2018

Using Dialectical Behavior Therapy to Improve School Performance of High School Students

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USING DIALECTICAL BEHAVIOR THERAPY TO IMPROVE SCHOOL PERFORMANCE OF HIGH SCHOOL STUDENTS

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Submitted in Partial Fulfillment of the Requirement for the Degree of

Doctor of Psychology

June 2018

COLLEGE OF

DEPARTMENT OF PSYCHOLOGY

DISSERTATION APPROVAL

This is to certify that the thesis presented to us by **Kelly R. Wayne** on the **18th day of May, 2018**, in partial fulfillment of the requirements for the degree of Doctor of Psychology, has been examined and is acceptable in both scholarship and literary quality.

COMMITTEE MEMBERS' SIGNATURES

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Acknowledgements

This achievement would never have occurred without the support of many who cajoled, inspired, and encouraged me throughout this journey. Dr. Diane Smallwood, thank you for your endless patience and encouragement while I fought my way through numerous self-inflicted detours and roadblocks. I always left my meetings with you believing I could achieve more than I had ever thought or dreamed possible. Dr. Ginny Salzer, thank you for teaching me that statistics is not something beyond my reach and for feeding my desire to continue to analyze (and reanalyze) data! Dr. Laura Monahon, thank you for teaching me the importance of considering the ethical implications of school practices and policies and to challenge those that do not serve the needs of all students.

Above all, thank you to my husband Bob, whose unwavering support and commitment allowed me to spend countless hours pursuing my passion while he cooked, cleaned, and took care of the day-to-day task of raising teenagers. You are an excellent example to our children, Rachael and Sam, of how to be a supportive spouse. Thank you for believing in me, even when I did not believe in myself.

Abstract

This study explored the effect of dialectical behavior therapy (DBT) on the school functioning of high school students with trauma histories. The lifelong impact of trauma exposure across multiple domains of functioning is well documented. However, there is a gap between research and practice in school environments. Teachers in this study were taught trauma-sensitive teaching practices and DBT strategies to improve their ability to understand student emotional dysregulation, reduce challenging classroom behaviors, and improve academic performance. Students were taught DBT strategies in mindfulness, emotional regulation, distress tolerance, and interpersonal relations designed to reduce disciplinary referrals, increase use of positive coping skills, and improve measures of resiliency. Results indicate teachers typically receive no training on the causes and impact of trauma prior to beginning their teaching career and feel ill-equipped to teach students with trauma histories. Teachers were more likely to identify challenging student behavior as a deliberate action or due to systemic issues such as school policy and procedures, rather than due to trauma exposure. Upon completion of the intervention, the number of disciplinary referrals students received for inappropriate language and defiance significantly increased, and the percentage of assignments completed by students participating in the DBT sessions significantly improved. Students reported increased use of positive coping skills, combined with a decrease in negative coping skills. Preresiliency and postresiliency measures found increased levels of adaptability, trust, tolerance, relatedness, and comfort, whereas emotional reactivity and impairment decreased. No change was found in levels of support, self-efficacy, optimism, or support.

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Chapter 1: Introduction

The aftermath of a trauma exposure can be likened to an infectious disease, spreading from individuals, families, schools, communities, and future generations across cultural, racial, and socioeconomic divisions. Stressor-related experiences early in life, especially those involving a parent, caregiver, or trusted adult, have been associated with diminished outcomes in health and education, which in turn, result in fewer assets and lower socioeconomic status in adulthood (Felitti et al., 1998; Adams, 2010; Lawrence & Hesse, 2010; Metzler, Merrick, Klevens, Ports, & Ford, 2017). Trauma has been found to cause multifaceted immediate and long-term consequences across all domains of functioning throughout an individual's lifespan. Even a single exposure to one or more threatening, adverse, or negative events or set of circumstances can have a profound, immediate, and lifelong influence on an individual, resulting in a multitude of intense, and often overwhelming, physical and psychological reactions of which the impact may not be immediately apparent (van der Kolk, 2003; D'Andrea, Ford, Stolbach, Spinazzola, & van der Kolk, 2012; Blaustein, 2013; Gerson & Rappaport, 2013; Substance Abuse and Mental Health Services Administration [SAMHSA], 2014; National Association of School Psychologists [NASP], 2015a). Individuals exposed to multiple types of violence or those who suffer numerous encounters with the same form of trauma (i.e., polyvictims) are at a very high risk for additional trauma exposure and cumulative impairments (Cook et al., 2005; Finkelhor, Ormrod, & Turner, 2007a; Adams, 2010). As many as 1 in 10 children are polyvictims and likely to experience psychiatric and addictive disorders, as well as legal, vocational, and family problems (Cook et al., 2005; Finkelhor et al., 2007a; Listenbee et al., 2012). The accumulation of traumatic events over time increases not

only the likelihood of negative outcomes, but also their level of severity (Felitti et al., 1998; Lam, Lyons, Griffin, & Kisiel, 2015; Lansing, Plante, & Beck, 2016).

Causes of trauma.

The Adverse Childhood Experiences (ACE) study was designed to explore the relationship between adult functioning and exposure to childhood emotional, physical, or sexual abuse and household dysfunction during childhood (Felitti et al., 1998). The original ACE study took place between 1995 and 1997. Approximately 17,000 adults completed a questionnaire targeting seven categories of adverse childhood experiences, which were then compared to measures of adult risk behavior, health, and disease. The following categories were studied: (a) deliberate and intentional acts perpetrated by family members, such as physical, sexual, or psychological, and/or emotional abuse, as well as community-, peer-, and school-based assaults and bullying; (b) acts of emotional or physical neglect, such as the failure to protect from harm or potential harm, as well as failure to provide basic needs (e.g., food, water, shelter); (c) trauma related to home/caregivers, which could include domestic violence, substance abuse, mental illness, or family history of trauma; (d) abandonment by a family member (e.g., death, parental separation or divorce, incarceration); and (e) environmental factors, such as chronic violence, gang activity, natural disasters, or exposure to terrorism. More than one half of the respondents reported experiencing at least one trauma, and one fourth reported trauma in two or more categories (Felitti et al., 1998). Results of the ACE study indicated childhood exposure to trauma correlated with higher levels of alcoholism, smoking, drug abuse, depression, suicide attempt, sexually transmitted disease, obesity, heart disease, cancer, and chronic lung and liver disease as an adult (Felitti et al., 1998). A strong

graded relationship was found between the extensiveness of exposure to abuse or dysfunction during childhood and multiple risk factors as an adult (Felitti et al., 1998; Finkelhor, Ormrod, & Turner, 2007b; Finkelhor, Turner, Ormrod, Hamby, & Kracke, 2009).

Prevalence.

Numerous studies have advanced the findings of the original ACE report confirming the prevalence and profound impact of early traumatic experiences. Studies have targeted the general population, various cultures and ethnicities, as well as specific populations such as juveniles with criminal records, children of alcoholics, street-involved youth, Lesbian, Gay, Bisexual, Transgender, and Questioning (LGBTQ), and those living in urban areas (Coates & McKenzie-Mohr, 2010; Hamby, Finkelhor, Turner, & Ormrod, 2011; Bender, Thompson, Ferguson, Yoder, & Kern, 2014; Baglivio, Wolff, Piquero, & Epps, 2015; Kosciw, Greytak, Giga, Villenas, & Danischewski, 2016; Maquire-Jack & Font, 2017).

A 2007 study found more than two thirds of a representative population sample of 1,420 children ages 9 through 13 experienced at least one significant trauma before the age of 16 (Copeland, Keeler, Angold, & Costello, 2007). The 2008 National Survey of Children's Exposure to Violence (NatSCEV) was the first comprehensive attempt to measure children's (birth to 17 years) exposure to violence in the home, school, and community, as well as cumulative exposure to violence across the lifespan (Finkelhor et al., 2009). The NatSCEV study found more than 60% of those surveyed had been exposed to direct or indirect violence within the past year, 46% were assaulted, and 1 in 10 were victims of maltreatment. Almost 40% of the children and adolescents

completing the NatSCEV survey indicated they had been direct victims of two or more violent acts, 1 in 10 children directly experienced five or more episodes of violence, with exposure to increasingly severe types of violence most frequent among older children and adolescents (Finkelhor et al., 2009). Data collected from child protective services, published in 2014, confirmed children's and adolescents' exposure to trauma continues to be a significant problem. From 2010 to 2014, the number of children and adolescents investigated by child protective agencies rose 7.4%. During 2014, 75% of the 702,000 children found to be victims of maltreatment were neglected, 17% were physically abused, and 8% experienced sexual abuse; 26% were exposed to at least one form of family violence, and 6% witnessed violence between their parents (Department of Health and Human Services [HHS], 2014; Finkelhor, Turner, Ormrod, Hamby, & Kracke, 2014). A review of data obtained between August 2013 and April 2014 found approximately 1,300 individuals reported being involved in a physical assault; 15% reported being the victim of sibling and/or peer abuse, and 1 in 20 girls ages 14 to 17 experienced sexual assault or abuse (Tucker, Finkelhor, Turner, & Shattuck, 2014; Finkelhor, Turner, Shattuck, & Hamby, 2015a). During 2014, 3.6 million reports were filed regarding suspected child maltreatment involving 6.6 million children, with 61% of the reports requiring additional response from an agency (HHS, 2014). McLaughlin et. al. (2013) surveyed 6,483 adolescents aged 13 to 17 and reported 61.8% of the adolescents had experienced a potentially traumatic experience.

School environment.

Violence occurring in the school environment can be a source of trauma as well as a trigger, causing individuals with trauma histories to reexperience original traumas

(Listenbee et al., 2012; Day et al., 2013). Sexual minority students routinely experience higher levels of bullying and school violence than heterosexual students. They are more likely to be the targets of bullying and physical aggression, resulting in school avoidance due to safety concerns (Olsen, Kann, Vivolo-Kantor, Kinchen, & McManus, 2014). Several studies have confirmed schools with negative school climate, higher rates of victimization, violence, bullying, or zero tolerance discipline systems typically have lower overall academic achievement, higher levels of absenteeism, and lower rates of graduation (Espelage, Low, & Jimerson, 2014; Wang et al., 2014; Cornell, Shukla, & Konold, 2015; Benbenishty, Astor, Roziner, & Wrabel, 2016).

Risk and resiliency factors.

Everyone possesses a unique combination of risk and resiliency factors created through complex interactions of biological, developmental, social, and environmental factors (Coie et al., 1993; Walaler, 2001; Wiebler, 2013). Multifaceted and complex, risk and resiliency (i.e., protective) factors influence the onset, type, development, and duration of symptoms associated with trauma. Each exposure to a risk factor has the potential to exponentially increase the level of dysfunction; protective factors serve to mediate or reduce the impact of adversity, trauma, and stress (Burack et al., 2006; Crozier et al., 2011; D'Andrea et al., 2012; Gerson & Rappaport, 2013; Kliethermes, Schacht, & Drewry, 2014; NASP, 2015a). The same circumstances or personality traits can either serve to be risk or protective factors (Matsen & Coatsworth, 1998; Waller, 2001). Whether an individual will view an adverse experience as traumatic is dependent upon a combination of internal and external factors, such as the age of the individual, developmental level at the time of the trauma exposure, physical health, cognitive

functioning, type and duration of traumatic experience, and proximity to the event (van der Kolk, 2003; De Bellis, Hooper, Spratt, & Woolley, 2009; Crozier, Van Voorhees, Hooper, & DeBellis, 2011; Gerson & Rappaport, 2013; Kliethermes et al., 2014; NASP, 2015a; Lansing et al., 2016). The quality of attachment to parents or caregivers has been found to be one of the most powerful risk or protective factors for a child or adolescent. When these fundamental attachment bonds are disrupted or destroyed, significant changes occur across multiple domains of functioning, including brain development, sense of self, and capacity to trust, causing difficulty engaging in healthy relationships (van der Kolk, 2003; Day et al., 2013; Schore, 2013; Lanius, Bluhm, & Frewen, 2013; Alexander, 2013; Kliethermes et al., 2014; Oshri, Sutton, Clay-Warner, & Miller, 2015).

Impact of trauma.

The impact of childhood adversity and trauma has become one of the most critical issues facing our society (Blaustein, 2013; Gerson & Rappaport, 2013; Shiner, Allen, & Masten, 2016). The National Task Force on Children Exposed to Violence (2012) reported, "the financial costs of children's exposure to violence are astronomical" (p. 5). Children and adolescents with trauma histories are more likely to engage in risky behaviors, such as sexual activity, drug and alcohol use, delinquent behaviors and criminal activity, self-harm or suicide (Felitti et al., 1998; van der Kolk, 2003; Adams, 2010; SAMHSA, 2014). They are also more likely to become involved with child welfare and juvenile justice systems (Cook et al., 2005; Wasserman & McReynolds, 2011; Gerson & Rappaport, 2013; Finkelhor et al., 2015a; Shiner et al., 2016). When the financial burden on other public systems servicing children and adolescents, such as social services, juvenile justice, and education, is considered, the cost of trauma becomes

staggering. The expense of trauma throughout an individual's lifespan and across generations is incalculable (Adams, 2010; Listenbee et al., 2012).

Research has demonstrated a significant relationship exists between exposure to trauma and disruptive school behaviors and poor academic outcomes, such as lower grades, delays in reading, grade repetition, and increased dropout rates and disciplinary actions (Breslau, Lane, Sampson, & Kessler, 2008; Rothon et al., 2009; Guzman et al., 2011; Burnett-Zeigler et al., 2012; Cornaglia, Crivellaro, & McNally, 2015; Murphy et al., 2015; Stephen, Sugai, Lever, & Connors, 2015; Chafouleas, Johnson, Overstreet, & Santos, 2016). Individuals with trauma histories experience more academic deficits, increased levels of absenteeism, frequent school transitions, greater behavioral challenges and disciplinary issues, and lower graduation rates than those without similar backgrounds (De Bellis et al., 2009; Wilson, Hansen, & Li, 2011; NASP, 2015b; Lansing et al., 2016). Exposure to trauma can cause deficits in memory, attention, organization, comprehension, and self-regulation, leading to low levels of motivation and self-efficacy and high levels of frustration and noncompliance (Brunetti, 2006; Ingersoll & May, 2011; West, Day, Somers, & Baroni, 2014; Monahan, VanDerhei, Bechtold, & Cauffman, 2014).

School staff are not immune to indirect or direct experiences of trauma. Teachers rarely receive appropriate training in child and adolescent mental health, classroom management, or how to effectively handle disruptive student behaviors before entering a classroom, nor do they tend to receive professional development in these topics once they begin their careers (Emmer & Stough, 2001; Stoiber & Gettinger, 2011; Inbar-Furst & Gumpel, 2015; Ball et al., 2016; Moon, Williford, & Mendenhall, 2017). School staff

report a lack of policies and procedures to guide how they should respond to students reporting trauma and report questioning their role and responsibilities in relationship to the school counselor, school psychologist, or administrative staff in providing supports to traumatized students (Powers, Bowen, & Bowen, 2010; Alisic, Bus, Dulack, Pennings, & Splinter, 2012; Moon et al., 2017). Although educators do not typically work with students at the same level of emotional intensity as a therapist or first responder, they are working closely with youth exposed to trauma and at risk for secondary traumatic stress (STS); often referred to as "compassion fatigue" (Figley, 1995; Ellis, 2012; Hydon, Wong, Langley, Stein, & Kataoka, 2015). Symptoms of STS include intrusive thoughts, negative cognitions and mood, irritability, changes in memory, hyperarousal, and reactivity (National Child Traumatic Stress Network [NCTSN], 2011). Researchers have recognized the importance of addressing the stress school staff experience due to direct or secondary contact with traumatic events as a means for explaining teacher burnout and attrition, increasing job satisfaction, and developing more effective interventions and strategies for supporting behavioral and emotional challenges of trauma exposed students (Figley, 2002; Alisic et al., 2012; Ellis, 2012; Chang, 2013; Moon et al., 2017).

Traumatic experiences early in life have been known to alter brain structures, shape physical development, impact social and emotional functioning, and change an individual's personality and mental health (van der Kolk, 2003; Gerson & Rappaport, 2013; Finkelhor et al., 2015a; Shiner et al., 2016). Children and adolescents exposed to traumatic events experience changes to their cognitive functioning in the areas of attentional capacity, intellectual functioning, executive functions, learning and memory, language, visuospatial function, and processing speed (Wilson et al., 2011; Mothes et al.,

2015; Vasilevski & Tucker, 2016). The various manifestations of trauma require not only an understanding of the individual's perspective of the defining traumatic event(s), but also the unique sequence of sequelae and resulting impact across one or more domains of functioning (van der Kolk, 2003; Crozier et al., 2011; D'Andrea et al., 2012; Kliethermes et al., 2014; SAMHSA, 2014; NASP, 2015a).

Safe and supportive schools.

The majority of children and adolescents with mental health needs either do not receive services at all or obtain services through the school system. A review of three national surveys found approximately 80% of students between the ages of 6 and 17 years who were identified as requiring mental health services had not received them in the 12 months prior to being identified; the majority of the remaining 20% obtained the needed mental health supports at school (Kataoka, Zhang, & Wells, 2002). Schools are in a unique position to provide mental health supports, decrease the impact of trauma for children and adolescents with trauma histories, and reduce many of the barriers associated with seeking mental health supports in traditional settings, such as dependence upon others for scheduling and keeping appointments, transportation, stigma, and difficulty finding child care (Stephan, Weist, Kataoka, Adelsheim, & Mills, 2007; Nadeem, Jaycox, Kataoka, Langley, & Stein, 2011; Burnett-Zeigler et al., 2012; Blaustein, 2013; NASP, 2015b; Chafouleas et al., 2016). Incorporating a purposeful and interconnected system of mental health supports in school not only provides targeted interventions, but also helps prevent worsening mental, emotional, and behavioral challenges and reduces disruption in academic functioning (Barrett, Eber, & Weist, 2013; Chafouleas et al., 2016; Lansing et al., 2016). Creating a comprehensive system of

supports for students and their families requires schools to purposefully collaborate with families and outside agencies to provide a multitiered framework of mental health supports from school-based and clinical professionals (Aldeman & Taylor, 2013; Blaustein, 2013; Cole et al., 2013; Chafouleas et al., 2016; Roffey, 2016). Schools can create safe and supportive environments and increase academic competency in students impacted by trauma by (a) providing professional development designed to increase staff knowledge about trauma and develop an educator's skills and motivation to implement trauma-informed approaches; (b) focusing on teaching social and emotional functioning skills, such as making and maintaining positive relationships with others, taking responsibility for own actions, and communicating effectively; (c) increasing students' sense of safety and connectedness by establishing relationships between students and adults; (d) developing students' ability to solve problems, cope with new situations and expectations, regulate emotions and behaviors, and tolerate frustration; and (e) teaching the fundamentals for maintaining a healthy lifestyle (Blaustein, 2013; Cole et al., 2013; Everly & Firestone, 2013; Ristuccia, 2013; Roffey, 2016).

Dialectical behavior therapy.

Dialectical behavior therapy (DBT) has been found to be an effective support for individuals with complex trauma histories. DBT was originally designed to support the emotional dysregulation, impulsiveness, negative view of self, poor interpersonal relationships, and dysfunctional response patterns among individuals diagnosed with borderline personality disorder (Linehan, 1993a, 1993b). Individuals diagnosed with borderline personality disorder (BPD) tend to have a history of trauma during childhood and/or adolescents with estimates of 60% to 90% having experienced physical, sexual, or

emotional abuse (Zanarini et al., 1997; Golier et al., 2003; Battle, Shea, Johnson, Zlotnick, & Zanarini, 2004; Ball & Links, 2009; MacIntosh, Godbout, & Dubash, 2015). DBT employs a skill deficit model, suggesting the absence of or inability to use critical skills leads to and maintains dysfunctional behaviors (Linehan 1993a, 2015a; Wilks, Korslund, Harned, & Linehan, 2016). Individuals are taught specific skills and strategies to (a) enhance their capability by increasing skillful behavior, (b) improve and maintain motivation to change and engage in treatment, (c) ensure generalization of change occurs through treatment, and (d) assist the individual in restructuring or changing his or her environment to be supportive and maintain progress toward goals (Koerner & Dimeff, 2007; Eich, 2015; Linehan, 1993a, 2015a). Although skill deficits are specifically targeted for intervention, the ultimate goal is the acquisition, strengthening, and generalization of practical skills for regulating both over- and under-controlled emotions, reducing impulsive behaviors, solving problems, and building and repairing interpersonal relationships as a means for learning new ways of responding to problems in living often caused by the client's emotional dysregulation. (Mazza, Dexter-Mazza, Miller, Rathus, & Murphy, 2016). Individuals who have been taught DBT skills and practice those skills on a regular basis report higher levels of self-efficacy and are more successful in regulating their emotions and behavior (Barnicot, Gonzalez, McCabe, & Priebe, 2016). DBT has been found to promote resilience by teaching skills for accumulating positive life events in order to increase positive emotions and building a sense of generalized mastery by engaging in activities to increase competency and self-efficacy (Neacsiu, Bohus, & Linehan, 2014). DBT strategies focus on teaching skills to increase acceptance of self and circumstances (referred to as mindfulness and distress tolerance tools) and techniques

for change (known as emotional regulation and interpersonal effectiveness skills). DBT for adolescents incorporates a fifth skills module, walking the middle path, designed to teach validation of self and others, behavioral principles (e.g., contingency reinforcement, shaping, extinction), and family-specific dialectical dilemmas (Miller, Rathus, & Linehan, 2007; MacPherson et al., 2013).

Statement of the Problem

The majority of research conducted on childhood and adolescent trauma has focused on identifying the impact of adverse experiences throughout the lifespan. Research has specifically explored the influence of adverse experiences on the biological, emotional, and behavioral regulation, and cognitive, academic, and social domains of functioning (Pearlman & Courtois, 2005; D'Andrea et al., 2012; Schore, 2013; Kliethermes et al., 2014; Oshri et al., 2015). Youth with trauma histories have been found to benefit from safe and supportive school environments specifically designed to decrease risk factors and increase protective factors, resulting in improved academic, social, emotional, and behavioral competencies (Weissberg et al., 2003; Cook et al., 2005; Cole et al., 2013; Crosby, 2015). Social, emotional, and behavioral interventions have successfully addressed whole school populations (such as School-Wide Positive Behavioral Interventions and Supports [SWPBIS]), groups of students with shared needs (e.g., groups focused on anxiety, anger management, grief, etc.), and individuals, ranging from daily report cards and behavioral contracts to more intensive trauma-focused cognitive behavioral therapy (Sugai et al., 2000; Greenberg et al., 2003; Cohen, Mannarino, & Deblinger, 2006; Sugai & Horner, 2006; Durlak et al., 2011; Sklad et al., 2012).

Teachers are often the first to notice the social, emotional, and behavioral needs of students, but typically do not believe they are knowledgeable, capable, or confident in their abilities and skills to address these needs. The preservice training and professional development of educators in child and adolescent mental health, classroom management, and emotional and behavioral challenges tends to be inadequate or nonexistent, causing increased stress and feelings of incompetency, which contribute to higher rates of teacher attrition (Emmer & Stough, 2001; Stoiber & Gettinger, 2011; Moon et al., 2017). As a result, it is important to increase not only teachers' knowledge of the causes and prevalence of adverse childhood experiences, but also their understanding of the far-reaching repercussions of trauma exposure across an individual's lifetime. Additionally, students with trauma backgrounds exhibit deficits in skill areas typically addressed in DBT sessions, including emotional regulation, distress tolerance, mindfulness, and developing interpersonal relationships. Providing teachers with training, resources, and strategies in these areas provides a greater degree of support for students with trauma histories. This knowledge also has the potential to reduce teacher stress, improve classroom management techniques, and increase self-efficacy, providing support for the emotional health of the teacher.

Purpose of the Study

Exposure to trauma impacts an individual's cognitive functioning, as well as his or her ability to form attachments, develop a positive sense of self, and regulate emotions and behaviors. Many strategies commonly used to support children and adolescents exposed to trauma do not address the wide range of behavioral responses to stress and maladaptive coping strategies, suggesting research identifying effective interventions for

adolescents with behavioral and emotional dysregulation and/or trauma histories is greatly needed (Fasulo, Ball, Jurkovic, & Miller, 2015; Lansing et al., 2016). The purpose of this study was to extend previous research by examining the impact on school functioning of students demonstrating emotional dysregulation, difficulty coping with frustration, poor interpersonal relationships, and an inability to calm and maintain attentiveness after teachers and students were provided with training in DBT principles and strategies associated with trauma-sensitive schools.

The research questions addressed in this study were:

1. What are the perceptions and experiences of teachers who receive training in DBT skills and/or trauma-sensitive schools regarding (a) adolescent mental health, (b) behavioral challenges, and (c) academic performance?
2. What is the impact of training in the cause and prevalence of trauma in trauma-sensitive schools on secondary teachers with regard to their capacity to (a) recognize when a student has been exposed to trauma, (b) know how to respond in the moment if a student discloses he or she has experienced trauma, (c) identify and implement strategies to support students exposed to trauma?
3. What is the impact of DBT skills training on students' on (a) negative school behaviors such as cutting class, not completing assignments, using inappropriate language, or acts of defiance, (b) academic performance, and (c) measures of coping and resiliency?

Chapter 2: Review of the Literature

There are experiences, particularly in childhood and adolescence, that make it extremely predictable that individuals will be at a substantially higher risk for a number of traumatic experiences, such as violence, abuse, neglect, poverty, and mental illness. Previous research has provided insight into these complex traumatic experiences and their impact on development across the lifespan. Even one episode of stress, trauma, or adversity has shown to influence brain development and functioning; the impact increased in severity in a graded dose-response fashion (i.e., as the number of episodes [doses] increased, the intensity of the outcome increased; Felitti et al., 1998). The number of trauma experiences (polyvictimization) has been identified as a significant factor when planning treatment (Finkelhor et al., 2007a; Ford, Elhai, Connor, & Frueh, 2010). Lastly, as the number of trauma experiences (cumulative trauma) increased, so did the unique pattern of symptom complexity and range of posttraumatic responses, making an understanding of a client's history and risk factors crucial to the development of interventions and treatment outcomes (Briere & Spinazzola, 2005; Cloitre et al., 2009; D'Andrea et al., 2012).

Recent research has expanded on the definition of complex trauma to include the impact trauma has on personality development (Gerson & Rappaport, 2013; Shiner et al., 2016), attachment (Oshri et al., 2015), neurobiological development (Schore, 2013; Kliethermes et al., 2014), emotional and behavioral regulation (Wilson et al., 2011; D'Andrea et al., 2012; Gerson & Rappaport, 2013; Kliethermes et al., 2014; Mothes et al., 2015), and cognition and executive functions (Wilson et al., 2011; Mothes et al., 2015; Vasilevski & Tucker, 2016) across the lifespan. Additional research has found

exposure to trauma affects individuals differently, depending on the developmental stage of the child or adolescent at the time of the trauma (Anderson et al., 2008; Schore, 2013; Kliethermes et al., 2014).

Causes of Trauma

Trauma is more than an event; it can be a process that extends over time with significant compounding elements. Children and adolescents are especially vulnerable because they are dependent upon others for their care, protection, and stability. Relational and betrayal trauma are two forms of interpersonal traumatic stressors that are particularly damaging, as they disrupt or destroy fundamental attachment bonds and violate the trust a child or adolescent has in another person (Hesse & Main, 2006; Cloitre et al., 2009; Shore, 2013; Lanius et al., 2013; Alexander, 2013; Kaehler, Babcock, DePrince, & Freyd, 2013; Platt & Freyd, 2015; Martin, Van Ryzin, & Dishion, 2016). The most common forms of relational and betrayal trauma are physical, sexual, psychological, and emotional abuse; failure to protect from harm; neglect of basic needs; and exposure to domestic violence and substance abuse (Alexander, 2013; Kaehler et al., 2013; Lawson & Quinn, 2013; Finkelhor, Turner, Shattuck, Hamby, & Kracke, 2015b).

Trauma and stressor-related experiences beginning in childhood or adolescence have a strong correlation with the quality of life experienced as an adult (Felitti et al., 1998; Cook et al., 2005; Lawrence & Hesse, 2010; Turner, Finkelhor, & Ormrod, 2010b; D'Andrea et al., 2012; Lawson & Quinn, 2013). Even a single exposure to a stressor in childhood or adolescence can result in lifelong difficulties related to self-concept, behavioral control, attachment, self-injury, addiction, and cognitive distortions, as well as psychological symptoms such as depression, anxiety, and dissociation (Felitti et al., 1998;

Cook et al., 2005; Lawrence & Hesse, 2010; Lawson & Quinn, 2013; Metzler et al., 2017). One experience of trauma places an individual at risk for additional traumas (cumulative trauma) and individuals who experience multiple forms of trauma (polyvictims) suffer from the cumulative exposure and are more likely to develop extremely complex physical, emotional, cognitive, and behavioral problems (Finkelhor et al., 2007a; Cloitre et al., 2009; Ford et al., 2010; Turner et al., 2010b; Grasso, Greene, & Ford, 2013; Lam et al., 2015).

Chronic community violence disproportionately occurs in urban communities among minority and low-income populations, increasing the risk of trauma for children and individuals living in these communities (Rohde-Collins, 2013; Zhang, Musu-Gillette, & Ouderkerk, 2016). Community violence can result in children and adolescents witnessing assaults and killings of family members, peers, or innocent bystanders. Individuals repeatedly exposed to violence in the community develop an attitude of hypervigilance against any perceived threat or outbreak of violence, view violent behavior as normal, and develop a pessimistic impression of outsiders, such as police and social workers (Listenbee et al., 2012; Rohde-Collins, 2013). Exposure to community violence can cause some to join gangs or engage in criminal activities to avoid being viewed as weak and counteract feelings of powerlessness, ultimately increasing their risk of incarceration (Listenbee et al., 2012; Lansing et al., 2016). Children and adolescents exposed to community violence are more likely to use alcohol and marijuana and perceive themselves as having less vitality as adults (Mostoufi et al., 2013; Wright, Fagan, & Pinchevsky, 2013; Zhang et al., 2106).

School violence, including bullying, cyberbullying, fighting, and availability and use of weapons and drugs, creates an unsafe environment for children, adolescents, and staff and can be the cause of significant trauma and stress (Zhang et al., 2016). Exposure to trauma at school has been found to increase absenteeism, suspensions, expulsions, dropout rates, and teacher attrition (Finkelhor et al., 2015a; Elkund & Rossen, 2016; Lansing et al., 2016: Zhang et al., 2016). Individuals who experience trauma in their families, communities, and schools are more likely to experience impairment across multiple domains, including attachment, emotional and behavioral regulation, cognitive development, dissociation, and self-concept (Felitti et al., 1998; Cook et al., 2005; Finkelhor et al., 2009; D'Andrea et al., 2012; Finkelhor et al., 2015a).

Direct or indirect exposure to natural disasters or acts of terrorism is an additional source of trauma and stress (Felitti et al., 1998; Finkelhor et al., 2009; Kilmer, Gil-Rivas, & Hardy, 2013). Multiple areas of an individual's life can be affected, such as physical needs (e.g., food and clothing), loss or damage to a home, death of a loved one, loss of the social structure of the community, or financial concerns, leaving children and adolescents to feel unsafe and uncertain of their future (Kilmer et al., 2013). Natural disasters or terrorism are more likely to directly impact adults working with children, forcing them to deal with their own trauma as well as that of those in their care (Figley, 1995; Kilmer et al., 2013).

