

IMPACT OF TRAUMA-INFORMED CARE PROFESSIONAL DEVELOPMENT ON
SCHOOL PERSONNEL PERCEPTIONS OF KNOWLEDGE, DISPOSITIONS, AND
BEHAVIORS TOWARD TRAUMATIZED STUDENTS

Kelly L. Goodwin-Glick

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Committee:

Rachel A. Reinhart, Advisor

Dawn L. Anderson
Graduate Faculty Representative

Joyce P. Litten

Paul A. Johnson

Todd Cramer

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ABSTRACT

Rachel A. Reinhart, Advisor

Childhood trauma is prevalent and has a profound impact on student learning, behaviors, social-emotional well-being (Perfect et al., 2016), physical health, relationships (Tishelman et al., 2010), and brain architecture (Perry, 2001). Trauma-informed care professional development (PD) within the school setting is a relatively new notion for school reform efforts (Craig, 2016); therefore, this study adds to the nascent literature.

The purpose of this quasi-experimental retrospective study was to determine the extent to which employees perceived that their knowledge, dispositions, and behaviors toward traumatized students improved as a result of participation in a traditional and transformational PD. Certified and classified employees ($n = 552$) of one large, urban school district in Northwest Ohio completed the Trauma-Informed Care Dispositions Survey (TIC-DS). The TIC-DS contains 52 closed-form and one open-ended survey item and is measured on a Likert scale. Survey items were selected from four existing instruments and modified into a retrospective pre/posttest design. The TIC-DS is a valid and reliable instrument: Cronbach's alpha for the TIC-DS was found to be .960 on the retrospective pretest responses and .955 on the posttest responses, which suggests strong internal reliability.

Data were analyzed using t -test of paired samples, t -test of independent samples, and ANOVA. Three theoretical frameworks (trauma theory, transformational learning, and dispositions) were used as a lens to interpret study outcomes. Data analyses revealed the following broad conclusions as a result of the TIC PD: 1) Significant gains in all seven subscales. 2) Greater gains in Knowledge than Dispositions and Behaviors. 3) Females reported

significantly greater gains in Student-Centeredness and Total Dispositions than males. 4) Elementary (K-5) educators had significantly greater gains in five subscales and Total Dispositions than secondary (6-12) educators. 5) Employee classification and years of employment did not generate significant differences in subscale gains; however, subscale gains were larger for classified than certified in all subscales except Empathetic Concern. 6) Classified employee gains in learning, dispositions, and behavior were greater for the transformational and traditional professional developments than participating in one or the other; therefore, employees may have greater gains from attending both types of sessions.

This dissertation is dedicated to

Ron and Sharon Goodwin, my loving parents.

To Todd, my devoted husband, PeopleSoft guru, and first mate.

To my children and fellow BGSU falcons, son Stefan and daughter Maren.

This journey would not have been possible without their enduring patience, support,
and encouragement.

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According to John Maxwell, “The pessimist complains about the wind. The optimist expects it to change. The leader adjusts the sails.” This quote captures my dissertation experience. There were moments of self-doubt. Moments of confidence. Finally, an opportunity to acknowledge the leadership of others who supported me as I adjusted my sails along the way.

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CHAPTER I. INTRODUCTION

Background of the Problem

Given the high frequency of children exposed to trauma and the detrimental impact of such exposure on school performance, it is critical that educators become more familiar with symptoms of traumatic stress and begin to create school environments that optimally support trauma-exposed children. (Simonich et al., 2015, p. 272)

School employees throughout the United States interact with traumatized students on a daily basis (Jaycox, Morse, Tanielian, & Stein, 2006; Overstreet & Chafouleas, 2016). Blaustein (2013) likens the prevalence of trauma to a malicious and complex virus that has the potential to impair nutrition, brain development, cognitive functioning, emotional regulation, physical health, and interpersonal as well as intrapersonal skills, which in turn places the individual at risk for an array of long-term illnesses and symptomatology. Childhood trauma exists and the manner in which school personnel respond to it has the potential to positively or negatively impact traumatized students (Barth, 2008; Oehlberg, 2008). “Without question, our school experiences help shape who we ultimately become” (Blaustein, 2013, p. 19). Based on the pervasiveness of traumatic experiences, school leaders must also recognize that employees may have faced childhood (Blaustein, 2013) or adulthood traumas, such as interpersonal violence, military experiences, crime, or natural disasters (Evans & Coccoma, 2014).

According to Perry (2001), more than five million children per year are exposed to some form of stress inducing traumatic experience. Globally, violence against children is often caused by someone the child knows, a caregiver in the home, or at school (Evans & Coccoma, 2014). In essence, it is an epidemic that has the potential to impact any student, even more so for students facing poverty, violence, homelessness, prejudice (Blaustein, 2013), or intellectual or

developmental disabilities (Keesler, 2016). Perfect, Turley, Carlson, Yohanna, and Saint Gilles (2016) estimate that two-thirds of students experience a minimum of one traumatic experience by age 17. A nationwide survey conducted in 2002 to 2003 across genders, race, and an extensive array of traumas, determined that traumatized children experienced an average of three traumas (Finkelhor, Ormrod, Turner, & Hamby, 2005). Moreover, Finkelhor et al. (2005) contend that research underestimates the prevalence and full impact of trauma due to the limited assessment of the numerous forms of trauma. Fragmented research diminishes informed practice, such as the identification of a traumatized student or implementation of optimal interventions, research, and policy (Finkelhor et al., 2005).

In addition to the well-documented research on the prevalence and detrimental impact of trauma on students, a California class-action lawsuit (i.e., *Peter P. et al. v. Compton Unified School District et al.*, 2015) filed by five students and three teachers received national attention. The plaintiffs alleged that complex trauma may cause mental health disorders and impaired learning; therefore, traumatized students deserved the same supports and programming as disabled students under Title II of the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act (Ahlers, Stanick, & Machek, 2016). According to Ahlers et al. (2016) traumatized students may meet the criteria for an emotional disturbance (ED); therefore, the plaintiffs could have invoked the Individuals with Disability Education Act (IDEA). Additionally, the plaintiffs claimed that the district failed to provide support and resources for employees who were negatively impacted by the stress caused by interacting with traumatized students (Ahlers et al., 2016). Punishments (e.g., suspension or expulsion) were the typical response to trauma-induced behaviors, and the district failed to provide mandatory and on-going trauma training for school employees (Turner, 2015).

According to Ahlers, et al. (2016), there are potential benefits of the lawsuit: increased awareness of the need for trauma-informed practices within school settings; trauma training for all adults; implementation of a three tiered school-wide approach to address the impact of trauma on students and secondary trauma on educators and classmates; implementation of school-wide positive behavior supports (SWPBS); and the use of screening tools to identify traumatized students in need of individualized treatment. Although Judge Michael W. Fitzgerald denied the preliminary injunction to mandate training on August 20, 2015, “the Court simply acknowledges the allegations that exposure to traumatic events might cause physical or mental impairments that could be cognizable as disabilities under the two Acts” (*Peter P. et al. v. Compton Unified School District, et al.*, 2015, p. 1).

The spotlight on President Obama’s signing of the 2015 Every Student Succeeds Act (ESSA), a reauthorization of the 2002 ESEA No Child Left Behind Act, underscored the need to expand educational programming to ensure the educational success of all students. Section 4018 of the Act, Activities to Support Safe and Healthy Students, specifies the need for evidence-based high-quality PD for all levels of school personnel on trauma-informed practices (114th Congress of the United States of America, 2015). Additionally, the governor of Oregon signed House Bill 4002 into law on March 29, 2016. The bill requires educational entities to address chronic truancy with a trauma-informed approach, fund trauma-informed care pilot programs in schools, and provide training for classified and certified staff using the Substance Abuse and Mental Health Services Administration’s (SAMHSA) model of a trauma-informed approach (House Bill 4002, 2016). Moreover, the bill acknowledges trauma faced by school employees, in addition to students and their families, and compels school leaders to incorporate TIC into school policies and procedures.

Media also bring attention to traumatic experiences by reporting on school and community violence, cases of sexual abuse by priests and other clergymen, and the outcomes of events such as September 11, 2001 (i.e., 9/11) and Hurricane Katrina (Tishelman, Haney, Greenwald O'Brien, & Blaustein, 2010). Moreover, Washington panelists, consisting of government officials and educators, agreed that teachers are not prepared to support students dealing with trauma (Mader, 2015).

Trauma is defined as the long-term negative effects on an individual's well-being that results from exposure to a single event, multiple experiences, or conditions that produce a strong physical, emotional, or stress response (SAMHSA, 2014). Traumatized students may experience a range of emotions including increased anxiety, depression, and feelings of fear and helplessness (Jaycox et al., 2006). Human suffering reduces feelings of safety and is only restored if students feel they are members of a caring community (Beck, 1994). Student feelings of safety at school are dependent on factors such as level of trust, respect, and environmental predictability, caring relationships with adults, and feelings of acceptance and support (Willis, 2006). Neuroimaging studies have shown that these factors affect the transference and storage of information in the brain (i.e., learning and memory) and higher-order thinking (Willis, 2006). Longitudinal studies indicate that positive student perceptions of safety and caregiving were associated with higher scores on most cognitive achievement assessments (Ratner et al., 2006).

Impact of Trauma on Education

Trauma has a profound impact on a student's performance in the school setting (Phifer & Hull, 2016; Tishelman et al., 2010). "Children's trauma-related mental health problems are widespread, largely untreated and constitute significant barriers to academic achievement and attainment" (Aber, Brown, Jones, Berg, & Torrente, 2011, p. 411). Childhood trauma negatively

impacts self-regulation skills, perceptions of safety, relationships, academic aptitude, and physical health (Tishelman et al., 2010). The need for educators to understand the connections between decreased learning, academic achievement, and childhood mental health problems caused by trauma is a foremost concern for school leaders (Wong, 2008).

Educators receive little professional development on how trauma impacts students and how to provide supports so that students can learn (Ko et al., 2008). “For educators, unaddressed student trauma is a major contributor to frustration, low job satisfaction, and burnout” (Blodgett, 2016, p. x). The challenge for school employees is to fulfill the requirements of their job while remaining conscious and supportive of the physical, psychological, and academic needs of the whole student (Sitler, 2009). For schools to achieve their mission, educators must collectively acknowledge the prevalence and impact of trauma on academic achievement and provide differentiated supports to traumatized students (Ko et al., 2008).

Educators are charged with the difficult task of closing the achievement gap in order for all students to achieve academic success regardless of racial or ethnic background (Ukpokodu, 2007), disability, economic status, or English proficiency (Futrell, Gomez, & Bedden, 2003). Wong (2008) acknowledged the gap in academic achievement between traumatized students and their peers. The added impact of the adverse effects of trauma may explain why economically disadvantaged students and minorities, at least in part, continue to underperform even after decades of interventions to close the achievement gap (Wong, 2008). Trauma-informed practices have the potential to improve student capabilities in addition to addressing the unyielding achievement gap problem (Craig, 2016; Phifer & Hull, 2016).

The impact of childhood trauma on adult physical and mental health also has major implications for the financial well-being of our nation (Simonich et al., 2015). The issue of

childhood trauma captured the attention of researchers and physicians following the Adverse Childhood Experience Study (ACE Study) conducted by Felitti and Anda (2010). This study focused on adults who retrospectively reported their experiences with childhood trauma. The findings of the ACE Study reflect profound implications for the long-term impact of childhood maltreatment on adult health and well-being if left unaddressed. Over 17,000 adult patients of Kaiser Permanente's Health Appraisal Clinic in San Diego, California voluntarily participated in the health screening study between 1995 and 1997 (Felitti & Anda, 2010).

The Centers for Disease Control and Prevention analyzed the ACE Study survey results to determine the number of adverse childhood experiences (ACE) reported by adults. An adult's ACE score indicated the number of categories of trauma experienced during childhood not the number of incidents. The ACE Study indicated a direct relationship between the number of ACE and the risk for health problems in adulthood: As the number of ACE increased, the amount of stress increased, resulting in adverse effects and risk for long-term physical and mental health problems (Felitti & Anda, 2010), and an association between adulthood depression, antidepressant use, and suicide attempts (Evans & Coccoma, 2014). "The ACE study revealed the economic costs of untreated trauma-related alcohol and drug abuse alone were estimated at \$161 billion in 2000. The human costs are incalculable" (National Council for Behavioral Health, 2015, para. 2).

A majority of the 1995 to 1997 ACE Study participants experienced childhood trauma (i.e., 64% of 17,337 experienced one or more ACE), just as current students will either become productive members of society or potentially suffer the long-term effects of childhood trauma. Furthermore, approximately 80% of the participants were white, 75% completed some college coursework or earned a college degree, and a little more than half were female (Felitti & Anda,

2010). Researchers now know that trauma impacts individuals regardless of level of education, socioeconomic status, religion, race, or culture (Souers & Hall, 2016).

The potential for long-term problems during school and beyond is probable if childhood trauma is not identified or treated (Bell, Limberg, & Robinson III, 2013). Similar to the varied impact of a viral illness, the aftermath of childhood trauma may be undetectable (i.e., internalizing behaviors) or overtly evident (i.e., externalizing behaviors), as some students are unaffected and others vulnerable to the impact of trauma (Blaustein, 2013). Due to the prevalence and impact of childhood trauma on students, as well as the possibility that any student may be experiencing trauma unbeknownst to the employee, it is imperative that school personnel understand how to positively respond to student behaviors and build relationships that promote feelings of safety, trust, empowerment, and connection (Black, 2015; Vicario & Gentile, 2015). Moreover, employees need the knowhow to implement interventions that overcome the symptoms of trauma to enhance learning, executive functioning, emotional regulation, and resiliency (Black, 2015; Vicario & Gentile, 2015).

