non-serious unanticipated problems should be reported to the IRB within 2 weeks of the first awareness of the problem by the PI. Prompt reporting is important, as unanticipated problems often require some modification of study procedures, protocols, and/or informed consent processes. Such modifications require the review and approval of the IRB. Please refer to the [IRB website](#) for more information.

Implied Consent

My name is Bruna Goncalves, I am a graduate student at Brigham Young University, and I am conducting this research under the supervision of Dr. Ryan Kellems, from the Department of Counseling Psychology and Special Education. You are being invited to participate in this research study of Posttraumatic Stress Disorder (PTSD) Symptoms Among Teachers and Caregivers of Individuals with Disabilities.

Your participation in this study will require the completion of the attached questionnaire. This should take approximately 10-15 minutes of your time. Your participation will be anonymous. If you desire, you may click on a link at the end of the questionnaire in order to participate in a drawing for a \$25 digital Amazon gift card. The odds of winning the gift card will be approximately 1 in 25 as 6 names will be drawn; however, this may vary depending on how many individuals participate in the study. You will only need to provide your first and last name and email if you decide to participate in the drawing. This is so that we may send you the gift card if you are selected. This is completely optional. We will have no way of connecting your names with your results if you participate in the drawing. Other than participating in the drawing, you will not be paid for being in this study.

This survey involves minimal risk to you. Risks may include discomfort while filling out the survey as well as triggers that may bring back uncomfortable memories. The benefits, however, may impact society by helping increase knowledge about PTSD symptoms among this population. At the end of survey, links and resources will be provided of places you may contact for help and consultation if you desire. Feel free to copy the links or take a screenshot so you may retain them.

You do not have to be in this study if you do not want to be. You do not have to answer any question that you do not want to answer for any reason. We will be happy to answer any questions you have about this study. If you have further questions about this project or if you have a research-related problem you may contact me, Bruna Goncalves, at brunag@me.com, or my advisor, Dr. Ryan Kellems at rkellems@byu.edu.

If you have any questions about your rights as a research participant you may contact the IRB Administrator at A-285 ASB, Brigham Young University, Provo, UT 84602; irb@byu.edu; (801) 422-1461. The IRB is a group of people who review research studies to protect the rights and welfare of research participants.

The completion of this survey implies your consent to participate. If you choose to participate, please click “yes” below and continue to the questionnaire. Thank you!

APPENDIX B

Recruitment Video Script

Hi there! I'm Bruna and I'm a special education teacher and a board-certified behavior analyst in training. I'm also a graduate student at Brigham Young University and I'm conducting a research project under the supervision of Dr. Ryan Kellems.

Many of us work with individuals with disabilities, and while that is immensely satisfying, it can also be hard physically and emotionally. My research is about post-traumatic stress disorder symptoms among parents, teachers and other caretakers and service providers.

But I need your help! All you have to do is fill out this online survey. It will only take about 10-15 minutes of your time!

Don't worry, you will remain completely anonymous! You don't even have to give us your name! Here are some other cool benefits you will receive by participating!

1. At the end of the survey there will be a list of links and resources for you in case you have questions regarding PTSD and would like more information. Feel free to copy or screenshot it so you can save it!
2. We will be doing a drawing for 6 \$25 digital gift cards for Amazon! To enter the drawing, just click on the link that is on the last question of the survey. That will lead to you a google form sheet. If you want to enter the drawing, you will have to give us your name and email so we can send you the card if you win, but don't worry, your survey results will still be completely anonymous, and we will have no way of connecting your name to the results! This is totally optional though and you don't have to do it if you don't want to!

3. Finally, you will be helping to further research that can help individuals with disabilities and their caretakers have a better quality of life, and that includes you!

My goal in life is to help individuals with disabilities have happier and more fulfilling lives. I also want to help parents, teachers, caretakers, and other service providers too! If you fill the same way, please click on the link below to complete the survey.

If you have more questions before participating, feel free to reach out to us! You can contact me, Bruna Goncalves, at brunag@me.com, or my advisor, Dr. Ryan Kellems at rkellems@byu.edu. We'd love to answer any questions or concerns you might have!

Thank you so much for helping us further this important research!

APPENDIX C

Instruments**PTSD Checklist - Civilian Version (PCL-C)**

INSTRUCTIONS: Below is a list of problems and complaints that people sometimes have in response to stressful life experiences. Please read each one carefully, then select one of the options to indicate how much you have been bothered by that problem in the past month.

Q2.1.

Repeated, disturbing memories, thoughts, or images of a stressful experience from the past?

- 1 Not at all
- 2 A little bit
- 3 Moderately
- 4 Quite a bit
- 5 Extremely

Q2.2. Repeated, disturbing dreams of a stressful experience from the past?