Prevalence

Unfortunately, exposure to traumatic experiences continues to be a common occurrence for far too many children and adolescents in the United States. Approximately one fifth of youth in the United States has been exposed to more than one

type of relational and/or betrayal traumatic event, with many being exposed to multiple types of trauma involving several perpetrators (Finkelhor et al., 2007a; Grasso et al., 2013; Turner et al., 2010b). The second National Survey of Children's Exposure to Violence (NatSCEV II), completed in 2011, surveyed 4,503 children, youth, or their caregivers across the United States. The NatSCEV II results indicated approximately three in five children (57.7%) were the victim of a physical assault, sexual attack, or property victimization (i.e., robbery, vandalism, theft) or indirectly witnessed violence during the previous year. Maltreatment, including physical, sexual, and emotional abuse, neglect, custodial interference, or family abduction, affected 13.8% of the individuals surveyed (Finkelhor et al., 2015b).

Multiple exposures to violence occurred in nearly one half (48.4%) of the NatSCEV II participants, with 15.1% reporting at least six or more types of direct or witnessed violence; nearly 5% were subjected to 10 or more types of victimization (Finkelhor et al., 2015b). Exposure to violence was found to accumulate as the child aged, with 7 in 10 (69.7%) adolescents (ages 14-17) reporting being assaulted and 71.5% witnessing violence during their lifetimes (Finkelhor et al., 2015b). Copeland and colleagues (2007) conducted a study in a representative sample of 1,420 children ages 9 through 13 and found more than two thirds had experienced at least one significant trauma before the age of 16 (Copeland et al., 2007). Children and adolescents with one or more trauma experiences are 2 to 7 times more likely to experience additional traumas (Finkelhor et al., 2007b; Turner, Finkelhor, & Ormrod, 2010a). Costello, Erkanli, Fairbank, and Angold (2002) interviewed 1,420 children and adolescents and discovered

that a family history of mental illness doubled the risk of exposure to a traumatic event for both boys and girls.

Maltreatment.

During 2015, 4 million referrals alleging child or adolescent maltreatment involving 7.2 million children were filed with a government agency. Approximately 86% of the claims investigated involved a child or adolescent suffering one maltreatment type, with 14% experiencing a combination of maltreatments (HHS, 2017). The most common form of maltreatment was neglect (75.3%), with physical abuse occurring in 17.2% of the cases investigated and sexual abuse in 8.4% of the referrals. Children younger than 3 were the victim of maltreatment in 27% of the cases, with approximately 75% of the children being neglected, 17% suffering physical abuse, and almost 9% sexually assaulted (HHS, 2017).

Assault.

Results of the NatSCEV II found approximately two in five children and youth (41.2%) were victims of at least one physical assault, and 1 in 20 children and youth (5.6%) were sexually assaulted. Approximately 10% of those who experienced an assault reported being injured during the assault (Finkelhor et al., 2015b). A study conducted by Tucker and colleagues (2014) between August 2013 and April 2014 identified approximately 1,300 individuals as having experienced a physical assault. Almost 1 in 20 girls ages 14 to 17 had been the victim of sexual assault or abuse (Tucker et al., 2014). The NatSCEV II study noted violence within the family as a significant source of trauma, with almost 23% of the participants witnessing a violent act and 8.2% being the target of direct violence by a family member (Finkelhor et al., 2015b). A similar study, conducted

by the U.S. Department of Health and Human Services, found 37% of children surveyed had been exposed to violence, crime, or abuse in their homes, schools, and communities, with approximately 26% being exposed to family violence and one in four experiencing a property crime (Hamby et al., 2011; HHS, 2014; Finkelhor et al., 2014). The NatSCEV II study found more than half of the youth (56.6%) reported experiencing a property crime at least once in their lifetime (Finkelhor et. al., 2015b).

High risk populations.

Members of high risk populations include homeless or transient children and adolescents, as well as those living in homes with high levels of unemployment, poverty, and exposure to criminal activities. Children and youth in the juvenile justice system, belonging to a gang, or belonging to the LGBTQ community experience more chronic and severe levels of trauma than other individuals with trauma histories (Felitti, 1998; McGee, 2014; Finkelhor et al., 2015a; Lansing et al., 2016). There is a strong correlation between belonging to one or more high-risk populations and a high number of school absences and transitions, development of significant mental health disorders, acts of self-harm and attempted suicide, and engaging in risky behaviors such as unprotected sexual encounters and substance and drug use (Centers for Disease Control and Prevention [CDC], 2013, 2016; Gerson & Rappaport, 2013; McGee, 2014; Oshri et al., 2015; Lansing et al., 2016).

LGBTQ. Individuals with a diverse sexual orientation (i.e., gay, lesbian, bisexual, transgender, or questioning) are at higher risk for interpersonal violence and childhood abuse and neglect and experience more types of trauma at an earlier age than heterosexual individuals (Roberts, Austin, Corliss, Vandermorris, & Koenen, 2010; Olsen

et al., 2014). Being in a relationship does not increase safety for LGBTQ males and females. They report experiencing higher levels of rape, physical violence, and/or stalking by an intimate partner than heterosexuals (CDC, 2010). Results of the 2015 National School Climate Survey indicated 57.6% of LGBTQ students felt unsafe at school, with 85.2% reporting experiencing verbal harassment and 27% suffering physical harassment (Kosciw, Greytak, Giga, Villenas, & Danischewsi, 2016).

Juvenile delinquency and gang membership. Data collected from 505 gang members found they were 6 times more likely to have experienced interpersonal violence, including physical and sexual abuse or witnessing family violence as a child (Petering, 2016). Baglivio and Epps (2016) studied the trauma experiences of 64,329 juvenile offenders and discovered 67.5% had been exposed to four or more trauma experiences, 24.5% reported at least six trauma experiences, and only 3% of males and 2% of females had no exposure to any abuse or neglect. Children and adolescents with five or more trauma experiences tend to have a greater likelihood of arrest and an earlier age of onset of criminal activity (Wasserman & McReynolds, 2011; Baglivio, Wolff, Piquero, & Epps, 2015). A study of 22,575 delinquent youth found each experience of trauma increased the adolescent's risk of becoming a serious, violent, and chronic offender by more than 35%, with physical abuse and incarcerated household members being the most detrimental forms of trauma (Fox, Perez, Cass, Baglivio, & Epps, 2015).

Homelessness. Bender, Thompson, Ferguson, Yoder, and Kern (2014) interviewed 145 homeless youth in three U.S. cities and found 78% of the adolescents had experienced multiple traumas before running away from home. After becoming homeless, youth continued to experience multiple traumas and high rates of

polyvictimization, with 28% of the homeless youth meeting the diagnostic criteria for posttraumatic stress disorder (Bender et al., 2014). Coates and McKenzie-Mohr (2010) interviewed 100 homeless adolescents and reported male adolescents experienced more physical abuse and assault, whereas violence against females was sexual in nature. High school dropout rates were high for homeless youth, with 78% of the adolescents having dropped out of high school after becoming homeless.

Poverty, unemployment, and crime. Children and adolescents living in communities with high levels of crime, poverty, and unemployment are more likely to experience multiple forms of violence and neglect. Findings from a survey of 1,045 parents indicated poverty status was associated with higher rates of emotional and supervisory neglect, corporal punishment, and severe physical assault (Maguire-Jack & Font, 2017). Vulnerability factors such as poverty have been identified as increasing the risk of sexual abuse (Costello et al., 2002). Neighborhoods with high rates of crime and low socioeconomic status typically lack positive role models and intimate interactions and inhibit sharing between neighbors, factors known to increase rates of child maltreatment (Coulton, Crampton, Irwin, Spilsbury, & Korbin, 2007; Molnar et al., 2016).

School environment.

Violence occurring in the school environment can have a traumatic impact on a child or adolescent. A nationally representative survey of students in grades 9 through 12 found almost 8% had engaged in a physical fight on school property, 6% were injured or threatened with a weapon, and another 4% brought a weapon (i.e., gun, knife, or club) to school (CDC, 2015; Zhang et al., 2016). Overall, 94% of public schools report at least

one violent crime per year (Blaustein, 2013; Zhang et al., 2016). The results of NatSCEV II found 1 in 30 children (3.7%) experienced a bomb or attack threat against their schools (Finkelhor et al., 2015b). Bullying continues to be a source of trauma and stress throughout childhood and adolescence. Results of the 2013 School Crime Supplement to the National Crime Victimization Survey and the 2015 Indicators of School Crime and Safety report indicated approximately 20% - 22% of students ages 12 through 18 reported being bullied at school, and an additional 15% were victims of cyberbullying (CDC, 2015; National Center for Education Statistics, 2015; Zhang et al., 2016). When indirect exposure to bullying, cyberbullying, or threatening behavior is considered, the percentage rises to 80% of students being impacted (Blitz & Lee, 2015).

Risk and resiliency factors

An individual's mental health is affected by numerous and complex interactions between risk and resiliency (i.e., protective) factors (Waller, 2001; Olives et al., 2013). These categories are not dichotomous; the same circumstances or personality traits might constitute risk in one setting, yet be protective in another (Matsen & Coatsworth, 1998; Waller, 2001). Risk and resiliency factors can be external, such as socioeconomic status, physical health, or family structure, or internal, including cognitive functioning, social-emotional development, and language development. How a child or adolescent responds to adverse experiences is impacted not only by the source of and proximity to trauma, but also his or her own set of risk and protective factors, as well as those of the parents or caregivers (De Bellis et al., 2009; Wiebler, 2013; Lansing et al., 2016).

Risk factors.

Risk factors are a set of cause-effect variables that make an individual more vulnerable for negative future events, such as higher probability of onset, longer duration, and greater level of severity of mental health problems (Coie et al., 1993; Wiebler, 2013). An individual's overall level of risk results from the cumulative effects of the interaction of biological, developmental, social, and environmental factors occurring at the individual, family, community, or societal levels (Coie et al., 1993; Waller, 2001; Wiebler, 2013). The risk of dysfunction increases exponentially with each exposure to a new risk factor (Coie et al., 1993; Felitti et al., 1998; Waller, 2001; Kliethermes et al., 2014). Individual risk factors include temperament, emotional dysregulation, interpersonal problems, developmental delays, poor cognitive capacity and executive functioning abilities, social skill deficits, sexual orientation, age, and gender (Coie et al., 1993; van der Kolk, 2003; Whitson et al., 2009; Crozier et al., 2011; Gerson & Rappaport, 2013; Kliethermes et al., 2014; Whitson, Bernard, & Kaufman, 2014; Finkelhor et al., 2015a). Risk factors found to predict first trauma exposure include parenting problems, history of anxiety, depressive, or disruptive behavior disorder, parent psychopathology, social supports available, age, and socioeconomic status (Copeland et.al., 2007; Gerson & Rappaport, 2013; Olives et al., 2013; Finkelhor et al., 2015a). Factors such as betrayal of trust, physical violation, exposure to more than one type of trauma, and chronic victimization play a key role in determining the level of risk and severity of symptoms as well as the resulting degree of impairment (D'Andrea et al., 2012; Finkelhor et al., 2009; McLaughlin et al., 2013). Familial risk factors consist of prenatal or heritable biological factors, unstable parental physical or mental health, poor

attachment or relationship between parents/caregivers, overcrowded housing, large family, and lack of positive social role models (Coie et al., 1993; Cook et al., 2005; Day et al., 2013; Wiebler, 2013; Whitson et al., 2014; Kliethermes et al., 2014; Oshri et al., 2015). Environmental risks, such as exposure to crime and violence, socioeconomic level, attending a failing school, school violence, and living in an urban setting, can also influence the manifestation of trauma symptoms (Olives et al., 2013; Rohde-Collins, 2013; McGee, 2014; Oshri et al., 2015; Lansing et al., 2016).

Resiliency factors.

Resilience is multidetermined, interactive, and ever-changing while serving a protective role towards decreasing dysfunction, buffering effects of risk factors, or preventing the initial occurrence of risk factors (Coie et al., 1993; Waller, 2001). Research has shown individuals not only respond very differently to the same or similar set of stressors across the lifespan but they also experience different vulnerabilities and protective factors at different ages and stages of development (Coie et al., 1993; Matsen & Coatsworth, 1998; Luthar, Cicchetti, & Becker, 2000; Waller, 2001; Kliethermes et al., 2014; Van Loon, Van De Ven, Van Doesum, Hosman, & Witteman, 2015). Individual resiliency factors include well-developed intellect, use of active coping strategies and problem solving skills, competency with language, achievement oriented, high levels of self-confidence, self-efficacy, and self-worth (Matsen & Coatsworth, 1998; Waller, 2001; Van Loon et al., 2015). Resiliency factors can also be associated with families, including close relationships with parental figures, authoritative parenting styles, parental monitoring, greater self-disclosure by adolescents to their parents, socioeconomic

advantage, and extended support systems (Olives et al., 2012; Kliethermes et al., 2014; Van Loon et al., 2015).

Impact of Trauma: Society

Trauma experiences have the potential to negatively impact an individual's development and functioning across multiple domains, including attachment, biology, affect regulation, dissociation, behavioral control, cognition, and self-concept (Cook et al., 2005; Hertel & Johnson, 2013; Hodges et al., 2013). Even a single exposure to a traumatic experience has the potential to alter an individual's normal developmental trajectory, increasing the risk for a lifetime of emotional, behavioral, academic, social, and physical problems (Felitti et al., 1998). Individuals with trauma histories are vulnerable to additional trauma exposures and cumulative impairments, such as legal issues, substance abuse, unemployment, early parenting, working poverty, and homelessness (Cook et al., 2005; Lawrence & Hesse, 2010). Those with exposure to trauma display chronic medical problems and consume a disproportionate amount of health care services as adults (Substance Abuse and Mental Health Services Administration, [SAMHSA], 2007). A history of trauma increases the risk of juvenile and adult criminal behavior, violence, and has been found to be associated with higher recidivism rates (Day et al., 2013). Exposure to domestic violence increases the risk and severity of internalizing, externalizing, academic, relational, and legal difficulties throughout the lifespan (Ford et al., 2010; Turner et al., 2010; D'Andrea et al, 2012). Adolescent criminal behavior is multi-determined, however, 75% - 93% of youths entering the juvenile justice system annually are estimated to have experienced some degree of trauma (Adams, 2010). An awareness of the adverse outcomes associated with

trauma exposure, and the impact on society, highlights the importance of socioeconomic, psychological, family, and school-based interventions (Stoddard, 2014).

Impact of Trauma: Schools

No one is immune to trauma. However, several indicators suggest students attending schools in urban settings are more likely to be at risk for experiencing trauma than their suburban counterparts. As previously noted, individuals living in poverty are more likely to have trauma histories. The percentage of students eligible for free or reduced-price lunch provides a proxy measure for the concentration of low-income students within a school (Department of Education [DOE], 2014). Schools in densely populated urban settings typically have high levels of poverty (more than 75% of the students are eligible for free or reduced-priced lunch). During the 2012-13 school year, 45% of the schools in urban settings met the criteria for free or reduced-price lunch compared to 18% of the schools located in suburban settings (DOE, 2014). Parent's level of educational attainment is another source of risk for a child and adolescent and has been related to lower levels of academic performance from kindergarten through high school as well as lower rates of high school completion (Ross et al., 2012). In 2014, 11% of 5- to 17-year-olds had parents who had not completed high school and an additional 19% had parents who only completed high school (Kena et al., 2016). In 2014, 44% of children and adolescents living in a mother-only household had the highest rates of poverty compared to 11% of children living in a married-couple household (Kena et al., 2016).

Attendance.

Adolescents with a history of trauma experience more school transitions and absenteeism than those without similar histories; resulting in lower graduation rates (De Bellis et al., 2009; Wilson et al., 2011; Hertel & Johnson, 2013; NASP, 2015b; Lansing et al., 2016). School truancy and dropouts can result in lost revenue for school districts dependent upon federal and state funding based on attendance rates (Lawrence & Hesse, 2010). Truant behaviors place students at risk for a series of lifelong problems, such as substance abuse, gang involvement, increased criminal activity and risk of incarceration, lower paying jobs, dependency on welfare support, and poor mental and physical health (Lawrence & Hesse, 2010). Students attending urban schools not only report being afraid of attack or harm both at school and away from school more often than students in suburban areas but are also more likely to witness or experience violence within the school and the community than their suburban counterparts (Castro, Kelly, & Shih, 2010; Patterson, Collins, & Abbott, 2004; Cornell et al., 2015; Zhang et al., 2016). In 2013, 18% of students from urban areas reported gang presence in their school compared to 11% in suburban and 7% in rural areas (Zhang et al., 2016).

Students.

McKnight (2015) interviewed students concerning their experiences in inner city schools. All of the students ($N = 22$) reported feeling as if their high school teachers were disengaged, dismissive, aloof, and at times cruel (McKnight, 2015). A common theme among the interviewed students was the perception of teacher apathy, poor methods of instruction, frequent threats of disciplinary action, and an overall lack of caring about the student, their circumstances, and needs. The interviewed students reported being cast in

an adversarial role with secondary school staff and felt they were prejudged or profiled as being disruptive or disrespectful without warrant (McKnight, 2015). A similar qualitative study interviewed focus groups, composed of students ages 14 to 18, to gain their perspective on how trauma experiences manifest in the classroom (West et al., 2014). Several themes emerged, including (a) frequent displays of frustration, irritability, and stress; (b) aggressive actions, including verbal and physical fights, aggressive posturing, and threats of violence; (c) influences of negative peers, relatives, community members; (d) triggers, including sights, sounds, words, physical touch, and interactions with others, resulting in confrontational interactions with teaching personnel and students; (e) lack of respect from teaching staff; and (f) poor classroom management and lack of productive learning environments (West et al., 2014).

School climate.

Students with trauma histories can negatively impact school culture and climate. Students with trauma histories tend to display more frequent and severe behavioral challenges in the school and classroom (Brunetti, 2006; Smith & Smith, 2006; Ingersoll & May, 2011; Espelage et al., 2014; Wang et al., 2014). Feelings of frustration over school failure and a lack of social bonds with peers or school staff can exacerbate behavioral and emotional challenges resulting in oppositional and defiant behaviors and a higher number of disciplinary referrals and consequences, such as detention, suspension, or expulsion (Lawrence & Hesse, 2010; Day et al., 2013; Monahan et al., 2014; Benbenishty et al., 2016). Similar to preceding school years, during the 2012-13 school year, a greater percentage of students from low socioeconomic status were expelled or

suspended (29%) than students from middle (17%) or high (9%) socioeconomic backgrounds (Zhang et al., 2016).

Teachers.

Teachers rarely receive adequate preservice training in classroom and behavioral management compounding their feelings of incompetency and personal stress when faced with the emotional and behavioral challenges displayed by students with trauma histories (Inbar-Furst & Gumpel, 2015). Furthermore, teachers at all stages of their career report a lack of effective professional development regarding classroom management and challenging student behavior (Emmer & Stough, 2001; Stoiber & Gettinger, 2011; Moon et al., 2017). Unsurprisingly, urban school settings consistently experience the highest teacher attrition, as disruptive student behavior and difficulty with classroom management continue to be most strongly associated with teacher burnout (Brunsting, 2014; Chang, 2013; Day & Gu, 2007; Goldring, Taie, & Riddles, 2014)

Secondary traumatic stress.

There has been a growing recognition of the importance of addressing the stress teachers and other school staff experience due to either direct or secondary exposure to traumatic events. Educators do not typically work with students at the same level of emotional intensity as a therapist or first responder; they are, however, working closely with children exposed to trauma and therefore vulnerable to secondary traumatic stress (STS). STS refers to the presence of posttraumatic stress disorder (PTSD) symptoms caused by indirect exposure to traumatic information (Ellis, 2012; Hydon et al., 2015). The term “Compassion fatigue” was proposed by Figley (1995) as a less stigmatizing way to describe STS and is defined as “the natural consequent behaviors and emotions

resulting from knowing about a traumatic event experienced by a significant other-the stress resulting from helping or wanting to help a traumatized or suffering person" (p. 5).

A student's disclosure of trauma can elicit a myriad of emotions and concerns. A recent survey of 786 educators discovered over 65% had encountered children with frequent exposures to trauma (Moon et al., 2017). Teacher training programs do not typically provide appropriate education about children and adolescent mental health nor do teachers report receiving appropriate on-the-job professional development on the subject (Alisic et al., 2012; Inbar-Furst & Gumpel, 2015; Ball et al., 2016). Uncertainty about their ability to react appropriately and concerns about 'making a mistake' or 'saying the wrong thing' are often noted by teachers as reasons for their fearfulness and reluctance to become involved beyond reporting the information to a school counselor, school psychologist, or administrator (Gonzalez, Nelson, Gutkin, & Shwery, 2004; Atkins et al., 2008; Alisic et al., 2012; Ellis, 2012). Teachers report feeling overwhelmed by the information, worried about hearing false accusations, and apprehensive about reporting incorrect information to school and/or state authorities possibly causing more damage to the student. Furthermore, unease about their own personal safety (e.g., possible retaliation from families, coworkers, and/or supervisors) can increase their reluctance about becoming involved with students' experiences of trauma (Powers et al., 2010; Ellis, 2012; Ball et al., 2016). Attempts to consult with teachers on mental health issues can be ineffective and met with skepticism as many teachers struggle with their role versus those of a counselor or psychologist (Gonzalez, Nelson, Gutkin, & Shwery, 2004; Atkins et al., 2008; Powers et al., 2010; Alisic et al., 2012; Ellis, 2012; Ball et al., 2016).

Symptoms. Individuals experiencing PTSD have directly experienced a traumatic event, personally witnessed trauma occur to others, learn about a close friend or family member's experience of trauma, and/or experience repeated or extreme exposure to aversive details of a traumatic event (APA, 2013). Symptoms of STS (i.e., compassion fatigue) can mimic those of posttraumatic stress disorder (PTSD), including intrusive thoughts, difficulty concentrating and focusing, avoidance, negative cognitions and mood, changes in memory and perception, increased irritability, and hyperarousal and reactivity (NCTSN, 2011). Individuals experiencing STS often perceive threats to their safety, trust, and independence. STS can affect an educator's physical, emotional, interpersonal, spiritual, behavioral, cognitive, and professional functioning. Educators with STS report difficulty motivating and teaching students due to sleeping problems, relationship difficulties, moodiness, and feeling overwhelmed (Hertel & Johnson, 2013; Hydon et al., 2015).

Impact of Trauma: Individual

Several domains of functioning have been well-researched regarding the impact of trauma on an individual. The number of exposures to trauma, the proximity of the trauma experience, as well as the severity of the trauma are directly related to the level of psychopathology, disruption of important relationships, functional impairments, and emotional dysregulation challenges displayed by the individual. Furthermore, the various manifestations of trauma require an understanding of the individual's unique perspective of the traumatic event(s) (van der Kolk, 2003; Crozier et al., 2011; D'Andrea et al., 2012; Kliethermes et al., 2014; SAMHSA, 2014; NASP, 2015a). A single exposure to one or more traumatic events can have lifelong implications for an individual resulting in the

immediate or delayed manifestation of physical and psychological reactions (van der Kolk, 2003; D'Andrea et al., 2012; Blaustein, 2013; Gerson & Rappaport, 2013; SAMHSA, 2014; NASP, 2015a).

Forming attachments.

Attachment trauma occurs when the caregiver displays periods of being emotionally inaccessible, withdrawn, and disengaged (i.e., neglect), or hyperintrusive, angry, and unpredictable (i.e., abuse), leaving the individual to endure stressful and intense negative states for long periods of time without returning to a sense of safety (Schore, 2013; Oshri et al., 2015). These types of interactions between caregiver and infant have been found to result in an insecure-disorganized/disoriented pattern of attachment in 80% of maltreated infants (Pearlman & Courtois, 2005; Hess & Main, 2006; Kaehler et al., 2013: Schore, 2013). An attachment relationship based on a sense of danger can cause two response patterns that remain throughout the lifespan: hyperarousal and dissociation (Hess & Main, 2006; Schore, 2013). An individual with a dissociation response pattern will turn to avoidance, numbing, compliance, and have a restricted affect, whereas those with a hyperarousal response tend to become defensive, angry, and argumentative (Crozier et al., 2011; Schore, 2013; Oshri et al., 2015). When exposure to trauma has occurred within the context of an attachment relationship interpersonal interactions could trigger trauma-related distress resulting in an inability to form relationships with others, impaired social functioning, inability to trust others, difficulty regulating emotions, externalizing problems, revictimization, victimizing others, and poor understanding of personal boundaries (Alexander, 2013; Kaehler et al., 2013; Kliethermes et al., 2014; Oshri et al., 2015).

Intrapersonal development.

A history of trauma can distort an individual's sense of self, expectations of others, and view of the world (Kliethermes et al., 2014; Shiner et al., 2016). Children and adolescents who have experienced trauma are more likely to experience shame and guilt, display low self-esteem, lack appropriate perspective taking skills, and poor self-efficacy (Burack et al., 2006; Turner et al., 2010a; Kliethermes et al., 2014). Individuals exposed to trauma and prolonged stress tend to view the world as negative, have a distorted locus of control (D'Andrea et al., 2012; Shiner et al., 2016). A poor sense of self-worth and self-esteem has been found to lead to problematic interactions with others, difficulty taking responsibility for one's own behavior, and increased risk for psychopathology (D'Andrea et al., 2012).

Emotional regulation.

Individuals who have experienced one or more adverse childhood experiences (ACEs) have been found to have difficulty regulating emotions and displaying empathy (Heim, Shugart, Craighead, & Nemeroff, 2010; Crozier et al, 2011; Oshri et al., 2015). Comorbidity appears to be the rule rather than the exception. Children and adolescents with a trauma history have been found to have almost double the rates of psychiatric disorders than those with no exposure to trauma. Some studies reporting 40% of individuals exposed to trauma have at least one other mood, anxiety, or disruptive behavior disorder, with the percentage increasing as exposure to types and number of trauma experiences increases (Copeland et.al., 2007; Heim et al., 2010; D'Andrea et al., 2012). Although many children and adolescents experiencing complex trauma do not meet the diagnostic criteria necessary for a trauma or stressor-related diagnosis, they may

be diagnosed with a variety of comorbid diagnoses (e.g., anxiety, depression, disruptive behavior, oppositional), leading to ineffective or misguided treatment (Heim et al., 2010; D'Andrea et al., 2012). Individuals with early trauma histories are more likely to develop schizophrenia, reactive attachment disorder, conduct disorders, eating disorders, and personality disorders (Ellis, 2012; Heim et al., 2010). Children and adolescents with trauma histories tend to struggle to appropriately access and identify emotions and lack the ability to cope with emotions or tolerate emotional expressions (van der Kolk, 2003; Kliethermes et al., 2014; Oshri et al., 2015; Lansing et al., 2016). These individuals can display rapidly vacillating moods, flat or numbed affect, explosive or sudden anger, extreme responses to minor stressors, and an inability to regulate impulses or tolerate uncertainty (D'Andrea et al., 2012; Ford, Nader, & Fletcher, 2013; Kliethermes et al., 2014; Oglesby, Boffa, Short, Raines, & Schmidt, 2016).

Behavior dysregulation.

Experiencing trauma can result in emotional overload and the individual's attempts to reduce an overwhelming negative mood can lead to either undercontrolled or overcontrolled dysregulation of behavior (Wilson et al., 2011; Kliethermes et al., 2014). Overcontrolled behaviors include compulsive behaviors, such as a rigid adherence to patterns and routines and/or withdrawal, and serve the function of managing overwhelming feelings or feelings of helplessness (Greeson et al., 2011; Kliethermes et al., 2014). Undercontrolled behaviors, such as impulsive, aggressive, self-injury, or oppositional defiance, appear to be related to deficits in executive functioning (D'Andrea et al., 2012; Kliethermes et al., 2014). Repeated exposure to trauma has been found to result in maladaptive coping strategies, such as self-destructive and risk taking behaviors

(McGee, 2014). Adolescents involved in the juvenile justice system tend to have a higher rate of trauma exposure and victimization resulting in more aggressive, self-injurious, risk-taking, and oppositional behaviors (D'Andrea et al., 2012).

Cognitive functioning.

Exposure to trauma can impact an individual's attentional capacity to concentrate, remember information, and inhibit responses as well as their executive functioning ability to problem solve, process information, and think flexibly with both verbal and nonverbal inputs (Cromer, Stevens, DePrince, & Pears, 2006; De Bellis et al., 2009; Spann et al., 2012; De Bellis, Woolley, & Hooper, 2013; Kirke-Smith, Henry, & Messer, 2014; Mothes et al., 2015). Diminished cognitive capacities across a broad range of cognitive domains have been documented by several studies involving victimized children and adolescents (Wilson et al., 2011; D'Andrea et al., 2012; Mothes et al., 2015; Vasilevski & Tucker, 2016). Individuals with a history of abuse or neglect are more likely to have intellectual deficits on standardized measures of cognition compared to the population (Jones, Trudinger, & Crawford, 2004; De Bellis et al., 2009; Wilson et al., 2011; De Bellis et al., 2013). In addition to executive function and attention capacity, verbal ability, learning, memory, working memory, visuospatial functioning, and processing speed have all been found to be impacted by exposure to trauma (De Bellis et al., 2009; Ellis, 2012; De Bellis et al., 2013; Mothes et al., 2015; Vasilevski & Tucker, 2016).

Academic achievement.

The impact of trauma on an individual's cognitive and executive functioning is often manifested in their academic performance. When required to complete an

academic task, students with trauma histories display less motivation and concentration and focus than students without exposure to trauma (Breslau et al., 2008; Duplechain, Reigner, & Packard, 2008; Rothon et al., 2009). Students impacted by trauma have difficulty processing verbal, nonverbal, or written instructions, score lower on standardized achievement tests, display more receptive and expressive language difficulties, and are more likely to fail a grade (Breslau et al., 2008; Duplechain et al., 2008; Rothon et al., 2009; Wolpow, Johnson, Hertel, & Kincaid, 2009; Hertel & Johnson, 2013; Cornaglia et al., 2015). A 3 year study of 163 urban elementary children (grades 2 through 5) found reading scores of students exposed to violence to be significantly lower than the scores of students with no history of violence. In addition, reading scores of students with trauma histories showed a steady decline in reading achievement over the course of three years (Dupechain et al., 2008).

Creating Safe and Supportive School Environments

The social, emotional, and psychological aspects of an education have become as critical as a student's academic achievement with regards to their future college and career opportunities. Education systems are tasked with graduating students proficient not only in core academic subjects but who also exhibit the ability to work well with others, behave responsibly and respectfully, and demonstrate an age-appropriate level of emotional maturity (Greenberg, Weissberg, Fredericks, & Elias, 2003; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Cole, Eisner, Gregory, & Ristuccia, 2013; Jones, Greenberg, & Crowley, 2015). Students who have been taught social and emotional skills demonstrate improved self-awareness, self-management, social awareness, relationship building, and responsible decision-making abilities, with

substantial and long-lasting gains in positive social behaviors, academic performance, attitude, and personal and social well being (Durlak et al., 2011; Sklad, Diekstra, DeRitter, Ben, & Gravesteijn, 2012; Cole et al., 2013; Jones et al., 2015; Mazza et al., 2016). Students who master social and emotional competencies shift from being controlled by external factors (common among individuals with trauma histories) to an internalization of personal beliefs and values that guides the individual's ability to make decisions, take responsibility for their own choices and behaviors, and show care and concern for others (Bear, 2010; Sklad et al., 2012). Children and adolescents historically underserved by the school system, such as low-income, traumatized, and urban students, as well as culturally diverse students, tend to perform better in schools with a social and emotional learning focus (Matsen & Coatworth, 1998; Greenberg et al., 2003; Weissberg, Kumpfer, & Seligman, 2003; Guerra & Bradshaw, 2008; Hamedani & Darling-Hammond, 2014; Jones et al., 2015). The Center for Benefit-Cost Studies in Education conducted a benefit-cost analysis based upon six evidence-based social and emotional learning (SEL) programs and found every dollar invested in SEL programming yielded an $11.00 gain in long-term benefits, such as a decrease in juvenile crimes, higher lifetime earnings, and better mental and physical health (Belfield et al., 2015).