Educator Response to Student Trauma

The impact of trauma on student well-being is one of many reasons school personnel, regardless of job classification, should understand the prevalence of trauma, the impact trauma has on learning and behaviors, and the benefits of using a trauma-informed approach when interacting with students (Dorado, Martinez, McArthur, & Leibovitz, 2016). Every employee has the potential to be a first-responder to a student in need. Whether in a classroom, school bus, playground, hallways, or cafeteria, every employee needs to manage student emotions and behaviors in a manner that does not retraumatize and encourages physical, social-emotional, and academic safety (Cole, Eisner, Gregory, & Ristuccia, 2013). Predictable environments help

students feel safe so that they can focus on academics and learning (Willis, 2006).

As feelings of stress, fear, or threat increase, perceptions of safety decrease. Triggers (e.g., traumatic memories, unmet expectations, rigid preconceived ideas, or real or perceived threats), whether rational or irrational, may cause the brain to release chemicals into the body (Souers & Hall, 2016). Furthermore, the lack of awareness of sensory triggers, such as specific smells or sounds, by students and staff may result in unintentional harm (Curtin, 2008). As stress hormones accumulate, traumatic stress may cause students to exhibit behaviors that may be perceived by educators as misbehaviors (e.g., withdraw or disruptive behaviors) (Oehlberg, 2008). When a trauma framework is not used to assess behavior, critical information is missed regarding the causes of the behavior, prompting educators to implement interventions for the symptoms without treating the root cause of the problem (Gabowitz, Zucker, & Cook, 2008).

Lacking a trauma-informed lens, educators may misunderstand and punish students for misbehaviors, inadvertently causing retraumatization (Phifer & Hull, 2016), rather than compassionately addressing the real issues beneath the behaviors and providing students with appropriate and logical consequences (Cole et al., 2013). Although educators are caring by nature, they may make decisions and respond to students based on feeling disrespected or fears of potential outcomes of student misbehaviors (Souers & Hall, 2016). Furthermore, caring educators may fear for students' well-being, feel discouraged, overwhelmed, and experience compassion fatigue; therefore, educators may be disinclined to interact with traumatized students and hold lower expectations for academic achievement (Souers & Hall, 2016).

Educator response to traumatized students and their behaviors may be examined by school leaders through the ethics of critique and care and may even be determined to be unethical (Starratt, 1991); therefore, educator dispositions may need to undergo transformational change

(Oehlberg, 2008). According to Smith and Sharbek (2013), dispositions are so important that they should be included in educator ethical standards. Furthermore, the standards should include beliefs and behaviors that demonstrate respect for the dignity and worth of students, recognizing that students achieve their fullest potential within the context of caring, trusting, and respectful relationships. Possessing a caring and empathetic disposition is critical to the success of an educator; empathy (i.e., awareness and sensitivity to another person's thoughts and feelings) is the outcome of a caring disposition (Smith & Sharbek, 2013).

Although teachers may be aware that students have diverse life experiences and face problems at school and home, they may not know that a student has experienced trauma or how trauma impacts the ability to learn (Curtin, 2008; Souers & Hall, 2016). Few universities teach pre-service educators how to identify and instruct traumatized students (Wong, 2008). The dearth of pre-service instruction on how trauma impacts students, trauma-sensitive instruction, and how to manage the social-emotional welfare of students, forces teachers to learn how to appropriately and calmly respond to difficult student behaviors while on the job (Phifer & Hull, 2016). Teachers reported that "being thrown into the deep end was 'not the best way' to acquire the necessary skills" (Alisic, 2012, p. 55).

Organizations lack awareness of trauma faced by the individuals they serve, resulting in a failure to refer individuals for appropriate services or unintentionally retraumatizing individuals through routine organizational practices (Harris & Falot, 2001). As a result of schools accepting responsibility for their role in addressing student emotional and behavioral needs, teachers have expressed the need for trauma training (Baweja et al., 2016). Although some experienced elementary teachers reported feeling comfortable teaching traumatized children, a qualitative study determined that teachers struggled with balancing the needs of traumatized students, other

learners, and their own emotional needs (i.e., secondary trauma); were unsure about their role and responsibilities compared to a counselor; or how to behave, talk to, or respond to traumatized students; therefore, they needed more information and skills to provide the best care possible (Alisic, 2012). Jones (2013) concluded that the support of caring administrators and colleagues could reduce the likelihood of teachers experiencing secondary trauma from helping traumatized students.

Professional Development on Student Trauma

Few school initiatives address comprehensive and on-going trauma PD for all staff members (Wong, 2008). The literature revealed only one study regarding trauma training for classroom-based classified employees (Anderson, Blitz, & Saastamoine, 2015). Moreover, the literature failed to indicate that all categories of classified employees received trauma training. Phifer, Hull (2016) and Oehlberg (2008) assert that educators need thorough trauma-informed PD to understand the impact of trauma on students. Furthermore, high-quality PD does not necessarily lead to meaningful change in educator practice (Johnson, 2006), or improved student academic achievement (Fishman, Marx, Best, & Tal, 2003). The focus on test scores has caused educators to miss important information that impacts learning, behaviors, and potential drop-outs (Oehlberg, 2008). Traditional instructional strategies have been implemented to address learning and behavior problems with little success in schools, focusing on the symptoms of trauma rather than addressing the main reason for the learning and behavioral problems (Oehlberg, 2008). “The field of education, from pre-school through teacher training, cannot ignore the issue of traumatic stress if schools are to meet the expectations of parents, community, and the nation” (Oehlberg, 2008, p. 12); therefore, organizations such as SAMHSA (2015d) advocate for the implementation of a trauma-informed care (TIC) framework in schools.

A TIC framework is based on understanding the symptoms and impact of trauma, avoiding retraumatization, the use of a trauma-informed approach that emphasizes the physical and psychological safety of organizational stakeholders, and supports to reestablish a sense of empowerment and control (SAMHSA, 2014). Similarly, the ethic of care focuses on human dignity, empowerment, and quality of life (Starratt, 1991). A TIC approach shifts the lens used to understand and respond to students; therefore, it requires a transformation of old assumptions regarding students and their behaviors (Simonich et al., 2015). In addition, TIC requires a change process focused on healing, and acknowledges the connection between health, societal issues and trauma (Bowen & Murshid, 2016). Implementing TIC requires a comprehensive plan, a needs assessment, funding, PD, and a universal transformation in thinking, policy, and practices in order to sustain change (Phifer & Hull, 2016) within the school culture (Overstreet & Chafouleas, 2016). Change of this magnitude is challenging due to a lack of time, resources, the perception that schools frequently jump from one initiative to another (Phifer & Hull, 2016), and a changing workforce (Overstreet & Chafouleas, 2016). Being trauma-informed is a mindset, a shift in the understanding of how trauma impacts brain development and subsequently student learning and behaviors (Phifer & Hull, 2016).

TIC is a universal approach that applies to every student and every staff member because school personnel may be unaware of the trauma experienced by students or their colleagues (Dorado et al., 2016) due to the confidentiality of sensitive information (Tishelman et al., 2010). A trauma-informed organization is not responsible for providing trauma-specific services; however, a trauma-informed organization must be capable of serving the needs of all individuals in a caring and welcoming manner (Harris & Fallot, 2001). When PD is provided, school employees are better prepared to utilize a trauma-informed lens to provide appropriate academic

and social-emotional supports to interact with and assist students (Phifer & Hull, 2016). Educators must shift the lens they use to interpret student behaviors; therefore, they must undergo transformational learning to change former meaning perspectives and dispositions. In addition to a TIC lens, school leaders can utilize an ethic of critique and care lens to evaluate the school culture, policies, and practices (Starratt, 1991).

Implementing a TIC framework requires a cultural change; often founded on subconscious assumptions and beliefs, such as beliefs surrounding the motives for student misbehaviors and punitive consequences, and a rejection of the idea that trauma may be a fundamental cause of school problems (Craig, 2016). Beliefs, whether conscious or unconscious, trigger employee behaviors toward traumatized students (Craig, 2016). Educator beliefs build slowly over time based on experiences and “are often not consciously held” (Schoenfeld, 2011, p. 464). Change involves loss, giving up old ways of doing things, producing feelings of anxiety, confusion, or frustration; therefore, it is difficult (Bloom & Farragher, 2013). Transparent and honest communication is necessary to establish safety, which is paramount for change to occur (Bloom & Farragher, 2013). School leaders must manage resistance to change; change will be slow and unstable sans a collective ownership of TIC (Craig, 2016).

The critical self-reflection of educators to promote the foundational change in dispositions can be examined through the lens of transformational learning theory. For the purposes of this study, all employees within the school setting are considered educators. The dispositions of all employees (e.g., school administrators, teachers, and other certified and classified employees) are critical to achieving the principal mission of schools; namely, equal access to a good education for all students in a safe and supporting environment.

Rationale

School personnel must be aware of: the lens they use to form opinions about students, the effect that lens has on their interpersonal interactions, and the impact on providing an equitable education for all students. Moreover, educator behaviors and responses to incidents may favor some students while disfavoring others (Newberry & Davis, 2008), as well impact their relationships with students (Souers & Hall, 2016). A lack of self-awareness perpetuates the practice of holding biased and stereotypical views of student capabilities and behaviors. Research conducted by Newberry and Davis (2008) reveals implications related to the importance of providing opportunities for educators to reflect on their beliefs about relationships; how they should respond to challenging student behaviors; the emotional work and vulnerability needed to establish caring relationships; and how positive feelings for students with similar characteristics impacts educator behaviors which may afford some students advantages over others. School reform efforts and initiatives largely overlook educator understanding of the impact of trauma on student physical and social-emotional well-being, behaviors, and learning within the school setting, as well as the development of trauma-sensitive behaviors to address the unique needs of all students (Craig, 2016).

Currently, there is a gap in the literature concerning the impact of TIC PD on school employee dispositions. This study will add to a nascent body of literature regarding the outcomes of TIC PD. According to Overstreet and Chafouleas (2016), the outcomes of TIC PD have not been wholly evaluated in a school setting or within the scientific literature. This study examined the perceived impact of TIC PD on school personnel knowledge, dispositions, and behaviors toward traumatized students, which has significant implications for academic achievement and student-well-being.

A majority of studies assess student perceptions of teacher interpersonal behaviors and the impact on relationships, rather than teacher perceptions of teacher interpersonal behaviors and the impact on relationships (Brok & Levy, 2005; Newberry & Davis, 2008). By assessing employee perceptions of the impact of trauma training on knowledge, dispositions, and behaviors toward traumatized students, school leaders may be better equipped to provide differentiated PD that increases the likelihood of achieving the benefits of a trauma-informed school system. Due to the impact of trauma on brain development, emotions, and behaviors, traumatized students may not be able to learn or achieve academic success if adults within a school setting lack the knowledge and skills to provide appropriate supports (Cole et al., 2005).

A thorough review of the literature failed to produce a quantitative study on the outcomes of TIC PD for all classified and certified employees within a K-12 public school setting. However, a few studies have been published that may substantiate the relevance of this study. For example, Baker, Brown, Wilcox, Overstreet, and Arora (2016) conducted a quantitative study to evaluate the attitudes of human service and certified school employees on TIC implementation. Baker et al. noted the scarcity of instruments to assess TIC and the lack of a clear operational definition as challenges to research. Dorado et al. (2016) utilized a retrospective pre-post survey design to assess the learning outcomes of certified employees within four San Francisco schools who participated in the Healthy Environments and Response to Trauma in Schools (HEARTS) program. In addition, Simonich et al. (2015) briefly described the survey results following North Dakota's Treatment Collaborative For Traumatized Youth (TCTY) trauma training in a public school. Lastly, a qualitative study conducted by Jones (2013) reported no prior studies regarding teacher understanding and response to trauma PD and suggested further studies be conducted to determine whether trauma PD would be most

beneficial at the elementary or secondary level. Moreover, the researcher concluded that trauma PD had the potential to positively impact social change by providing teachers with the skills to support traumatized students. Teacher support may help students avoid misbehaviors and increase their ability to focus and retain information within the classroom so that students can reach their full learning potential (Jones, 2013).

Purpose of the Study

The purpose of this quasi-experimental retrospective study was to examine the extent to which employees report that their knowledge of TIC concepts, dispositions (empathetic concern, perspective taking, interpersonal relationships, sense of respect and trust, and student-centered) and behaviors toward traumatized students improve as a result of participation in the PD, and if there were significant gains in PD outcomes based on demographics of participants (gender, grade level, employee classification, number of years of employment in schools, and sessions attended). The independent variables studied were participation in the TIC PD and demographic variables (gender, grade level, employee classification, number of years of employment in schools, and sessions attended). The independent variables were evaluated by comparing retrospective (post/pre) survey data obtained from the participants following the completion of the PD. The dependent variables studied were trauma-related knowledge, dispositions, and behaviors as measured by the Trauma-Informed Care Dispositions Survey (TIC-DS). In summary, the study examined whether employee perceptions of knowledge, dispositions, and behaviors toward students experiencing trauma significantly improved as a result of participation in the PD.