- 1 Not at all
- 2 A little bit
- 3 Moderately
- 4 Quite a bit
- 5 Extremely

Q2.3. Suddenly acting or feeling as if a stressful experience were happening again (as if you were reliving it?)

- 1 Not at all

2 A little bit

3 Moderately

4 Quite a bit

5 Extremely

Q2.4. Feeling very upset when something reminded you of a stressful experience from the past?

1 Not at all

2 A little bit

3 Moderately

4 Quite a bit

5 Extremely

Q2.5. Having physical reactions (e.g., heart pounding, trouble breathing, sweating) when something reminded you of a stressful experience from the past?

1 Not at all

2 A little bit

3 Moderately

4 Quite a bit

5 Extremely

Q2.6. Avoiding thinking about or talking about a stressful experience from the past or avoiding having feelings related to it?

1 Not at all

2 A little bit

3 Moderately

4 Quite a bit

5 Extremely

Q2.7. Avoiding activities or situations because they reminded you of a stressful experience from the past?

1 Not at all

2 A little bit

3 Moderately

4 Quite a bit 5 Extremely

Q2.8. Trouble remembering important parts of a stressful experience from the past?

1 Not at all

2 A little bit

3 Moderately

4 Quite a bit

5 Extremely

Q2.9. Loss of interest in activities that you used to enjoy?

1 Not at all

2 A little bit

3 Moderately

4 Quite a bit

5 Extremely

Q2.10. Feeling distant or cut off from other people?

1 Not at all

2 A little bit

3 Moderately

4 Quite a bit

5 Extremely

Q2.11. Feeling emotionally numb or being unable to have loving feelings for those close to you?

1 Not at all

2 A little bit

3 Moderately

4 Quite a bit

5 Extremely

Q2.12. Feeling as if your future will somehow be cut short?

1 Not at all

2 A little bit

3 Moderately

4 Quite a bit

5 Extremely

Q2.13. Trouble falling or staying asleep?

1 Not at all

2 A little bit

3 Moderately

4 Quite a bit

5 Extremely

Q2.14. Feeling irritable or having angry outbursts?

1 Not at all

2 A little bit

3 Moderately

4 Quite a bit

5 Extremely

Q2.15. Having difficulty concentrating?

1 Not at all

2 A little bit

3 Moderately

4 Quite a bit

5 Extremely

Q2.16. Being "super-alert" or watchful or on guard?

1 Not at all

2 A little bit

3 Moderately

4 Quite a bit

5 Extremely

Q2.17. Feeling jumpy or easily startled?

1 Not at all

2 A little bit

3 Moderately

4 Quite a bit

5 Extremely

Demographics

Q3.2. Please indicate your sex. (Choose one response.)

Female

Male

Q3.3. Please indicate your ethnicity/race. (Choose one response.)

Black or African American

American Indian/Alaska Native

Asian

Hispanic/Latino/a

Native Hawaiian/Other Pacific Islander

White

Multiracial

Q3.4. What state do you live in?

Q3.5. What is your primary role? (Choose one response.)

Licensed teacher- special education (specify certification):

Licensed teacher- general education (specify certification):

Alternate route to licensure - special education

Paraprofessional

Parent

Caretaker

Board Certified Behavior Analyst

Registered Behavior
Technician

Other (specify):

Q3.6.

How many years of teaching/work experience do you have?

Overall

Teaching general education

Teaching special education

Instructional Aide/Assistant

Board Certified Behavior Analyst

Registered Behavior Technician

Q3.7.

What grade level do you primarily work with?

Pre-K

Elementary (k-5)

Middle School (6-8)

High School (9-12)

12+ (18-21 program)

Q3.8. Highest Degree Obtained

High School

Associates

Bachelors

Masters

Doctorate

Q3.9. Level of Household Income

<30k/year

31-50k/year

51-100k/year

>100k/year

Q3.10. What level of intensity is your child/student's disability?

Mild

Moderate

Severe

Profound

Q3.11. Do you work with an individual that engages in aggressive behavior (i.e., hitting, biting, screaming, self-injury, kicking, scratching, etc.)?

Yes

No

Q3.12. How often does your student or child demonstrate some form of aggression towards you or themselves?

Multiple times daily

Daily

Weekly

Monthly

Infrequently

Never

Q3.13. Please rate the intensity of your child/student's aggression

Mild

Moderate

Severe

Profound

Drawing

5.1. Would you like to participate in a drawing for a \$25 gift card?

Yes (Please click on the link) <https://forms.gle/vzU4bwVJiN6gP6ok9>

No