There are more SEL programs designed for elementary than high school students. Existing high school SEL programs focus on improving school climate, creating supportive learning environments, and increasing family and community involvement by improving systems within the school rather than specific student skills (Hamedani & Darling-Hammond, 2014; Mazza et al., 2016). There is a trend towards reactive rather that preventative approaches, particularly in secondary schools, with the focus on a

student or small group of students displaying problematic behaviors (Vostanis, Humphrey, Fitzgerald, Deighton, & Wolpert, 2013). Schoolwide Positive Behavioral Intervention and Supports (SWPBIS) is one example of a whole-school SEL program that has been found to be effective in preventing, changing, and reducing the impact or intensity of problem behaviors, especially at the elementary level (Sugai et al., 2000; Greenberg et al., 2003; Sugai & Horner, 2006; Durlak et al., 2011; Sklad et al., 2012). However, the implementation integrity and outcomes of programs such as SWPBIS are compromised by their failure to address the influence of classroom, school, and neighborhood contexts, lack of adequate staff professional development and fidelity to the program, poor teacher motivation and leadership buy-in, and funding concerns (Durlak et al., 2011; Sklad et al., 2012; Feuerborn, Wallace, & Tyre, 2016).

Trauma sensitive schools.

Trauma sensitive schools incorporate SEL learning targets as part of a whole school approach to reduce risk factors and foster resiliency and positive adjustment of all students. Trauma sensitive schools emphasize the development of student and staff knowledge and competency in the areas of emotional regulation, behavioral supports, healthy relationships, crisis prevention and response, district and school policies, leadership, school environment, culture, and climate, cognitive and academic skills, assessment and screening, physical health, partnering with community groups and services, as well as parent and caregiver involvement (Weissberg et al., 2003; Cook et al., 2005; Guerra & Bradshaw, 2008; Cole et al., 2013; Hertel & Johnson, 2013; Ristuccia, 2013; Crosby, 2015; Roffey, 2016). Trauma sensitive classrooms display characteristics of resilient classrooms, including academic efficacy and self-determination, behavioral

self-control, strong teacher-student relationships, effective peer relationships, and connections between home and school (Doll, Brehm, & Zucker, 2014). Several components are critical to the development of a safe and supportive school environment for students with trauma histories, including consensus within the school community on the importance of implementing a trauma-informed approach to education, direct participation of administrative personnel, identification of supports in the community and mental health profession, as well as clear policies, procedures, and protocols (Ristuccia, 2013; Metz, Naoom, Halle, & Bartley, 2015; Roffey, 2016). The Trauma Learning Policy Initiative identifies the following core attributes of a trauma sensitive school: a shared understanding of how trauma impacts learning and the need for a school-wide approach; everyone in the school is responsible for supporting students to feel safe; students must be connected to the school community; and students' needs must be addressed holistically as schools anticipate and adapt to the ever-changing needs of students and their community (Cole et al., 2013).

Staff knowledge, capacity, and confidence. Educators need to be aware of the impact trauma experiences have on a student's ability to learn, regulate their emotions and behavior, and engage in appropriate interpersonal relationships throughout their lifespan (Blaustein, 2013; Cole et al., 2013; Ristuccia, 2013; Kliethermes et al., 2014; Dorado, Martinez, McArthur, & Liebovitz, 2016; Lansing et al., 2016). Trauma sensitive staff recognize the trauma-related challenges of students cannot be addressed separately from their learning goals; trauma reactions become intertwined with the learning process, acting as a barrier to academic success and triggering emotional and behavioral responses (Crosby, 2015; Dorado et al., 2016; Oglesby et al., 2016). Addressing the impact of

trauma on learning does not require specialized curricula or programming. Rather, trauma sensitive approaches should be infused into all aspects of the school day (Cole et al., 2013; Crosby, 2015). Staff require ongoing professional development, consultation, supervision, and support before they feel knowledgeable, capable, and confident when addressing not only the academic needs of students with trauma histories but also their social emotional needs such as building an emotional vocabulary, practicing coping strategies and problem solving skills, and engaging in appropriate assertiveness and conflict resolution (Vostanis, 2008; Cole et al., 2013; Doll et al., 2014; Anderson, Blitz, & Saastamoinen, 2015; Crosby, 2015; Moon et al., 2017).

Professional development. Professional development should be designed to increase an educator's knowledge, skills, and motivation to implement trauma-informed approaches in a classroom. Educators require information regarding the prevalence of trauma, with specific attention to the population of their school, the impact of chronic exposure to trauma and stressor-related disorders, and trauma-informed classroom strategies and skills (Fixsen, et al., 2009; Dorado et al., 2016; Metz, Naoom, Halle, & Bartley, 2015; Chafouleas et al., 2016). Coaching should be provided to teachers to increase effectiveness and sustainability of training regarding establishing safe environments, developing connected relationships, as well as how to identify, prevent, and respond to student triggers to avoid behavioral escalation and revictimization (Fixsen, Blase, Naoom, & Wallace, 2009; Wolpow et al., 2009; Chafouleas et al., 2016). Due to the sensitive nature of trauma, time needs to be included in any professional development plan for teachers to process their emotional responses to working with students with trauma histories (Ellis, 2012).

Effective professional development should be designed to incorporate both passive (i.e., lecture, video, reading written text) and active (i.e., role-play, experiential) learning methods as well as multimedia materials, situated learning, goal-based scenarios, and periodic checks for understanding. The use of case studies helps increase teacher knowledge and confidence and allows them to apply information learned in a real-world scenario (McHugh & Barlow, 2010; Dimeff, Woodcock, Harned, & Beadnell, 2011; Dimeff et al., 2015). Consultation plays a critical role in the level of participant adherence and competency of new knowledge, skills, and competency: the more hours of consultation provided has been found to increase adherence and skill set of participants (Beidas, Edmunds, Marcus, & Kendall, 2012). Consultation allows individuals to solidify concepts and skills learned and increases fidelity to evidence-based interventions (Beidas et al., 2012).

School cohesiveness and sense of connection. Individual educators cannot address the complex challenges associated with trauma alone. Schools must move away from the traditional mindset, in which a classroom teacher has the primary responsibility for a group of students, and toward a focus on shared responsibility, teamwork, and effective communication throughout all members of the school (Cole et al., 2013; Moon et al., 2017). Without a cohesive and connected school approach the positive impacts one adult might make with a student can easily be undone by another adult, opportunities for sharing effective strategies are lost, and school staff are left feeling isolated and ineffective (Rothi, Leavey, & Best, 2008; Cole et al., 2013). Most districts and schools offer a range of programs and services dependent upon support and funding through federal and state laws, grants, or community agencies; each with very specific goals

targeting specific groups of students. Unfortunately, these programs are often fragmented with little or no coordination or integration of efforts; typically pulling students out of classrooms to receive the services rather than incorporating mental health within the classroom resulting in limited effectiveness (Adelman & Taylor, 2013; Farrington, Gaffney, Losel, & Ttofi, 2017). This fragmentation is one indication of the marginalization that occurs in schools and barriers to learning and teaching are viewed as less important than academic supports. Marginalization continues to contribute and maintain the fragmented planning, implementation, and evaluation that is the norm in the majority of elementary and secondary schools (Adelman & Taylor, 2013).

A survey of 239 teachers in schools without a focus on trauma sensitivity demonstrates the disconnect between teachers, the mental health needs of their students, and the availability of services (Moon et al., 2017). Fifty-seven percent of the teachers could not identify the types of data collected by their schools or whether the school offered behavioral interventions or functional behavioral assessments. Over one half (58%) of the teachers did not know the types of mental health issues affecting students, 62% were uncertain of the demographic characteristics of students receiving services, and 54% could not name the mental health services provided at their school (Stormont, Reinke, & Herman, 2011). Approximately 65% of the 786 educators surveyed by Moon and colleagues (2017) reported inadequate mental health resources in their schools.

Students learn best when they feel safe, connected, and supported by school staff, and when their social, emotional, and physical needs are met (D'Andrea et al., 2012; van der Kolk, 2013; Kliethermes et al., 2014; Lansing et al., 2016). However, many students enter school lacking social and emotional competencies and become less connected to

school each year. Upon entering high school, as many as 40% to 60% become chronically disengaged from school, negatively impacting academic performance, and behavior, mental and physical health (Klem & Connell, 2004; Strati, Schmidt, & Maier, 2017). Failure to meet students' psychological, emotional, and social needs has been found to widen the gap in achievement as well as opportunity from kindergarten through high school (Jones et al., 2015). Increasing a students' sense of safety and connectedness reduces overreactions to normal stresses, such as tests, in-class participation, and homework, and increases availability for learning (Duplechain et al., 2008; Wolpow et al., 2009; Lanius et al., 2013; Schore, 2013; McGee, 2014; Lansing et al., 2016). Matthews and colleagues (2015) conducted a longitudinal study on the effects of being socially isolated early in schooling and the development of mental health problems in adolescence. The results suggested early isolation does not predict worse mental health problems in adolescence; however, children with problematic behaviors are more likely to become socially isolated from their peers and school (Matthews et al., 2015). A study of 2,678 13- to 16-year-old students found students with good school and social connections are less likely to experience mental health issues, refrain from engaging in risky behaviors, such as substance use, and have better academic records than students who lack connections (Bond et al., 2007).

Safe environment. Exposure to trauma often results in real or perceived threats to a child or adolescences' sense of safety and well-being, which can lead to attention-seeking behaviors and emotional or behavioral outbursts (D'Andrea et al., 2012; Cole et al., 2013; Ford et al., 2013; van der Kolk, 2013; Kliethermes et al., 2014; Oglesby et al., 2016). Trauma sensitive schools implement policies and procedures that provide

structure to the school environment and create a sense of safety and security to soothe the survival mode often created by exposure to trauma (Adelman & Taylor, 2013; Cole et al., 2013; Hertel & Johnson, 2013). Teachers in trauma informed schools convey safety through subtle means, such as their tone of voice, demeanor, or calm presence as well as the provision of clear, consistent, and predictable rules and boundaries and dependable transitions, processes, and schedules (Cole et al., 2013; Hertel & Johnson, 2013; Rustuccia, 2013; Cavanaugh, 2016). These structures and limits require thorough and thoughtful planning yet are essential to creating and maintaining a sense of safety for all students and staff (Adelman & Taylor, 2013; Cole et al., 2013).

In addition to the social, emotional, and physical safety of students, schools need to provide students with a sense of academic safety in which they feel safe to make mistakes rather than engage in behaviors in order to escape or avoid academic tasks (Duplechain et al., 2008; Wolpow et al., 2009; Cole et al., 2013). Too often school personnel respond negatively to a student seeking attention or displaying oppositional behavior when the student may be attempting to connect to others or communicate their lack of understanding (Lewis, Romi, & Roache, 2012; Kliethermes et al., 2014; Oshri et al., 2015). Defensive behaviors, such as aggression, withdrawal, dissociation, and bullying, can serve as protective strategies for children who have a history of abuse or neglect (Brunzell, Waters, & Stokes, 2015). Although students need to be accountable for their behavior, the use of reactive, punitive, and exclusionary disciplinary methods create distance, intolerance, and disconnect and have been found to increase problematic behaviors, criminal offending behaviors, arrests, and dropout rates (Rustuccia, 2013; Cuellar & Markowitz, 2015). Morris and Perry (2016) found students who had been

suspended scored substantially lower on end-of-year academic tests and the effects of even one suspension were long-lasting, creating a trajectory of poor performance in future years, regardless of the occurrence of any further suspensions. Trauma sensitive schools focus on the development of proactive disciplinary systems within the school and classroom grounded in the strong relationships between students and teachers (Cole et al., 2013; Craig, 2016). Discipline policies support efforts to repair and make amends for any harm caused by a student's misbehavior (Craig, 2016). With the use of restorative discipline principles, students no longer miss academic seat time due to detentions, suspensions, or even expulsions and administrative time is not spent documenting the disciplinary infractions and meeting with parents (Cook et al., 2008; Craig, 2016).

Student needs. The impact of trauma is pervasive and unique to each student. Behavior displayed by children and adolescents with trauma histories often masks the true nature of the challenges they are experiencing. Trauma sensitive schools maximize students' opportunities to succeed by strengthening their ability to self-regulate behavior, emotions, and level of attention as well as addressing physical health and well-being (Cole et al., 2013). Educators in trauma informed schools recognize academic competence is dependent upon the individual's ability to self-regulate, develop relationships, as well as their physical and mental well-being (Cole et al., 2013; Brunzell et al., 2015). Children and adolescents with trauma histories need opportunities to showcase their strengths and participate in decisions about their lives (Cavanaugh, 2016).

Self-regulation. Trauma sensitive schools purposefully address the dysregulation common to trauma-affected students through a multi-modal perspective. Students receive psychoeducation about the stress response and the effect of stress on wellbeing as

they engage in physical regulation using repetitive, rhythmic, and patterned activities, such as yoga, mindfulness, drumming, and short bursts of exercise (Brunzell et al., 2015). The ability to regulate emotions is another priority for trauma sensitive educators. Students need opportunities to learn how to identify and acknowledge difficult feelings, link internal feelings with external experiences, and learn strategies for tolerating frustration and heightened emotions as well as relaxation techniques (Wolpow et al., 2009; Blaustein, 2013; Cole et al., 2013; Brunzell et al., 2015).

Strengths-based. Trauma sensitive schools purposefully help students identify and nurture their strengths and areas of competency to increase their level of engagement, motivation, self-worth, wellbeing, and academic achievement (Goldstein, Brooks, & DeVries, 2013; Brunzell et al., 2015). Providing children and adolescents with opportunities to use their strengths to help others fosters responsibility, caring, and compassion (Goldstein et al., 2013; Craig, 2016). Focusing on strengths helps children and adolescents recognize strengths in others and enhances peer relationships (Goldstein, Brooks, & DeVries, 2013; Brunzell et al., 2015; Climie & Mastoras, 2015).

Instructional practices. Students with trauma histories are more successful when lessons incorporate active participation, novelty and variety of tasks, task-related choices, positive activity scheduling, computer-assisted instruction, and more expectations during the morning period (Goldstein et al., 2013; Climie & Mastoras, 2015). Individuals with a trauma background often display challenges with higher order cognitive processes and executive functions, particularly in moments of emotional distress (Blaustein, 2013; Kirke-Smith et al., 2014; Mothes et al., 2015). Trauma sensitive schools teach students to think flexibly while evaluating cause-effect relationships, appraise outcomes, and

process information in a variety of ways (Spann et al., 2012; De Bellis et al., 2013; Blaustein, 2013).

Parent/caregiver and community partnerships. Educators focus on building trusting relationships with parents and caregivers to facilitate an open dialog between the school and caregivers about a student's strengths, challenges, and trauma history (Cole et al., 2013; Cavanaugh, 2016; Craig, 2016). Trauma sensitive schools purposefully connect students with adults in supportive roles and encourage mentoring relationships (Cole et al., 2013; Ristuccia, 2013; Craig, 2016). Schools encourage partnerships with outside supports, such as mental health professionals and local community organizations to provide wraparound services for students and their families (Cole et al., 2013; Craig, 2016).

Dialectical Behavior Therapy

As noted, several domains of functioning are significantly impacted by exposure to trauma including, but not limited to, an individual's ability to regulate their emotions and behaviors, form and maintain appropriate interpersonal relationships, cope with frustration and distress, and achieve a sense of calm and peacefulness. Dialectical behavior therapy (DBT) draws from a dialectical world view, biosocial developmental model, eastern Zen influences, and cognitive-behavioral therapy principles to form a unique framework for supporting, treating, and healing individuals with emotional dysregulation.

Dialectical theory.

A dialectical perspective on the nature of reality and human behavior has three primary characteristics. First, dialectics emphasizes a world view of wholeness and

interrelatedness in which there is no absolute or relative truth; truth evolves, develops, and is constructed over a lifespan (Linehan, 1993a, 2015a; MacPherson, Cheavens, & Fristad, 2013). Individual parts of a system (i.e., a specific behavior) are viewed as having little meaning or value unless an analysis of the parts is conducted in relationship to the whole (e.g., environment, culture, relationships). Second, reality is not static but comprised of internal opposing truths (thesis and antithesis) and the integration (synthesis) of the divergent forces creates a new set of contrasting truths (Linehan, 1993a, 2015a). Change or progress is the result of synthesizing the divergent viewpoints, thereby creating a balance between the two opposing viewpoints. Finally, the interconnected and oppositional nature of reality means individuals and the environment are in a continuous state of change with the resulting tension between the opposing forces within each system responsible for producing change (Linehan, 1993a, 2015a; Eich, 2015).

Another foundational principal of DBT is based on Linehan's (1993a) Biosocial Theory. Biosocial theory defines emotional dysregulation as an inability to monitor, evaluate, and modulate when and what emotions occur as well as how one experiences emotions and expresses emotions (Linehan, 1993a, 2015a; Crowell, Beauchaine, & Linehan, 2009; MacPherson et al., 2013; Eich, 2015). Biologically based precursors to emotional dysregulation include a disposition to negative affect, hypersensitivity to emotional stimuli, highly responsive to subtle emotional information in the environment, susceptible to experiences of intense emotions for long periods of time, and difficulty returning to an emotional baseline (Linehan, 1993a, 2015a; Crowell et al., 2009; MacPherson et al., 2013). Impulsivity is viewed as an early vulnerability and important

biological factor impacting the development of emotional dysregulation (Crowell et al., 2009). Impulsive behaviors may manifest as difficulty regulating action, restraining behavior, controlling moods, and achieving goals (MacPherson et al., 2013). The social component of biosocial theory addresses the impact an individual's environment, particularly family and caregiver, have on the development of emotional regulation capabilities (Linehan, 1993a, 2015a). An invalidating environment tends to negate, punish, and/or respond erratically and inappropriately to expressions of emotions. Invalidation from family members and/or caregivers stems from rebuking emotional displays, communicating individuals should cope with their emotions without support, and conveying problems should be easily solved (MacPherson et al., 2013). An invalidating environment is present when emotions expressed by an individual are intermittently reinforced. The intermittent reinforcement teaches the individual that intense emotional expressions are necessary to communicate because more appropriate expressions of emotion are ignored or invalidated until they reach a high enough level for someone in the environment to attend to the emotions (Linehan, 1993a, 2015a; Rizvi, Steffel, & Carson-Wong, 2013). Individuals who possess a biological vulnerability and experience an invalidating environment display increased levels of negative affect, do not learn how to label or regulate emotions, cannot tolerate distress, and do not trust their emotional responses (Linehan, 1993a, 2015a; MacPherson et al., 2013). Biosocial theory also considers the fit between the infant/child's temperament and caregivers' parenting style as an additional contributing factor influencing the development of emotional regulation (Linehan, 1993a, 2015a). Dialectics assumes individual functioning and environmental conditions are continuously interactive, interdependent, and reciprocal

(Linehan, 1993a, 2015a). Linehan's (1993a, 2015a) biosocial and dialectical theories propose emotional dysregulation is the result of (a) the development of emotional lability is based on characteristics of the child in transaction with a social context that shapes and maintains the lability, (b) reciprocal transactions between biological vulnerabilities and risk factors result in frequent and intense emotional experiences, (c) transactions reinforcing dysregulation and contribute to the development of negative cognitive and social outcomes, and (c) maladaptive coping strategies that develop as a result of the interactions. These traits and behaviors increase the risk for pervasive emotional dysregulation across development and interfere with healthy interpersonal relationships and social functioning (Crowell et al., 2009; Linehan, 2015a).

Behavioral therapy shapes all aspects of DBT, including the way problems are defined, how behaviors are assessed, which interventions are used, and the case conceptualization (Linehan, 1993a, 2015a; Rizvi et al., 2013). Behavioral theory contributes to the nonjudgmental stance in DBT that every behavior has a cause and behavioral change occurs by looking at the factors contributing to the development and maintenance of the behavior. The maintenance of problem behaviors is the result of skill deficits, deficiencies in emotional regulation, and cognitive factors (Rizvi et al., 2013).

Finally, Linehan (1993a, 2015a) acknowledges the influence cognitive behavioral therapy (CBT) has made to the development of DBT. Similar to CBT, DBT recognizes a strong therapeutic alliance plays a key role in the change process. Cognitive errors targeted during therapy are viewed in DBT as examples of nondialectical patterns of thought (Linehan, 1993a). DBT seeks to help client identify extreme and absolute thought patterns and test their validity though identification of problematic thought

patterns. Cognitive distortions recognized by CBT and DBT include overgeneralization, catastrophizing, pessimism, magnification, labeling, all-or-nothing thinking, and disqualifying positive information (Linehan, 1993a; Beck, 2011). Behavioral activation plays a key role in both CBT and DBT. Behavioral activation allows the client to practice and generalize newly learned skills which in turn increases self-esteem and leads to the development of a positive attitude (Linehan, 1993a; Beck, 2011).

Research

Numerous studies have found the traditional format of DBT as well as stand-alone components of a DBT program (e.g., mindfulness, skills training, emotional regulation) to be effective interventions for adults and adolescents displaying significant emotional dysregulation. Emotional dysregulation has been identified as a key component for a variety of mental health problems, including substance use disorders, eating disorders, stressor-related disorders, major depressive disorder, self-harm and suicidal behaviors, bipolar, schizophrenia, psychotic disorders, and anxiety-based disorders (Harrison, Sullivan, Tchanturia, & Treasure, 2009; Cisler, Olatunji, Feldner, & Forsyth 2010).

Dialectical behavior therapy (DBT) was originally developed by Linehan (1993a; 1993b; 2015a; 2015b) as a treatment for chronically suicidal individuals diagnosed with borderline personality disorder (BPD) (Linehan, 1993a, 1993b). Individuals diagnosed with BPD display heightened emotional sensitivity, lack stable affect regulation, struggle to return to emotional stability, engage in poor interpersonal relationships, hold a negative view of self, and are unable to control impulses leading to dysfunctional response patterns (Linehan, 1993a, 1993b, 2015a, 2015b). Many individuals diagnosed with BPD have a history of childhood and adolescent trauma. Researchers have

estimated that up to 60% to 90% of individuals diagnosed with BPD experienced childhood physical, sexual, or emotional abuse (Zanarini et al., 1997; Golier et al., 2003; Battle et al., 2004; Ball & Links, 2009; MacIntosh et al., 2015).

A modified DBT skills training program was found to reduce negative behaviors associated with a diagnosis of oppositional defiant disorder (ODD) in adolescents as well as increase positive behaviors (Nelson-Gray et al., 2006). Participants were taught the core components of DBT: mindfulness, interpersonal effectiveness, emotional regulation, and distress tolerance skills. Both caregiver and self-report measures indicated significant reduction in internalizing and externalizing symptoms associated with ODD (e.g., often loses temper, often argues with adults, often blames others for his or her mistakes or misbehavior, is often angry and resentful, easily annoyed by others) as well as an increase in positive behaviors (e.g., accepts no for an answer, reacts calmly to disappointment). A review of studies conducted with individuals expressing anger and/or aggressive behaviors found the use of DBT skills or modified DBT skills effectively reduced anger and aggressive behaviors, such as yelling, verbal threats, hitting others, and feelings of hostility and irritability (Frazier & Vela, 2014).

Several studies have found DBT to be an effective intervention for reducing self-harm and suicidal ideation as well as symptoms associated with anxiety, anger, impulsivity, and depression in adolescents (James et al., 2008; Woodberry & Popenoe, 2008; Fleischhaker et al., 2011). Participants in these studies experienced fewer hospitalizations, higher rates of compliance, and significant reduction in suicidal ideation (Rathus & Miller, 2002; Mehlum et al., 2014); decreased thoughts of wanting to harm or kill self and feelings of anger, depression, and anxiety as well as improved behavioral

functioning (Woodberry & Popenoe, 2008; James et al., 2014; Webb, Beard, Kertz, Hsu, & Bjorgvinsson, 2016); improved interpersonal skills and emotional regulation, increased resiliency, less withdrawal, and fewer suicidal attempts after one year (Fleischhaker et al., 2011; James et al., 2014; Courtney & Flament, 2015). A comparison study between DBT and individual treatment provided by experts in suicidal behaviors and borderline personality disorder found those receiving DBT had half as many suicide attempts, were twice as likely to stay in treatment, required fewer days of inpatient care, and used less lethal or medically risky suicide attempts (Linehan et al., 2006).

Adolescents treated with DBT have been found to make improvements on a variety of measures and functioning across treatment settings, including reductions in impulsivity, emotional dysregulation, confusion about self, interpersonal difficulties, acts of aggression, classroom disruptions, suicidal behaviors, non-suicidal self-injury, and depression (Rathus & Miller, 2002; Trupin, Stewart, Beach, & Boesky, 2002; Goldstein, Axelson, Birmaher, & Brent, 2007; Woodberry & Popenoe, 2008; Groves, Backer, van den Bosch, & Miller, 2012). Adolescents and their families participating in DBT are more likely to complete the program and report being highly satisfied with the intervention and gains made during treatment (Rathus & Miller, 2002; Goldstein et al., 2007; Woodberry & Popenoe, 2008: Groves et al., 2012).

DBT Treatment Components

Stages of treatment.

Four stages of treatment, each containing a hierarchy of treatment targets, are utilized in traditional DBT. The pretreatment stage focuses on developing a therapeutic alliance, introducing how DBT treatment can help solve problems, orienting client to

DBT theory (e.g., dialectical thinking, biosocial theory, treatment format, etc.), identifying goals, and obtaining the clients commitment to therapy (Linehan, 1993a, 2015a; Miller et al., 2007; MacPherson et al., 2013). Treatment during stage 1 targets a hierarchy of behaviors: (1) reducing life-threatening behaviors (e.g., suicide), (2) decreasing therapy-interfering behaviors (e.g., noncompliance), (3) decreasing quality of life interfering behaviors (e.g., substance use, depression), and (4) increasing behavioral skills (Linehan 1993a, 2015a; Miller et al., 2007; Rizvi et al., 2013). Stage 2 addresses decreasing stress and normalizing emotional experiences. The focus of treatment during stage 3 is resolving problems, increasing self-respect, and achieving individual goals in order to improve quality of life. Finally, stage 4 focuses on the sense of incompleteness many individuals experience, even after resolving problems. Goals in stage 4 tend to take place outside of traditional therapy and often includes involvement in a spiritual practice (Linehan, 1993a, 2015a; Koerner & Dimeff, 2007; Miller et al., 2007; MacPherson et al., 2013).

Modes of therapy.

Traditional DBT is accomplished through weekly individual therapy, week group skills training, telephone coaching, and weekly therapist consultation team meetings (Linehan, 1993a, 2015a; Miller et al., 2007; Rathus & Miller, 2015). Research has found DBT to be an effective intervention when various combinations of therapy modes have been utilized rather than the traditional model. James, Taylor, Winmill, and Alfoadari (2008) incorporated individual and group therapy as well as telephone coaching in their intervention and reported significant posttreatment improvements in depression, hopelessness, nonsuicidal self-injury, and general functioning with gains maintained after

eight months despite the lack of team consultation meetings. Another study eliminated the use of telephone coaching and found a reduction in the number of suicidal attempts during treatment and after six months following the intervention (Katz, Cox, Gunasekara, & Miller, 2004). Adolescents with bipolar disorder demonstrated significant posttreatment improvement in suicidal ideation, emotional dysregulation, depression, and non-suicidal self-injurious behaviors after participating in individual skills training and telephone coaching (Goldstein et al., 2007). Safer, Lock, and Couturier (2007) modified the traditional DBT format by eliminating the group sessions and team consultation meetings and reported a reduction in the frequency and severity of adolescents with binge eating disorders posttreatment and after three months. Providing individual skills training along with parent check-in meetings improved symptoms of trichotillomania (hair pulling), emotion regulation, anxiety, and depression (Welch & Kim, 2012). Numerous studies have found the implementation of group skills training to be successful in reducing emotional dysregulation and increasing adaptive coping skills when implemented as a stand-alone treatment (Trupin et al., 2002; Nelson-Gray et al., 2006). Few studies have been conducted using DBT with males with the majority of the studies occurring in forensic settings (Evershed et al., 2003; Shelton, Kesten, Zhang, & Trestman, 2011). DBT's effectiveness helping clients regulate emotions and reduce problematic behaviors makes it an attractive treatment for a range of disorders (Rizvi et al., 2013)

DBT treatment strategies.

DBT has five functions: (a) enhancing behavioral capabilities, (b) improving client motivation to change, (c) ensuring generalization across environments, (d)

structuring the environment to reinforce functional rather than dysfunctional behaviors, and (e) enhancing the capabilities and motivation of the therapist (Linehan, 1993a, 2015a; Miller et al., 2007; Eich, 2015). Several core strategies form the foundation of DBT, including the use of dialectical dilemmas, validation, chain-analysis, change procedures, diary cards, and irreverent communication have been identified as critical to the successful attainment of DBT goals (i.e., functions).

Dialectical dilemmas. Common dialectical dilemmas of individuals with emotional dysregulation are characterized by behaviors representing the extremes of three continua; one end of each continuum representing biologically driven behaviors and the other socially determined and maintained behaviors (Linehan, 1993a, 2015a; Miller et al., 2007). Individuals unable to regulate emotions tend to vacillate between positions at the extreme ends of the continuum resulting in over- or under-regulation of emotions and behaviors (Linehan, 1993a, 2015a; Miller et al., 2007). This pattern of shifting between behavioral extremes is referred to as dialectical dilemmas in DBT. The first dialectical dilemma, emotional vulnerability versus self-invalidation, addresses an individual's tendency to vacillate between intense emotional suffering and dismissal, judgment, and invalidation of suffering. The second dilemma, active passivity versus apparent competence, addresses passivity in solving one's problems while actively engaging others to solve problems. Finally, unrelenting crises versus inhibited grieving reflects the tendency to experience life as a series of extreme problems contrasted with an inability to experience emotions associated with trauma and loss (Linehan, 1993a, 2015a; MacPherson et al., 2013).

Linehan's (1993a) original set of dialectical dilemmas remains applicable to adolescents. However, adolescents and their families encounter three additional dialectical dilemmas (Miller et al., 2007). The first dilemma focuses on the vacillation of the parent and/or adolescent between being excessively lenient and being authoritarian. Excessive leniency could include the parent placing too few behavioral demands or limits on the adolescent as well as the adolescent imposing too few demands on themselves, giving in to the demands of the adolescent, or a laissez faire style of parenting (Miller et al., 2007; MacPherson et al., 2013). Authoritarian control is found at the opposite end of the continuum and often results in coercive methods of limiting freedom, autonomy, and independent decision making to suppress the adolescent's emotional and behavioral dysregulation (Miller et al., 2007). In this dialectical dilemma, parents are found vacillating between being overly permissive and setting unreasonable, overly restrictive limits. The adolescent wavers between being too hard on themselves and knowing when to give themselves a break versus when to work harder (Miller et al., 2007; Eich, 2015). A second dilemma specific to adolescents and their families involves distinguishing between normative and pathological behaviors. Pathological behaviors are viewed as extreme presentations of developmentally normal behavior likely to cause harm to quality of life or physical well-being (e.g., selling drugs, engaging in unprotected sex, self-harm or suicidal attempts). Developmentally normative behaviors typical of adolescents include experimentation with drugs, alcohol, and sexuality; changing self-images; frequent interpersonal conflicts; and moodiness but do not result in self-harm, school dropout, or other quality-of-life-impairments (Miller et al., 2007). Parents and adolescents face similar struggles as they recognize and allow these behaviors while at

the same time identifying and addressing the behaviors before they result in negative consequences or severe dysfunction. The third dilemma addresses the struggle of fostering dependence versus fostering autonomy. Parents can foster dependence by engaging excessive caretaking with the result being an adolescent unable to negotiate the word on their own. Fostering autonomy can become dysfunctional when the parents' severe ties with their adolescent and require them to take on adult levels of responsibility and functioning. Adolescents work to achieve a balance between the appropriate amount of relatedness and dependence and a comfortable degree of separation, individuation, and identity (Miller et al., 2007; Eich, 2015). DBT recognizes that individuals are most effective when they can find balance between the opposing forces found in each dialectical dilemma (Linehan, 1993a, 2015a; MacPherson et al., 2013). Dialectical dilemmas teach strategies to address behavioral extremes and rigid thinking, identify dysfunctional thoughts and behaviors by offering alternative viewpoints, and promote a balance between acceptance and change (MacPherson et al., 2013). Dialectical thinking strategies are designed to address rigid and polarized positions and cognitive distortions such as black-and-white thinking by emphasizing both-and thinking rather than either-or thinking (Swenson, Witterhold, & Bous 2007). Strategies teach clients to identify more than one solution to a problem, accept change, understand different points of view, and recognize there can be more than one truth in any given situation or interaction (Linehan 1993a, 2015a; Miller et al., 2007).