Research Questions

This study addressed the following research questions:

1. Do employees report that knowledge of TIC concepts improve as a result of participating in the TIC PD?
2. Do employees report that their dispositions (empathetic concern, perspective taking, interpersonal relationships, sense of respect and trust, and student-centered) and behaviors improve as a result of participating in the TIC PD?
3. Are there significant gains in PD outcomes based on demographic data (gender, grade level, employee classification, number of years of employment in schools, and sessions attended)?

Theoretical Frameworks

Three theoretical frameworks provide the foundation for this study: trauma theory, transformational learning, and dispositions. Trauma theory was founded on the consilience of large bodies of new knowledge within scientific literature and human services regarding trauma and the negative impact of traumatic and toxic stress on human development and attachment relationships (Bloom & Farragher, 2013). The biopsychosocial understanding of what happens to people exposed to overwhelming events and the aftermath of the stress response informs the trauma-informed approach used to help traumatized individuals recover and become resilient.

A fundamental notion of trauma theory is the understanding that negative outcomes (e.g., difficulties with cognition, communication, and authority; lack of safety, trust, and an understanding of fairness; inability to manage emotions, mourn, or anticipate the future) are caused by traumatic harm, not a lack of character, morality or intentional malice (Bloom & Farragher, 2013; Craig, 2016). This paradigm shift, or mindset change, constitutes a major step toward educators overcoming former beliefs and establishing positive relationships with traumatized students (Craig, 2016). Moreover, the theory recognizes that trauma is acutely damaging to the normal development of the brain and body if it occurs during childhood, and is

associated with diminished adult mental and physical health (Bloom & Farragher, 2013).

The lens of transformational learning theory can be used to examine the critical self-reflection of educators to promote a foundational change in dispositions (i.e., a framework consisting of feelings, attitudes, beliefs, and behaviors) toward traumatized students (Mezirow, 1978). Learning new knowledge and skills requires perseverance when faced with challenges, such as those presented by traumatized students; therefore, people must possess a belief in one's self-efficacy (Bandura, 1989). Deep-seated change in beliefs transforms the lens by which adults understand traumatized students and their behaviors. This is an example of the type of adult transformational learning that has the potential to positively impact educator dispositions, adult-student interactions, and relationships.

The work of Mezirow and others can provide a rationale for the use of transformational learning to change classified and certified employee knowledge, dispositions, and behaviors toward traumatized students. Mezirow (1978) was particularly interested in a form of adult learning that involved reflection on how we relive our personal histories and “become critically aware of the cultural and psychological assumptions that have influenced the way we see ourselves and our relationships and the way we pattern our lives” (p. 101). Mezirow (1978) referred to this as “learning about meaning perspectives,” resulting in a “personal paradigm” to better understand our relationships with others and ourselves (p. 101).

A meaning perspective can be thought of as a frame of reference, consisting of a habit of mind and point of view, which utilizes three parts of the mind (i.e., emotions, thought, and the desire to take action on emotions or thoughts) to filter sensory experiences (Merriam, Caffarella, & Baumgartner, 2007). Individuals are typically more aware of their points of view; therefore, are more readily able to alter their views as a result of receiving feedback from others regarding

the social acceptance or rejection of the view (Merriam et al., 2007). Transformational learning occurs when there is a change in a point of view, perception, belief, or habit of mind (Merriam et al., 2007). As dispositions are learned outcomes of our experiences and naturally develop within caring and respectful social interactions, transforming a habit of mind, or disposition, requires experiences that involve the whole person (i.e., the physical body, mind, and spirit) (Usher, 2004). According to Usher (2004), providing a variety of inspirational activities that involve exposure to relevant information, facilitate participation, and provide time to think, feel, and make personal connections encourage dispositional growth.

Dispositions have been described in the literature for more than 20 years and are “environmentally sensitive, meaning they are acquired, supported, or weakened by interactive experiences in an environment with significant adults and peers” (Da Ros-Voseles & Moss, 2007, p. 90). For this study, adult disposition will generally be defined as the feelings, attitudes, beliefs, and preferences that result in the tendency to respond or behave in specific ways (Eberly, Rand, & O’Connor, 2007). Wasicsko, Callahan, and Wirtz (2004) define dispositions as the third component of an effective educator: “anything not falling in the areas of knowledge or skills” (p. 2), including characteristics such as tolerance of differences, open-mindedness, patience, and perceptions (i.e., beliefs, such as all students can learn, self-concept, and values). M. Wasicsko further defined dispositions as how adults perceive themselves, how adults perceive others, and whether their frame of reference is people and relationship-oriented or thing-oriented (personal communication, February 25, 2015).

Significance of the Study

Envision the possibilities if every student in schools throughout the United States felt safe, respected, and cared for by every employee. Imagine a trauma-informed workforce that

understands the unique needs of every child. With rapid identification, effective interventions, and care, the negative impact of trauma can be reduced and possibly eradicated, in the hope of forgoing a cascade of physical and financial health problems, disability and possibly early death (Blaustein, 2013). Researchers now know that the brain of a traumatized child can heal.

According to Blodgett (2016), the greatest factor in the healing process is relationships. “Whole-school efforts to become trauma informed have the potential to build positive outcomes, not just for trauma-impacted youth, but for all students, as well as the professionals whose task is to guide, teach, and care for them” (Blaustein, 2013, p. 19).

In addition to academic achievement, Hattie (2012) asserts that schools exist to cultivate future citizens who respect, care for, and consider what is good for themselves and others; to encourage interpersonal intelligence and celebration of diversity; the ability to understand others’ perspectives, biases, and limitations; and to knowingly respond to stereotypes and narrow-mindedness. Schools perform a vital role within communities above and beyond providing an education: Schools are involved in meeting psychological and behavioral needs of students and their families (Jaycox et al., 2006). Schools have been used as a central location for mental health services, dissemination of resources and services to families in need, and are often the first organization to reopen after tragedy strikes (Jaycox et al., 2006; Wong, 2008). In fact, children with mental health disorders are more likely to receive services within a school setting than a mental health setting (Garland et al., 2001; Ko et al., 2008). Schools are a logical location to begin the process of providing mental health supports, although a majority schools do not systematically evaluate students for trauma, provide counseling, or referrals for students experiencing traumatic stress (Ko et al., 2008).

According to Oehlberg (2008), becoming a trauma-informed school benefits staff and

students in many ways (see Table 1). Trauma-informed schools may improve a student's capacity to cope with the outcomes of trauma so that they thrive rather than survive; therefore, a TIC approach is a key environmental component in determining the potential progression of traumatic experiences on learning and development (Phifer & Hull, 2016).

Table 1

Benefits of Trauma-Informed Care in Schools

Improved / Increased	Decreased
Relationships	Reports of bullying and harassment
Climate of respect and empathy	High school dropouts
Perceptions of emotional and physical safety	School consequences such as suspensions
Teacher retention and satisfaction	Absences or truancy
Test scores and academic achievement	Special education services
Graduation rates	Referrals to the office due to disruptions

This study is significant because TIC PD within the school setting, largely founded on recent advances in neuroscience, is a relatively new notion for school reform efforts (Craig, 2016). Evans and Coccoma (2014) consider trauma-informed care to be an “emerging concept” that lacks uniform implementation in the U.S., and is largely contingent on mental health workers. Employees must be knowledgeable to develop and sustain a TIC organization (Ko et al., 2008). Overstreet and Chafouleas (2016) identified 17 states that have addressed TIC to some extent within a few schools, school districts, or statewide (e.g., Massachusetts, Washington, and Wisconsin). Although a few programs have been developed to reduce the emotional and behavioral problems traumatized students' display within the confines of a school, many have yet to be evaluated for effectiveness or publicized to school administrators (Jaycox et al., 2006). School personnel cannot respond appropriately to student needs if they do not have an understanding of the potential impact of trauma and how to identify related behavioral symptoms (Perfect et al., 2016). Perfect et al. (2016) advocate for school-based research on

effective methods to expand school personnel knowledge and transform beliefs on the potential school-related outcomes of trauma.

According to Blodgett and Dorado (2016), “building leadership is rarely addressed in a systematic manner” when it comes to trauma-informed care implementation (p. 31). However, Cole et al. (2013) acknowledged the importance the school leader’s role during TIC implementation. Leaders must actively facilitate whole-school reform, participate in and prioritize the initiative, seamlessly merge TIC into existing initiatives, and sustain a change in practices (Blodgett & Dorado, 2016). To accomplish this mission, there must be an “independent focus of support to help leadership integrate trauma-informed practice in all aspects of how they function as transformational leaders” (Blodgett & Dorado, 2016, p. 31).

The outcomes of the study may compel school leaders to use a trauma-informed lens to assess and transform school policies and practices, employee dispositions toward students, and school climate and culture. “Organizational theorists have long reported that paying attention to culture is the most important action that a leader can perform” (Macneil, Prater, & Busch, 2009, p. 73). School leaders influence the interrelated concepts of climate (i.e., organizational health and perceptions of behavior) and culture (i.e., values and norms) by focusing on learning and fostering positive relationships between all school stakeholders (Macneil et al.). In addition, this study may provide school leaders with the justification and motivation to implement a district-wide TIC framework.

Although Chafouleas, Johnson, Overstreet, and Santos (2016) acknowledged recent efforts to expand educator capacity and commitment to address childhood trauma in schools, “controlled studies have yet demonstrated whether professional development and training and organizational support build consensus or competence in trauma-informed approaches” (p. 159).

Furthermore, Chafouleas et al. (2016) advocate for research and the development of instruments to assess PD outcomes, including gains in employee knowledge, attitudes, and the use of trauma-informed approaches to improve school safety, climate, behaviors and academic performance. Additionally, Baker et al. (2016) assert that there is a strong need for a valid, reliable, and economical assessment to quantitatively measure school employee attitudes toward traumatized students and the outcomes of TIC implementation.

The field is primed to shift from the rich, if diverse, foundational theoretical and conceptual thinking to the data-driven analysis of TIC and its effects. However, this forward movement is blocked by the absence of psychometrically strong instruments to evaluate TIC. (Baker et al., 2016, p. 63)

The survey used for the Baker et al. study combined an assessment of TIC knowledge acquired during the PD along with employee attitudes, a component of dispositions.

Definitions of Key Terms

Several terms and phrases utilized within the education and mental health fields are necessary to define for this study.

- Adverse childhood experiences: Abuse, neglect, dysfunctions in the home, and exposure to other traumatic stressors during childhood (Centers for Disease Control and Prevention [CDC], 2016).
- Amygdala: A component of the limbic system responsible for interpreting sensory information and recognizing potential threats (Willis, 2006).
- Bias: The propensity to believe that some viewpoints, people, or things are better than others, a prejudice, resulting in oppression or unjust treatment (Merriam-Webster, 2015).
- Biopsychosocial: The “biological, psychological, and social aspects in contrast to the

strictly biomedical aspects of disease” (Merriam-Webster, 2015).

- Certified employees: Faculty or staff who hold a certificate, license or permit issued under section 3301.071 or Chapter 3319 of the Ohio Revised Code (LAW Writer: Ohio Laws and Rules, 2015). For the purposes of this study, certified employees include administrators, teachers, counselors, licensed interpreters, school psychologists and speech therapists.
- Child Protective Services Agency: CPS is an official state agency responsible for receiving and responding to reported cases of suspected child abuse and neglect. The agency determines the validity of the reports and provides protective services to the children and their families (U.S. Department of Health and Human Services, 2013).
- Classified employees: The National Education Association (2015) refers to classified employees as an “Educational Support Professional”. Furthermore, classified employees are assigned to nonteaching positions and do not require a certificate, license, or permit in accordance with section 3317.12 of the Ohio Revised Code (LAW Writer: Ohio Laws and Rules, 2015). For the purposes of this study, classified employees include bus drivers, secretaries, classroom and bus aides, lunch and recess monitors, custodians, maintenance, non-licensed librarians, and food service employees.
- Complex trauma: Gabowitz et al. (2008) define complex trauma as chronic exposure to traumatizing life events, often caused by caregivers, and therefore may be interpersonal in nature, impacting adolescents’ development and long-term physical and mental health.
- Confidentiality: A term used in schools to explain the type of information that school counselors are required by law to keep private or report to parents, CPS or the police (i.e., harm to self or others, and abuse or neglect) (Hansen, 2009). Due to the professional

promise to respect the student's right to privacy, sensitive information regarding trauma may not be shared with employees in the building.

- **Educator:** Merriam-Webster (2015) defines an educator as school personnel in the field of education, including but not limited to teachers and administrators. For the purposes of this study, an educator is defined as classified and certified staff members who may influence the education of a student.
- **Empathy:** The emotional response to another person's emotions and behaviors; how one interprets their emotional response and perspective-taking; and the conscious decision to utilize empathetic behaviors (Gerdes, Lietz, & Segal, 2011).
- **Executive functioning:** The capabilities a person possesses to control their behavior and successfully participate in independent, purposeful and goal-oriented activities. Executive functions include self-awareness, regulation, motivation, and the ability to plan, organize, and purposefully carry out action (Gabowitz et al., 2008).
- **Mindfulness:** Mindfulness is a conscious state of mind in which one is calmly observant and accepting of their thoughts, feelings, and body (Newberg & Waldman, 2012).
- **Mindset:** A person's way of thinking, an attitude, inclination or opinion (Merriam-Webster, 2015).
- **Neurogenesis:** Neurogenesis is the origination of new neurons in the brain (Perry, 2001).
- **Neuroimaging:** Medical techniques used to determine the structure, function, and biochemical nature of the brain. Positron emission tomography (PET) and functional magnetic resonance imaging (fMRI) scans measure brain activity and blood flow while various cognitive tasks are performed, indicating the level of activity and area of brain in use when exposed to sight, sounds, or physical touch (Willis, 2006).

- Neuroplasticity: Willis (2006) defines plasticity as neuron formation and pruning that “allows the brain to reshape and reorganize the networks of dendrite-neuron connections in response to increased or decreased uses of these pathways” (p. 111).
- Perspective taking: Janssen (2012) defines perspective taking within the framework of empathy, in which the one member of an interpersonal interaction pays close attention to the other individual’s feelings or divulged information. Moreover, research shows that perspective taking, or imagining the other person’s perspective, what that person may feel, or putting yourself in their shoes, results in feelings of empathy and increased positive attitudes toward the other individual (Madera, Neal, & Dawson, 2011).
- Pruning: Pruning occurs around age three, to rid the brain of unused neurons present at birth, and again in puberty following a second stage of neurogenesis. Pruning permits the brain to rid itself of unused neurons and combine neural pathways and learning by “wrapping white matter (myelin) around the neuronal networks more frequently used to stabilize and strengthen them” (Willis, 2006, p. 112).
- Resiliency: Resiliency is an individual’s capacity to thrive following adversity (Brendtro & Longhurst, 2005).
- Safety: Safe environments support physical, psychological, social, and moral safety, facilitated by trusting interpersonal relationships (Bloom & Farragher, 2013).
- Stakeholder: Stakeholders include school employees, parents, and students who impact and are impacted by the academic achievement of the school district (LAW Writer: Ohio Laws and Rules, 2015).
- Trauma-informed lens: The lens adults’ use, filtered by life experiences and beliefs, to interpret student behaviors and inform adult responses (Bloom & Farragher, 2013).

- Traumatic stress: Stress caused by traumatic events, resulting in feelings of anxiousness, insecurity, fear, and stress related behaviors (Oehlberg, 2008).
- Trigger: A trigger is an internal reminder of a traumatic event (e.g., memory or thought) or an external reminder of a traumatic event (e.g., sight, smell, sound, taste, or touch) (Black, 2015). The tone of voice or specific words used by an adult, the smell of a perfume, gestures, gender or race, may trigger an emotional response.

Delimitations and Limitations

The primary delimitation of the study was the selection of participants. Survey data were collected from one large, urban Northwest Ohio school district's (i.e., Findlay City Schools) classified and certified employees in the fall of 2015. Thus, the findings of this study may not be generalized to rural, suburban, or small school districts. A second delimitation was based on the training developed for the school district; therefore, the results may vary depending on the nature of PD activities in other districts. The PD outcomes of classified versus certified employees may differ within this study due to the distinct transformational learning activities, although the intended learning outcomes were congruent. Additionally, this study represents the first attempt to use the TIC-DS survey to measure employee perceptions of change in knowledge, dispositions, and behaviors toward traumatized students. Lastly, other demographic variables, such as race, ethnicity, participant exposure to trauma, or prior training could have been studied.

Although the study has the potential to provide school leaders with valuable information regarding the potential benefits of TIC PD, the study has limitations that must be noted. As the TIC-DS required participants to self-report perceptions of themselves before and after the TIC PD, participants may have provided responses to demonstrate improved knowledge, dispositions, or behaviors. Self-report retrospective designs are vulnerable to social desirability responses and

accuracy; therefore, the design may not be the most reliable assessment of knowledge, beliefs and behaviors (Klatt & Taylor-Powell, 2005). However, participants were notified that their responses would be anonymous and pooled with approximately 800 employee survey results to reduce social desirability and improve accuracy. Additionally, the study sample lacked racial diversity, as 97.96% of the school personnel were Caucasian. Data collection was also initiated the day following the PD; therefore, the survey collected a snapshot of employee perceptions rather than longitudinal perceptions. Lastly, the length and retrospective nature of the survey (i.e., reading and responding to 52 items, one open-ended response, and demographic items) may have caused participants to become fatigued, reducing the validity of the survey.

Organization of the Study

This dissertation is composed of five chapters. Chapter I provided an overview of the problem and significance of the study, the research questions, conceptual framework, definitions of terms, and delimitations of the study. The remaining chapters include: Chapter II, a review of the literature; Chapter III, the methodology and procedures used for the study; Chapter IV, results of the study; and Chapter V, conclusions, implications for school leaders, policy and practice, recommendations for future research, and final thoughts.

CHAPTER II. LITERATURE REVIEW

Students throughout the U.S. experience trauma at alarming rates (Holmes, Levy, Smith, Pinne, & Neese, 2015; Jaycox et al., 2006; Overstreet & Chafouleas, 2016). School personnel knowledge, attitudes, and beliefs about students, as well as self-knowledge, impact behaviors toward traumatized students and have the potential to positively or negatively impact students within the school setting (Barth, 2008; Oehlberg, 2008). “Even the most well-intentioned teacher has moments where she is heavily influenced by the situation and emotions that arise suddenly when faced with difficulty” (Newberry & Davis, 2008, p. 1984). When educators fail to critically reflect on their emotions and behaviors, their reactions can become habitual, preserving the tendency to judge, label, and interact with students based on past practice, in lieu of viewing each student through a new lens (Newberry & Davis, 2008).

Knowledge of the impact of trauma on students is imperative due to data on prevalence and the research that outlines the impact of trauma on brain development, physical and psychological health, social-emotional well-being, behaviors, relationships, and learning within the school setting (Craig, 2016). McCollum and Yoder (2011) found that “school culture and student-teacher relationships are influential aspects of the school environment that impact academic expectations, school satisfaction, and academic performance” (p. 65). Academic achievement is impacted by a variety of factors, such as instructional strategies, student support, self-efficacy, academic motivation, socio-economic status (SES), teacher and administrator preparation, and school safety and culture (Van der Westhuizen, Mosoge, Swanepoel, & Coetsee, 2005).

The solution is to create trauma-informed schools in which all employees receive Trauma-Informed Care professional development (TIC PD) to create a unified understanding of

the impact and signs of trauma; the skills to build empathetic, trusting, and respectful relationships with students; and the know-how to provide supports in a universal manner so that all students thrive socially, academically, emotionally, and have the capacity for self-regulation (Cole et al., 2013). Moreover, Overstreet and Chafouleas (2016) contend that all school personnel must “engender attitudes, beliefs, and behaviors conducive to the adoption of system-wide trauma-informed approaches” (i.e., dispositions) (p. 2). The climate of a trauma-informed school is analogous to an effective school described by Hattie (2012), consisting of trusting, empathetic, fair, and caring interpersonal communications, in which students and educators feel safe to make and learn from mistakes.

Any student may be a potential victim of childhood trauma; the signs and symptoms of trauma are not always detectable (Dorado et al., 2016). Educators must look at all students through a trauma lens as the underlying cause of behaviors that negatively impact learning may not be evident (Craig, 2016). Educators may not know, nor do they need to know a student’s trauma history to remain cognizant and sensitive of the effect of trauma on students (Souers & Hall, 2016). Traumatized students come from all socio-economic and demographic groups and exhibit a wide-variety of behaviors (Blaustein, 2013); therefore, the infinite diversity of school-related experiences may cause educators to misunderstand student behaviors and the reasons for academic failure (Souers & Hall, 2016). Educators may also inadvertently retraumatize students if they are unaware of the signs and symptoms of trauma or their dispositions toward students. Implementing a TIC approach to create safe and caring schools will provide appropriate supports that will benefit all students (Cole et al., 2013; Souers & Hall, 2016). Helping all students learn and achieve academic success, including traumatized students, must become the mission of schools throughout the United States (Souers & Hall, 2016).

Trauma

Most adults can remember an incident or series of related or unrelated incidents that disrupted their life in some fashion as a child, whether the impact was social, emotional, or physical, or perhaps their relationships or success in school was compromised. Trauma is the damage generated by high levels of stress during violent, real, or perceived threats, or any life-altering experience (Children's Defense Fund - Ohio, 2015; Jaycox et al., 2006) that happens to a person or is witnessed (Blaustein, 2013). Trauma may result from a short term or single, severe incident (i.e., an acute stressor), or recurrent incidents (i.e., chronic stressor) that trigger an ongoing activation of the brain and body's response systems, resulting in overwhelming feelings (Blaustein, 2013) and toxic stress (Children's Defense Fund - Ohio, 2015).

The National Child Traumatic Stress Network (n.d.) utilizes the phrase acute traumatic event to describe short-term or single-incident traumas (e.g., severe accidents, gang violence, school shootings, natural disasters, or physical or sexual assault); or chronic traumatic situations to describe repeated events over a long period of time (e.g., on-going physical or sexual abuse, or domestic or political violence). Trauma results in the victim feeling powerless, helpless, or lacking control (Sitler, 2009), fear, panic, unsafe, unable to cope, disgust, or shame (Blaustein, 2013); therefore, trauma is the perception and response to an event, not the event itself (Hertel & Johnson, 2013; Souers & Hall, 2016). Fear of the unknown impacts educators as well as students (Souers & Hall, 2016).

Although studies have shown that trauma is pervasive, the type and intensity of traumatic incidents differs, as well as how children and adolescents interpret events and cope, generating various symptoms and behavioral outcomes (Bell et al., 2013; Jaycox et al., 2006). The consequences of traumatic experiences may begin in infancy or any stage of development, be

instantaneous or delayed (OhioMHAS, 2016d), and varies between children, ranging from no effect to devastating consequences, depending on factors such as the environment (e.g., poverty or family dysfunctions), physiology, level of support (Bell et al., 2013), past ACEs, age, mental abilities (Simonich et al., 2015), and resiliency factors (White-McMahon & Baker, 2016). The aftereffects of traumatic experiences appear to depend on how students manage the outcomes, the student's developmental stage, ethnic or spiritual belief system, and the level of environmental and social supports, rather than the type of trauma itself (Woodbridge et al., 2016). Some students may seem unaffected or recover quickly from traumatic experiences, while others continue to struggle with everyday life; some may be leaders, have friends, and do well in school, while others lack friends, fail, or bully; some children living in the same house cope, while siblings struggle (Blaustein, 2013).

Blodgett (2014) confirmed that exposure to traumatic experiences “is a pervasive community problem established early in life and during key developmental stages” (p. 11). The coping skills of a young person, especially if parents or guardians lack coping skills of their own, may become overwhelmed resulting in trauma related stress. Stress has a detrimental effect on learning and behavior: excessive absences, impairs attention, concentration, and social skills, and reduces creativity, memory, motivation, and neurogenesis (Jensen, 2009). Fear and feeling powerless are normal responses to traumatic experiences, regardless of whether the experiences are real or perceived threats to the adolescent's personal safety and well-being, or to that of a loved one (OhioMHAS, 2016d).

Forms of Trauma

Trauma can be grouped into three categories: acute trauma (i.e., a single event), complex trauma (i.e., multiple forms of trauma), and chronic trauma (i.e., on-going exposure to trauma

producing events) (Thomas, Scott & Pooler, 2015). Complex trauma, such as several exposures to one or more combined forms of traumatic incidents of sexual, physical or emotional abuse, neglect, witnessing domestic violence, or loss of a caregiver impacts children in a multifaceted capacity (Cook et al., 2005). The 1995 to 1997 ACE study examined forms of trauma such as emotional, physical, or sexual abuse and neglect, and household dysfunctions (e.g., family member imprisoned, mentally ill, suicidal, alcohol or drug user, deceased, separated or divorced family, or witnessing domestic violence) (Felitti & Anda, 2010). Other forms of trauma include experiencing a natural disaster such as a hurricane, flood or tornado (Perry, 2001), illegal behaviors in the home, or prolonged or life-threatening illness of a family member (Souers & Hall, 2016). A child whose parent is serving in a war, such as Iraq or Afghanistan, may experience trauma (Sitler, 2009). These various forms of trauma may be organized into four categories: intrapersonal, interpersonal, familial dysfunction, and nondomestic (see Table 2).

Table 2

Forms of Trauma

Intrapersonal	Interpersonal	Familial Dysfunction	Nondomestic
Feels like a failure ^a	Bullying ^a	Family member ill ^{b,d,h}	Prejudice ^c
Feeling labeled ^a	Harshly criticized ^{ae}	Abuse of mother ^e	War ^{df}
Lonely ^a	Kidnapping ^b	Divorce or separation ^e	Natural disaster ^d
Feeling unable to accomplish like peers ^a	Parent is serving in the military or war ^g	Family member mentally ill ^e	Terrorism or political violence ^d
Personal illness ^b	Emotional neglect ^e	Substance abuse ^e	School violence ^d
Frequent changes to school enrollment ^c	Death of a parent ^{bf}	Domestic violence witness ^{edf}	Neighborhood violence ^d
Serious accident ^{bd}	Sexual abuse ^{ef}	Lack of basic resources ^c	
	Emotional abuse ^{ef}	Family member suicidal ^e	
	Physical abuse ^c	Relative in jail ^e	
	Physical neglect ^e	Homelessness ^h	
		Illegal activity in the home ^h	

^aVicario & Gentile, 2015; ^bPerry, 2001; ^cBlaustein, 2013; ^dBlack, 2015; ^eFelitti & Anda, 2010; ^fCook et al., 2005; ^gSitler, 2009; ^hSouers & Hall, 2016

Although poverty may increase the likelihood of trauma, poverty is not a form of trauma (Souers & Hall, 2016). However, trauma may be caused by experiences that are often linked to poverty, dramatically increasing the stress felt by parents or guardians: lack of food, unemployment, an overextended caregiver, living in crowded or unsafe conditions, eviction, lack of resources to take care of basic needs, exposure to violence (Blaustein, 2013; Children's Defense Fund - Ohio, 2015), or homelessness (Souers & Hall, 2016). While poverty may increase the prevalence of trauma (Blitz, Anderson, & Saastamoinen, 2016), the ACE study demonstrated that trauma could occur within any socioeconomic status.