Validation. Validation strategies are essential to the success of change-oriented strategies when working with clients who are emotionally sensitive and prone to emotional dysregulation (Koerner & Dimeff, 2007). DBT validation strategies are

incorporated to communicate empathic understanding, validate the client's emotions, thoughts, and actions in relationship to their current reality, and balance the tendency, of both the client and therapist, to pathologize behaviors (Fruzzetti, Santisteban, & Hoffman, 2007). Pathologizing behaviors is a phenomenon, common to therapy, in which clients tend to treat their own valid responses as invalid, while therapists come to view normal responses as pathological (Koerner & Dimeff, 2007). Validation strategies focus on the therapist's acceptance of the client and communicate to the client their responses make sense or are what would be expected within their current life situation (Linehan, 1993a, 2015a; Koerner & Dimeff, 2007; MacPherson et al., 2013). These strategies require nonjudgmental awareness of another person, the ability to pay attention, listen, communicate acceptance and interest, and not responding with negative emotions (Fruzzetti et al., 2007). DBT validation strategies are used by the therapist, client, and in the case of adolescents, family members, to learn not only how to validate but what to validate, when to validate, how to build motivation to validate, and how to recover from invalidation (Fruzzetti et al., 2007).

***Chain-analysis*.** Completion of a chain analysis allows the client to identify the cause of a problem, determine alternative behaviors and their outcomes, troubleshoot potential obstacles, rehearse new behaviors, and analyze solutions in order to prevent the problem behavior from reoccurring (Linehan, 1993a, 2015a; MacPherson et al., 2013; Rizvi et al., 2013). Clients learn how to identify vulnerabilities, events, thoughts, feelings, sensations, and behaviors that led to a specific problem behavior as well as the consequences of engaging in the problem behavior (Linehan, 1993a, 2015a; MacPherson et al., 2013).

Behavioral change procedures. Problem-solving strategies form the basis for behavioral change in DBT (MacPherson et al., 2013). In DBT, every behavior is viewed as reasonable when viewed in context to the client's history and current situation. Problem behaviors are considered, without judgment, to be the result of skill deficits, which in turn cause emotional dysregulation and cognitive thinking errors (Linehan 1993a, 2015a). DBT uses four primary change procedures designed to reduce problematic behaviors associated with dysregulated emotions while shaping and reinforcing more effective, adaptive behaviors. The first procedure, skills training, teaches the client new skills. Second, contingency management provides a consequence influencing the probability of a client's behavior to occur again. The third strategy, exposure allows the client to experience uncomfortable emotions and reduces the likelihood of engaging in escape strategies. Finally, cognitive modification addresses the client's dysfunctional assumptions or beliefs (Linehan 1993a, 2015a; MacPherson et al., 2013).

Diary cards. This monitoring tool allows clients to record daily ratings of emotions, problem behaviors, and skill use and identifies behaviors to target during therapy (Linehan, 1993a, 2015a; Miller et al., 2007; Rizvi et al., 2013). Diary cards can function as a daily reminder to the client to use skills in different environments (Mazza et al., 2016). Clients receive a new diary card with each lesson in order to record the skills practiced during the day and rate the effectiveness of the skill (Mazza et al., 2016). Diary cards allow the therapist to not only monitor how well the client is developing and implementing skills outside of the session but also understand the client's perception of how effective or helpful the skills are in their daily living (Miller et al., 2007).

Irreverent communication. DBT therapists are encouraged to use responsive and genuine communication techniques with their clients but also have permission to engage in irreverent communication as a tool for gaining client interest, attention, or recognition of a problem (Linehan, 1993a, 2015a; Miller et al., 2007). This could be agreeing with a client's dysfunctional thought pattern, such as catastrophic thinking, as well as taking a matter-of-fact approach (MacPherson et al., 2013). The use of irreverent comments has been found to be an effective strategy for building and maintaining the authenticity of the therapeutic alliance with adolescents (Fasulo et al., 2015).

DBT Behavioral Skills

DBT employs a skill deficit model suggesting that the absence of or inability to use critical skills leads to and maintains dysfunctional behaviors (Linehan 1993a, 2015a; Wilks et al., 2016). Addressing skill deficits through DBT has resulted in fewer suicidal behaviors, fewer symptoms associated with depression, and better anger control, providing further evidence for using DBT to address skills deficits and decrease maladaptive behaviors (Neacsiu, Rizvi, & Linehan, 2010). Individuals who have been taught DBT skills, and practice those skills on a regular basis, report higher levels of self-efficacy and are more successful regulating their emotions and behavior (Barnicot et al., 2016). DBT has been found to promote resilience by teaching skills for accumulating positive life events in order to increase positive emotions and building a sense of generalized mastery by engaging in activities to increase competency and self-efficacy (Bohus et al., 2004; Neacsiu et al., 2014). Focus is placed on skill acquisition, strengthening, and generalization of practical skills for regulating both over- and under-controlled emotions, reducing impulsive behaviors, solving problems, and building and

repairing interpersonal relationships as a means for learning new ways of responding to problems in living often caused by the client's emotional dysregulation. (Mazza et al., 2016). DBT skills synthesize the need for clients to accept themselves as they are and the need for them to change by offering strategies focused on acceptance (mindfulness and distress tolerance) as well as change (emotion regulation and interpersonal effectiveness). DBT for adolescents and their families incorporates a fifth skills module, walking the middle path, designed to teach validation of self and others, behavioral principles (e.g., contingency reinforcement, shaping, extinction), and family-specific dialectical dilemmas (Miller et al., 2007; MacPherson et al., 2013). Skills are designed to (a) enhance an individual's capability by increasing skillful behavior, (b) improve and maintain client's motivation to change and engage in treatment, (c) ensure generalization of change occurs through treatment, (d) enhance therapist's motivation to deliver effective treatment through treatment format, hierarchy, and functions, and (e) assist the individual in restructuring or changing their environment to be supportive and maintain progress toward goals (Koerner & Dimeff, 2007; Eich, 2015; Linehan, 1993a, 2015a).

Mindfulness.

Core to all subsequent skills taught as part of a DBT program, mindfulness skills teach the client how to observe and experience reality as it is, to be less judgmental, and participate effectively in the moment (Linehan, 2015b; Mazza et al., 2016). Mindfulness skills are designed to teach the client how to quiet their mind and notice what is happening internally in response to external stimuli (Eich, 2015). DBT teaches three "what" skills (observing, describing, participating) and three "how" skills (taking a nonjudgmental stance, focusing attention on one thing, being effective). Linehan (1993a,

2015a) makes the assumption that participation without awareness is a key characteristic of impulsive and mood-dependent behaviors. Mindfulness is participating with attention; therefore, a key goal of the what skills is to develop awareness. This is especially important when learning new behaviors. How skills teach clients to focus on the consequences of behaviors and events rather than adding a label such as bad to the behavior. Achieving such a focus requires learning to control attention to one task or activity at a time (Linehan, 1993a, 2015a; Miller et al., 2007).

For adolescents, mindfulness skills teach how to focus attention, pay attention to one thing at a time, and increase awareness of the present rather than being distracted by thoughts focused on the past or future. These are critical skills for regulating emotions and can be applied to studying and focusing during class. Mindfulness skills allow students to make more effective decisions, develop future goals, and identify their values (MacPherson et al., 2013; Mazza et al., 2016). Regular practice of mindfulness has been found to increase emotional stability and sense of well-being (Vollestad, Nielsen, & Nielsen, 2012).

Distress tolerance.

Individuals with emotional dysregulation challenges display maladaptive problem-solving and impulsive behaviors to avoid emotional distress. Distress tolerance skills teach clients self-soothing strategies to tolerate emotional distress and crisis situations long enough to identify and engage in more effective solutions and behaviors and not make things worse by impulsive actions (Linehan, 2015a; Linehan, 2015b; Mazza et al., 2016). Distress tolerance skills are designed to provide the necessary skills for surviving crisis situations as well as strategies for accepting the realities of life that

cannot be changed (MacPherson et al., 2013; Eich, 2015). These skills focus on the ability to nonjudgmentally accept both oneself and one's current situation, perceive one's environment without demanding it to be different, experience current emotional state without attempt to change it, and to observe one's own patterns of thinking and acting without trying to control them (Mazza et al., 2007).

Four sets of crisis survival skills are taught: distracting, self-soothing, improving the moment, and thinking of pros and cons (Linehan 1993a, 2015a). By learning skills to reduce impulsiveness, especially when faced with a crisis situation adolescents tend to engage in fewer outbursts, conflicts, and aggressive behaviors during the school day (Mazza et al., 2016). Three acceptance skills complete the distress tolerance module: radical acceptance, choosing to accept reality as it truly is, and willingness versus willfulness (Linehan, 1993a, 2015a; Miller et al., 2007; Mazza et al., 2016).

Emotion regulation.

Emotion regulation skills are designed to teach clients the importance of emotions as well as how to accurately recognize, describe, and label emotions, reduce vulnerability to as well as the intensity of painful or unwanted emotions, change situations that cause unproductive or harmful emotions, build emotional resilience and increase the frequency of positive events to increase positive emotions (MacPherson et al., 2013; Eich, 2015; Linehan, 2015b; Mazza et al., 2016). Developing the ability to calmly make decisions and apply problem solving strategies increases the likelihood of making effective decisions resulting in less emotional discomfort as well as increases the frequency of experiencing positive emotions (MacPherson et al., 2013; Mazza et al., 2016). Emotional regulation skills have been found to successfully reduce the severity of depression in

abuse victims, improve client's ability to manage anger, stabilize affect, and decrease emotional dysregulation (Iverson, Shenk, & Fruzzetti, 2009; Soler et al., 2009; Neacsiu et al., 2010).

The ability to regulate the expression of emotion is crucial because its absence leads to the disruption of goal-directed and prosocial behaviors as well as interferes with the development of a sense of self (Linehan, 1993a, 2015a). Dysregulation of the sense of self is common in individuals with emotional regulation challenges and often manifests as distorted inferences, assumptions, and beliefs (Linehan, 1993a, 2015a). Emotional regulation skills can only be taught in the context of emotional self-validation (Linehan, 1993a, 2015a).

Interpersonal effectiveness.

Effective interpersonal relationships depend on a stable sense of self and the capacity for appropriate emotional expression. Individuals with emotion dysregulation often have chaotic and intense relationships marked with challenges and difficulties (Linehan, 1993a, 2015a).

Interpersonal effectiveness skills teach individuals how to maintain and improve relationships, build self-respect, and manage interpersonal conflicts (Linehan, 2015b; Rathus & Miller, 2015). Clients learn strategies for making requests, saying no to unwanted requests, finding potential friends, coping with interpersonal conflict, and ending destructive relationships (Eich, 2015; Mazza et al., 2016). This is an extremely important set of skills for adolescents to master as many intense emotional or problem behaviors during adolescents stem from an interpersonal situation. Skill building focuses on all types of relationships (i.e., peer to peer, student to teacher and staff, and student to

family) with the goal of improving interactions between all individuals in the client's environment (MacPherson et al., 2013; Mazza et al., 2016). A key function of the skills taught as part of the interpersonal effectiveness module involves teaching the individual how to identify and ask for what they need or want in a situation or relationship, as well as identify what is stopping them from achieving their goals (e.g., lack of skill, worry, indecision, environmental obstacles, and/or people-centered complications).

Walking the middle path.

The Walking the Middle Path module was developed to address specific issues commonly found in emotionally dysregulated adolescents and their families, such as polarized, nondialectical thinking, a tendency to alternate between behaviors that underregulate emotions and those that overregulate emotions, a greater need for validation, and the explicit instruction and application of learning principles to self and others (Miller et al., 2007; Rathus & Miller, 2015). In addition to the dialectical dilemmas developed by Linehan (1993a, 2015a) three additional dilemmas, common to adolescents and their families, are addressed in this module: (a) excessive leniency versus authoritarian control, (b) normalizing pathological behaviors versus pathologizing normative behaviors, and (c) forcing autonomy versus fostering dependence (Miller et al., 2007; Rathus & Miller, 2015). The explicit focus on validation is another critical part of this module and relates to the biosocial theory by aiming to increase validating responses in an invalidating family context. Adolescent and their families have been found to require additional time to learn and practice how to validate both self and others; validation lessons focus on acceptance of one's own and others' experiences (Miller et al., 2007; Rathus & Miller, 2015). Teens learn how to validate parents while teaching all

family members how to use validation to improve communication and reduce conflict in their relationships. Another skill deficit found to be unique to adolescents and their families, addressed during the walking the middle path module, is the inability to apply behavioral principles effectively (Miller et al., 2007). Parents and adolescents are taught how to reinforce, extinguish, punish, and shape behavior providing them with the skills necessary to increase adaptive behaviors and decrease maladaptive behaviors in themselves and others (Miller et al., 2007). In this module, adolescents learn not only how to reinforce behaviors of siblings but also how to practice self-reinforcement (e.g., watching television only after completing homework). Parenting in the "middle path" is based on the work of Baumrind (1991), who linked authoritative parenting with healthy adjustment in children. Parents are taught how to use skills displayed by authoritative parents, such as firm discipline with clear rules and follow-through coupled with a flexible, democratic style involving discussion and negotiation. Families also learn the difference between developmentally normal adolescent behaviors and those that are pathological to help find a common middle ground to parenting dilemmas (Rathus & Miller, 2015).

DBT for adolescents.

DBT designed for adolescents is designed to teach specific skills focused on areas in which teens typically have difficulty: (a) managing emotions, (b) confusion about self and distraction, (c) impulsiveness, and (d) interpersonal problems (Mazza et al., 2016). DBT for adolescents follows a similar format as standard DBT but with modifications to make DBT more developmentally appropriate for adolescents and their families (Miller et al., 2007; MacPherson et al., 2013). Adaptations of traditional DBT for adolescents

include the inclusion of family members in multifamily skills training groups to enhance generalization and reinforcement of skills; addition of family therapy sessions; teaching of three adolescent-family dialectical dilemmas; reduction of treatment length to 16 weeks rather than one year with an additional, but optional, 16-week graduate group available, if needed; a reduction in the number of skills taught with the addition of an adolescent-specific skill module; and modification of handouts to be more developmentally appropriate and interesting for adolescents (Miller et al., 2007; MacPherson et al., 2013). One goal of DBT for adolescents is to reduce "black-or-white," "all-or-nothing" thinking and move away from either-or and towards both-and approach to thinking. Therefore, a primary goal of DBT is to help the individual become comfortable with change (Linehan, 1993a, 2015a; MacPherson et al., 2013; Rathus & Miller, 2013; Rathus & Miller, 2015).

Adolescents with trauma histories. The rationale for using DBT with adolescents who have experienced trauma lies in the common underlying dysfunction in emotional regulation found among adolescents with trauma and its manifestation in extreme emotional and behavioral dysregulation (MacPherson et al., 2013). Adolescents experiencing emotional dysregulation tend to use a variety of methods for regulating their emotional discomfort, including engaging in (a) externalizing behaviors, such as physical and/or verbal aggression, conduct problems, oppositional and defiant behaviors; (b) internalizing behaviors, including withdrawing, anxiety, depression; (c) pathological behaviors, such as substance abuse, drug use, sexual promiscuity; and (d) school-avoidance behaviors, including skipping class, leaving school without permission, noncompliance with school and classroom rules. These behaviors can result in failing

grades, significant number of disciplinary referrals, lack of social engagement and/or school involvement, and/or dropping out of school. Left untreated, emotional dysregulation and problematic behaviors in adolescence have been linked with the development of various forms of psychiatric diagnosis, including substance abuse/dependence, borderline personality disorder, bipolar disorder, binge eating, anxiety disorders, anorexia nervosa, oppositional defiant disorder, posttraumatic stress disorder, conduct disorder, and impairing behaviors, such as suicidal behaviors, nonsuicidal self-injury, aggression, impulsivity, and disruptive behavior (McLaughlin, Hatzenbuehler, Mennin, & Nolen-Hoeksema, 2011; MacPherson et al., 2013).

DBT Training for Staff.

McCay et al. (2015) reported a significant increase in DBT knowledge, skills, and confidence after staff, with no previous exposure to DBT, participated in DBT training incorporating multiple methods of delivery: online training, training sessions and webinars, Linehan's (2015a) training manual, manuals developed for the research study with specific expectations and protocols, and participation in weekly consultation team meetings to support skill development.

Summary

The majority of research conducted on childhood and adolescent trauma has specifically explored the influence of adverse experiences on the biological, emotional and behavioral regulation, cognitive, academic, and social domains of functioning (Pearlman & Courtois, 2005; D'Andrea et al., 2012; Schore, 2013; Kliethermes et al., 2014; Oshri et al., 2015). Youth with trauma histories have been found to benefit from safe and supportive school environments specifically designed to decrease risk factors

and increase protective factors resulting in improved academics, social, emotional, and behavioral competencies (Weissberg et al., 2003; Cook et al., 2005; Cole et al., 2013; Crosby, 2015). The cost of supporting a trauma-sensitive school and providing appropriate supports for individuals with trauma histories needs to be considered within the context of the cost to our communities and society of not providing interventions and care (Whitson, Kaufman, & Bernard, 2009). The benefits of preventive interventions can be measured both in terms of economic costs, including a reduction in school absenteeism and dropout rates and crime-related costs, such as quality of life, employment options, and healthy life choices (SAMHSA, 2007). Teachers are often the first to notice the social, emotional, and behavioral needs of students but typically do not feel knowledgeable, capable, or confident in their abilities and skills to address these needs (Emmer & Stough, 2001; Stoiber & Gettinger, 2011; Moon et al., 2017). Therefore, it is important to increase not only teachers' knowledge of the causes and prevalence of adverse childhood experiences but also their understanding of the far-reaching repercussions of trauma exposure across an individual's lifetime. Many strategies commonly used to support children and adolescents exposed to trauma do not address the wide range of behavioral responses to stress, and maladaptive coping strategies suggesting research identifying effective interventions for adolescents with behavioral and emotional dysregulation and/or trauma histories is greatly needed (Fasulo et al., 2015; Lansing et al., 2016). Much of the research involving dialectical behavior therapy (DBT) has centered on adults with emotional dysregulation challenges, although several studies have identified DBT to be an effective treatment for adolescents with emotional dysregulation and their families. The use of DBT with adolescents in the

school environment has shown promise as an effective intervention with adolescents (Mazza et al., 2016). Additionally, students with trauma backgrounds exhibit deficits in skill areas typically addressed in DBT sessions including, emotional regulation, distress tolerance, mindfulness, and developing interpersonal relationships.

This study attempted to identify the impact on school functioning of students demonstrating emotional dysregulation, difficulty coping with frustration, poor interpersonal relationships, and an inability to calm and maintain attentiveness when teachers and students are taught key DBT principles and strategies and teachers are provided with professional development about trauma-sensitive schools. Prior to participating in the training sessions, it was predicted teachers would report a lack of professional training and knowledge regarding the impact trauma has on adolescent mental health, behavioral challenges, and academic performance. Additionally, it was predicted teachers would initially perceive addressing the mental health needs of their students to be beyond the scope of their professional responsibilities. Furthermore, it was predicted teachers would cite a number of barriers, including the lack of resources and increasing numbers of students with disruptive behaviors and poor academic performance, to be challenges related to supporting students with mental health needs. It was hypothesized that teachers would find it challenging to identify the causes and manifestations of trauma in adolescents. It was predicted teachers participating in the DBT skills training sessions would experience the greatest increase in their knowledge, confidence, and capacity to recognize student behaviors related to trauma exposure, respond appropriately to a student disclosure of trauma, and implement strategies associated with trauma-sensitive teaching practices when compared to teachers who

attended the trauma-sensitive schools workshops. With regards to student behavior, it was hypothesized students participating in the DBT skills groups would (a) engage in fewer incidences of negative school behaviors, (b) demonstrate improved academic functioning, and (c) report improved resiliency capabilities and engage in more effective coping strategies.

Chapter 3: Method

This study used archival data collected in the course of a school-based intervention that was planned, implemented, and evaluated during the 2016-2017 school year. The intervention combined training for teachers in strategies and principles associated with dialectical behavior therapy (DBT) and trauma-sensitive schools. A group of students were provided with the same DBT skills training as the teachers. Data were collected before, during, and following the implementation of these interventions. The researcher/school psychologist received permission from school and district administrators to utilize the data that were collected over the course of the study to address the research questions posed by this study. In accordance with district policy, parental permission was obtained prior to student participation.

This chapter provides information regarding the methodology of the study. First, inclusion and exclusion criteria for teacher and student participants of the study are outlined, and information is provided about recruitment, selection, and characteristics of participants for the study. Two workshops on trauma-sensitive schools were provided for teachers, and the content of each workshop is outlined. The description of content for DBT skills training for students and teachers is organized by session. The measures designed for this study are explained as well as the target audience (i.e., teacher, student, or both). The following information is provided for each research question/subquestion: type of data collected (e.g., qualitative or quantitative); description of participants; type of training (e.g., teacher DBT skills, student DBT skills, trauma-sensitive schools, or no training); procedures used to collect data, and statistical tests conducted. Data collected were used to address the following questions:

1. What are the perceptions and experiences of teachers who receive training in DBT skills and/or trauma-sensitive schools regarding (a) adolescent mental health; (b) behavioral challenges; and (c) academic performance?
2. What is the impact of training on the cause and prevalence of trauma and trauma-sensitive schools on secondary teachers with regard to their capacity to (a) recognize when a student has been exposed to trauma; (b) know how to respond in the moment if a student discloses he or she has experienced trauma; (c) identify and implement strategies to support students exposed to trauma?
3. What is the impact of DBT skills training on students' (a) negative school behaviors, such as cutting class, not completing assignments, using inappropriate language, or acts of defiance; (b) academic performance; and (c) measures of coping and resiliency?

Participants.

The site for this study was a school district in the mid-atlantic region of the U.S. serving approximately 10,475 students in prekindergarten through 12th grade. Data were collected from high school students in grades 9 through 12 and secondary general and special education teachers from one of the three high schools in the district. Teachers of classes in grades 9 through 12 at one of the three high schools in the district were eligible for inclusion in this study. Students in grades 9 through 12 at the same school were eligible for the study based upon a referral for counseling services, excessive behavioral referrals, and/or failing grades. Teachers and students from other schools in the district were not eligible for participation. High school students and teachers participated in one

or more of the components of this project: (a) a survey of teachers' knowledge and experiences related to trauma and its impact on learning and behavior; (b) two teacher training workshops on the topic of trauma-sensitive schools; (c) an 8-session DBT skills training program for students, conducted in small single-gender groups; and (d) an 8-session DBT skills training program for teachers, conducted in a small group.

Teacher participants. Prior to beginning the intervention phase of this project, all teachers were invited to respond to a survey regarding their knowledge and experiences related to trauma and its impact on behavior and learning. A total of 66 educators (38 female, 28 male) received an emailed description of the intervention project, informed consent, and a link to a 10- to 15-minute survey to be completed via Survey Monkey (see Appendix A). A total of 48 educators (31 female, 17 male) responded to the survey (72%). Information about the demographics of teacher participants in each component of the intervention project is presented in Chapter 4.

Student participants. Thirty students were identified as potential participants in the DBT skills group sessions based upon several factors including teacher, administrator, or school counselor recommendation, disciplinary data, school attendance, and grades. All 30 students were asked to complete the Adverse Childhood Experiences Quiz (see Appendix D), which was revised to state questions in the present, rather than past tense. The students chosen for the DBT groups reported the highest level of exposure to adverse experiences (i.e., an ACE score of four or higher). Twenty students in grades 9 through 12 were selected to participate in eight 1-hour DBT skills group sessions. Information about the demographics of student participants is presented in Chapter 4.

Content of teacher intervention sessions.

Elkund and Rossen (2016) found teachers who understand the impact of trauma are more likely to consider the problematic behaviors of a student to be a reflection and developmental response to their trauma and stress-related experiences rather than willful, purposeful misbehavior. Taking this into consideration two workshops were developed based on research completed by the school psychologist regarding the cause, effect, and prevalence of trauma experiences on academic functioning, emotional regulation, and behavior dysregulation across the lifespan.

All eligible teachers were invited via email to attend two workshops designed to increase teacher knowledge regarding the cause and prevalence of trauma and its impact on student functioning, build confidence in their capacity to respond to a student's disclosure of trauma, and identify resources available in the school and community. Teachers were provided with four hours of district-approved professional development at the completion of the training. Teachers attended 2-hour workshops after school hours one time per week for two weeks in January 2017. All teachers attending the trauma-sensitive schools workshops had previously completed the survey.

Trauma-sensitive schools workshop 1. Participants learned the definition of trauma and the individual, event, cultural, and environmental factors impacting the way trauma is experienced and the potential outcomes. The results of the Adverse Childhood Experiences (ACE) study were shared with the attendees. Participants learned the prevalence rates of abuse, neglect, domestic violence, substance abuse, mental illness, parental discord, and crime impacting their community as compared to the average prevalence rates across the United States. The lasting effects and cost to society of

exposure to trauma across the lifespan was shared with workshop attendees. The participants learned individual, familial, and environmental risk and resiliency factors known to influence the manifestation and degree of trauma. Attendees studied the impact trauma exposure has on school attendance, graduation rates, and school climate. The pervasive exposure to trauma on an individual's neurological development, ability to form attachments, regulate emotion, behavioral control, cognitive functioning, and academic achievement was reviewed with participants.

Trauma-sensitive schools workshop 2. Information from session one was reviewed. Participants learned the various manifestations of trauma at home with an emphasis on the change in worldview caused by exposure to trauma. The developmental needs of adolescents was reviewed to provide a frame of reference for normalized versus maladaptive behaviors during adolescence. Attendees learned the guiding principles of an effective trauma sensitive classroom and school. The domains and goals of instruction necessary to support students with trauma histories was introduced. Participants learned instructional and classroom management strategies proven effective and supportive for trauma exposed students. Techniques for increasing sensitivity to trauma across the school was discussed. Teachers were introduced to the impact and symptoms associated with secondary trauma syndrome and learned methods for reducing symptomology.

Dialectical behavior therapy training for teachers. Exposure to trauma negatively impacts the already challenging emotions and behaviors associated with adolescence, such as confusion about self, difficulty managing emotions, impulsiveness, and interpersonal difficulties. When exposure to trauma is combined with an unsupportive environment, adolescents can display significant skill deficits in emotional

regulation, behavioral control, cognitive functioning, and academic achievement. Teachers working with adolescents need to understand the difference between normal and maladaptive adolescent behaviors, especially when they are teaching students with trauma histories. Mazza et al. (2016) developed a series of lessons designed to use Dialectical Behavior Therapy principles with adolescents in the school. This program addresses the challenges associated with the pervasive emotional dysregulation often displayed in the school and classroom environment by adolescents exposed to trauma. Teacher training sessions were derived from Linehan's theory of DBT (2015a) and portions of the DBT Skills in Schools program developed by Mazza et al. (2016). Teachers attending the DBT training sessions were provided with an overview of the theory, principles, and techniques associated with dialectical behavior therapy. Attendees received training in the four primary skill areas of mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness plus dialectics, validation, and problem-solving strategies. Mnemonics, developed by Linehan (2015a) and Mazza et al. (2016) were introduced to facilitate memory of key strategy principles in each of the four skill areas.

Instructor-led and online training, when active learning methods (e.g., practice opportunities, modeling) are utilized, have been found to be superior to self-study of manuals or books in terms of learner satisfaction, increasing knowledge, and self-efficacy (Beidas et al., 2012). Therefore, a combination of instructor-led and online training with the use of active learning methods (e.g., practice opportunities, modeling) was utilized. Participants engaged in six instructor-led 1-hour sessions after school hours one time per week and completed two 1-hour online training sessions during the alternating weeks at

their leisure. Training was completed during February and March of 2017. The content of each DBT skills session for teachers is described in the following sections.

*DBT training session 1***.** During this instructor-led session, participants were provided with a brief overview of the foundational principles of DBT, including dialectical perspective, biosocial theory, emotional dysregulation, and behavioral theory. The four main areas in which adolescents tend to have problems were reviewed: difficulty managing emotions, confusion about self and distraction, impulsiveness, and interpersonal problems. Attendees learned the role cognitive behavioral therapy (CBT) plays in the identification of cognitive errors and distortions as well as the importance of behavioral activation. A brief review of research proving the effectiveness of DBT with adolescents was provided. Attendees completed a pretest designed to measure their knowledge of DBT principles and skills.

*DBT training session 2***.** This session was completed using Schoology, a learning management system that allows users to create, manage, and share content and resources. A schoology course was created for teachers to access information provided to them by the school psychologist. Teachers reviewed information on the following dialectical dilemmas common to adolescence: excessive leniency versus authoritarian control, normalizing pathological behaviors versus pathologizing normative behaviors, and forcing autonomy versus fostering dependence. Additional information was provided on the importance of using validation to communicate acceptance or understanding of a student's thoughts, feelings, and actions in a particular situation. A final component of this session included information on the use of a seven-step strategy for solving problems as a means for changing behaviors.

*DBT training session 3***.** During this instructor-led session participants engaged in activities designed to teach the concept of mindfulness. Participants learned the differences between the wise mind, reasonable mind, and emotion mind. Additional mindfulness skills taught included the three how skills (nonjudgmental, one-mindful, effective) and the three what skills (observe, describe, participate) as a strategy for increasing the student's ability to control attention to one task or activity at a time. Participants engaged in role-play activities to practice mindfulness strategies in order to teach students how to focus their attention, deal with distracting thoughts, and improve concentration. The impact a lack of mindfulness has on an individual's cognitive functioning and academic achievement was discussed.

*DBT training session 4***.** Information regarding the impact exposure to trauma has on the student's ability to handle distress and frustration and the possible behaviors displayed in the classroom which could be attributed to an inability to tolerate distress was shared with participants. Participants learned the importance of teaching students both crisis survival skills and reality acceptance skills as a means for reducing impulsiveness and coping with emotional distress. Strategies for supporting students with deficits in this skill area were identified and discussed. During this session attendees practiced the following distress tolerance strategies: (a) ACCEPTS, engaging in distracting Activities, Contribute by focusing on others, Compare yourself to those less fortunate, generating opposite Emotions, Push away by leaving, filling the mind with other Thoughts and physical Sensations; (b) IMPROVE: replace negative events through Imagery, creating Meaning, Prayer, Relaxing actions, One thing at a time, taking a brief

mental Vacation, and Encouragement by talking to someone; and (c) how to use a pros and cons grid to identify short- and long-term goals.

DBT training session 5. During this instructor-led session, participants learned the emotional regulation challenges typically displayed by students with trauma histories. Teachers learned the different components of an emotion as a means for regulating emotions and engaged in role-play activities to learn the checking the facts emotional regulation strategy. Additional information was provided on the importance of increasing positive emotions and how to experience emotions like a wave. Participants learned the mnemonic ABC PLEASE (Accumulate positive emotions, Build skill mastery, Cope before emotional situations, treating PhysicaL illnesses, balancing healthy Eating, Avoiding drugs, getting enough Sleep, and Exercise) as a way to remember strategies for increasing positive emotions. Participants identified various classroom management and instructional strategies that could be implemented to support students with emotional regulation difficulties.

DBT training session 6. The impact that trauma has on an individual's ability to develop appropriate and effective interpersonal skills was reviewed with participants. Attendees learned behaviors typically displayed by individuals with deficits in interpersonal effectiveness and strategies for supporting these students in the school environment. Participants engaged in role-play activities to practice interpersonal skills using the mnemonic DEAR MAN, which introduces the skills necessary for getting what you want or saying no (Describing the situation, Expressing feelings, Assert by asking for what you want, Reinforce by explaining the positive effects, be Mindful and focused on goal, Appear confident by maintaining eye contact, and Negotiate by being willing to

give in order to get). The GIVE mnemonic was introduced as a tool for remembering skills necessary for building and maintaining positive relationships. GIVE stands for (be) Gentle, (act) Interested, Validate, and (use an) Easy manner. Additional skills learned during this session included steps to build and maintain relationships and how to evaluate options when making or declining requests. Individuals participating in the training session identified ways to incorporate these strategies with their students.

*DBT training session 7***.** This training session was conducted online and focused on specific issues found in emotionally dysregulated adolescents, such as black-or-white thinking, thinking errors, underregulated versus overregulated emotions, and the intense need for validation typically expressed by individuals with trauma histories. Participants were provided with information on the application of behavioral principals in a trauma-sensitive classroom as well as how to establish clear rules and the importance of logical consequences. Additional information during this session included how to engage in flexible discussion and negotiation with trauma exposed students.

DBT training session 8. The final session reviewed concepts learned during the training and clarified any misconceptions held by the participants. Discussions focused on the practical aspects and possible challenges associated with implementing the concepts and strategies learned in the classroom. Participants developed and shared with the group their individual action plans identifying 1-2 concepts and strategies they planned to incorporate into their instruction during the next week as well as possible obstacles. At the end of the session, participants completed a post-assessment designed to assess their understanding of the DBT principles and skills presented during the training sessions (see Appendix C).

Content of student intervention sessions.

Prior to beginning the DBT sessions, each student met individually with the school psychologist to learn about the purpose and structure of the group sessions. During the individual meeting the results of each student's ACE quiz was reviewed and students received a brief lesson on the impact of trauma. At the end of the individual meeting, students completed the Resiliency Scales for Children and Adolescents rating scale. Permission to use the results of the rating scale was obtained from the author. This scale was chosen due to its emphasis on strength rather than pathology as well as sound psychometric properties allowing for progress monitoring and evaluation of the effectiveness of interventions (Prince-Embury, 2011). Individual student meetings occurred during January 2017. Group sessions were led by the school psychologist and lasted approximately 45-60 minutes per week. Sessions were held during the school day lunch periods. Research has found skills training in the four primary skill areas of mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness plus dialectics can be an effective strategy for adolescents resulting in greater reduction in anger expression and impulsivity as well as better tolerance of frustration and management of emotions (Cook et al., 2008). The content covered during each session was designed to mirror the information being presented to teachers. Group sessions were held during eight consecutive weeks beginning in February 2017 and ending in March 2017. A description of the content covered in each session follows.

DBT training session 1. At the beginning of this session students completed a modified version of the Dialectical Behavior Therapy Ways of Coping Checklist (DBT-WCCL) designed to identify the coping skills typically used by participants (see

Appendix E). Items for this pretest were selected from the Dialectical Behavior Therapy Ways of Coping Checklist (DBT-WCCL) to match the skills taught during the 8-week group sessions. The DBT-WCCL has been found to effectively capture DBT skills as well as the use of dysfunctional coping in difficult situations with good to excellent psychometric properties (Neacsiu, Rizvi, Vitaliano, Lynch, & Linehan, 2010). Students also completed a pretest designed to assess their understanding of DBT principles (see Appendix C). A set of group norms was established and participants learned how to use modified versions of the individual diary cards they were required to complete on a weekly basis (see Appendix F). During this session, participants were given a preview of the areas being addressed, including emotional regulation, mindfulness, distress tolerance, and interpersonal effectiveness. Participants learned how their thoughts, feelings, and behaviors were connected and were provided with information on thinking errors. Students identified various thinking errors they have experienced and created a positive action card for each thinking error identified. Students were given the task of noticing, identifying, and recording thinking errors and replacement thinking strategies they experienced during the week.

DBT training session 2. Information presented in session one was reviewed with students. Students were encouraged to share their experiences with identifying thinking errors and using replacement thinking strategies during the past week. Students were taught the underlying philosophy of DBT and the meaning of dialectics. Instruction focused on the dialectical dilemmas common to adolescents and how they pertain to the adults in their homes and school. Students learned the seven steps for effective problem solving.

DBT training session 3. Participants learned about the wise mind, reasonable mind, and emotion mind. Students engaged in activities designed to practice the three what skills of observing, describing, and participating and the three how skills of nonjudgmental, one-mindfully, and effectively. The importance of learning to control attention to one task or activity at a time was discussed. Participants engaged in role-play activities to practice strategies designed to help focus their attention, deal with distracting thoughts, and improve concentration. The impact a lack of Mindfulness has on their cognitive functioning and academic achievement was reviewed.

DBT training session 4. Students were taught the importance of learning how to cope with emotional distress so that they do not act impulsively and make things worse in the moment. Students learned crisis survival and reality acceptance skills, including ACCEPTS, IMPROVE, and how to use the pros/cons grid to make decisions and set goals. Information regarding the impact exposure to trauma has on their ability to handle distress and frustration as well as the resulting behaviors was provided to students.

DBT training session 5. Students learned the impact trauma has on their ability to regulate their emotions. They engaged in role-play activities to practice emotional regulation strategies such as checking the facts and ABC PLEASE. Additional information was provided on the model of emotions and how to experience emotions using the wave skill

DBT training session 6. Students identified the difference between appropriate and inappropriate relationships. They learned the impact trauma has on their ability to engage in appropriate interpersonal relationships. Strategies taught during this session

included DEAR MAN, GIVE, and how to evaluate their options when making decisions about relationships.

DBT training session 7. Students played a game to review previously learned skills and strategies. Students were asked to identify the pros and cons of using each strategy and discussed how to resolve any obstacles encountered. Any misconceptions held by students were clarified. Students were asked to identify one or two key concepts and strategies learned during the sessions and develop a plan for incorporating the strategies into their daily functioning.

DBT training session 8. Participants shared their individual action plans identifying 1-2 key concepts and strategies learned during the sessions to incorporate into their daily functioning. At the end of the session, participants were administered a post-test designed to assess their understanding of DBT principles presented during the training session (see Appendix C). Students completed a second Resiliency Scale for Children and Adolescents, as well as the modified version of the DBT-WCCL.

Teacher measures.

The teacher and student measures designed for this study are described in the following sections. Demographic information regarding teacher participants for each measure is provided.

Survey of teacher perceptions and experiences. Based on the literature review previously discussed, a self-created survey was utilized. Teachers completing the survey provided demographic information that included gender, age range, race/ethnicity, years of teaching experience, type of teaching certification (i.e., general education, special education, or dual certification), and highest level of education obtained. Participants

were asked to estimate the frequency of disruptive behaviors in their classroom and identify reasons for poor academic performance and/or challenging behavior, and professional development experiences. Questions were posed to determine perceptions of the impact and manifestations of trauma and the job responsibilities of a teacher in relation to adolescent mental health. Teachers were asked to identify resources available in the school as well as barriers experienced working with disruptive students, adolescents with mental health concerns, and/or individuals with trauma backgrounds. The responding staff included 29% with dual certifications in general and special education, 10% were certified in special education, and 60% held certifications in general education. The racial or ethnic composition of the staff responding to the survey was approximately 12% African American, 10% Hispanic, 1% Coptic, (North African countries, White), 2% American Indian, and 75% Caucasian.

Vignettes. Based on the literature examined, two vignettes were developed to collect information regarding the teacher's perception of student misbehavior, ability to recognize the signs of trauma exposure, ability to respond in the moment to a student's disclosure of trauma, capacity to identify strategies and interventions appropriate for students with trauma experiences, as well as their ability to apply information learned after having completed four hours of trauma-sensitive schools training to scenarios typically encountered at their school (see Appendix B). Teachers were asked to read the vignettes, then (a) identify the potential causes of a student's misbehavior and any additional information that might be needed about the student, (b) select a possible course of action, and (c) determine appropriate strategies or interventions to implement in the classroom. Vignettes were completed by all teachers participating in the two trauma-

sensitive schools training sessions at the end of the second session. Nineteen teachers (12 females and 7 males) expressed interest in the workshop and were recruited through personal invitation. In this sample, 63% of the teachers were Caucasian, 16% African American, 16% Hispanic, and 5% Coptic. The participating teachers included 58% with teaching certification in general education, 5% certified only in special education, and 37% of the teachers with dual certifications in general and special education.

DBT skills pretest and posttest. The DBT principles and skills assessment (see Appendix C) was designed to address teacher and student knowledge regarding DBT practices. The DBT skills assessment consisted of short answer, fill-in-the-blank, and multiple choice items. Test items assessed knowledge of the DBT world view, biosocial theory, and invalidating environments, dialectical dilemmas common to adolescence, as well as participants knowledge of strategies and interventions associated with mindfulness, distress tolerance, emotional regulation, and interpersonal relationships. Teachers and students were asked to explain the model of cognitive behavior therapy (CBT) and provide examples of cognitive distortions as well as explain the impact of trauma on the individual. Twelve teachers (8 females and 4 males) completed the eight 1-hour DBT training sessions. Teachers participating in the DBT training sessions had completed the survey and attended the two trauma-sensitive schools workshops. In this sample, 17% of the teachers were Hispanic, 66% Caucasian, and 17% African American. Teachers participating in the DBT skills training sessions included 58% certified in general education and 42% held dual certifications in general and special education. With regards to teaching experience, a majority of the participates (42%) held master's degrees and had been teaching for over 30 years (master's +30), 8% taught for at least 15

years with a master's degree, 33% held master's degrees but had taught fewer than 15 years, and 17% of the teachers held bachelor's degrees.

Individual interviews. Additional information regarding teacher perception, experiences, knowledge, confidence, and capacity for working with students who display social, emotional, and behavioral challenges was gained through individual interviews with all teachers completing the DBT skills training and four additional teachers who completed the survey and the trauma-sensitive schools rraining but not the DBT skills training sessions (see Appendix G). In this sample, 15% of the teachers were Hispanic, 65% Caucasian, and 20% African American. Teachers participating in the DBT mkills training sessions included 62% certified in general education and 38% held dual certifications in general and special education. With regards to teaching experience, a majority of the participates (45%) held master's degrees and had been teaching for over 30 years (master's +30), 10% taught for at least 15 years with a master's degree, 33% held master's degrees but had taught fewer than 15 years, and 12% of the teachers held bachelor's degrees.

Student measures.

All 20 student DBT skills group participants completed the following measures as part of this archival study. Student demographic data is described in Chapter 4.

DBT content pretest and posttest. Teachers and students participating in the DBT skills training completed pre- and posttests consisting of short answer, fill-in-the-blank, and multiple choice items (see Appendix C). Test items assessed knowledge of the DBT world view, biosocial theory, and invalidating environments, dialectical dilemmas common to adolescence, as well as participants knowledge of strategies and interventions

associated with mindfulness, distress tolerance, emotional regulation, and interpersonal relationships. Teachers and students were asked to explain the model of cognitive behavior therapy (CBT) and provide examples of cognitive distortions as well as explain the impact of trauma on the individual.

Modified diary cards. Diary cards were modified to reflect the content taught during the DBT Skills sessions (see Appendix F). The diary cards provided students with a daily reminder to practice newly learned skills in different environments outside of the group sessions. Students used the cards to indicate the effectiveness of the skills they practiced. The card allowed the student and school psychologist to identify which strategies and skills worked well for students and problem solve any barriers or obstacles encountered when using the skills (Mazza et al., 2016).

Resiliency scales for children and adolescents. Students were asked to complete the Resiliency Scales for Children and Adolescents before and after completion of the DBT skills training sessions (Prince-Embury, 2011). Given the short time (approximately 8 to 10 weeks) between completion of the pre- and post training measures, each student's responses were compared to determine individual changes not only on the composite areas of mastery, relatedness, emotional reactivity, resiliency, and vulnerability but also on the individual subscale results.

Dialectical Behavior Therapy Ways of Coping Checklist (Modified). The Dialectical Behavior Therapy Ways of Coping Checklist (DBT-WCCL) was modified to reflect the content covered during the 8-week DBT skills sessions (see Appendix E). Students completed the checklists before participating in the group sessions to identify their use of dysfunctional coping methods as well as behaviors and attitudes associated

with effective coping skills. Checklists completed at the end of the DBT skills training provided information regarding the student's use of coping strategies related to skills taught during the group sessions, the type of coping strategies most often used by the student, as well as continued use of less effective methods of coping.

School data. Data collected on attendance, behavior and disciplinary referrals, assignment completion, and grades for the twenty students enrolled in the group DBT sessions was collected September 2016 through May 2017. Data before, during, and after the completion of the DBT student group sessions was compared to determine the impact of DBT training on attendance, academic performance, and negative school behaviors.

Research design.

A mixed method design was utilized as both qualitative and quantitative data was collected and analyzed to address the research questions. Teacher participants were part of the school faculty during the 2016-2017 academic year and each individual had an equal chance of completing the survey (n = 48), participating in trauma-sensitive schools training (n =19), and/or completing the DBT skills training (n =12). Students involved in the dialectical behavior therapy groups (n = 20) were chosen based on adult referrals, scores obtained on the ACE quiz, grades, disciplinary referrals, and attendance data.

Research Question 1. Quantitative data were analyzed to understand the perceptions and experiences of teachers who participated in DBT Skills and/or Trauma-Sensitive Schools trainings regarding (a) adolescent mental health, (b) behavioral challenges, and (c) academic performance.

Research subquestion 1a. To understand the perceptions and experiences of teachers regarding adolescent mental health two analyses were conducted. A chi-square

analysis was calculated with teacher training (trauma-sensitive schools workshop and DBT skills, trauma-sensitive schools only, no training) as the independent variable and teacher perceptions concerning their responsibility and ability to address adolescent mental health as the dependent variables. The dependent variables were operationalized using survey questions 11, 12, 13, and 14 (Table 1). The number of responses marked as *true* by the teacher for the four questions was recorded as the dependent variables.

Table 1

Teacher Perceptions Concerning Responsibility and Ability to Address Adolescent Mental Health

Question	Perception of Responsibility
11	I see it as part of my job to address students' mental health concerns
12	It is important for school staff to understand the mental health issues that students may experience
13	I know when to refer a student, and who to refer the student to, when a student needs mental health support at my school
14	Students need greater access to mental health services at school

Additionally, a one-way ANOVA was calculated with teacher training (trauma-sensitive schools workshop and DBT skills, trauma-sensitive schools only, no training) as the independent variable and teacher experiences concerning resources to address student mental health at their institution as the dependent variables. The dependent variables were operationalized using survey question 15 (Table 2): "Please indicate whether the

following resources are available at your current school placement." The number of responses marked as *Yes, available*, *No, not available,* or *Not Sure if available* were recorded as the dependent variables.

Table 2

Teacher Experiences Concerning Resources Available to Support Teachers and Students

Question	Resources
A	Assessment for emotional and/or behavioral problems
B	Classroom consultation on behavior management
C	Functional behavioral assessments
D	Behavior support plans
E	Consultation with teachers for planning behavioral interventions
F	Individual counseling
G	Referrals to community-based services
H	Support for families such as obtaining food, paying bills, finding a place to live
I	Group counseling for students with anger problems, anxiety, depression, etc.

Research subquestion 1b. To determine the perceptions and experiences of teachers concerning behavioral challenges, five quantitative analyses were conducted. First, a Kruskal-Wallis H test, or the nonparametric version of the one-way ANOVA, was calculated with teacher training (trauma-sensitive schools workshop and DBT skills, trauma-sensitive schools only, no training) as the independent variable; the topic and delivery method of trainings concerning student behavioral challenges served as the

dependent variables. The dependent variables were operationalized using survey question 10 (see Appendix A): "Please indicate if you have received training in any of the following topics and the type of training you have received." Responses were coded as 0 (*No training*), 1 (*Training received via online learning module or text*), and 2 (*Training received via instructor*). The types of trainings the teachers may have received are listed in Table 3.

Table 3

Teacher Trainings Concerning Student Behavioral Challenges

Question 10	Type of Training
A	Bullying (including cyberbullying)
B	School violence and crisis preparedness
C	Causes of trauma and impact on students
D	Mental health needs of adolescents
E	Managing disruptive classroom behaviors
F	Normal adolescent behavior
G	Classroom strategies for working with students with trauma histories
H	Classroom strategies for working with students with mental health concerns
I	Promoting positive school climate

The second analysis utilized a one-way ANOVA with teacher training (trauma-sensitive schools workshop and DBT skills, trauma-sensitive schools only, no training) as the independent variable and teacher ability to identify students with trauma histories as the dependent variable. The dependent variable was operationalized using survey question 17: "On a scale of 0-100 indicate the percentage of students you currently teach who you suspect have been exposed to trauma." The percentage indicated by the teacher was recorded as the dependent variable.

Third, a Kruskal-Wallis H test was calculated with teacher training (trauma-sensitive schools workshop and DBT skills, trauma-sensitive schools only, no training) as the independent variable and teacher experiences concerning barriers to addressing student behavioral challenges as the dependent variables. The dependent variables were operationalized using survey question 18: "Which of the following is a barrier you have experienced when working with disruptive students, adolescents with mental health issues, or students with trauma backgrounds at your current school placement?" Table 4 indicates the possible barriers teachers experience while working with students.

Table 4

Barriers to Working with Students

Question 18	Barriers
A	District or school policies and procedures
B	Parents
C	Lack of administrative support
D	Fear of reprisal
E	Lack of training

The fourth analysis considered teacher's experiences regarding changes in student behavior over time. The dependent variable was operationalized using survey question 7: "Since you have begun teaching has the number of disruptive behaviors you must deal with, daily, increased, decreased, or remain unchanged?" Frequency data was recording regarding the levels of the variable and were coded as 1 (*same number of disruptive behaviors*), 2 (*increase in disruptive behaviors*) and 3 (*decrease in disruptive behaviors*).

Finally, frequency data was used to identify the number of disruptive behaviors teachers experienced on a daily basis. The dependent variable was operationalized using survey question 9: "How often do you experience incidents of disruptive behavior per day?" The levels of the variable were coded as 1 (*0-5 times per day*), 2 (*6-10 times per day*) and 3 (*more than 10 times per day*).

Research subquestion 1c. A Kruskal-Wallis H test, or the nonparametric version of the one-way analysis of variance (ANOVA), was calculated with teacher training

(trauma-sensitive schools workshop and DBT skills, trauma-sensitive schools only, no training) as the independent variable and teacher perceptions concerning the potential causes of disruptive behavior and/or poor academic performance as the dependent variables. The dependent variables were operationalized using survey question 8a-8u (see Appendix A): "Indicate whether each statement below could be a reason for disruptive behavior or poor academic performance." The number of potential causes of disruptive behavior and/or poor academic performance related to student mental health and possible manifestations of trauma exposure identified by the teacher were recorded as the dependent variables (see Appendix A, question 8a-8u).

Hypothesis regarding research question 1a-c. It was predicted teachers would feel ill equipped to handle the challenges commonly associated with students exposed to trauma due to their lack of professional development in this area. Additionally, it was predicted teachers would perceive addressing the mental health needs of their students to be beyond the scope of their professional responsibilities. Furthermore, it was predicted teachers would cite a number of barriers, including the lack of resources and increasing numbers of students with disruptive behaviors and poor academic performance, as challenges related to their ability to support students with mental health needs. It was hypothesized that teachers would find it challenging to identify the causes and manifestations of trauma in adolescents.

Research question 2. Qualitative and quantitative data analyses were conducted to examine the impact of training (trauma-sensitive schools workshop and DBT skills and trauma-sensitive schools only) on the cause and prevalence of trauma and trauma-sensitive schools on secondary teachers with regard to their capacity to (a) recognize

when a student has been exposed to trauma, (b) know how to respond in the moment if a student discloses he or she has experienced trauma, and (c) identify and implement strategies to support students exposed to trauma. The qualitative data collection process involved analyzing 60-minute individual interviews with a subgroup of 16 teachers, which consisted of the twelve teachers who completed the DBT trainings and four individuals who had participated in the trauma-sensitive schools workshops. The Interview recordings were audio recorded, transcribed, and generated one spreadsheet of transcripts. Analysis of the interviews were guided by a protocol (Appendix G) designed to collect data identifying the impact of the workshops, teacher-student interactions, as well as teacher perception of student performance and attitude in the classroom. The process of developing the themes was guided by the six-phase thematic analysis by Braun and Clarke (2006). The six phases involved in data analysis were: familiarization with the data, initial code generation, themes identification, themes review, the naming of themes, and production of a final report.

Research subquestion 2a. Qualitative data was analyzed to determine the effect of trainings teacher attended (trauma-sensitive schools workshop and DBT skills and trauma-sensitive schools only) on teacher ability to know how to respond in the moment if a student discloses he or she has experienced trauma. Responses from the individual teacher interviews (see Appendix G) were considered. Quantitative data was analyzed through an independent *t*-test with teacher training (trauma-sensitive schools workshop and DBT skills and trauma-sensitive schools only) as the independent variable and teacher ability to recognize manifestations of trauma and determine the appropriate supports required for a student as the dependent variables. The dependent variables

consisted of teacher responses to vignettes describing scenarios involving hypothetical students demonstrating behavioral and/or academic challenges (see Appendix B questions 2a-2e). Teachers were asked to indicate their level of agreement with the statement by selecting one of the following: strongly agree, agree, not sure, disagree, or strongly disagree. The responses were coded as 1 (*teacher checked the response*) or 2 (*teacher did not check the option*).

Research subquestion 2b. To determine the effect of trainings teacher attended (trauma-sensitive schools workshop and DBT skills and trauma-sensitive chools only) and teacher ability to recognize manifestations of trauma when a student has been exposed to trauma, an independent *t*-test was calculated with teacher training (trauma-sensitive schools workshop and DBT skills and trauma-sensitive schools only) as the independent variable and teacher ability to recognize manifestations of trauma exposure as the dependent variables. The dependent variables were operationalized using teacher responses from vignette question 1: "What do you believe are the causes of the student's difficulties? You may check as many of the following as you wish." The number of potential causes of student difficulties related to behavioral health and trauma identified by the teacher were recorded as the dependent variables (see Appendix B question 1a-1o).

Research subquestion 2c. The effect of trainings teacher attended (trauma-sensitive schools workshop and DBT skills and trauma-sensitive schools only) on teacher ability to identify and implement strategies to support students exposed to trauma was examined. The Wilcoxon signed-rank test was calculated with teacher training (before DBT skills training, after DBT skills training) and teacher ability to identify and

implement strategies to support students with trauma histories via DBT test performance as the dependent variables. The dependent variables were operationalized using the number of correct responses on the DBT assessment (see Appendix C) before and after the DBT Skills teacher training sessions.

Hypothesis regarding research question 2a-c. It was predicted teachers would report a lack of knowledge, confidence, and capacity to handle the challenges commonly experienced by trauma exposed students. It was further predicted teachers participating in the DBT skills training sessions would experience the greatest increase in their knowledge, confidence, and capacity to recognize student behaviors related to trauma exposure, respond appropriately to a student disclosure of trauma, and implement strategies associated with trauma-sensitive teaching practices when compared to teachers who attended the trauma-sensitive schools workshops.

Research Question 3. Research question 3 examined the impact of participating in a DBT skills group on students' (a) negative school behaviors, such as cutting class, not completing assignments, using inappropriate language, or acts of defiance; (b) academic performance; and (c) measures of coping and resiliency.

Research subquestion 3a. To determine the effect of participating in a DBT skills group on school performance a series of analyses were completed. A series of Wilcoxon signed-rank test were conducted with the number of disciplinary referrals received in each of the following areas: cutting class, inappropriate language, and defiance before and after participating in the student group as the dependent variables. The number of referrals obtained prior to participation in DBT skills groups (September 2016 through January 2017) was compared with the number of referrals students received during the

intervention (February through March 2017) and following the completion of the DBT skills groups (April and May 2017).

Research subquestion 3b. To determine the effect of participating in a DBT skills group on academic performance, the percentage of assignments completed before and after participating in a DBT skills group were analyzed by student participant. A repeated-measures ANOVA analysis was calculated comparing the percentage of assignments completed prior to the intervention with the percentage of assignments completed during and after the completion of the DBT skills group.

Research subquestion 3c. A number of analyses were conducted to determine the effect of participating in a DBT skills group on students' ability to increase their use of effective coping skills and build resiliency. To determine the effect of participation in a DBT skills group on students' ability to use effective coping skills frequency data was analyzed based on the number of yes responses reported by students regarding their use of effective and ineffective coping skills prior to and following the DBT skills group sessions.

To determine the effect of participating in the DBT skills groups on student resiliency, a series of one-way repeated-measures ANOVA were conducted to compare results of the Resiliency Scales for Children and Adolescents rating scale completed prior to participation in the DBT skills group with those reported by students after they completed the intervention.

To determine the effect of participating in DBT skill group sessions on students' ability to apply DBT strategies, a series of one-way repeated-measures ANOVA were conducted. Students used Diary Cards (see Appendix F) to record the frequency and

effectiveness of specific DBT skills on a scale of 0 through 4. Items were coded as 0 (*Not thought about or used*), 1 (*Thought about, did not want to use*), 2 (*Tried, but could not use*), 3 (*Tried, but did not help*) and 4 (*Tried and helped*). Three subscales were averaged to obtain the dependent variable Mindfulness: (1) Balancing 3 minds; (2) What Skills: Observe, Describe, and Participate; (3) How Skills: Nonjudgmental, One-Mind, and Effectively and were recorded for 6 weeks. Responses for the dependent variable Tolerating Distress was averaged cross three subscales (ACCEPTS, Pros & Cons, and Radical Acceptance) and recorded for 5 weeks. Responses for the dependent variable Emotional Regulation was averaged cross three subscales (Check the Facts, Accumulate Positives, and Ride the WAVE) and recorded for 4 weeks. Responses for the dependent variable Interpersonal Effectiveness was averaged cross three subscales (DEAR MAN, GIVE, and Evaluating Options) and recorded for 3 weeks.

Hypothesis regarding research question 3a-c. It was hypothesized students participating in the DBT Skills groups would (a) engage in fewer incidences of negative school behaviors; (b) demonstrate improved academic functioning; and (c) display the capacity to more effectively regulate emotions, tolerate distress, manage interpersonal relationships, remain attentive, and engage in more effective coping strategies as measured by school data, weekly diary cards, results of the preintervention/postintervention Dialectical Behavior Therapy Ways of Coping Checklist-Modified (DBT-WCCLM) and pre/post results of the Resiliency Scales for Children and Adolescents.

Summary.

Qualitative data was obtained from teacher responses to the Individual Interviews conducted with all teachers involved in the DBT Skills training and four of the teachers who had attended the Trauma-Sensitive Schools Workshops. Examination of the qualitative data was derived from the six-phase thematic analysis method developed by Braun and Clarke (2006). For each quantitative analysis, the appropriate parametric test was chosen to analyze the data. When choosing the appropriate test, the scale of measurement for each variable, the number of factors of each variable, and the design of the test (within or between subjects) were all considered. For cases in which the measures were non-normally distributed, the equivalent non-parametric test was performed instead. Normality of each measure was assessed visually by examining histograms and using the SPSS explore function. Each statistical test was conducted in SPSS, and results were considered significant at p values of $\leq .05$. Tables 5 through 7 provide a summary of the variables, measures, and statistical tests used for each research question.

Table 5

Summary of Quantitative Data Analysis for Perceptions and Experiences of Teachers Who Receive Training in DBT Skills and/or Trauma-Sensitive Schools

Subquestion	Independent Variables	Dependent Variables	Measures	Statistical Test
1a: Perceptions and experiences of teachers regarding adolescent mental health	Type of trainings attended by teachers: DBT skills, trauma-sensitive schools, no training	Teacher perceptions concerning their responsibility and ability to address adolescent mental health	Survey Questions 11, 12, 13, and 14	Chi-square
		Teacher experiences concerning resources to address student mental health at their institution	Survey Question 15	One-way ANOVA
1b: Perceptions and experiences concerning behavioral challenges	Type of trainings attended by teachers: DBT skills, trauma-	Topic and delivery method of teacher trainings concerning student behavioral challenges	Survey Question 10	Kruskal-Wallis H test

Subquestion	Independent Variables	Dependent Variables	Measures	Statistical Test
	sensitive schools, no training			
		Teacher ability to identify students with trauma histories	Survey Question 17	One-way ANOVA
		Teacher experiences concerning barriers to addressing student behavioral challenges	Survey Question 18	Kruskal-Wallis H test
		Teacher experiences concerning changes in the number of student disruptive behaviors over time	Survey Question 7	Frequency
		Teacher experiences concerning frequency of	Survey Question 9	Frequency

Subquestion	Independent Variables	Dependent Variables	Measures	Statistical Test
		student disruptive behaviors per day		
1c: Perceptions/experiences of teachers regarding the cause of poor academic performance	Type of trainings attended by teachers: DBT skills, trauma-sensitive schools, no training	Teacher perceptions concerning the potential causes of disruptive behavior and/or poor academic performance	Survey Question 8a-8u	Kruskal-Wallis H test

Table 6

Summary of Quantitative Data Analysis for the Impact of Training on Teachers

Subquestion	Independent Variables	Dependent Variables	Measures	Statistical Test
2a: Teacher ability to recognize when a student has been exposed to trauma	Type of trainings attended by teachers: DBT skills, trauma-sensitive schools, no training	Teacher ability to recognize possible manifestations of trauma and identify need for additional supports	Vignettes Question 2a-2e	Independent *t*-test
2b: Teacher ability to recognize manifestations of trauma when a student has been exposed to trauma	Type of trainings attended by teachers: DBT skills, trauma-sensitive schools, no training	Teacher ability to recognize manifestations of trauma	Vignettes Question 1a-1o	Independent *t*-test

Subquestion	Independent Variables	Dependent Variables	Measures	Statistical Test
2c: Teacher ability to identify and implement strategies to support students exposed to trauma	None	Teacher training and performance on DBT Principles and Skills Assessment	DBT Principles and Skills Pre/Post Test	Wilcoxon signed-rank test

Table 7

Summary of Quantitative Data Analysis for the Impact of Training on Students

Subquestion	Independent Variables	Dependent Variables	Measures	Statistical Test
3a: Impact of participating in DBT skills group on negative school behaviors	None	Student behavior (pre/post) based on number of disciplinary referrals received (pre/post)	School data	Related samples Wilcoxon signed rank test
3b: Impact of participating in DBT skills group on academic performance	Student	Net difference between assignment completion percentage pre/post participation per class period	School data	One-way repeated measures ANOVA
3c: Impact of participating in DBT skills groups on coping and resiliency	Student participation in DBT skills group	Student self-report on types of coping skills used pre/post participating in DBT skills group	Coping Skills Checklist	Frequency One-way repeated

Subquestion	Independent Variables	Dependent Variables	Measures	Statistical Test
Students' ability to apply DBT strategies		Student self-report on resiliency pre/post participating in DBT skills group	Resiliency Scales for Children and Adolescents	measures ANOVA
		Student self-report on the use of DBT strategies	Diary cards	One-way repeated measures ANOVA

Chapter 4: Results

Overview

The purpose of this study was to extend previous research by examining the impact on school functioning of students with exposure to trauma who demonstrate emotional dysregulation, difficulty coping with frustration, and/or poor interpersonal relationships when teachers and students are provided with training in DBT principles and strategies associated with Trauma-sensitive schools. Data were collected during the 2016-2017 school year.