Although gender, race, or ethnicity is not a form of trauma, certain individuals may be more likely to experience trauma due to prejudice. A study conducted by Woodbridge et al. (2016) indicated that males, Black, Native American, and Latino students reported significantly higher traumatic experiences than female, White or Asian students. Surprisingly, the study also found that adolescent males who were separated from their caregiver were nearly two times as likely to report high levels of trauma-related stress than females. The predominant predictor of trauma-related stress across racial groups and gender was separation from a caregiver and the perceived threat of physical violence, not a tangible assault (Woodbridge et al.).

Prevalence of Traumatic Experiences

The CDC (2016) reported the following categories and prevalence of traumatic experiences as a result of the Felitti and Anda Adverse Childhood Experiences (ACE) Study in which 17,337 adults completed a survey regarding their childhood experiences:

- physical abuse, such as pushing, slapping, grabbing or throwing objects at the child in a manner that leaves abrasions or injuries (28.3%);
- household substance abuse (26.9%);

- separation or divorce (23.3%);
- sexual abuse, such as touch or fondling in a sexual manner, attempted or actual oral, anal, or vaginal intercourse by an adult or person at least five years older than the child (20.7%);
- a member of the household was mentally ill or attempted suicide (19.4%);
- emotional neglect, including little or no feelings of being loved, supported, or protected by family members (14.8%);
- witnessing violence toward the mother (12.7%);
- emotional abuse, including insults, profanity, or behaviors toward the child that would indicate the potential for physical harm (10.6%);
- physical neglect, including having little to eat, dirty clothing, or lack of medical care (9.9%);
- a family member went to jail (4.7%).

Of the ACE study participants, 36.1% reported zero adverse childhood experiences (ACEs), 26% reported one ACE, 15.9% reported two ACEs, 9.5% reported three ACEs, and 12.5% reported four or more ACEs (CDC, 2016).

The CDC is not alone in reporting data that indicates childhood trauma is widespread; therefore, childhood trauma is a significant concern for school employees who have daily interactions with potential trauma victims. The U.S. Department of Health and Human Services (2013) reported data regarding the number of referrals of alleged child abuse to CPS in 2013: 3,016,794 referrals were made nationwide; 166,583 referrals were made in the state of Ohio. Fifty-two states reported that more than 27.3% of the victims were younger than three years of age; 19.7% were between three to five years of age. The percentages of abuse categories for

2013 were as follows: 79.5% endured neglect; 18% were physically abused; 10% were victims of other forms of maltreatment such as parent's drug or alcohol abuse or threats of abuse; 9% were sexually abused; 8.7% were victims of psychological maltreatment; and 2.3% faced medical neglect. The research conducted by the U.S. Department of Health and Human Services showed little change in maltreatment data over a five-year (2009-2013) period of time.

In addition to the original ACE study conducted by the CDC on Kaiser Permanente's Health Appraisal Clinic patients, John Hopkins University analyzed data from 95,677 randomly selected parents of children ages six to seventeen across the U.S. who completed the 2011-2012 National Survey of Children's Health (Bethell, Newacheck, Hawes, & Halfon, 2014; Sacks, Murphey, & Moore, 2014). The goal of the study was to assess the pervasiveness of trauma and associations between incidents of trauma and childhood development and health into adulthood. The results of the interviews revealed that severe financial hardship was the most common experience reported in the U.S. and in most states, followed by divorce or separation of parents, with the exception of witnessing or being the victim of violence, which was second in prevalence in the District of Columbia. Other commonly reported ACEs were alcohol or drug abuse, witnessing community violence, and mental illness. Bethell et al. (2014) determined that 48% of children in the study experienced at least one childhood trauma; 30.5% of children aged twelve to seventeen experienced two or more traumas. The John Hopkins study estimated that nearly 35 million children between the age of 2 and 17 experienced at least one ACE; 19.6% were consistently disengaged in school; 9.1% failed one or more grades; and 7.6% took medication for ADHD, emotional, behavioral, or concentration problems. Ohio was in the highest quartile for prevalence of ACEs among the 50 states in the categories of violence, incarceration, death, and domestic violence (Sacks et al., 2014).

The U.S. Department of Health and Human Services (2013) reported data regarding the prevalence of child abuse from 52 states: 79.5% of the victims were neglected (i.e., 678,932 victims in 2013), 18% were physically abused, 44% were White, 22.4% were Hispanic, and 21.2% were African-American. Of the 1,520 child fatalities, a parent caused 78.9%. Shockingly, 3.5 million referrals regarding 6.4 million children were made to CPS in 2013, resulting in an investigation or services for 3.2 million children. The data also revealed that in 40.7% of the abuse cases the perpetrator was the mother of the victim, the father victimized 20.3% of the cases, and 22.5% of the cases were victimized by both parents. Nonparents represented the smallest percentage of perpetrators.

C. Blodgett (personal communication, October 21, 2015) discussed the profound findings of research conducted on 642 pairs of parents and Head Start children from a low-income, typical sample of the general population. The exposure to ACE was prevalent: 63% of parents and 40% of three to four year old children experienced three or more ACEs; 40% of parents had five or more ACEs, and 69% of their children had two or more and 40% had four or more ACEs. As the number of ACE increased, concerns with childhood development, attachment issues, readiness for school, and behavior problems increased (C. Blodgett, personal communication, October 21, 2015). As the number of ACE reported by parents or caregivers increased, the study noted an increasingly high probability that their children would also experience ACE, although the number of ACE experienced by parents could not be used to predict the developmental standing of children (Blodgett, 2014). Blodgett (2014) noted that 41% of parents with zero to one traumatic experience had children who experienced two or more traumas, and alternatively 31% of parents who experienced five or more traumas had children with zero to one trauma exposure. Poverty and parent resiliency may be factors that impact the

prevalence and outcomes of ACE for children: The finding regarding prevalence of ACE amongst parents and children provides a rationale for the need to understand ACE exposure and methods to build resiliency (Blodgett, 2014).

The state of Washington added adverse childhood experiences questions to a statewide survey of adults in 2009 to provide baseline data for research. As a result of prevalence data, the Washington State Family Policy Council played a critical role in addressing ACEs in the state of Washington between 1994 and 2012 by leading community-based efforts to improve collaborative partnerships between agencies. The Washington State ACE study determined that “the cumulative stress of ACEs are the most powerful determinate of the public’s health and the strongest common driver of mental, physical and behavioral health costs” (ACE Response, 2016, para. 3). A second study completed by the Washington State Family Policy Council of sophomores and seniors in high school found that in an average classroom of 30 students, 24 will have experienced one or more ACE; 13 will have damaging stress from three or more forms of ACEs, increasing the likelihood that the students will lack motivation and exhibit behaviors that interfere with learning (Stevens, 2012).

In Ohio, 50% of children from birth to 17 did not experience an ACE, 36% experienced one or two ACEs, and 14% had three or more ACEs (Sacks et al., 2014). A health assessment study conducted by the Alcohol, Drug Addiction and Mental Health Services (ADAMHS) Board in 2013 determined that 44% of the adult population in Hancock County Ohio, in which this study was conducted, indicated an ACE score of at least one; 10% indicated an ACE score of four or higher. “That 10% is significant considering that the risk of medical, behavioral, and social problems increase as the ACE score increases” (A. Wolfram, personal communication, October 8, 2015). Regardless of the source, the data consistently corroborates that trauma is

prevalent amongst U.S. students.

“In recent years, the number of students exposed to these kinds of traumas has increased substantially, and it seems unlikely to diminish. Neither does the importance of helping students cope with the long-term consequences of traumatic events” (Jaycox et al., 2006, p. 7).

Unfortunately, the suicide rate amongst females and males ages 10 to 74 increased by 24% between 1999 and 2014, with females’ ages 10 to 14 having the greatest percent increase (Curtin, Warner, & Hedegaard, 2016). According to Curtin et al. (2016), adolescent suicide is on the increase and is among the leading causes of death for that age group. Acknowledging and understanding the prevalence and outcomes of trauma is the first step toward addressing this societal issue. If ignored and untreated, the impact of trauma persists into adulthood. The following paragraphs will describe in greater detail the impact of trauma on the brain, health, social-emotional well-being, behaviors, and learning, challenges of identifying the symptoms of trauma within the school setting, and the potential for misdiagnosing student behaviors.

Impact of Trauma

The impact of complex trauma on adolescents includes “a loss of core capacities for self-regulation and interpersonal relatedness” which “places them at risk for additional trauma exposure and cumulative impairment (e.g., psychiatric and addictive disorders; chronic medical illness; legal, vocational, and family problems)” (Cook et al., 2005, p. 390).

Impact of Trauma on the Brain

Childhood trauma negatively impacts brain architecture during crucial stages of development (Bloom & Farragher, 2013; Evans & Coccoma, 2014; Perry, 2001). While genetics determines the number of neurons formed in the brain at birth and the process of pruning in childhood, the child’s environment determines the final structure of the brain and strength of the

neural connections (Bloom & Farragher, 2013). The brain's architecture continues to form until late adolescence, thus the brain is more susceptible in childhood to alterations due to trauma's fear response; however, the prefrontal cortex continues to develop into adulthood (Evans & Coccoma, 2014). Neuroscience has demonstrated that the brain changes in structure into adulthood as a result of experiences: "Experience gradually modifies the connections between neurons following a 'use it or lose it' rule" (as cited in Zhang & Lu, 2009, p. 37). Advances in brain research provide educators with valuable information regarding how genetics and the environment impact how students learn, and the importance that emotion and motivation plays in learning (Hinton, Miyamoto, & Della-Chiesa, 2008; Zhang & Lu, 2009).

Although the magnitude of the impact of trauma on the brain is not fully understood, researchers know that trauma has a profound impact on the normal structure (e.g., smaller in volume) and functioning (e.g., impairment of areas responsible for learning and behaviors) of the brain (Hertel & Johnson, 2013). The impact of traumatic experiences on brain development, including the organizational and functional status of the brain, is dependent on two main forms of abuse (e.g., neglect and traumatic stress); environmental factors; the nature, pattern (e.g., single event or chronic experience) and duration of trauma; area of brain undergoing development and rate of the development (i.e., increased rate of development is directly related to level of impact); nature of the child (i.e., age, genetics, gender, history of traumatic experiences); and mitigating factors such as supportive adults; "therefore, adverse events can have a tremendous negative impact on the development of the brain" (Perry, 2001, p. 15). The brain's response to overstimulation is to prompt the body to produce hormones such as adrenaline and cortisol, which are beneficial if there is a need to fight or escape to survive, and detrimental if the experiences are chronic, because brain cells can be destroyed, inhibiting

normal development (Hertel & Johnson, 2013).

Individuals differ in whether an event is perceived as traumatic or results in traumatic stress symptoms (Perfect et al., 2016). “Neuroplasticity is the quality that allows region-specific changes to occur in the brain as a result of experience” (Jensen, 2009, p. 47). Brain abnormalities may be dependent on the area of the brain undergoing development when trauma occurs, negatively impacting the following structures of the brain: brainstem (e.g., altered regulation of core functions such as respiration, cardiovascular, temperature, hyper-reactivity, sensory integration difficulties, impaired regulation of sleep, feeding, and self-soothing); diencephalon (e.g., motor control and secondary sensory processing); limbic system (e.g., memory, emotional regulation, disorganized attachment, and primary sensory integration); and neocortex (e.g., reasoning, problem solving, abstract thinking, and secondary sensory integration) (Perry, 2001). Areas of the brain develop in a ordered pattern beginning with the brainstem in infancy to the neocortex in puberty and adulthood (Perry, 2001). Disruptions in one part of the brain may negatively impacting subsequent areas of development; “each layer organizing at a different time and each layer reflecting the experiences – good and bad – of that era in the individual’s life. Key insights to understanding human functioning, then, will come from understanding neurodevelopment” (Perry, 2001, p. 17).

Brain development is altered in response to disruptions of the normal neurochemical release, as a result of experiences, changing neuron differentiation and functional capacity (i.e., unused neurons will prune), potentially causing abnormalities or shortfalls in neurodevelopment (Perry, 2001). Neurons need to connect properly during development in order for the brain to function correctly (Perry, 2001). Traumatic events, whether real or perceived, result in the child’s brain mediating the brainstem and diencephalic stress-related response, resulting in

emotional, behavioral, cognitive, and physiological adaptations needed to survive (Perry, 2001). Our experiences change the brain as neuron connectivity is strengthened, diminished or eliminated (Hinton et al., 2008). Throughout childhood and adolescence, changes in the brain impact cognitive and emotional functioning, self-image, language development, and beliefs (Perry, 2001). “Adverse childhood events, therefore, can alter the organization of developing neural systems in ways that create a lifetime of vulnerability” (Perry, 2001, p. 27). However, the opposite is also true; positive experiences and interactions created by caring educators influence student brain plasticity fueling optimism and the motivation for change (White-McMahon & Baker, 2016).