Qualitative data was obtained from semistructured individual interviews (n = 16) and teacher responses to vignettes (n = 19) with general and special education teachers from a public high school located in a regional school district. The individual interviews were recorded, transcribed and analyzed through thematic analysis. Thematic analysis of the interview and vignette responses involved searching for patterns in the data to identify themes. The themes identified in this study are presented, along with narratives and quotes from the data.

The quantitative section of this chapter contains the analysis used to address the three research questions. Quantitative self-report data were collected from 48 secondary general and special education teachers via completion of an online survey (see Appendix A). Additionally, self-reports, attendance, discipline referrals, and class assignment completion data were collected from 20 high school students with an ACE score of at least 4, before, during and after participating in DBT skills group sessions. Responses to the teacher survey and vignettes (see Appendix B) were used to address research question one. Teacher responses to the vignettes, individual interviews (see Appendix G) regarding student behavior, and a DBT skills pre- and posttraining assessment (see

Appendix C) were used to address research question 2. The third research question was addressed using the sample of students. The measures used included a Pre/Post Coping Skills Checklist (see Appendix E), Pre/Post Resiliency Scales for Children and Adolescents rating scale (Prince-Embury, 2011), and self-report diary cards (see Appendix F). Additionally, school data consisting of student attendance, discipline referrals, and classroom assignment completions were analyzed to answer research question three.

Study sample.

Data was collected from high school students in grades 9 through 12 and secondary general and special education teachers from a public high school. The high school is part of a larger school district located in the mid-Atlantic region of the United States. Although the high school is in a middle-class suburban neighborhood, more than one half of the school population is bused to the school from inner city urban locations. School demographics for the 2016-2017 school year indicate 49.7% of the 740 students are African American, 36.9% are Caucasian, 7.0% Hispanic, 3.4% Asian, 2.6% multiracial, 0.3% American Indian, and 0.1% Hawaiian. Approximately 31% of the student body identified as low income, with 17% receiving special education services. Per state and district standards, fewer than 50% of students enrolled in the 11th grade are proficient in reading, fewer than 20% are proficient in mathematics, and fewer than 40% proficient in science. Approximately 30% of the students in grades 9 through 12 have failed at least one core academic subject (i.e., math, reading, science, social studies) each year since 2010.

The students bused from the inner city to the school, approximately one half of the student population, live in areas known to have higher rates of crime and poverty. The students reside in neighborhoods where the property and violent crime rate has exceeded the state and national average every year since 2000 (United States Department of Justice [DOJ], 2015). The school receives Title I funds to help ensure that all students meet state standards. Title I, Part A of the Elementary and Secondary Education Act (1965) provides financial assistance to schools when student enrollment from low-income families reaches or exceeds 40% of the student body. In addition, the school provides free breakfasts, snacks, and lunches to all students, another indication the majority of the student population are living in poverty. Demographic information regarding the student sample is provided in Table 8. Table 9 provides the teacher demographic information.

Table 8

Student Demographic Data

	Frequency	Percent
Age		
15	3	15.0
16	9	45.0
17	7	35.0
18	1	5.0
Gender		
Male	10	50.0
Female	10	50.0
Race		
African American	13	65.0
Hispanic	1	5.0
Caucasian	6	30.0
Grade		
9	6	30.0
10	9	45.0
11	3	15.0
12	3	15.0
Retention Status		
On grade level	9	45.0
Repeated one grade	6	30.0

	Frequency	Percent
Repeated two or more grades	5	25.0
Education Program		
General education	5	25.0
504 Plan	3	15.0
Special education	12	60.0
Number of Reported ACES		
0-3	0	0.0
4	2	10.0
5	3	15.0
6	1	5.0
7	6	30.0
8	2	10.0
9	4	20.0
10	2	10.0

Table 9

Teacher Demographic Data

	Frequency	Percent
Age	3	6.2
21-30	16	33.3
31-40	15	31.2
41-50	14	29.1
51+		
Gender		
Male	18	37.5
Female	30	62.5
Race		
African American	7	14.5
Hispanic	5	10.4
Caucasian	34	70.8
Coptic	1	2.0
American Indian	1	2.0
Years Teaching Experience		
0-5	7	14.6
6-10	7	4.6
11-15	12	25.0
16+	22	45.8

	Frequency	Percent
Professional Certification		
General Education	29	60.4
Special Education	6	12.5
Dual Certification	13	27.1
Teacher Education		
Bachelors	9	18.8
Masters	18	37.5
Masters +15	7	14.6
Masters +30	13	27.1
Doctorate	1	2.1
Level of Participation		
Survey	29	60.4
Survey and trauma-sensitive schools workshops	7	14.6
Survey, trauma-sensitive schools workshops, and DBT sessions	12	25.0

Research question 1.

Research question 1 examined the effect of teacher trainings in Trauma-Sensitive Schools and/or Dialectical Behavior Therapy (DBT) on teacher perceptions and experiences regarding (a) adolescent mental health; (b) behavioral challenges; and (c) academic performance.

Research subquestion 1a. A chi-square test was calculated to determine the difference between the type of teacher training and perceptions concerning teacher responsibility towards understanding adolescent mental health. Participants were classified into three groups based on training: DBT skills (n = 12), trauma-sensitive schools (n = 7), and survey (n = 29). There was no significant difference between teachers who attended the trauma-sensitive schools workshop and DBT skills sessions, trauma-sensitive schools workshops, or participated in no training (i.e., only completed the online survey) and teacher perceptions of their role in supporting students' mental health, $\chi^2(2) = 2.92$, $p > .05$. Overall, 71% of the teachers completing the survey agreed that they have a responsibility to address the mental health concerns of students. All teachers completing the study believed it is important to understand the mental health issues of adolescents, whereas only 63% reported knowing who to refer the student to when they believed the student has need for mental health support. The majority of teachers (94%) believed students needed greater access to mental health services for students.

A one-way ANOVA was conducted to determine the difference between teachers who attended the DBT skills sessions, trauma-sensitive schools workshops, or only completed the online survey and their knowledge of school-based resources that are

currently available at the school to support students and families (see Figure 1). Participants were classified into three groups based on training: DBT skills, rauma-sensitive schools workshops, and survey. There was no significant difference in teacher ability to identify resources and type of teacher training, $F(2, 45) = 0.87$, $p > .05$.

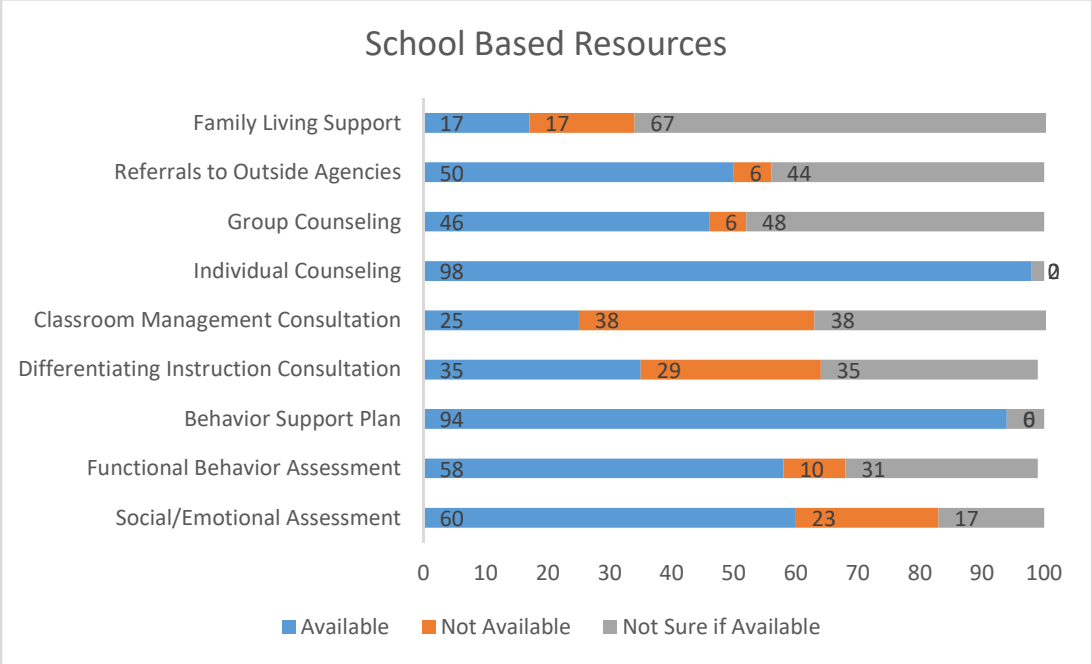

Figure 1. Teacher awareness of school-based resources

Research subquestion 1b. A Kruskal-Wallis H test, or the nonparametric version of the one-way ANOVA, was calculated to determine whether the type of training teachers in each group had previously experienced influenced the training they chose to participate in on the topic of trauma (i.e., DBT skills, trauma-sensitive schools, or completing only the survey). There was no significant difference in previous teacher training experiences between teachers in each group, $H(2) = 1.43$, $p > .05$.

A one-way ANOVA was calculated to determine teacher's ability to identify students with trauma histories. Participants were classified into three groups based on training: DBT skills ($n = 12$), trauma-sensitive schools ($n = 7$), and survey ($n = 29$).

There was no significant difference in teacher ability to identify students with trauma histories and the type of training attended by teachers, $F(2, 45) = 2.47$, $p > .05$. On average, teachers completing the survey believed 56% of the students they currently taught had been exposed to trauma.

A Kruskal-Wallis H test was calculated to determine whether teachers from each group (DBT skills, trauma-sensitive schools, or completion of the survey) differed with regards to the barriers they encountered when working with students who display behavioral challenges. There was no significant difference in teachers' identification of barriers associated with supporting students' behavioral needs, $H(2) = 2.32$, $p > .05$.

Frequency data was used to determine whether teachers perceived a change in the number of disruptive student behaviors occurring in their classroom since they had begun teaching. Seventy-five percent of the teachers responding to the survey reported an increase in the number of disruptive behaviors they experienced in their classroom on a daily basis, 8.3% reported a decrease in disruptive student behavior, and 16.7% indicated there had been no change in student behavior.

Frequency data was considered to identify the number of times per day teachers reported experiencing incidents of disruptive behavior in their classrooms. Several teachers reported having 0-5 episodes of disruptive behavior per day (44.7%), a significant percentage of teachers (38.3%) indicated 6 - 10 disruptive behaviors occur in their classroom per day, and 17.2% of the teachers reported experiencing challenging student behavior more than 10 times per day.

Research subquestion 1c. A Kruskal-Wallis H test was calculated to determine whether teachers from each group (DBT skills, trauma-sensitive schools, or survey)

differed concerning the potential causes of disruptive behavior. There was no significant difference in teacher's perceptions regarding potential reasons for behavioral challenges and/or poor academic performance, $H(2) = 1.34$, $p > .05$. Figure 2 depicts the frequency with which teachers believed the situation caused disruptive behaviors.

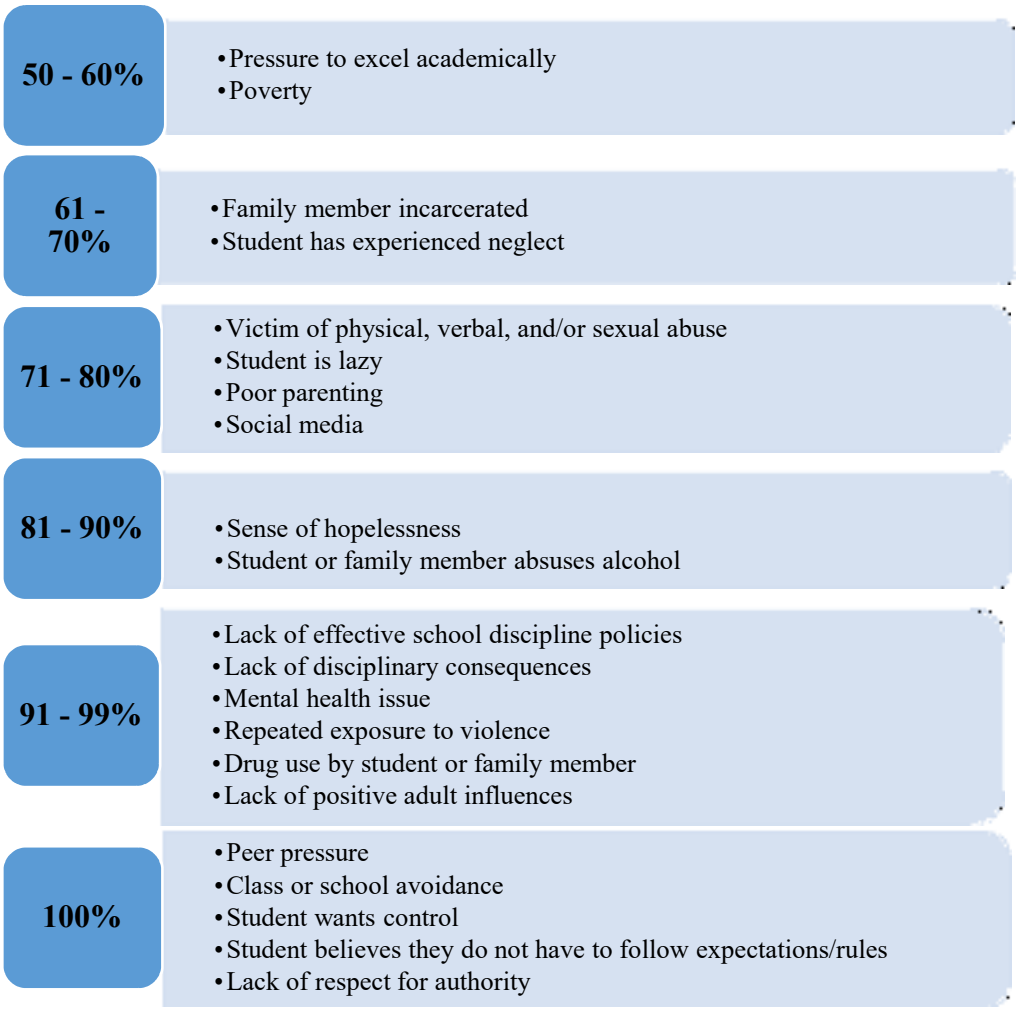

Figure 2. Teacher perceptions regarding causes of disruptive behaviors

Research Question 2.

Research question two examines the impact of training on the cause and prevalence of trauma and trauma-sensitive schools on secondary teachers with regard to their capacity to (a) recognize when a student has been exposed to trauma; (b) know how

to respond in the moment if a student discloses he or she has experienced trauma; (c) identify and implement strategies to support students exposed to trauma.

Research subquestion 2a. Teacher ability to recognize when a student has been exposed to trauma was analyzed using quantitative and qualitative data. An independent *t*-test was calculated to determine whether teacher training impacts teacher's ability to recognize the need for additional support when there is a possible manifestation of trauma. Participants were classified into two groups based on training: DBT skills sessions ($n = 12$) or trauma-sensitive schools workshop ($n = 7$). On average, there was no significant difference between teachers completing the DBT skills sessions ($M = 1.25$, $SE = .45$) and those who attended the trauma-sensitive schools workshops ($M = 1.43$, $SE = .53$). This difference, -.18, 95% CI [-.66, .31], was not significant $t(17) = .215$, $p > 05$.

Analysis of the qualitative data followed the six-phase protocol developed by Braun and Clarke (2006). To begin, the first phase of data analysis involved familiarization with the data. The researcher repeatedly read the transcripts while making notes of emerging patterns in the data without making interpretations. The purpose of the first phase was to be acquainted with the data and develop an overview of common patterns in the data. After repeated immersion in the data, the researcher began the second phase of analysis, initial code generation. In the second phase, key words/phrases were identified through closely reading the transcripts. The key words/phrases were determined according to their relevance in answering the research questions. The data were initially coded using descriptive words or phrases. For instance, in the statement, "Now my brain breaks are more focused on mindfulness and information I learned in your workshops," the researcher identified the key word as *mindfulness*. The word was

selected as a key word due to being identified as one of the components of DBT (Linehan, 1993a; 1993b; 2015a; 2015b). Furthermore, close reading of the statement helped the researcher identify mindfulness as a strategy learned from the workshops.

Once all the data were initially coded, the researcher proceeded to the third phase of analysis, theme identification. In the third phase, the coded data were reviewed to identify recurring patterns. Going back to the sample code *mindfulness,* a recurring pattern appeared that teachers who have experienced the workshops developed an increased mindfulness through being more sensitive towards their students. Therefore, a theme of *increased mindfulness as an impact of training* was developed. Themes identified in the third phase were reviewed in the fourth phase of data analysis, themes review. The identified themes were refined in this phase as the researcher went back and forth from the raw data to the themes to check the themes' relevance in answering the research questions, and whether there was sufficient evidence, based on the number of times a theme occurred, to support the theme as a finding.

After refining the themes in theme review, the themes were finalized in the fifth phase of data analysis, the naming of themes. The finalized themes consisted of seven overarching themes. The finalized themes were: initial interest in training was due to convenience, learning about the prevalence of trauma, perceived long-term effects of trauma, identifying trauma is not diagnosing, overall knowledge of trauma and dealing with trauma, increased mindfulness as an impact of training, and continuous strategies to help students. The corresponding number of occurrences is found in Table 10. After finalizing the themes, the sixth phase of data analysis involved the development of a final

report. The final report provides descriptions of themes as well as excerpts from the data to support the findings.

Table 10

Overview of Themes

Theme	Frequency
Initial interest in training was due to convenience	15
Learning about the prevalence of trauma	12
Perceived long-term effects of trauma	8
Identifying trauma is not diagnosing	15
Overall knowledge of trauma and dealing with trauma	25
Increased mindfulness as an impact of training	8
Continuous strategies to help students	31

Initial interest in training was due to convenience. With regard to the initial perception of the teachers on the trauma-sensitive schools workshops and DBT skills training, the majority of the teachers revealed that they joined the training due to convenience. Two participants believed that the timing of the trainings was convenient for their schedules. Participant 12, a teacher who completed the DBT training, stated that having the workshops scheduled after school was convenient for her. Participant 15, a teacher who completed the trauma workshops, believed similarly. Participant 15 added that the workshops were also offered in exchange for trade-in hours. Trade-in hours were

required by the school district to make up for hours lost when the school closed for snow days. Seven participants perceived that attending the trainings was convenient in accomplishing trade in hours. However, convenience was only considered to be an initial reason for the majority of the teachers' interest in training. Several teachers, especially the ones who completed the DBT training, expressed that they continued to attend the trainings due to interest in learning about trauma. In addition, six participants mentioned that they were interested in the training due to having the school psychologist (the researcher) as the facilitator. Some of the participants felt comfortable enough with the researcher for them to joke and laugh during the interview, such as in the excerpt in the response of Participant 2:

> *I took the first training [trauma workshops] because you [the school psychologist] were leading the training (laughs) and I needed the trade-in hours. I came to the DBT sessions because I learned so much from the first part and wanted to know more plus I like to give you [the school psychologist] a hard time (laughs).*

Learning about the prevalence of trauma. In relation to the first theme, the second theme was developed from the teachers' perception of taking interest in the workshops/training in terms of the content of the training. The majority of the participants revealed that the workshops/training helped them realize the prevalence of trauma among the student population. Participant 7 claimed that trauma was not talked about much among high school teachers, despite the topic's importance and prevalence. Participant 16 stated:

I thought the information was excellent and really helpful all teachers should have to attend. I had not known how prevalent trauma was, don't you [the school psychologist] think the majority of our students have had some kind of trauma in their lives? It just seems like everyone has something.

Furthermore, Participant 1 mentioned that her interest in the workshops/training stemmed from the belief that the local area consisted of dangerous neighborhoods where many of the students in the study site lived. Participants 7 and 8 came to realize after the training that several students experienced trauma, which may explain some behavioral problems. Participant 8 claimed "that so many students in our school have a lot of trauma might be why they are acting out."

In addition, learning about the prevalence of trauma among the student population also helped three of the teachers realize their own trauma. Participant 14 shared, "I learned that I personally have a lot of trauma in my life, which is scary. I had no idea about the ACEs or the impact of trauma before taking the workshops." Participants 7 and 10 believed similarly. Participant 10 also expressed the desire to receive help dealing with her own trauma, to which the researcher provided referrals to consult with local psychology practitioners.

Nonetheless, one teacher, Participant 11, expressed that the teachers needed to stop making excuses for the students' behavior despite possibly experiencing trauma. The participant believed that she was not qualified as a teacher to diagnose and provide therapy for the students. Furthermore, the participants stated that the parents of the students should be held accountable for their children's behavior regardless of why the

children misbehave. The participant shared a recent experience with a student who had threatened the participants' children. Participant 11 said:

> *The student was suspended for 5 days but was placed back in my classroom [rather than reassigned to another room] and I have to still make sure they pass my class? I don't see how this [mental health] is something I have to teach. I'm not qualified to diagnose or provide therapy to a student and they all seem to have something going on, it's [teaching profession] not like it used to be even a few years ago.*

Regardless, the majority of participants claimed that the workshops/training helped them become made aware of the prevalence of trauma not just among the students, but also among themselves, and the society. Participant 12 shared, "I had no idea trauma was so prevalent and had such a lasting impact on someone's life."

Perceived long-term effects of trauma. The majority of participants shared that they have also taken interest in learning about the long-term effects of trauma. Eight of the participants shared that the workshops/training taught them that the experience of trauma had long-term effects in the students. Five participants mentioned learning about the Adverse Childhood Experiences (ACE) Study, and how the study contributed to their understanding of the students' functioning, including mental health, behavioral challenges, and academic performance in relation to emotional, physical, or sexual trauma and household dysfunctions. Participant 4 articulated that the experience of trauma changed a person. Participant 4 shared, "The most important thing I learned is that we probably all have had some experience with trauma and it changes us. I did not realize how much a traumatic experience can affect someone's life." Participant 5

believed similarly and revealed that ACEs led her to believe that trauma had an impact on students' behaviors.

Identifying trauma is not diagnosing. Seven teachers stated that they were confident in identifying students with trauma; however, eight participants believed that teachers should not or could not diagnose students. The teachers were asked to rate their confidence in a scale of 0-10 in identifying students with trauma; the majority of the teachers rated 6 and below. Participant 14 rated 3, providing no explanations for her rating, whereas Participant 16 rated 5, stating, "I don't know if I have enough information to identify someone with trauma, and I can't ask can I?" Furthermore, Participant 10 rated her confidence a 1 or a 2 and explained that she did not want to assume that trauma was the reason for misbehavior. Participant 10 explained:

> *I have no way of knowing, unless I ask them, if a student has trauma. Are you saying that I should assume all the bad behavior and failing grades are because they [the student] has trauma in their lives? We all have something going on in our lives don't we? Do I get to skip work because I have trauma? No. So why do we coddle these students? I guess I would say 1-2.*

However, some of the participants who gave high ratings, such as 7 or 8, also shared being uncertain in identifying whether the misbehaving student has trauma. Participant 11 claimed:

> *Probably 7 or 8. I'm not sure I am too confident in knowing if the student's behavior is due to trauma or something else. Some of the students I have seem to be okay one day then are awful the next? Is that because of trauma or they just feel like acting out? I don't know so I guess I would say 7 or 8.*

Participants perceived that the most certain way for a teacher to identify whether a student has trauma was through directly asking the students; however, the teachers generally believed that asking the students may not actually help the students. Therefore, the majority of teachers believed that identifying trauma among the students was not similar to diagnosing and helping the students and that the responsibility of diagnosing and helping the students lay on the school psychologist. Participant 1 expressed, "6. Just because I do not think a teacher should identify a student with trauma, I'll leave that up to you! [the school psychologist conducting the interview]." Participant 6 gave a rating of an 8 or a 9; nonetheless, the participant believed that diagnosis was the responsibility of the school psychologist. Participant 6 emphasized:

> *I'd say 8 or 9 but I would not diagnosis a student, that is your [the school psychologist] job! I do think there are many, many students who have some form of trauma in their lives and we should be more mindful of what they are experiencing.*

Overall knowledge of trauma and dealing with trauma. When asked whether the teachers experienced changes in dealing with the students after undergoing the workshops/training, all the participants claimed that they had generally increased their overall knowledge of trauma and dealing with trauma. However, three participants claimed that there were none or there were little changes. Participants 1, 4, and 5 believed that there were no changes or little changes due to their ability to build relationships with the students and their families. Participant 5 explained:

No. Like I said, I'm pretty good at building relationships with students, my classroom [this is the art teacher] is a place that is safe and a lot of students, even ones I do not have in class, will seek me out as a place to relax and chill.

Nonetheless, the three participants expressed the desire to learn more about trauma, and that the workshops/training helped them learn general information about students with trauma and strategies in dealing with trauma. Participant 1 perceived, "After attending the trauma trainings I felt like I needed more information about the best way to work with students who have experienced trauma." Furthermore, Participant 1 added, "The DBT skills training gave me specific, concrete actions to take with students when I suspect they have experienced a traumatic event. But I also think those strategies are just good teaching practices."

Some teachers also believed that the workshops/training provided them with a general knowledge of trauma and were able to provide more specific examples of what they had learned. Participant 9 claimed to have a better understanding of trauma and that she now understood how some topics discussed in class may be a trigger for some students to misbehave or leave the classroom. Participant 12 specifically stated, "In the DBT classes I learned about using strategies with CBT, emotional regulation, mindfulness, distress tolerance, and interpersonal relationships with students." Participant 2 claimed that after gaining an overall knowledge of trauma she has been attempting to be more compassionate towards her students. In addition, Participant 2 perceived that being compassionate was not only applicable to students with trauma, but also a good teaching strategy.

Increased mindfulness as an impact of training. In relation to the previous theme, the majority of teachers believed that the workshops/training increased their mindfulness towards the students. Participant 8 claimed that she has not yet figured out specific strategies to deal with students with trauma, but she has learned to be more sensitive towards her students. Participant 9 also believed that mindfulness encompassed sensitivity towards the students. Participant 9 articulated:

> *I am definitely more sensitive to how I approach a student who I think has trauma. Before the workshops and classes I knew when a student was upset or something was going on in their lives and would call you [the school psychologist] but now I know that there might be some trauma in their lives and I think I am more sensitive to how I approach the student.*

Participant 13 expressed being more considerate towards her students as an application of mindfulness. Participant 7 revealed using mindfulness exercises in class. The participant shared that she had implemented taking short "brain breaks" in her 90-minute class, but after attending the training, the breaks consisted of mindfulness exercises. Participant 7 explained that:

> *I think the thing that stands out to me is that we can help students in our classroom by making some simple changes, like spending time talking about how to handle frustration and teaching students how to be mindful. I really loved the mindfulness exercises and am trying to use them with my students.*

Continuous strategies to help students. After the teachers' experiences with the workshops and/or the DBT training, the teachers generally believed in utilizing some strategies to help students with trauma. Most of the participants expressed the desire to

help all students. Some teachers expressed that referrals to the school psychologist or counselor may be more helpful to students who misbehave compared to giving the students detention or sending them to time out. Participant 14 stated that she was more willing to send misbehaving students to the school psychologist, the wellness center (a school-based mental and medical health support staffed by a local hospital), or school counselors rather than immediately punish the students. However, Participant 7 was reluctant to send the students to the school counselors. The counselors at the study site are expected to work with students to develop schedules, complete college applications, and administer standardized tests rather than provide emotional support. Participant 7 claimed confidence in identifying when students needed help and the first personnel she would contact was the school psychologist followed by the wellness center.

In addition, the teachers felt that the Trauma-Sensitive Schools Workshops and/or DBT Sessions were insufficient for them to fully help students with trauma with the majority of teachers desired to receive more training. Participant 4 shared, “I enjoyed the trainings and would like to have more training in this area, maybe after I have some practice in using the different strategies we talked about-it would be good to have another training after that.” Furthermore, some teachers claimed that all the teachers, staff, and administrators should be required to attend trauma training to benefit the students. Participant 9 claimed, “I really liked these workshops, you [the school psychologist] need to do more of them! I think our entire faculty and admin should be required to attend. I'm disappointed that our admin did not attend any of these.” Participant 7 stated she hoped for more engagement with the school psychologist and invited the psychologist to observe her class.

Some of the teachers believed that hiring professionals, such as licensed counselors or psychologists, may be more beneficial for the students. Participants 3, 11, and 12 believed that their jobs as teachers did not involve providing therapy and that teachers may not have sufficient skills to help students with trauma. Participant 12 exclaimed:

> *I thought the information in both the workshops and DBT classes was excellent and teachers need this information, but we are teachers, not therapists. I don't want to be a therapist any more than you [the school psychologist] wants to be a teacher, right? So, I hope we are not being expected to stop teaching and do therapy during class time.*

Research subquestion 2b. An independent *t*-test was calculated to determine whether teacher training impacts teacher's ability to recognize manifestations of trauma when a student has been exposed to trauma. Participants were classified into two groups based on training: DBT skills sessions ($n = 12$) or trauma-sensitive schools workshop ($n = 7$). On average, there was no significant difference between teachers completing the DBT skills sessions ($M = 8.17$, $SE = 3.43$) and those who attended the trauma-sensitive schools workshops ($M = 6.71$, $SE = 3.64$). This difference, 1.46, was not significant $t(17) = -0.857$, $p > .05$.

Research subquestion 2c. A Wilcoxon signed-rank test was calculated with teacher training (before DBT skills training, after DBT skills training) compared to teacher knowledge of strategies designed to support students with trauma histories. DBT test performance was found to improve significantly after the DBT skills training compared to before the DBT skills training, $T = 78$, $p < .05$.

Research question 3.

Research question three examines the impact of participating in a DBT skills group on students' (a) negative school behaviors, such as cutting class, not completing assignments, using inappropriate language, or acts of defiance, (b) academic performance, and (c) measures of coping and resiliency.

Research subquestion 3a. Research subquestion 3a addressed the impact participating in a DBT skills group had on school attendance and student engagement in negative school behaviors (e.g., cutting class, defiance, and inappropriate language). Discipline referral data was compared using the total number of referrals the 20 students received prior to participation in DBT skills groups (September 2016 through January 2017) with the number of referrals the students received during (February through March 2017) and after completion of the DBT skills groups (April and May 2017). The following series of Wilcoxon signed-rank tests were conducted to determine the effect of participating in DBT skills groups on school performance:

The total number of disciplinary referrals the 20 students participating in the DBT skills groups received for using inappropriate language were significantly higher during and after the intervention (193 referrals) than prior to the intervention (149 referrals), $T = 3{,}457.0$, $p < .01$.

The number of disciplinary referrals the 20 students participating in the DBT skills groups received for defiance were found to be significantly higher during and after the intervention (277 referrals) than prior to the intervention (169 referrals), $T = 5, 852.5$, $p < .01$.