IQ and academic achievement.

A study conducted by Crozier and Barth (2005) determined that maltreated students scored lower on IQ (i.e., 2.13 times more likely to score one *SD* below the mean) and academic achievement tests (i.e., 1.92 times as likely to score as low on the reading and 2.75 times as likely on the math tests) than peers. In addition, as the number of risk factors increased, the percentage of students scoring lower on IQ and achievement tests increased. While no significant differences were found on IQ and achievement tests between age groups and gender, students living in poverty were significantly more likely to score below 85 on the IQ, math, and reading tests (Crozier & Barth, 2005). However, studies on institutionalized, abused and neglected children have shown that IQ scores can improve by 40 to 60 points when children are placed in caring, safe, and predictable environments (Perry, 2001). The older the child and longer the child was exposed to adverse experiences, the more significant the developmental delay and pervasive deficits (Perry, 2001).

Impact on brain functioning.

As administrators and teachers study how the brain learns, they gain professional skills to implement brain-based learning and teaching strategies (Willis, 2006). Willis (2006), a neurologist, researcher, and teacher, supports the use of positron emission tomography (PET scans), functional magnetic resonance imaging (fMRI), and quantitative electroencephalography brain wave monitoring (qEEG) to view the brain as it learns. Educators now have neuroimaging and brain-mapping studies available to inform effective instruction (Willis, 2006).

According to Willis (2006), stress in the learning environment overstimulates the amygdala in the limbic system. Fear, stress, helplessness and anxiety can overactivate the amygdala and prevent information received by the brain's sensory areas from moving through the amygdala's filters to the part of the brain responsible for memory (Willis, 2006). Brain scans indicate that negative emotional experiences, such as rejection, cause feelings of shame and low self-esteem, activating the same parts of the brain as physical pain (Brendtro & Longhurst, 2005). In contrast, neuroimaging shows lower levels of amygdala stimulations when students experience positive emotions, causing improved social behaviors, working memory, verbal fluency, and problem solving capabilities (Willis, 2006). Negative words or phrases that trigger fear, cause noticeable neural changes in the fMRI scans of brains, and overtime may damage portions of the brain that control memory, feelings, and emotions, and disrupt sleep, appetite, and health (Newberg & Waldman, 2012). The activity in the amygdala increases and the normal functioning of the brain is interrupted due to the release of stress-causing hormones and neurotransmitters (Newberg & Waldman, 2012).

Groundbreaking research by Newberg and Waldman can be used to reflect on the potential impact of trauma, a negative school climate, or poor relationships on students as well as

school personnel. Negative thinking and worrying is self-perpetuating, meaning that increased exposure to negativity, whether it is personal or expressed by another, causes the brain to respond by generating more negative thoughts and feelings which can lead to violence (Newberg & Waldman, 2012). Moreover, Newberg and Waldman (2012) claimed that verbally expressing negativity prompts a greater release of stress related chemicals in both the speaker's and listener's brains than merely thinking negative thoughts, causing both parties to experience feelings of anxiety and irritability; therefore, reducing feelings of trust, cooperation and empathy.

The automatic and brain-based contagious nature of emotions within social interactions can be explained by specialized brain cells discovered in the 1990's called mirror neurons (Keysers, 2011). Even witnessing an event involving another person can trigger a biological response; humans have the natural capacity to feel what others feel (Keysers, 2011). The realization that the brain responds in a similar manner in make believe situations, such as watching negative or violent scenes in a movie, is especially important for educators to understand, as research shows that the brain "doesn't distinguish between fantasies and facts when it perceives a negative event. Instead it assumes that a real danger exists in the world" (Newberg & Waldman, 2012, pp. 24-25). What matters most during interpersonal conflicts is if the student perceives the threat as real; not whether the educator perceives the negative words or fearful comments as real threats. This understanding may help educators adjust their dispositional response to traumatized students who are exhibiting behaviors indicative of fear.

Interpersonal conflict increases the release of cortisol, a chemical in the body that intensifies stress, leading to brain and cardiovascular system damage. Newberg and Waldman (2012) reported that children who were exposed to hostile language and conflict in the home have difficulty avoiding anxiety, depression, and fear, as hostile language appears to interfere

with the genes that produce neurochemicals designed to protect us from physical stress. Furthermore, according to a study conducted by The Ohio State College of Medicine, hostility and anger diminish the body's healing progression (Newberg & Waldman, 2012). The brain and body continue to respond to traumatic stress, even after the incidents have concluded, due to the "prolonged activation of the body's stress response system," which in turn "can disrupt development of brain architecture, increasing risk for stress-related diseases and cognitive impairment, which can persist into adulthood" (Children's Defense Fund - Ohio, 2015, p. 2).

Complex trauma has a profound impact on the human brain. According to Gabowitz et al. (2008), complex trauma "has been associated with structural and functional alterations in brain development, which in turn can result in cognitive and neuropsychological deficits" (p. 163) including "neurohormonal to neuroanatomical" "psychobiological abnormalities" (p. 164). Neuroimaging studies have identified differences in the brains of complex trauma victims, such as smaller total brain volume, smaller corpus callosum, prefrontal cortex, and cerebrum, and larger lateral ventricles and cerebrospinal fluid volumes in the frontal lobe of the brain that result in a multitude of developmental and cognitive consequences (Gabowitz et al.). Moreover, neuroimaging studies have shown that dysfunction of mirror neurons in the brain due to trauma or other forms of brain injury can result in attachment problems (i.e., lack of emotional connection with others) (Keyesers, 2011). Attachment trauma, caused by a lack of opportunity to build attachments with caring adults in early childhood, perceived rejection or separation from caregivers, may result in a reduced capacity for self-regulation, stress management, empathy or development of the prefrontal cortex (Oehlberg, 2008).

Exposure to chronic stress at an early age impacts brain maturation, including the sympathetic nervous system, neurochemical changes (i.e., changes in serotonin levels), the

limbic system, neurogenesis, and pruning at critical stages of childhood maturation (Gabowitz et al., 2008). Although the more than 100 billion neurons present at birth are used throughout the lifespan, researchers have recently demonstrated that neurogenesis can occur in the adult brain (Perry, 2001). This finding is significant because it implies hope for injured or traumatized brains to heal.

Impact of Trauma on Health

Complex trauma places children at life-long risk for psychiatric maladies such as mood, anxiety, eating, conduct, personality, substance abuse, dissociative, attention, and learning disorders, Posttraumatic Stress Disorder (PTSD), in addition to chronic medical issues such as fibromyalgia, fatigue, and immune system deficiencies (Gabowitz et al., 2008). The CDC reported an increased risk for the following long-term health problems due to childhood ACE:

alcoholism and alcohol abuse, chronic obstructive pulmonary disease, depression, fetal death, health-related quality of life, illicit drug use, Ischemic heart disease, liver disease, poor work performance, financial stress, risk for intimate partner violence, multiple sexual partners, sexually transmitted diseases, smoking, suicide attempts, unintended pregnancies, early initiation of smoking, early initiation of sexual activity, adolescent pregnancy, risk for sexual violence, and poor academic achievement. (CDC, Major Findings, 2016, para. 3)

In addition, Blodgett's 2011 study found a correlation between the number of ACE and obesity, asthma, speech difficulties, and increased incidence of illness. The emotional response to traumatic stress may cause physical symptoms, such as anxiety, headaches or stomachaches, that result in frequent visits to the nurse's clinic in a school setting, (Children's Defense Fund - Ohio, 2015). Stress may result in suicide attempts, obesity and other chronic health problems that may

last into adulthood (OhioMHAS, 2016a). Moreover, according to the ACE Study, individuals who experienced four or more traumas in childhood were more likely to have long-term health issues such as diabetes, heart disease, cancer, a poor immune system, depression, and obesity, putting individuals in jeopardy of an early death (OhioMHAS, 2016c).

Impact of Trauma on Social-Emotional Well-Being

A critical role of caregivers is to help children understand and manage their environment to foster feelings of safety, balancing risk taking opportunities that stimulate the emotional parts of the brain so that children can learn coping skills with appropriate boundaries (Bloom & Farragher, 2013). Children must be protected from stressors and emotions that overwhelm their capabilities in order for their cognitive abilities to develop properly (Bloom & Farragher, 2013). When individuals face trauma that interferes with their sense of self and worldview, they begin to question assumptions and subsequently construct a revised theory to explain how the world works and how people behave in order to make sense of their experiences; trauma-victims attempt to make sense of a world that should be safe, predictable, and caring, but is now unsafe and bewildering (Harris & Falot, 2001). This new sense of self, others, and the world impact life choices, the development of coping strategies, and the individual's life as a whole (Harris & Falot, 2001).

Due to stress, trauma interferes with a student's ability to relax and concentrate, and modifies their perceptions of the future (OhioMHAS, 2016a). Traumatized students may pursue seclusion to avoid discussing their thoughts due to feelings of confusion, guilt, or shame, or due to their inability to manage their feelings and behaviors (OhioMHAS, 2016a). Students may yearn for revenge, become angry, or contemplate, attempt or complete suicide (OhioMHAS, 2016a). Although the response to traumatic incidents may vary amongst individuals, especially

with age, students often feel anxious, nervous, sad, or depressed; these feelings interfere with behaviors and academic performance in school (Jaycox et al., 2006).

Impact of Trauma on Behaviors

A report by the U.S. Department of Health and Human Services (2013) defined the behaviors that result from traumatic experiences as “a child’s behavior in the school or community that adversely affects socialization, learning, growth, and moral development” (p. 103). Distressed children do not consciously choose the negative behaviors that result from impaired brain functioning. Traumatized individuals are largely unaware of the feelings and motivations behind their destructive behaviors that impact themselves and others; therefore, adults must be curious about the true meaning of the behavior (Bloom & Farragher, 2013).

Life experiences and human interactions shape the developing brain, which alters how events are interpreted and the ensuing behaviors (i.e., a visible reaction to objects and people) (White-McMahon & Baker, 2016). “All behavior is needs driven,” especially when children lack the ability to tell adults what they need or to meet their own needs, triggering stress and defensive behaviors, even if the behaviors are counterproductive and result in consequences (White-McMahon & Baker, 2016, p. 1). Educators may use Maslow’s hierarchy of needs as a lens to interpret student behaviors. Students must have certain needs met before they can ascertain positive self-esteem, demonstrate respect for self and others, and achieve academic success and self-actualization. Maslow’s (1987) hierarchy of needs is aligned to the needs of a trauma victim: physiological (e.g., basic needs such as food or sleep), safety (e.g., physical and psychological), and feeling loved, cared for, or belonging (as cited in Sitler, 2009).

Educators need an understanding of how trauma reveals itself, although not all misbehaviors are a result of trauma (White-McMahon & Baker, 2016). For example, students

may use apathetic behaviors for self-protection or challenge teachers to avoid completing schoolwork (Sitler, 2009). Traumatized students may exhibit impulsive behaviors, have problems sleeping, explosive outbursts, under (hypovigilance) or over (hypervigilance) react to situations such as loud noises or abrupt movements, self-harm or hurt others, emotionally withdraw (Children's Defense Fund - Ohio, 2015), feel apathetic, fail to think about the future, exhibit inattentiveness, verbally or physically act out (Sitler, 2009), use profanity, or skip school (Stevens, 2012). Other behaviors, such as stealing and storing food or other items may fulfill unmet needs due to neglect, engage in sexual promiscuity to fulfill the need for care and affection, or the student may overeat to fulfill the need for emotional support (Blaustein, 2013). Furthermore, physically and emotionally neglected students may exhibit attention seeking behaviors that may be misinterpreted by educators as demanding, difficult, dishonest and manipulative (Blaustein, 2013). Traumatized students often fail and are punished in school because their behaviors are misunderstood as laziness, indifference, or purposeful disobediences (Cole et al., 2013). "Blaming a trauma-affected child for having an outburst in class is like blaming a child who has the flu for having a fever" (Children's Defense Fund - Ohio, 2015, p. 3).

According to the 1995 to 1997 ACE Study, individuals who experienced four or more traumas in youth were almost twice as likely to smoke cigarettes, four and a half times as likely to use drugs, seven times as likely to be abuse alcohol, eleven times as likely to use intravenous drugs, and nineteen times as likely to have attempted suicide in their life-time (OhioMHAS, 2016c). In addition, students naturally relapse into behaviors from an earlier developmental stage in an attempt to feel safe (OhioMHAS, 2016a). Jaycox et al. (2006) noted that the behaviors students exhibit following traumatic experiences varies by age: preschool students may display behaviors of an earlier age, reenact the events during play, have tantrums, or

withdrawal behaviors; elementary students may complain of somatic symptoms such as frequent headaches or stomach aches, appear to be short-tempered, may be absent from school or do poorly on school work, lack concentration, or talk incessantly about the trauma; secondary students may have truancy issues and display at-risk behaviors, such as fighting, alcohol or drug use, have difficulties with relationships, and poor performance in school.

When the brain's amygdala is triggered, the body's fight-or-flight reaction causes individuals to contemplate negative outcomes and practice potential responses for events that may or may not ever occur (Newberg & Waldman, 2012). The emotional center of the brain may replay fearful events, whether fantasy or real, like a runaway train that must be slowed down so that students can access the thinking part of the brain. Students need assistance to evaluate whether the perceived situation is a real threat to their safety, followed by assistance in reframing negative thoughts into positive ones so that the student can regain self-control and feelings of safety (Newberg & Waldman, 2012). Educators who understand the impact of trauma on the brain and quickly intervene when a traumatized student's amygdala is firing can help students achieve feelings of safety and well-being.