There were no significant differences between the number of disciplinary referrals the 20 student participants received for cutting class prior to the intervention (88 referrals) than the number of referrals for cutting class during and after the intervention (78 referrals), $T = 2{,}584.5$, $p = .179$.

Research subquestion 3b. The impact of participating in the DBT skills groups on students' academic performance was measured using a repeated measures ANOVA. The percentage of assignments completed prior to the intervention was compared to the percentage of assignments completed during and after the DBT skills group. The 20 students completed an average of 58% of their assignments prior to the intervention, 63% during, and 68% of the student's assignments were completed after the DBT skills group. Mauchly's test indicated that the assumption of sphericity had been violated, $X^2(2) = 55.78$, $p < 0.1$, therefore degrees of freedom were corrected using Huynh-Feldt estimates of sphericity ($\varepsilon = .78$). The results indicate that the percentage of assignments completed was significantly affected by participation in DBT skills group, $F(1.55, 247.04) = 38.44$, $p = .000$.

Research subquestion 3c. Research subquestion 3c addressed the impact of DBT skills group participation on students' coping and resiliency capabilities. On average, students reported using 28% more effective coping skills after participating in the DBT skills group sessions. Students reported a 57% decrease in the number of ineffective coping skills used upon completion of the DBT skills groups.

A series of one-way repeated measures ANOVA were conducted to determine the effect of participating in DBT Skills Groups on measures of resiliency (see Appendix H).

Table 11 depicts the outcome on each aspect of resiliency measured. The following results are reported by individual indices:

Optimism: Mauchly's test indicated that the assumption of sphericity had been violated, $X^2(2) = 79.23$, $p < 0.1$, therefore Greenhouse-Geisser corrected tests are reported ($\varepsilon = .50$). The results indicate that students' level of optimism was not significantly affected by participation in DBT skills group, $F(1.01, 19.12) = 3.71$, $p = .069$.

Self-Efficacy: Mauchly's test indicated that the assumption of sphericity had been violated, $X^2(2) = 75.01$, $p < 0.1$, therefore Greenhouse-Geisser corrected tests are reported ($\varepsilon = .50$). The results indicate that students' level of self-efficacy was not significantly affected by participation in DBT skills group, $F(1.01, 19.15) = 4.34$, $p = .051$.

Adaptability: Mauchly's test indicated that the assumption of sphericity had been violated, $X^2(2) = 62.57$ $p < 0.1$, therefore Greenhouse-Geisser corrected tests are reported ($\varepsilon = .51$). The results indicate that students' level of Adaptability was significantly improved by participation in DBT skills group, $F(1.02, 19.33) = 4.34$, $p = .048$.

Sense of Mastery: Mauchly's test indicated that the assumption of sphericity had been violated, $X^2(2) = 74.94$ $p < 0.1$, therefore Greenhouse-Geisser corrected tests are reported ($\varepsilon = .50$). The results indicate that students' sense of mastery was significantly improved by participation in DBT skills group, $F(1.01, 19.15) = 190.06$, $p = .000$.

Trust: Mauchly's test indicated that the assumption of sphericity had been violated, $X^2(2) = 57.86$, $p < 0.1$, therefore Greenhouse-Geisser corrected tests are reported ($\varepsilon = .51$). The results indicate that students' level of trust was significantly improved by participation in DBT skills group, $F(1.02, 19.34) = 5.26$, $p = .033$.

Support: Mauchly's test indicated that the assumption of sphericity had been violated, $X^2(2) = 51.42$, $p < 0.1$, therefore Greenhouse-Geisser corrected tests are reported ($\varepsilon = .52$). The results indicate that students' level of support was not significantly affected by participation in DBT skills group, $F(1.03, 19.56) = 3.93$, $p = .061$.

Comfort: Mauchly's test indicated that the assumption of sphericity had been violated, $X^2(2) = 65.71$, $p < 0.1$, therefore Greenhouse-Geisser corrected tests are reported ($\varepsilon = .51$). The results indicate that students' level of comfort was significantly improved by participation in DBT skills group, $F(1.01, 19.25) = 4.55$, $p = .045$.

Tolerance: Mauchly's test indicated that the assumption of sphericity had been violated, $X^2(2) = 51.99$, $p < 0.1$, therefore Greenhouse-Geisser corrected tests are reported ($\varepsilon = .51$). The results indicate that students' level of tolerance was significantly improved by participation in DBT skills group, $F(1.03, 19.54) = 6.07$, $p = .022$.

Sense of Relatedness: Mauchly's test indicated that the assumption of sphericity had been violated, $X^2(2) = 40.71$, $p < 0.1$, therefore Greenhouse-Geisser corrected tests are reported ($\varepsilon = .53$). The results indicate that students' sense of relatedness was significantly improved by participation in DBT skills group, $F(1.06, 20.04) = 179.49$, $p = .000$.

Sensitivity: Mauchly's test indicated that the assumption of sphericity had been violated, $X^2(2) = 69.74$, $p < 0.1$, therefore Greenhouse-Geisser corrected tests are reported ($\varepsilon = .51$). The results indicate that students' level of sensitivity was not significantly affected by participation in DBT skills group, $F(1.01, 19.12) = .84$, $p = .373$.

Recovery: Mauchly's test indicated that the assumption of sphericity had been violated, $X^2(2) = 51.35$, $p < 0.1$, therefore Greenhouse-Geisser corrected tests are reported

(ε = .52). The results indicate that students' level of recovery was not significantly affected by participation in DBT skills group, $F(1.03, 19.56) = 1.52$, $p = .233$.

Impairment: Mauchly's test indicated that the assumption of sphericity had been violated, $X^2(2) = 50.25$, $p < 0.1$, therefore Greenhouse-Geisser corrected tests are reported (ε = .52). The results indicate that students' level of impairment was significantly decreased by participation in DBT skills group, $F(1.03, 19.60) = 1.89$, $p = .185$.

Emotional Reactivity: Mauchly's test indicated that the assumption of sphericity had been violated, $X^2(2) = 44.46$, $p < 0.1$, therefore Greenhouse-Geisser corrected tests are reported (ε = .52). The results indicate that students' level of emotional reactivity was significantly decreased by participation in DBT skills group, $F(1.04, 19.84) = 367.45$, $p = .000$.

Overall Resource: Mauchly's test indicated that the assumption of sphericity had been violated, $X^2(2) = 24.12$, $p < 0.1$, therefore Greenhouse-Geisser corrected tests are reported (ε = .56). The results indicate that students' level of overall resource was significantly improved by participation in DBT skills group, $F(1.15, 21.86) = 159.14$, $p = .000$.

Overall Vulnerability: Mauchly's test indicated that the assumption of sphericity had not been violated, $X^2(2) = 4.18$, $p > .05$. The results indicate that students' level of overall vulnerability was significantly decreased by participation in DBT skills group, $F(2, 38) = 405.412$, $p = .000$.

Table 11

Outcome of DBT Skills Groups on Measures of Resiliency by Scale

Significant Increase in Resiliency Measures	Significant Decrease in Vulnerability Measures	No Significant Change Measured
Adaptability	Impairment	Optimism
Mastery	Emotional Reactivity	Self-Efficacy
Trust	Overall Vulnerability	Support
Comfort		Sensitivity
Tolerance		
Relatedness		
Recovery		
Overall Resource		

A series of one-way repeated measures ANOVA were conducted to determine the effect of participating in DBT skills groups on students' use of strategies taught during the group sessions. Mauchly's test indicated that the assumption of sphericity had been violated, $X^2(5) = 110.13$, $p < 0.1$, therefore Greenhouse-Geisser corrected tests are reported ($\varepsilon = .35$). The results indicate that students' use of strategies related to mindfulness significantly improved during their participation in the DBT skills group, $F(1.04, 19.82) = 37.98$, $p = .000$.

With regards to students use of strategies designed to improve their ability to tolerate distress the Mauchly's test indicated that the assumption of sphericity had been violated, $X^2(5) = 77.01$, $p < 0.1$, therefore Greenhouse-Geisser corrected tests are reported ($\varepsilon = .37$). The results indicate that students' use of strategies related to tolerating distress significantly improved during their participation in the DBT skills group, $F(1.01, 20.88) = 43.68$, $p = .000$.

Strategies related to regulating emotion was also found to significantly improve after students participated in the DBT skills group. The Mauchly's test indicated that the assumption of sphericity had been violated, $X^2(5) = 87.21$, $p < 0.1$, therefore Greenhouse-Geisser corrected tests are reported ($\varepsilon = .35$), $F(1.01, 19.72) = 32.35$, $p = .000$.

Mauchly's test indicated that the assumption of sphericity had been violated, $X^2(5) = 90.55$, $p < 0.1$, therefore Greenhouse-Geisser corrected tests are reported ($\varepsilon = .36$). The results indicate that students' use of strategies designed to improve their interpersonal effectiveness was significantly improved by participation in DBT skills group, $F(1.09, 20.62) = 33.02$, $p = .000$.

Summary and Conclusions

These results suggest student participation in DBT skills groups does not appear to decrease negative school behaviors when measured by the number of disciplinary referrals. Students completing DBT skills groups reported less maladaptive coping strategies and an increase in more effective coping skills. Measures of resiliency were found to increase, primarily in the areas associated with self-confidence and relatedness towards others. Teacher participation in the trauma-sensitive schools trainings and the DBT skills sessions was found to increase teacher awareness of exposure to trauma and

the possible manifestations in the school setting. Teacher knowledge of strategies to use in their classrooms to support students with trauma histories was also found to increase, particularly in the area of mindfulness.

Chapter 5: Discussion

Summary of the Findings

This study evaluated the impact on school functioning, coping skills, and various aspects of resiliency of students with multiple exposures to trauma. This study was unique in that both teachers and students were provided with the same training in specific DBT skills and strategies. Teachers were provided with additional training designed to develop their understanding of the various ways trauma can impact adolescent academic performance, behavior, and mental health. All teacher participants were currently teaching, or had taught, at least one class with at least one of the student participants. The mixed methods findings of this study provide a vivid lens with which to understand teachers' perspectives and experiences regarding the mental health, challenging behaviors, and poor academic performance of high school students with significant trauma histories (i.e., all student participants obtained ACE scores of 4 or more). Student and teachers' subjective descriptions substantiate the quantitative results. For example, elevated baseline quantitative measures of negative school behaviors (e.g., cutting classes, defiance towards adults, using inappropriate language, and poor school attendance), maladaptive coping skills, and reduced levels of resiliency indicated students came into the intervention experiencing overwhelming challenges across many domains of functioning. Qualitative data and anecdotal evidence provides context for these results, clarifying the difficulties students faced while balancing the expectations of school, family, and friends with managing their interpersonal relationships, emotional vulnerability, and inability to tolerate distress, all while engaging in dysfunctional behaviors in an effort to avoid or escape their intense feelings through substance abuse or

self-harm. The qualitative data provide additional insights into the perspectives and experiences of the teacher participants as they attempt to balance dialectical dilemmas found within the school environment, including (a) classroom management style (i.e., authoritative discipline versus excessive leniency), (b) behavior challenges (i.e., increasing normative behavior versus decreasing pathological behaviors), and (c) academic performance (i.e., decreasing excessive dependence on others versus increasing autonomy). Each research question will be explored in depth.

Teacher Perceptions and Experiences

This study predicted teachers would report a lack of knowledge and minimal professional training regarding the impact trauma can have on adolescent mental health, behavior, and academic performance. Similar to the findings of past research (Inbar-Furst & Gumpel, 2015; Moon et al., 2017) the majority of teachers who had completed the survey (see Appendix A) agreed that, although they have a responsibility to address the mental health concerns of their students, preservice teacher training and in-service professional development programs have left them ill prepared to handle the various manifestations of trauma presented by students. Only 4% of the teachers, all of whom had been teaching fewer than 5 years, indicated they had received information on the causes and impact of trauma on students through their preservice teacher education programs. More than one half of the teachers completing the survey, 70% of whom had been teaching high school for 10 years or more, had not received any form of professional development in aspects of student functioning easily influenced by trauma exposure, including adolescent mental health, classroom management, classroom strategies to support students with trauma histories, or classroom strategies for working

with students with mental health concerns. This difference suggests preservice teacher education programs have recently begun to recognize the impact rising rates of trauma exposure is having on student functioning. Encouragingly, more than 80% of the teachers completing the survey expressed interest in receiving education in trauma exposure and impact, classroom management systems, strategies for working with students with disruptive behaviors, and techniques for supporting the mental health needs of high school students. Across all quantitative measures related to teacher perceptions and experiences, there were no significant differences between participants and the type of training intervention they completed as part of this study (i.e., no training, trauma-sensitive schools workshops, and/or DBT skills sessions).

Although qualitative data obtained suggested teachers initially attended the Trauma-Sensitive Schools Workshops due to convenience and the need to obtain required professional development hours, participants continued to attend the workshops and DBT Skills groups because they were learning valuable information regarding the prevalence and impact of trauma:

> The most important thing I learned is that we probably all have had some experience with trauma and it changes us. I did not realize how much a traumatic experience can affect someone's life (Participant 4).

> I had no idea trauma was so prevalent and had such a lasting impact on someone's life. I also did not know that trauma could impact so many different areas of a person's life (Participant 12).

> I thought the information was excellent and really helpful, all teachers should have to attend. I had not known how prevalent trauma was, don't you [the school psychologist] think the majority of our students have had some kind of trauma in their lives? It just seems like everyone has something (Participant 16).

Every teacher completing the survey acknowledged the importance of understanding the mental health issues adolescents with trauma histories can experience but fewer than 5% felt they had a role to play in supporting student mental health. The following teacher remark summarizes the overall attitude of participants:

> I thought the information in both the workshop and DBT classes was excellent and teachers need this information, but we are teachers, not therapists. I don't want to be a therapist any more than you [the school psychologist] wants to be a teacher, right? So, I hope we are not being expected to stop teaching and do therapy during class time (Participant 12).

These findings are consistent with previous research regarding the role of teachers in implementing social and emotional evidence-based practices at the high school level; particularly teachers' lack of openness to adopting new practices (Aarons, 2005; Han & Weiss, 2005; Johnson, Pas, Loh, Debnam, & Bradshaw, 2017). Although the majority of teachers participating in this study expressed a desire to become more knowledgeable about the impact of trauma on student functioning, there is little interest in taking a more active role in supporting student mental health.

School-Based Resources and Barriers

It was predicted teachers would identify several barriers that interfered with their ability to support students with trauma histories. It was further predicted teachers would not be able to accurately identify the school-based resources available to them at the high school where this study was conducted. Across all quantitative measures, there were no significant differences between participants and the type of training intervention they completed as part of this study (i.e., no training, trauma-sensitive schools workshops, and/or DBT skills sessions). The teachers involved in this study reported experiencing significant disruptive student behavior each day. Overall, 75% of the teachers noted dysfunctional student behavior had increased since they began teaching; 45% report five or fewer incidents of disruptive behavior per day, 38% indicated they experienced 6-10 episodes, and 17% of the teachers engaged in challenging student behaviors more than 10 times each day.

With such significant dysfunctional behavior occurring daily, it is critical teachers know the resources available for supporting students. The results of this study indicated a vast number of teachers (94%) were able to identify resources provided through the school psychologist (e.g., functional behavior assessments, behavior support plans, individual and group counseling, social/emotional evaluations, psychoeducational evaluations, classroom consultation) but not the school counselors (e.g., changes to class schedules, monitoring academic progress, facilitation of parent/teacher meetings, 504 plans) or those located in the local community (e.g., food and housing, mental health supports). One explanation could be that the services provided by the school psychologist often required multiple interactions with teachers, whereas those provided

by the school counselors primarily involved students and parents, with less direct teacher interaction.

In order to provide comprehensive support for students, it is equally important teachers are aware of potential barriers. When asked to identify barriers they had experienced at the high school, teachers focused on external barriers over which they had little influence or control, such as district or school policies, consequences assigned to students for disruptive behavior, lack of parental support, and ineffective and reactive school leadership. Many of the comments made by teachers targeted the lack of administrative support to be the primary impediment to supporting students and were similar to those articulated by Participant 10, "Bottom line is we need proactive and effective school leadership or we will never be successful," a sentiment echoed by 31% of the teachers who completed the survey. No teachers identified classroom management style, instructional practices, or the appropriateness and pacing of the curriculum they teach to be a barrier for trauma exposed students. Unfortunately, the lack of ability to identify resources available and the barriers identified by teachers in this study (i.e., the direct participation of administration, knowledge of mental and physical health supports available, and clear policies, procedures, and protocols) have been found by researchers as factors that impede the success of schools attempting to implement a trauma-informed approach (Ristuccia, 2013; Metz et al., 2015; Roffey, 2016).

Teacher Capacity to Recognize Trauma Exposure

This study predicted teachers would become more knowledgeable about the various manifestations of trauma after participating in the trauma-sensitive schools workshops and/or DBT skills sessions. In turn, teacher's capacity to recognize when a

student has been exposed to trauma was predicted to increase. Prior to implementation of the training interventions, teachers were provided with a list of 21 situations and asked to identify whether each of the situations had the potential to cause disruptive student behavior (see Appendix A). Teacher's overwhelmingly (91% to 100%) indicated they viewed the causes of dysfunctional student behavior to be a deliberate action students chose and, thereby, something that is within the students' power to change. Trauma-specific situations were included in the 21 situations presented to teachers. Neglect, incarceration, physical, verbal, and/or sexual abuse, use of drugs and/or alcohol, and repeated exposure to violence were also frequently identified as the cause of negative behaviors but by the fewest percentages of responders. Poor parenting and social media were also noted by over one half of the teachers completing the survey as being significant causes of student misbehavior as were systemic issues related to school policies and procedures.

Although there was no significant difference between teachers completing the trauma-sensitive schools workshops and the DBT skills sessions in their ability to recognize when a student has been exposed to trauma, qualitative data collected after the completion of the trauma-sensitive schools workshop and DBT skills sessions depicts changes in teacher mindsets, as exemplified in the following quotes:

> Hard to know since the training just ended but I think I am more aware of when a student is misbehaving it might be because they have experienced a trauma and not that they are just being defiant and rude. There might be an underlying reason why they are not doing their work, acting out, getting in fights, failing classes. I guess I consider that there might be a reason and I attempt to talk to the student

rather than send the student to the time out room or write them up with a referral and they get detention (Participant 2).

Yes, I feel like I am more patient with my students. I consider that there might be something going on outside of school to make them behave the way they are, but I don't want to make excuses for them either. They need to function in the world and we don't do them any favors by giving them a free pass or not holding them accountable for their actions. They should be held accountable, the world holds them accountable, but we do not. So. I don't want "I have trauma" to be another excuse students start to use to not do their work or to be rude (Participant 3).

I think I am more sensitive to the possibility that a student might have some trauma in their lives now than I was before. I'm still not sure how to incorporate the strategies you [the school psychologist] taught us with my required curriculum (Participant 8).

Like I said, I'm more likely to think the student's behavior might have something to do with trauma when before I might have just thought they were rude or lazy. I don't think I write up [write a disciplinary referral] as many students since I took the classes, but I know I email or call you [the school psychologist] about a student's behavior more than I did before [attending the workshop and DBT classes] (Participant 13).

> I think about the reasons for the student's behavior more than before, I try to consider that maybe they are behaving this way because of trauma (Participant 14).

> I now wonder if the student has trauma going on or in their past when they are acting up in class (Participant 15).

Teacher Ability to Identify and Implement Supportive Strategies

It was predicted teachers' knowledge of appropriate classroom strategies to use when teaching students exposed to trauma would increase after they had attended the trauma-sensitive schools workshops and/or DBT skills sessions. After participating in the training sessions, teachers indicated their knowledge about trauma had increased, but they believed it was insufficient and expressed a desire to receive more training, as described by these participants:

> I was interested in hearing more about trauma sensitive schools because we have many students who live in dangerous neighborhoods. After attending the trauma trainings, I felt like I needed more information about the best way to work with students who have experienced trauma (Participant 1).

> I enjoyed the trainings and would like to have more training in this area, maybe after I have some practice in using the different strategies we talked about- it would be good to have another training after that (Participant 4).

> I would like to have more time with you [the school psychologist] to learn how to use the strategies in my classroom. Maybe you could come and observe or even teach a lesson in my room (Participant 7).

Teachers who attended the DBT skills sessions significantly improved their knowledge of DBT principles and strategies associated with the four elements of DBT: mindfulness, emotional regulation, tolerating distress, and interpersonal relationships. Perhaps because the term mindfulness has become so prevalent in education and/or it is one of the easier DBT strategies to naturally insert into the classroom environment, teachers found the mindfulness strategies the most favorable, as Participant 6 explained:

> I think the thing that stands out to me is that we can help students in our classroom by making some simple changes, like spending time talking about how to handle frustration and teaching students how to be mindful. I really loved the mindfulness exercises and am trying to use them with my students.

This is encouraging to note, especially when previous research has found mindfulness to be an effective treatment for decreasing stress and anxiety, treating depression, and reducing high school dropout rates; concerns known to be significant for students with trauma histories (Khoury et al., 2013; Carsley, Heath, Gomez-Garibello, & Mills, 2017).

Positive School Functioning

It was predicted students participating in the DBT skills groups would engage in fewer negative school behaviors (i.e., cutting class, defiance, use of inappropriate language). However, these results found students had significantly higher numbers of

disciplinary referrals for inappropriate language and defiance, whereas the number of times they cut a class period, that is, attended school but failed to attend one or more class periods, remained unchanged following the intervention. On average, students were found to complete a significantly higher percentage of assignments during and after the DBT skills group than prior to the initial group session.

Qualitative and anecdotal data obtained from teachers and students provides some insight towards explaining the data outcomes. It is possible teachers experienced increasing levels of frustration and were less tolerant of student misbehavior as the year progressed, as evidenced by the following teacher comments:

> I want to know when are we going to stop making excuses for students who misbehave, are disrespectful and rude, and are failing because they refuse to do any work? Why is that my fault as a teacher? Shouldn't their parents be held accountable? Why should I have to listen to them tell me to [teacher recounted the profanity-laced statements] and threaten to harm my family [this occurred during the week prior to the interview, a student in the DBT Skills Group had threatened this teachers' son and daughter. The student was suspended for 5 days but was placed back in the teacher's classroom rather than reassigned to another room] and I have to still make sure they pass my class? I don't see how this is something I have to teach, I'm not qualified to diagnose or provide therapy to a student and they all seem to have something going on, it's [referring to the teaching profession] is not like it used to be even a few years ago (Participant 11).

> Are you saying that I should assume all the bad behavior and failing grades are because they [the student] has trauma in their lives? We all have something going

> on in our lives' don't we? Do I get to skip work because I have trauma? No. So why do we coddle these students? Enough (Participant 16).

Meanwhile, student anecdotal data provided information about their own level of frustration towards teachers and classes, as exemplified by the following comments students made during DBT skills group sessions:

> Why should I be nice to her [classroom teacher]? She's rude to me! She told me, "Go sit in the back [of the class], you don't want to pass this class anyway, save the front for the student who want to learn" and you want me to be respectful? Not until she shows me some respect (Female Participant).

> It's so boring! All he [classroom teacher] does is sit and talk and talk and talk and talk. Why don't he ask me what I think? We can't say one word in that class or he tells us to leave. I'll be sent out [teachers at this school send students to the reset room, a classroom in the school designated as a place to send students that need to be removed from class] in the first five minutes, you watch, might as well go to the reset room to start (Female Participant).

> He [classroom teacher] hates me. I raise my hand and he calls on someone else. I ask him to meet with me after school and he tells me he can't, how am I supposed to pass his class if he won't help me or answer my questions (Male Participant).

Teacher comments suggest they perceived themselves as being the only one held responsible for student success. When combined with the strain of having to be accountable despite difficulties in lives outside of work, it is understandable when adults

respond to students' dysfunction in a negative manner. However the statements made by the students suggest they were having similar feelings of isolation and lack of support. Commentary such as this provides additional evidence to suggest a lack of school connectedness and cohesion occurring at the high school participating in this study. Students in this study, who had significant trauma exposure, found it difficult to form healthy attachments to others and tend to be distrustful. Even the most harmless remark or nonverbal gesture was typically misinterpreted to mean something negative. Once a trauma-exposed student believe an adult is unwilling to help them it is very difficult to change their mind, as these comments demonstrated.

Feelings of hopelessness could be another explanation for the lack of change in attendance and behavior as illustrated by the following quotes from both female and male participants:

"I just failed the marking period again, there is no way I can pass this class."

"I have no idea what is going on in class so I just go to sleep."

"The only way I will go to class is if I have my earbuds so I can tune her [the teacher] out."

"I've already failed for the year in attendance so why bother? (Students are allowed 13 absences per class period per year, once that is exceeded they automatically receive a grade of F)."

"I'm not going to graduate anyway."

"Nobody would care if I missed class, they don't expect me anyway."

Although it is not within the scope of this study to statistically consider individual student data, a visual examination of the data, per student found some possible

explanations for the results obtained regarding overall student functioning. When the data is inspected visually, there is evidence suggesting students experienced improved school functioning. No student improved across all areas of functioning measured and student improvement in one area was often offset by significant declines in another area. Additionally, the grouping of student data into a whole allows for outliers, such as a significant number of behavioral referrals from a teacher or excessive absenteeism with a few students to influence the overall outcome.

Student Coping Skills and Resiliency Factors

This study predicted students would engage in more effective rather than maladaptive coping strategies, experience a gain in protective, resiliency factors, and display the capacity to more effectively regulate their emotions, tolerate distress, manage relationships, and engage in more mindful decision making after participating in the DBT skills groups. After participating in the DBT skills groups students reported using 28% more effective coping skills. Perhaps of even greater significance was the 57% decrease in the use of maladaptive coping strategies. Anecdotal evidence obtained from student comments during the group sessions highlights students' awareness of their changing skill sets:

> Today I didn't let [name of teacher] get to me. She was yelling at me and asking me why was I late to class and did I have a pass with that smart ass look on her face and last time she did that I was feelin' all types of ways and I told her to go [expletive] herself, ya get me? But this time I stopped and tried to get calm like we practiced before I said or did anything. It didn't work cuz she kept on yellin'

> but I felt better inside, ya get me? I didn't go all crazy angry and want to hit her like I usually do, she makes me so mad ya feel me? (Female Participant)

> So I don't know if this is good or not cuz I didn't exactly use one of our strategies but I also didn't take a hit [student smokes marijuana daily] when I got suspended last week, so that counts, right? (Male Participant)

> I try to pause and think about what is happening, like is what I'm seeing and hearing matching what is really going on? I try to calm down. Now I only think about punching you in the face rather than doing it, you know? (Male Participant)

> Somebody comes at me like that I got no choice-I have to fight (Male Participant).
>
> I got so pissed at my mom that I blanked-I don't know what happened I was so mad and I stayed mad all weekend. I just could not calm down, nothing worked (Female Participant).

Significant increases were found in various aspects of resiliency after students completed the DBT skills group. As a group, students reported feeling more connected to others, less emotionally volatile, and generally more capable to handle challenges. Additionally, students reported an increased ability to tolerate situations that previously would have resulted in verbal and/or physical altercations. Students commented on their growing capabilities:

> I'm pretty confident I can solve problems, it didn't used to be like that but now I'm more willing to try. I still get upset when I can't figure out something, like my

> homework, but I don't stop working on it the very first time I can't do it, I keep at it because I now realize I can understand it but it might take longer (Male Participant).

> I realized that there are people I can talk to at school. People really do care (Some version of this sentiment was noted by multiple Male and Female Participants).

Finally, students reported an increased capacity to use the skills and strategies specifically taught during the DBT Group sessions. Students were responsible for tracking their use of specific skills taught during the week between group sessions. Upon visual examination of the data there appears to be an initial spike in the use of the specific strategy taught that week followed by a reduction in skill use over the course of the eight-week intervention. It is unknown whether this is due to student mastery of the skill over time, a decreased effectiveness when students used the skill, or student attention becoming focused on the newest skill learned. Students learned to make connections between their emotions and behaviors, identify when they are feeling anxious, angry, or sad and manage that emotion, improve their relationships, and tolerate distress as described by these participants:

> Part of the reason I like being high [student smokes marijuana] is that my emotions shut down and I don't have to feel anything. I realized that part of life is feeling and those feelings that I was afraid of are okay to experience, that I can talk about them with someone (Female Participant).

> I realized I can take time to calm down, think about things, and decide what to say so that I don't make things worse. I'm not in as much trouble at home because I don't always just say the first thing that pops in my head (Male Participant).

> I don't feel as bad about myself as before, I mean its just kinda nice knowing all of you are going through things to, you know? (Female Participant).

Limitations

This study has several limitations that should be considered. Although significant results were obtained on many of the analyses conducted, the sample size was very small. The use of a larger sample size would clarify the reported outcomes. In addition, the unequal sample sizes of the teacher groups proved to be challenging for making direct comparisons and determining the effectiveness of the interventions. The unequal sample size was not statistically adequate requiring the use of non-parametric models to be conducted for much of the data accumulated. Much could be learned from larger teacher and student sample sizes as well as alternative geographical locations. Furthermore, there was not a post-survey or pre-vignette constructed which would have provided the ability to make direct comparisons between teacher responses to gain a better picture of acquired knowledge. Comparisons were made by grouping students as one data set rather than exploring individual student and/or gender differences. Finally, no data was collected to provide information regarding the use of DBT strategies in the classroom.

Implications

The current study highlights the difficult balance teachers face as they seek to support students with challenging behaviors and/or poor academic performance while

maintaining classroom and school-wide discipline and the primary requirement of their profession: teaching academic content. The impact school cohesiveness and sense of connection has on student performance and behavior as well as teacher satisfaction was briefly explored through anecdotal and qualitative data. Despite the considerable trauma histories of the students in this study, they were able to demonstrate significant gains in their ability to use effective coping skills, regulate their emotions, tolerate distress, and begin to build positive interpersonal relationships. By addressing the effectiveness of DBT skills training sessions as a means of improving the school performance of students with trauma histories, the study has contributed to addressing the knowledge gap pertaining to accessibility of empirically-based interventions for high school students with significant trauma. The study also highlighted the impact learning DBT skills and strategies had on student measures of resiliency. Recognizing the strengths students and teachers already possessed was achieved using validation, a key component of DBT, and proved to be an effective tool in building student and staff confidence when they were challenged to learn new ways of thinking and change patterns of behavior. DBT skills training has the potential to improve students' capacity for coping with challenging circumstances at home and school. The focus on building student and staff capacity, encouraging trusting relationships, and promoting resilience all worked in concert to increase students' ability to solve problems, face challenges, and change negative patterns of thinking and acting within a fairly short span of time.

It is particularly important to note a component of this study focused on building staff knowledge, confidence, and capacity for working with students exposed to trauma. Teachers were exposed to the same content in their DBT skills groups as students. This

served the important function of building staff capacity to support students with mental health needs, challenging behaviors, and poor academic abilities. Providing teachers with the same content has the potential for significant impact among vulnerable student populations and may serve to mediate some of the challenges associated with trauma exposure.

Schools have been charged with developing multitiered systems of support (MTSS) for students and their families. The results of this study suggest training teachers and students in DBT strategies has the potential to be a key intervention easily accessed by school-based MTSS teams as they seek to increase positive coping skills, build resiliency, reduce emotional distress and increase positive interpersonal relationships for both teachers and students.

Dialectical dilemmas are foundational concepts of DBT (Linehan, 1993a, 2015a). Adults negotiate a different set of dilemmas than have been found to apply to adolescents (Miller et al., 2007). The data and anecdotal evidence suggests high school teachers in this study struggle with some of the same dialectical dilemmas as their adolescent student.