Connecting trauma symptoms and disorders.

Irrespective of the pervasiveness of trauma experienced by clients, Fallot and Harris (2001) acknowledge that mental health professionals may forgo identifying trauma during treatment due to a lack of PD and uncertainty on how to respond if trauma is exposed. Additionally, clients may not self-report trauma due to safety concerns, fear of retaliation or the stigma of being blamed or doubted, and feelings of shame (Fallot & Harris, 2001). Likewise, "trauma masks itself in classroom behaviors that can easily be interpreted erroneously;" therefore, the interpretation of behaviors impact how educators respond (Sitler, 2009, p. 120).

Gamache Martin, DeMarni Cromer, and Freyd (2010) conducted a quantitative study to examine teachers' perceptions of how childhood physical or sexual abuse or neglect affected student learning and behaviors. Sixty-six pre-school through twelfth-grade teachers in the U.S. and Canada reported negative outcomes such as attention-deficit and disruptive behaviors in the classroom that were attributed to child abuse (Gamache Martin et al.). Children who experience chronic, chaotic or violent environments are hypersensitive and hypervigilant to triggers as an adaptation to their environment (Perry, 2001). They exist in a persistent activated stress response and state of fear and are often diagnosed with attention-deficit hyperactivity disorder (ADHD) or a learning disability (Perry, 2001). Although students diagnosed with ADHD may exhibit impulsive behaviors and cognitive distortions due to the brain's response to living in a state of fear during development, they possess the fundamental capacity to maintain attention to a task (Perry, 2001).

Educators may also assign labels to students, such as learning disabled, ADHD, autistic, or insubordinate, to provide a rationale for why students are not learning (Hattie, 2012). Moreover, clinicians may misinterpret student behaviors (e.g., hyperemotional, manipulative, acting out, inattentive, aggressive, or impulsive) resulting in diagnoses such as bipolar disorder, ADHD (Simonich et al., 2015) or oppositional defiant disorder (Black, 2015). The trauma-informed lens views the student as lacking skills, experiencing fear, or being emotionally dysregulated, resulting in diagnoses of posttraumatic stress disorder (PTSD) or reactive attachment disorder (Black, 2015). Educators must understand the similarity of behaviors exhibited by traumatized children and children diagnosed with ADHD in order to identify and respond to possible cases of child abuse (Gamache Martin et al., 2010). Perry (2001) noted that clinicians might misdiagnose students with ADHD, oppositional-defiant disorder, conduct

disorder, major depression, or separation anxiety due to a lack of information about the student's traumatic history, overlooking the co-morbidity in symptomology.

Traumatized students with PTSD may be impulsive, easily distracted, avoid social situations, have sleep problems, be void of emotions or aggressive, fail in school, or regress in development (Perry, 2001). Additionally, they may have life-long problems with attachment, depression, eating disorders, increased suicidality, anxiety, or alcoholism (Perry, 2001). The likelihood that a traumatized student will develop PTSD is mediated by factors such as the student's characteristics (e.g., perception of threat, history of trauma, age, gender, and ability to cope); nature and duration of trauma; whether the social support system is calm and empathetic, or chaotic and indifferent; and the impact the factors have on the student's stress response (Perry, 2001). Factors such as a safe, predictable, caring, and structured environment mitigate post-traumatic stress response symptoms (Perry, 2001).

The National Longitudinal Study of Adolescent Health conducted research on 14,322 adolescents in grades seven through twelve in the U.S. to evaluate the relationship between different types of child abuse and symptoms of different types of ADHD (e.g., inattentive, hyperactivity, or combined), as well as the relationship between the severity and number of child abuse incidents and the number of ADHD symptoms, after controlling for several factors (e.g., gender, race, mother's education level and age of giving birth, whether the biological father was ever imprisoned, socio-economic status, and household risk factors) (Ouyang, Fang, Mercy, Perou, & Grosse, 2008). The researchers noted the challenge of identifying child abuse based on the limited knowledge of the signs and symptoms of trauma. Ouyang et al. (2008) concluded that child abuse was associated with symptoms of ADHD; therefore, adults exposed to children should be aware of the potential for child abuse among adolescents who exhibit ADHD

symptoms. Specifically, the researchers determined that there were significant associations between all four forms of child abuse (e.g., physical and supervisory neglect, and physical and sexual abuse) and the inattentive symptoms of ADHD, and between supervisory neglect and physical abuse and the hyperactivity symptoms of ADHD. Educators must understand the potential for both negative inattentive or internalized behaviors, and hyperactive, impulsive or externalized behaviors (i.e., indicative of ADHD) in cases of abuse (Ouyang et al., 2008).

Students may exhibit disruptive behaviors or lack focus and fail to engage in the classroom setting or in unstructured areas of the school building. If left unrecognized and untreated, which is especially a risk for inattentive adolescents, the behavioral symptoms of abused children could place them at risk for further abuse due to the misunderstanding that the behaviors are a result of the underlying circumstance (e.g., abuse), putting them at risk for a cycle of neglect or punishment to address on-going behaviors (Ouyang et al., 2008). It is particularly important for educators to reflect on these findings to prevent misinterpreting behaviors and to remain cognizant for the potential that the adolescent is in fact traumatized. Whereas the symptoms of ADHD and child abuse are associated, physical punishment within the home often increases to address the behaviors of children with ADHD (Ouyang et al., 2008).

Garland et al. (2001) conducted a study in the late 1990s with 1,618 individuals aged six to eighteen who were involved in at least one of five organizations that provide care or services (e.g., alcohol and drug agencies, child welfare, juvenile justice, primary and mental health care, and public schools' special education). Fifty-four percent of the individuals in the study had a minimum of one psychiatric disorder and 23% had two or more disorders, which is significantly higher than the typical rates of psychiatric disorders within a community (i.e., 20%). Approximately 50% had ADHD, oppositional defiant, or conduct disorders, 9.9% had anxiety

disorders (e.g., PTSD, obsessive compulsive, panic, social phobia, or separation anxiety), and 7% had mood disorders (e.g., major depression, dysthymia, mania, or hypomania); suggesting that adolescents with ADHD and disruptive behavior disorders are overrepresented and adolescents with anxiety disorders are underrepresented in public organizations which provide care or services (Garland et al., 2001). The rates of ADHD, conduct disorders and oppositional defiance disorders were significantly higher within the school setting (Garland et al., 2001).

Adolescents who received special education services in a school setting for a serious emotional disturbance had the highest prevalence of any mental health disorder (70%), even greater than those served in a mental health agency (60.8%), alcohol and drug agency (60.3%), juvenile justice (52.1%) or child welfare (41.8%) (Garland et al., 2001). According to OhioMHAS (2016c), more than one-fourth of abused students receive special education services. In an analysis of the 2011-2012 National Survey of Children's Health data on approximately 66,000 school age students, Porche, Costello, and Rosen-Reynoso (2016) found a positive relationship between students who experienced trauma and family adversity and receiving special education services.

Impact of Trauma in the School Setting

The literature reveals that traumatized students may struggle academically, physically, socially, behaviorally, and emotionally within the school setting (Perry, 2001). Educators must be able to recognize and respond to the unique needs of traumatized students who may exhibit significant concerns if compared to successful peers in the school setting: emotional problems including withdraw, depression, and anxiousness; behavioral problems including impulsivity, noncompliance, hyperactivity, irritability, disruptiveness, disrespect, and aggressive behaviors; and academic problems including lower grades in classes, lower test scores on standardized

assessments, and failure of grade level (Gamache Martin et al., 2010). “If we expect the emotionally distressed children who fill our classes to learn, we must be ready to understand and help them in a deeply personal way” (Morrow, 1987, p. 233).

Educators who are capable of providing the correct balance of positive emotional and intellectual opportunities, such as mild-to-moderate challenging curriculum that creates a natural curiosity, motivation and engagement, help students move information through the amygdala to integrate new material with previous learning (Willis, 2006). Content that is perceived as challenging, rather than stressful, causes an appropriate amount of stress hormones (e.g., cortisol and adrenaline) to be released: High levels of cortisol released during sustained stress appears to shrink cells in the hippocampus (Willis, 2006). Students and adults learn each time neurons fire, and with repeated exposure to content using multiple senses, especially content linked to unusual or surprising events, the capacity to learn increases (Willis, 2006).

Perfect et al. (2016) noted the lack of research and difficulty in conducting research on the impact of trauma on children within school settings due to a variety of organizational barriers; deficiency of a working definition of a traumatic event and traumatic stress; and the numerous forms of trauma that could be examined. Perfect et al. amalgamated the findings from 83 of 6,107 research articles published between 1990 and 2015 specific to trauma and school-age children. Although some studies failed to find significant differences between school-related outcomes of students exposed to trauma or traumatic stress and their peers, Perfect et al. reported on many studies that demonstrated trauma’s association with categories of school-related concerns and symptoms (see Table 3).

Table 3

Impact of Trauma on Cognitive, Academic, and Social-Emotional-Behavioral Functioning

Cognitive Functioning	Academic Functioning	Social-Emotional-Behavioral
Reduced visual memory ^a	Less engaged in academics ^a	Low self-esteem ^{ah}
Reduced verbal memory ^a	Abused scored lower on math and English state tests ^a	Internalizing behavior symptoms ^a
Reduced spatial memory ^a	Neglected scored lower than abused on tests ^a	Externalizing behavior symptoms ^{ad}
Abused and neglected had significantly reduced working memory ^a	Lower scores on vocabulary, reading, spelling, and language tests for traumatic stressed ^a	Aggressive, defiant, and oppositional behaviors ^{adg}
Neglected with PTSD had reduced memory skills ^a	Lower scores on math and science tests ^a	Impulsive, unruly, and disruptive behaviors ^{adg}
Lower verbal and language abilities ^a	Lower grade point average or failing in school ^{abcd}	Depression and despondency related behaviors ^a
Comorbidity between abuse and language disorders ^a	More discipline referrals and suspensions ^a	Withdraw or inattentive behaviors ^{adg}
Lower IQ scores ^{abc}	More likely to fail a grade ^{ac}	Behavior problems ^{dfgik}
Attention problems for sexually abused ^a	Increased school absences ^{acdf}	Hypervigilant to potential problems and safety concerns ^h
Reduced readiness to learn ^d	Avoids academic risks and quits easily ^{gi}	Failure to understand how choices effect outcomes ^j
Reduced attention and critical thinking ^{gl}	Reduced ability to read ^{bc}	Interpersonal skills and relationship problems ^{gm}
Reduced executive functioning skills ^g	More likely to drop-out or be expelled ^c	Emotional regulation problems ^{gij}
	Difficulty following directions and problem solving ^g	Difficulty with intrapersonal skills and solving conflicts ⁿ
	Difficulty interpreting oral, nonverbal or written instructions ^l	Lack awareness of acceptable physical and psychological boundaries of others ^g
	Difficulty setting and achieving goals ^g	Unpredictable and easily overwhelmed ^g
	Perfectionistic with academics ^l	Somatic symptoms ^o
		More risk-taking behaviors ^{hm}
		Lacks trust ^{gl}
		View world as unjust ⁿ
		Difficulty perspective taking ^l

^aPerfect et al., 2016; ^bDelaney-Black et al., 2002; ^cWong, 2008; ^dSouers & Hall, 2016; ^ePorche et al., 2016; ^fBlodgett, 2016; ^gBlaustein, 2013; ^hBluestein, 2001; ⁱPhifer & Hull, 2016; ^jCurtin, 2008; ^kJaycox et al., 2006; ^lHertel & Johnson, 2013; ^mKo et al., 2008; ⁿCraig, 2016; ^oWiebler, 2013

The limbic system of the human brain responds to danger or stressful situations by activating a flight, fight, or freeze response to improve the likelihood of survival by escaping, fighting, or avoidance behaviors (Souers & Hall, 2016). Humans instinctually flee from danger, whether real or perceived, before resorting to fighting, and when the biological response fails to activate and the thinking part of the brain shuts down, humans freeze. Stress may cause students to utilize these coping behaviors within the school setting (Souers & Hall, 2016). Thus, Souers and Hall (2016) categorizes behaviors into the following categories:

Flight

- leaving or skipping class, hiding or wandering;
- daydreaming or pretending to sleep;
- social isolation (Phifer & Hull, 2016).

Fight

- childish and bullying type behaviors (Blaustein, 2013);
- yelling, arguing, defiance, belligerent.

Freeze

- appearing numb, shut down or disengaged;
- refuses to answer questions or accept help.

The negative consequences of ACEs on students begin before kindergarten. After controlling for demographics (e.g., age, gender, race, and ethnicity of the child) in the ACEs in Head Start Study, Blodgett (2014) determined that the numbers of ACE were correlated with teacher ratings of childhood social-emotional, literacy, language, math, and cognitive development delays that lead to school readiness problems. Boys may be more susceptible to the negative outcomes of experiencing trauma than girls (Blodgett, 2014).