Excessive leniency versus authoritarian control. Teachers found it difficult to identify the appropriate number of expectations they should have in their classroom compared to placing too few demands on students with trauma histories. Teachers also reported being unsure how to maintain a safe and supportive classroom when students are experiencing emotional and/or behavioral dysregulation, which at times, could be frightening or even dangerous to others. The fear of losing absolute control often forces teachers and administrators, in this study, to resort to coercive methods for controlling

student behavior that are focused on punishment rather than restorative principles. The benefit of using punishment techniques has been well researched as has the poor long-term outcome of using this type of discipline. An unsafe and unsettled school environment is created when teachers and school administrators are not competent in behavior management. It is important for school staff to know how to move along the continuum of leniency and control with ease to meet the changing demands of the school, classroom, and student.

Normative versus pathological behaviors. Another dialectical dilemma common to adolescence is the fluctuation between pathological behavior and what is developmentally normative behavior for an adolescent. The period of adolescence includes experimentation, changing self-image, interpersonal conflicts, and moodiness but students with trauma histories tend to display extreme presentations of this developmentally normal behavior (e.g., self-harm or suicidal attempts, drug and alcohol use, unprotected sex). Teachers need to have the knowledge and capacity to recognize behavior that is atypical and likely to be harmful to an individual's quality of life. Many of the teachers in this study perceived developmentally normal behavior, such as moodiness and frequent conflicts with others, as being pathological and requiring immediate mental health support. Teachers often regarded emotional and behavioral dysfunction as being a personal insult, something under the control of the student, rather than a manifestation of trauma. On the opposite end of the dialectical dilemma continuum, a teacher unaware of normal adolescent behavior could misinterpret an extreme behavior as being typical, resulting in a lack of support for the student, intensification of dysfunction, and severe consequences.

Fostering dependence versus fostering autonomy. The third dialectical dilemma common to adolescence is the balance between independence and an over reliance on adults. Data and anecdotal evidence complied during this study suggests teachers participating in this study hold a core belief that students in high school should be as autonomous as adults and failing to treat them as such puts them at a disadvantage. This could be, in part because students at the high school level have the physical appearance of adults and often engage in adult activities (i.e., work at a job, drive a car, drink alcohol, use drugs, sexual activity, etc.). The commonly held opinion that high school students should have mastered the basic skills necessary to be successful in school gives little consideration to the impact of trauma, negative home environments, or the experiences students are encountering outside of school. Teachers expected students to know how to study for a test, complete homework, and/or how to take notes during class. This belief could be requiring students to engage in more autonomy than they are capable of handling; resulting in increased behavioral dysfunction and academic failure. Teachers, particularly those working with students with trauma histories, need to have the knowledge and capacity to provide students with appropriate scaffolding strategies that will foster independence at the appropriate time. This is especially true when working with students who display academic and/or cognitive deficits as well as behavioral challenges due to trauma exposure.

Future Research

Additional research is needed to understand the interplay of adolescent and adult dialectical dilemmas within the classroom and school environment. Understanding the manifestation of dialectical dilemmas of teachers, across grade levels, as they seek to

create safe and supporting environments for students could guide classroom management practices, inform school discipline policy, and inform instructional practices. Additional research could help determine the ease and effectiveness of using DBT strategies in the classroom with teachers as the primary method for teaching DBT skills and strategies.

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Appendix A

Survey: Teacher Perceptions and Experiences

1. What is your gender?

   ☐Female ☐Male

2. What is your age?

   ☐21-30 years old ☐31-40 years old ☐41-50 years old ☐51+

3. Please indicate your race/ethnicity.

   ☐African American ☐American Indian ☐Caucasian ☐Hispanic
   ☐Other (please indicate)_____

4. How many years have you been teaching?

   ☐0-5 ☐6-10 ☐11-15 ☐16+

5. Please indicate your teaching certification.

   ☐General Education Only ☐Special Education Only
   ☐Dual Certification in General and Special Education

6. What is the highest level of education you have achieved?

   ☐Bachelor Degree ☐Master's Degree ☐Master's plus 15
   ☐Master's plus 30 ☐Doctorate

Use the following definition of disruptive behavior when answering questions 7-9.

Disruptive behaviors can include one or more of the following:

a. The teacher is unable to continue teaching the lesson for longer than one or two minutes.
b. The student's behavior is repetitive in nature requiring the teacher to stop instruction more than 3 times during one 90-minute instructional period.
c. Any behavior that is out of proportion to the request being made (e.g., If you ask the student to put away their cell phone and they instantly become loud or defiant saying, "You can't tell me what to do" or "I don't have to listen to you" in a loud voice.
d. Physical behaviors such as hitting, fighting, pushing, leaving without permission, invading personal space, or threatening posturing.
e. Verbal behaviors such as use of profanity, verbal intimidation, threats of harm, verbal noncompliance, or talking back.

7. Since you have begun teaching has the number of disruptive behaviors you must deal with, daily, increased, decreased, or remain unchanged?

☐There has been no change in the number of disruptive behaviors.
☐There has been a decrease in the number of disruptive behaviors.
☐There has been an increase in the number of disruptive behaviors.

8. Indicate whether each statement below could be a reason for disruptive behavior or poor academic performance:

		Yes, could cause disruptive behavior or poor academic performance	**No, does not cause disruptive behavior or poor academic performance**	**Not Sure**
A.	Academic pressure to do well in school or pass a class			
B.	Student believes they are not capable of passing the class (i.e., Student displays a sense of hopelessness)			
C.	Student is the victim of physical, verbal, and/or sexual abuse			
D.	Lack of effective school discipline policies			
E.	Disciplinary issues are not enforced or consequences are not assigned in a timely manner			
F.	Students are empowered by defiance and arrogance or might feel peer pressure to maintain “face”			
G.	Student has a mental health issue such as depression, anxiety, PTSD, etc.			
H.	Student has a family member in prison or who was recently in prison			
I.	Violence is modeled in the home or community (i.e., student has been repeatedly exposed to crime or violence)			
J.	Student does not want to do the work and engages in disruptive behavior to be sent out of class			
K.	Student lives in poverty			
L.	Student or family member abuses drugs			

		Yes, could cause disruptive behavior or poor academic performance	No, does not cause disruptive behavior or poor academic performance	Not Sure
M.	Student is capable of the work but is lazy and does not apply him or herself			
N.	Student or family member abuses alcohol			
O.	Poor parenting			
P.	Lack of positive role models			
Q.	Social media (e.g., Facebook, Twitter, SnapChat)			
R.	Student wants to control the situation			
S.	Student does not believe he/she must follow same rules as others			
T.	Student has been neglected			
U.	Student does not have any respect for authority figures			

9. How often do you experience incidents of disruptive behavior per day?

☐0-5 times per day ☐6-10 times per day

☐More than 10 times per day

10. Please indicate if you have received training on any of the following topics, the type of training you have received, and whether you are interested in receiving additional training.

	Topic	Type of Training Received	Interested in Additional Training?
A.	Bullying (including cyberbullying)	☐Not received training ☐Pre-Service teacher education program ☐In-service professional development with an instructor ☐Online learning module ☐Book/Manual	☐Yes ☐No

	Topic	Type of Training Received	Interested in Additional Training?
B.	School Violence and Crisis Preparedness	☐Not received training ☐Pre-Service teacher education program ☐In-service professional development with an instructor ☐Online learning module ☐Book/Manual	☐Yes ☐No
C.	Causes of Trauma and Impact on Students	☐Not received training ☐Pre-Service teacher education program ☐In-service professional development with an instructor ☐Online learning module ☐Book/Manual	☐Yes ☐No
D.	Mental Health Needs of Adolescents	☐Not received training ☐Pre-Service teacher education program ☐In-service professional development with an instructor ☐Online learning module ☐Book/Manual	☐Yes ☐No
E.	Managing Disruptive Classroom Behaviors	☐Not received training ☐Pre-Service teacher education program ☐In-service professional development with an instructor ☐Online learning module ☐Book/Manual	☐Yes ☐No
F.	Normal Adolescent Behavior	☐Not received training ☐Pre-Service teacher education program ☐In-service professional development with an instructor ☐Online learning module ☐Book/Manual	☐Yes ☐No
G.	Classroom Strategies for Working with Students with Trauma Histories	☐Not received training ☐Pre-Service teacher education program	☐Yes ☐No

	Topic	Type of Training Received	Interested in Additional Training?
		☐In-service professional development with an instructor ☐Online learning module ☐Book/Manual	
H.	Classroom Strategies for Working with Students with Mental Health Concerns	☐Not received training ☐Pre-Service teacher education program ☐In-service professional development with an instructor ☐Online learning module ☐Book/Manual	☐Yes ☐No
I.	Promoting Positive School Climate	☐Not received training ☐Pre-Service teacher education program ☐In-service professional development with an instructor ☐Online learning module ☐Book/Manual	☐Yes ☐No

11. I see it as part of my job to address students' mental health concerns.

☐True ☐False

12. It is important for school staff to understand the mental health issues that students may experience.

☐True ☐False

13. I know when to refer a student, and who to refer the student to, when a student needs mental health support at my school.

☐True ☐False

☐Other (please explain)_____

14. Students need greater access to mental health services at school.

☐True ☐False

15. Please indicate whether the following resources are available at your current school placement:

		Yes, available at school	No, not available at school	Not Sure
A.	Assessment for emotional and/or behavioral problems			
B.	Classroom consultation on behavior management			
C.	Functional Behavioral Assessments			
D.	Behavior Support Plans			
E.	Consultation with teachers for planning behavioral interventions			
F.	Individual Counseling			
G.	Referrals to community-based services			
H.	Support for families such as obtaining food, paying bills, finding a place to live			
I.	Group counseling for students with anger problems, anxiety, depression, etc.			

16. There are too many students in my current school placement who are not receiving support for serious mental health concerns.

☐Strongly Agree ☐Agree ☐Not Sure ☐Disagree ☐Strongly Disagree

17. On a scale of 0-100 indicate the percentage of students you currently teach who you suspect have been exposed to trauma.

The percentage of students I am currently teaching who have been exposed to trauma is _____

18. Which of the following is a barrier you have experienced when working with disruptive students, adolescents with mental health issues, or students with trauma backgrounds at your current school placement?

		Yes, this is a barrier	No, this is not a barrier	Not Sure
A.	District or School Policies and Procedures			
B.	Parents			
C.	Lack of administrative support			
D.	Fear of reprisal			
E.	Lack of training			
F.	Other: (Please explain)			

19. When you reflect on students with disruptive behaviors, trauma exposure, or mental health concerns, what do you believe would be the most important support you could receive as a teacher?

Appendix B

Vignettes: Teacher Perceptions Following Trauma-Sensitive Schools Workshops

Vignette A:

Sally is a 15-year-old ninth grade student in your classroom. She lives in the city and rides the bus to school. Sally lives with her mother, grandmother, and younger brother. She is frequently absent from class and is failing the class. You have attempted to contact Sally's mother or grandmother on multiple occasions to express your concern but their phone service is often cut off or the voice mailbox is full and you are unable to leave a message. During a phone conversation with Sally's mother earlier this year, she reported, "Sally often comes home after curfew, always argues with everyone, and has destroyed or lost things that do not belong to her".

When she attends class, Sally calls out questions, answers, or makes off-topic remarks during teacher lectures, talks to her friends during assigned work time or when the class is taking a test, and rarely completes assignments. Sally has received six detentions and four out-of-school suspensions for fighting, cutting class, and being disrespectful and defiant to staff. Sally's friends often get into trouble. When you speak to Sally about her behavior she never seems to feel guilty or upset but appears irritated and blames others for her actions and words. While walking into your class earlier today you lightly tap Sally on the shoulder and say, "Good morning, glad to see you today"; a common practice for you and all the students in the classroom. Sally responds by quickly pulling away and rapidly turning around to face you yelling, "Don't touch me you mother f*&#^er!"

Answer the following questions based on Vignette A:

1. What do you believe are the causes of the student's difficulties? You may check as many of the following as you wish.

☐ A. Ordinary/Typical behavior for the student's age

☐ B. Academic problems, perhaps does not have the skill required to complete assigned work

☐ C. Problems at home

☐ D. Student has a behavior problem

☐ E. Student has been exposed to trauma

☐ F. Student is trying to gain attention from peers

☐ G. Poor parenting

☐ H. Student is using drugs or alcohol

☐ I. Negative influence of peers

☐ J. Student lives in poverty

☐ K. Student is capable but lazy and does not care about school

☐ L. Student has a mental health issue

☐ M. Student has been exposed to violence

☐ N. Student has been abused or neglected

☐ O. Student does not have respect for authority figures

☐ P. Other (please explain)_____

2. Please indicate your level of agreement with the following statements concerning this student:

A. “This student needs to be referred to the School Psychologist or School Counselor for mental health supports.”

☐Strongly Agree ☐Agree ☐Not Sure ☐Disagree ☐Strongly Disagree

B. “This student needs to be referred to an Administrator or Dean of Students for behavioral consequences.”

☐Strongly Agree ☐Agree ☐Not Sure ☐Disagree ☐Strongly Disagree

C. “This student needs to be evaluated for special education services.”

☐Strongly Agree ☐Agree ☐Not Sure ☐Disagree ☐Strongly Disagree

D. “This student needs to be referred for mental health supports outside of the school system.”

☐Strongly Agree ☐Agree ☐Not Sure ☐Disagree ☐Strongly Disagree

E. “There is no need to take further action with this student.”

☐Strongly Agree ☐Agree ☐Not Sure ☐Disagree ☐Strongly Disagree

3. What further information would you want to know about this student?

4. How would you respond to this student?

5. What types of strategies or interventions would you use in the classroom to support this student?

Vignette B:

Fred is a 17-year-old junior in your classroom. He lives near the school in a suburban community and drives his own car to school each day. Fred lives with his mother, father, and two younger sisters. He is rarely absent from class but when he is Fred typically contacts you to obtain any assignments he might have missed. Fred's parents return your phone calls or emails within 24 hours. Fred plays on the school football and lacrosse teams. He appears to be friends with everyone. Adults and peers always speak favorably of Fred.

However, within the last couple of months Fred has been coming to school looking as if he has not showered and slept in his clothes. Fred no longer participates in class, in fact, he has fallen asleep in your class more than one time and not turned in his last three assignments. You have spoken to all of Fred's teachers and they have noticed similar behaviors. When you attempt to call Fred's parents you must leave a message and no one has returned your call from one week ago. Fred frequently responds by saying "I don't feel well" or "I have a headache" when you ask him about his behavior. Several of Fred's friends have told you they are concerned about him because he no longer returns their calls or texts.

Answer the following questions based on Vignette B:

1. What do you believe are the causes of the student's difficulties? You may check as many of the following as you wish.

☐ A. Ordinary/Typical behavior for the student's age

☐ B. Academic problems, perhaps does not have the skill required to complete assigned work

☐ C. Problems at home

☐ D. Student has a behavior problem

☐ E. Student has been exposed to trauma

☐ F. Student is trying to gain attention from peers

☐ G. Poor parenting

☐ H. Student is using drugs or alcohol

☐ I. Negative influence of peers

☐ J. Student lives in poverty

☐ K. Student is capable but lazy and does not care about school

☐ L. Student has a mental health issue

☐ M. Student has been exposed to violence

☐ N. Student has been abused or neglected

☐ O. Student does not have respect for authority figures

☐ P. Other (please explain)_____

2. Please indicate your level of agreement with the following statements concerning this student:

A. "This student needs to be referred to the School Psychologist or School Counselor for mental health supports."

☐Strongly Agree ☐Agree ☐Not Sure ☐Disagree ☐Strongly Disagree

B. "This student needs to be referred to an Administrator or Dean of Students for behavioral consequences."

☐Strongly Agree ☐Agree ☐Not Sure ☐Disagree ☐Strongly Disagree

C. "This student needs to be evaluated for special education services."

☐Strongly Agree ☐Agree ☐Not Sure ☐Disagree ☐Strongly Disagree

D. "This student needs to be referred for mental health supports outside of the school system."

☐Strongly Agree ☐Agree ☐Not Sure ☐Disagree ☐Strongly Disagree

E. "There is no need to take further action with this student."

☐Strongly Agree ☐Agree ☐Not Sure ☐Disagree ☐Strongly Disagree

3. What further information would you want to know about this student?

4. How would you respond to this student?

5. What types of strategies or interventions would you use in the classroom to support this student?

If you answered, "Student has been exposed to trauma" for either or both vignettes please indicate below what clues you believe indicated the student had a history of trauma.

Vignette A:

Vignette B:

Appendix C

DBT Pre/Post Assessment

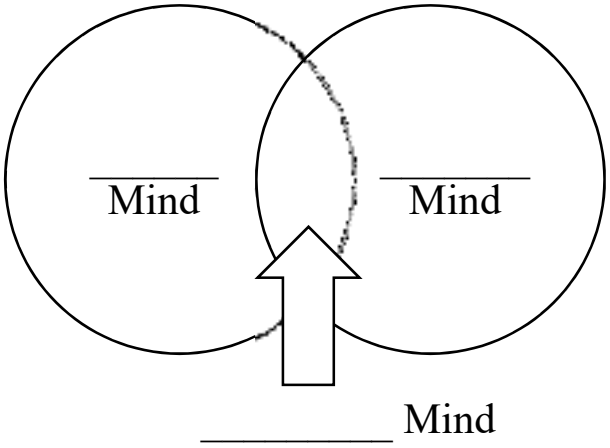
1. Fill in the blanks to complete the following statements:

   a. Dialectical Behavior Therapy (DBT) is based on the world view of _____ and _____. DBT views reality as being in a continuous state of _____. It is the _____ between opposing forces that is responsible for producing change.

   b. Another aspect of DBT is the _____ Theory. There are _____ precursors to emotional _____ as well as a _____component.

   c. An _____ environment negates, punishes, and responds erratically and inappropriately to expressions of _____.

2. Fill in the three states of mind:



3. Name the “what” skills and their meaning.

4. Name the “how” skills and their meaning.

5. Distress tolerance skills are: (Circle One Response):

   a. Skills for interacting effectively with other people.

   b. Skills for getting through a difficult situation without making it worse.

   c. Skills for finding your wise mind.

   d. Skills for accepting and tolerating urges to act on your emotions in distressing situations.

   e. All of the above.

6. Name two types of distress tolerance skills.

   a. _____

   b. _____

7. List the four goals of emotion regulation skills

   a. _____

   b. _____

   c. _____

   d. _____

8. The DEAR MAN skills focus on what priority?

   _____, which entails _____

   and _____.

9. The GIVE mnemonic stands for:

   G: _____

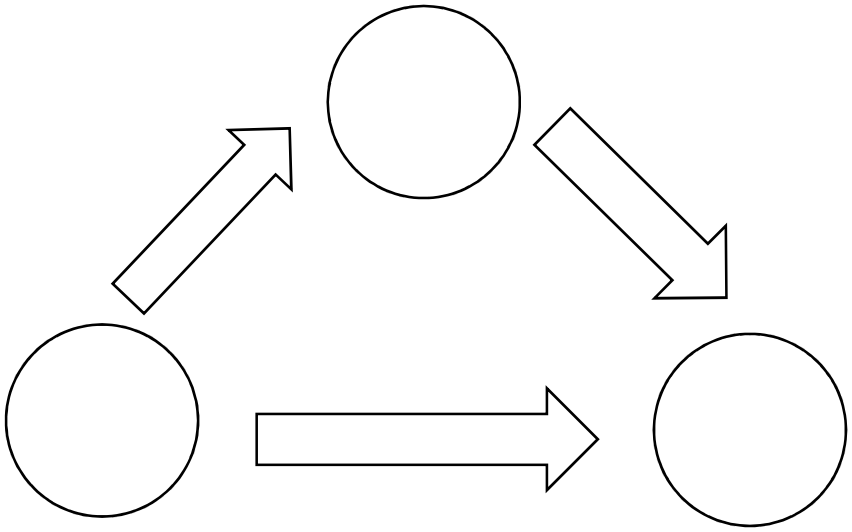
   I: _____

V: _____

E: _____

10. What are cognitive distortions or thinking errors? Give three examples.

11. Explain this model for Cognitive Behavior Therapy (CBT):



12. What are the three dialectical dilemmas in adolescence?

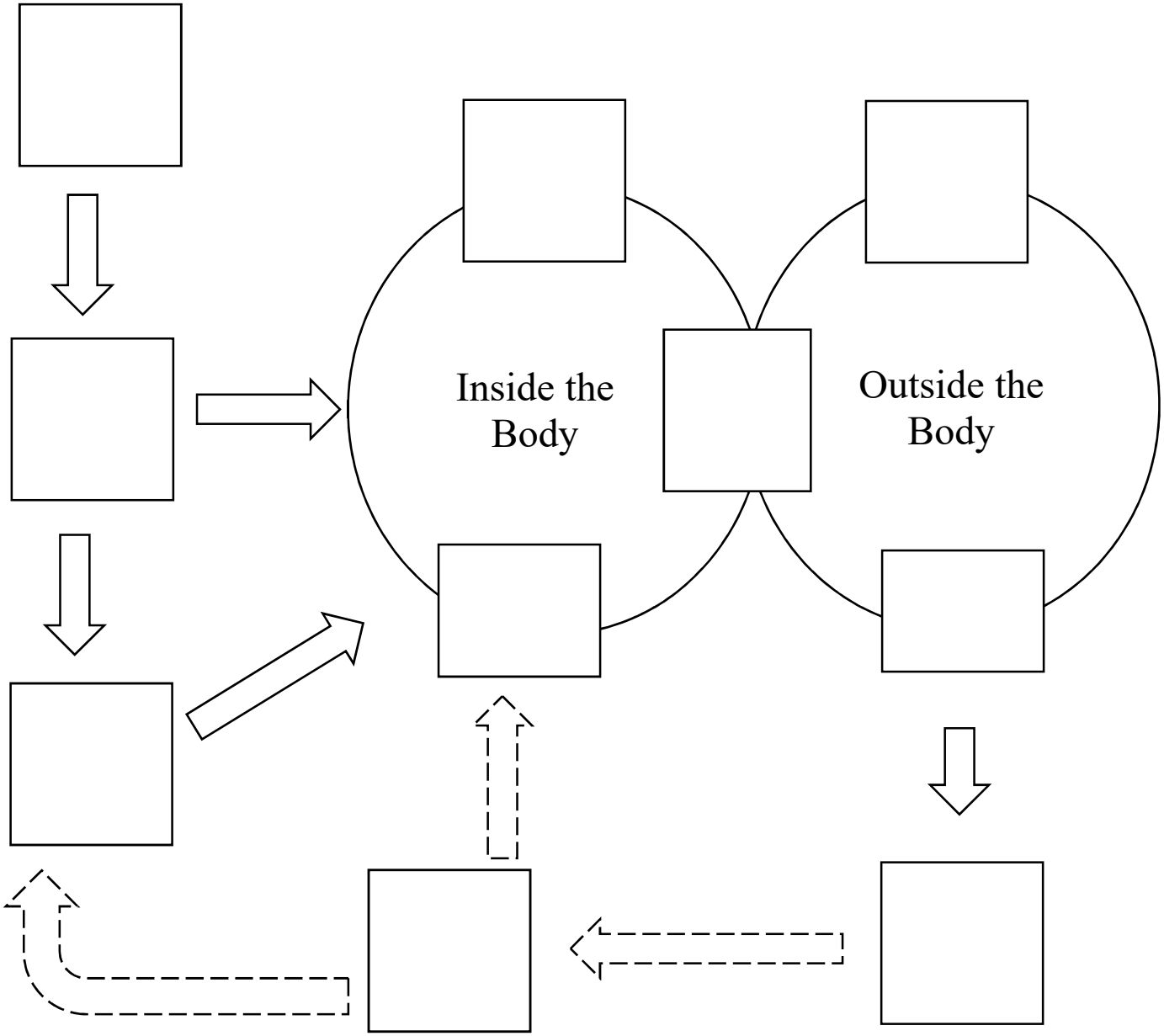
a. _____

b. _____

c. _____

13. Explain the impact of trauma on an individual.

14. Fill in the labels on the model of emotions below.



Appendix D

Adverse Childhood Experiences Quiz

(Administered to Students Recommended for DBT Intervention Group)

1. Does a parent, guardian, or other adult in the household often or very often swear at you, insult you, put you down, or humiliate you? Or act in a way that makes you afraid that you might be physically hurt?

   YES NO If YES, enter 1 _____

2. Does a parent, guardian, or other adult in the household often or very often push, grab, slap, or throw something at you? Or ever hit you so hard that you have marks or are injured?

   YES NO If YES, enter 1 _____

3. Does an adult or person at least 5 years older than you ever touch or fondle you or have you touch their body in a sexual way? Or attempt or actually have oral, anal, or vaginal intercourse with you?

   YES NO If YES, enter 1 _____

4. Do you often or very often feel that no one in your family loves you or thinks you are important or special? Or your family doesn't look out for each other, feel close to each other, or support each other?

   YES NO If YES, enter 1 _____

5. Do you often or very often feel that you don't have enough to eat, have to wear dirty clothes, and have no one to protect you? Or your parents or guardians are too drunk or high to take care of you or take you to the doctor if you needed it?

   YES NO If YES, enter 1 _____

6. Have your parents ever separated or divorced?

   YES NO If YES, enter 1 _____

7. Is your mother, stepmother, or guardian:
   Often or very often pushed, grabbed, slapped, or had something thrown at her? Or sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard? Or ever repeatedly hit at least a few minutes or threatened with a gun or knife?

   YES NO If YES, enter 1 _____

8. Do you live with anyone who is a problem drinker or alcoholic or who uses street drugs?

YES NO If YES, enter 1 _____

9. Is a household member depressed or mentally ill, or has a household member attempt suicide?

YES NO If YES, enter 1 _____

10. Has a household member ever gone to prison? Is a parent, guardian, or another person you are close to currently in prison or recently released from prison?

YES NO If YES, enter 1 _____

Total YES answers: _____

Appendix E
Modified Pre/Post Dialectical Behavior Therapy Ways of Coping Checklist for Students

Place a "X" next to any of the following strategies you have used

1. _____ Bargained or compromised to get something positive from the situation.
2. _____ Counted my blessings.
3. _____ Blamed myself.
4. _____ Concentrated on something good that could come out of the whole thing.
5. _____ Kept my feelings to myself.
6. _____ Made sure I was responding in a way that did not isolate or make others mad.
7. _____ Figured out who to blame.
8. _____ Hoped a miracle would happen.
9. _____ Tried to get calm before taking any action.
10. _____ Talked to someone about how I have been feeling.
11. _____ Stood my ground and fought for what I wanted.
12. _____ Refused to believe that it had happened.
13. _____ Treated myself to something that I wanted (e.g., food, video game, clothing).
14. _____ Criticized or lectured myself.
15. _____ Took it out on others.
16. _____ Came up with a couple of different solutions to my problem.
17. _____ Wished I was a stronger person, more optimistic and forceful.

18. _____ Accepted my strong feelings, but not let them interfere with other things too much.
19. _____ Focused on the good things in my life.
20. _____ Wished that I could change the way that I felt.
21. _____ Found something beautiful to look at to make me feel better.
22. _____ Changed something about myself so that I could deal with the situation better.
23. _____ Focused on the good aspects of my life and gave less attention to negative thoughts or feelings.
24. _____ Got mad at the people or things that caused the problem.
25. _____ Felt bad that I could not avoid the problem.
26. _____ Tried to distract myself.
27. _____ Tried harder to make things work.
28. _____ Thought that others were unfair to me.
29. _____ Blamed others.
30. _____ Listened to music.
31. _____ Acted as if nothing had happened.
32. _____ Told myself things could be worse.
33. _____ Talked to someone who could do something about the problem.
34. _____ Tried to feel better by eating, drinking, smoking, taking medication, etc.
35. _____ Avoided people.
36. _____ Thought how much better off I was than others.
37. _____Wished the situation would go away or stop.

38. _____ Kept anyone from knowing how bad things were.

39. _____ Wished I could change what had happened.

40. _____ Made a plan of action and followed it.

41. _____ Got in a physical fight.

42. _____ Other: (Please explain):

_____

Appendix F

Example of Diary Cards

Name: _____ Date: _____

Effectiveness Rating Scale								
0= Not thought about or used 1= Thought about, did not want to use							2 = Tried, but could not use 3 = Tried, but did not help 4= Tried and helped	
Mark Days Practiced							**DBT Skill**	**Overall Rating**
M	T	W	Th	F	Sa	Su	Problem Solving	
Mindfulness Skills								
M	T	W	Th	F	Sa	Su	Balancing 3 Minds	
M	T	W	Th	F	Sa	Su	What Skills: Observe, Describe, Participate	
M	T	W	Th	F	Sa	Su	How Skills: Nonjudgmental, One-Mind, Effectively	
Distress Tolerance Skills								
M	T	W	Th	F	Sa	Su	ACCEPTS	
M	T	W	Th	F	Sa	Su	Pros & Cons	
M	T	W	Th	F	Sa	Su	Radical Acceptance	
Emotion Regulation								
M	T	W	Th	F	Sa	Su	Check the Facts	
M	T	W	Th	F	Sa	Su	Accumulate Positives	
M	T	W	Th	F	Sa	Su	Ride the WAVE	
Interpersonal Effectiveness								
M	T	W	Th	F	Sa	Su	DEAR MAN	
M	T	W	Th	F	Sa	Su	GIVE	
M	T	W	Th	F	Sa	Su	Evaluating Options	

Appendix G

Interview Questions for Teachers Post Trauma-Sensitive Schools Workshops and/or DBT Skills Training

1. Why were you interested in the Trauma Sensitive Schools Training and/or DBT Skills Training?
2. What did you learn by attending the Trauma Sensitive Schools Training and/or DBT Skills Training?
3. On a scale of 0-10 with 0 being no confidence at all and 10 being extremely confident: How confident are you in your ability to identify a student with a trauma experience?
4. Using the same scale of 0-10: How confident are you in your ability to recognize when a student needs a referral to a mental health professional, the school psychologist, or the school counselor?
5. Have you noticed any changes in student performance, your teaching practices, and/or your relationship with students or parents after attending the Trauma Sensitive Schools Training and/or DBT Skills Training?
6. What other information would you like to share?

Appendix H

Definitions of Scales and Subscales from the Resiliency Scales for Children and Adolescents Rating Scales

Sense of Mastery: The Sense of Mastery composite is composed of three personal characteristics: Optimism, Self-Efficacy, and Adaptability

Optimism: A positive attitude about the world/life in general and an individual's life now and in the future

Self-Efficacy: The ability to develop problem-solving attitudes and strategies

Adaptability: The ability to consider different options in problem solving, be receptive to constructive feedback, and to learn from one's mistakes

Sense of Relatedness: The Sense of Relatedness composite is composed of four personal characteristics: Trust, Support, Comfort, and Tolerance

Trust: Degree to which others are perceived as reliable and accepting, and the degree to which an individual can be authentic in these relationships

Support: An individual's belief that there are others to whom he or she can turn to when dealing with adversity

Comfort: Degree to which an individual can be in the presence of others without discomfort or anxiety

Tolerance: An individual's belief the he or she can safely express differences within a relationship

Emotional Reactivity: The Emotional Reactivity composite is composite of three personal characteristics: Sensitivity, Recovery, and Impairment

Sensitivity: Threshold for reaction and the intensity of the reaction

Recovery: Ability to bounce back from emotional arousal or disturbance

Impairment: Degree to which the individual is able to maintain an emotional equilibrium when aroused

Resource Index: The combination of the Sense of Mastery and Sense of Relatedness Composites

Vulnerability Index: The discrepancy between results of the Emotional Reactivity Composite and the score obtained on the Resource Index