Childhood trauma has a profound impact on all stakeholders within the school setting, whether it is the negative impact of ACEs on traumatized students, traumatized student behaviors on peers, or the negative impact on adults responsible for managing school facilities or teaching students (Blodgett, 2015). Ultimately, this has the potential to cause job related stress and burnout (Blodgett, 2015). The Spokane Childhood ACE Study conducted by researchers at Washington State University in 2010 on approximately 2,000 students in 10 public elementary schools determined that 45% of students experienced one or more and 11% experienced three or more traumas; 35% had academic problems, 27% had behavior problems, 21% had chronic health problems, and 13% had truancy problems (Blodgett et al., n.d.). More than two-thirds of the students in the Spokane study were White, approximately half were on Free and Reduced lunch, and a little over one in ten received special education services. Sours and Hall (2016) referenced the correlation between the number of ACE and increased school related concerns determined by the Washington State University Spokane Childhood ACE Study. For example, a student with two ACEs was 4.3 times more likely to have behavior concerns and 2.6 times as likely to have major attendance problems as a student with zero ACE (See Table 4).

Table 4

Correlation Between the Number of ACEs and School and Health Concerns

	Attendance	Behavior	Coursework	Health
3+ ACEs	4.9	6.1	2.9	3.9
2 ACEs	2.6	4.3	2.5	2.4
1ACE	2.2	2.4	1.5	2.3
No ACEs	1.0	1.0	1.0	1.0

Note: Reproduced from Souers & Hall, 2016, p. 21

The number of ACE were significantly associated with student eligibility for free and reduced lunch, indicating a link of traumatic experiences and living in poverty, although no association

was found between the number of ACE and the grade level, gender, race, or special education status of students.

Bethell et al. (2014) determined that children who experience two or more traumas are 2.67 times more likely to fail a grade in school and 2.59 times more likely to become disengaged with academics as compared to peers with zero ACE. Moreover, Bethell et al. discovered reduced academic engagement and greater rates of chronic illness amongst traumatized students after adjusting for confounding factors such as race, income, and health status. The number of ACE were found to be a predictor of attendance and behavior problems; while involvement in special education classes, followed by the number of ACE, was a predictor of health and academic failure (Blodgett et al., n.d.).

The results support the relevance of adverse events as a focus for school-based risk reduction efforts. Indeed, these results suggest that attending to ACE exposure in children may be the most powerful predictor of risk for schools to attend compared to other common school risk indicators. (Blodgett et al., n.d. p. 4)

The impact of childhood abuse on learning may be a result of attention and executive functioning problems, compounded by the complications of emotional and behavioral outbursts within the school setting (Gamache Martin et al., 2010). The negative impact on student learning and behaviors within the school setting are due to the emotions and stress caused by the perceptions of traumatic events (Jaycox et al., 2006). When students are preoccupied with memories of the trauma, making it difficult to concentrate in a school setting, students may exhibit behaviors in an attempt to avoid school or anything that may remind them of the events they have experienced (Jaycox et al., 2006). Furthermore, when a student is in survival mode and his or her limbic system is activated due to stress or danger, the ability to learn and

remember information is impaired (Souers & Hall, 2016). Educators are in a prime position to help students understand how their brain and bodies work, to identify and deescalate emotions in order to calm the limbic system, and gain access to the prefrontal cortex so that students can think clearly (Souers & Hall, 2016). Although, educators cannot prevent trauma, they can proactively teach and help students practice emotional regulation strategies within a safe and predictable setting (Souers & Hall, 2016).

Students experiencing stress due to trauma must feel psychologically and physically safe to maintain self-control. Disciplinary actions that result from negative behaviors due to stress are typically interpreted as a rejection or threat, resulting in additional negative behaviors (OhioMHAS, 2016a). Disruptive behaviors exhibited by traumatized students often result in referrals to the principal's office and punitive consequences. Nationally, only 5% of suspensions result from dangerous activities such as violence or drugs, while 95% result from behaviors that disrupt the learning environment (Children's Defense Fund - Ohio, 2015). More than 50% of out-of-school suspensions in Ohio result from disruptions or insubordination, regardless of the documented risk that being suspended makes it twice as likely a student will fail a grade and three times as likely to enter the juvenile justice system (Children's Defense Fund - Ohio, 2015).

Repeated suspensions for on-going behavior problems result in a decline in academic performance, increasing the probability that students will be channeled into the "school-to-prison pipeline" (Children's Defense Fund - Ohio, 2015, p. 3). Mallett (2014) reported that a vast majority of adolescents involved in the juvenile justice system have at least one or more ACEs and substantial emotional or learning deficiencies, potentially lasting for weeks to years. The comorbidity of mental health disorders (e.g., depression and conduct disorders), substance abuse, learning disabilities, adolescent delinquency, and trauma impacts childhood development and

predisposes students to negative outcomes such as incarceration (Mallett, 2014).

In the study conducted by Gamache Martin et al. (2010), teachers reported that physical and sexual abuse as well as emotional neglect negatively impacted student learning and behaviors in the school setting. Teachers reported that emotionally neglected students had problems learning, and internalized and self-harm behaviors. Physically or sexually abused students exhibited behaviors at both ends of the spectrum (i.e., internalized behaviors to disruptive behaviors), negatively impacting students' ability to pay attention and learn (Gamache Martin et al.). The symptoms of disruptive behaviors used in the study included hyperactivity, impulsivity, insubordination, inattention, and physical and verbal aggression. Symptoms of internalized behaviors included withdraw, depression, avoidance, deficient motivation, and low self-image. Additional abuse outcomes were reported, such as self-mutilation, scarcity of basic needs (e.g., safety, food, or sleep), and excessively emotional or needy behaviors. Of the 112 teachers that participated in the study, 21% were unable to describe how physical and sexual abuse could potentially impact their students within the school setting. PD on the behaviors at both ends of the spectrum, inattentive to disruptive, may assist educators in detecting potential cases of abuse or trauma. The comorbidity of behavioral symptoms between abused or traumatized students and students who have psychiatric disorders, such as ADHD or PTSD, or learning disabilities (Perfect et al., 2016), creates a level of uncertainty that may impact an educator's willingness to report suspected abuse to CPS or when making decisions about how to respond to the behaviors from a disciplinary perspective.

Educator response to traumatized students.

Brockton Public School leaders in Massachusetts experienced resistance from educators following the attempt to implement a trauma-informed approach in conjunction with local law

enforcement and helping agencies (Stevens, 2012). Teachers responded to disruptive student behaviors with habitual reactions, such as yelling at disruptive students, removing them from class, or participating in negative conversations with colleagues about how the students should be punished (Stevens, 2012). Alternately, other students may have experienced the same traumatic events, exhibiting withdrawal type behaviors, failing to engage in classroom lessons, resulting in different responses by educators (Stevens, 2012).

The customary response of school personnel to student misbehaviors, especially those considered disruptive, is to utilize the authority of the position to address the behavior, frequently resulting in a power struggle or removal to the principal's office for disciplinary action (Souers & Hall, 2016). Souers and Hall (2016) challenge educators to use a trauma-informed lens to reconsider the notion that misbehaviors are choice behaviors and to focus on the motive behind the behaviors so that adults can provide alternate options for managing stress related behaviors. The beliefs adults' hold about student behaviors determines whether adults feel attacked or disrespected; therefore, adults may respond with punishment to stop negative behaviors or understand the need to teach school-appropriate behaviors (White-McMahon & Baker, 2016). Black (2015) recommends educational leaders change traditional responses to student behaviors in light of the growing knowledge of the interconnectedness of trauma and misbehaviors.

A trauma-informed lens and paradigm shift in basic assumptions changes the questions adults ask traumatized youth from *What is wrong with you?*, to a holistic view of *What has happened to you?*, *What do you need?*, or *How can I help?*, to improve interpersonal interactions, treatment, and outcomes (Bloom & Farragher, 2013; SAMHSA, 2015a; Vicario & Gentile, 2015). Through the use of a trauma-informed lens, counselors, physicians, and educators can reflect on the student's history rather than solely addressing the symptoms or behaviors that

prompted the intervention. A greater awareness of the impact of trauma on brain development will assist school leaders, teachers, and non-teaching staff to change the mindset used to view student misbehaviors that impede learning and traditional discipline measures (Oehlberg, 2008). Misbehaviors are often the result of trauma related stress; therefore, disciplinary policy may need to be revised to avoid student feelings of rejection, insecurity, shame, punishment, and retraumatization (Oehlberg, 2008).

School personnel change the lens they use to interpret student misconduct, academic failure, or lack of motivation when armed with the knowledge of how trauma impacts the neurobiology of the brain. This knowledge includes an understanding that students may feel fear and overreact to events that most students would find nonthreatening (i.e., hyper-arousal or hyper-vigilance) or withdraw and under-react to events (i.e., hypo-arousal). Students may also become defiant, unable to pay attention or manage emotions, or utilize survival tactics (Black, 2015). Additionally, an educator familiar with trauma symptomology will recognize that a perfectionistic student may be a trauma victim (Black, 2015). Changing the lens used to interpret behaviors, misbehaviors as well as perfectionistic behaviors, allows educators to identify students who need additional support. When students feel close to educators, supported, valued, and accepted for who they are, classroom engagement improves, negative emotions decrease, and students feel more competent and in control of their education (Reeve, 2006).

A collective understanding of the problem (i.e., trauma) is vital to achieving teacher support for TIC (Baweja et al., 2016). Teacher support for TIC implementation is particularly critical because teachers are the largest group of stakeholders, spending the greatest amount of time with students, and are therefore, more likely to be familiar and able to identify students in need of interventions and services (Baweja et al., 2016). Educators must understand the link

between neurobiological and trauma research, in addition to identifying and referring students to outside services (Oehlberg, 2008). A trauma-informed organization focuses on the whole-student, acknowledging what lies beneath the symptoms, and the coping skills and resources possessed by traumatized students, rather than focusing efforts on deficiencies and problems (Fallot and Harris, 2001). Trauma-informed employees give students a voice by co-identifying safe and trusting relationships, secure locations, a sense of purpose, self-soothing strategies, and resiliency skills so that support plans draw upon survivor know-how (Fallot & Harris, 2001).

Impact of Trauma on Adult and Societal Well-Being

Childhood trauma negatively affects adult and societal financial well-being in addition to the impact of ACEs on adult physical and emotional health (Simonich et al., 2015). Prolonged exposure to the brain's stress response, fear, and increased cortisol levels can alter brain structure in childhood and consequently disrupt relationship building and trust, memory and cognitive reasoning, and emotional management (Evans & Coccoma, 2014). Research conducted by Anda et al. (2004) determined that there was a strong relationship between the number of ACE and diminished employability skills due to outcomes of traumatic experiences such as a lack of interpersonal communication skills, relationship problems, substance abuse, somatic symptomology, and emotional turmoil.

Informed employers provide biopsychosocial assistance to employees to address these personal concerns with the goal of minimizing health insurance costs, improving worker absenteeism, employee financial well-being, job performance, organizational profits, and productivity (Anda et al., 2004). The traditional approach of improving workforce productivity focused on medically treating job-related injuries, training employees, and integrating new technologies; this approach is inadequate and signals a lack of awareness of ACE related

research (Anda et al., 2004). A paradigm shift is necessary: Leaders must utilize a trauma-informed lens to address the toxic impact of trauma on employee social-emotional and brain functioning, use of unhealthy behaviors, and the possibility of disease, disability, and premature death. To compound the problem, employees may underreport or hide ACE related information from employers due to shame or community taboos, making it difficult for employers or medical professionals to appropriately address the underlying cause of worker dysfunction (Anda et al., 2004). Due to the detrimental impact of ACE on individuals and society as a whole, Simonich et al. (2015) advocate for the implementation of a trauma-informed framework.

Trauma-Informed Care Framework

As a result of research regarding the impact trauma has on children, and subsequently adult physical and mental health and well-being, national organizations have formed initiatives to recognize and address trauma symptoms and provide appropriate interventions to support the healing of traumatized youth in order for them to become healthy, productive citizens. For example, SAMHSA, the National Center for Trauma-Informed Care (SAMHSA, 2015a), National Council for Behavioral Health (2015), National Child Traumatic Stress Network (NCTSN) (Ko et al., 2008), and the Ohio Department of Mental Health and Addiction Services (OhioMHAS, 2016b), advocate for the implementation of Trauma-Informed Care professional development (TIC PD) to create an informed workforce capable of addressing the multifaceted needs of traumatized individuals within a trauma-sensitive organization. The advocacy is founded on trauma-survivor stories, research, including the outcomes of the ACE Study (Felitti & Anda, 2010) and advances in neuroscience, indicating the prevalence and long-term impact of childhood trauma on cognitive and physical functioning, as well as the impact trauma has on brain development, social-emotional well-being, learning, and behaviors (Perry, 2001). “In turn,

these neurodevelopmental effects may result in significant cost to the individual, their family, community and, ultimately, society. In essence, childhood maltreatment alters the potential of a child and, thereby, robs all of us” (Perry, 2001, p. 15).

Harris and Fallot (2001) advocate for the use of trauma theory to develop service systems that meet the needs of all individuals. A trauma-informed organization has a safe and inviting climate, educated workforce, and supports the needs of the whole-person; a TIC organization does not have to provide trauma therapy (Evans & Coccoma, 2014). Within a trauma-informed system, the focus is on understanding the whole individual rather than the troubling symptoms or behaviors so that individuals can regain control and autonomy (Harris & Fallot, 2001).

SAMHSA, an agency within the U.S. Department of Health and Human Services, spearheads the national effort to improve the behavioral well-being of individuals within the U.S., and influences federal efforts to encourage the implementation of a trauma-informed approach to behavioral health care and social service systems (SAMHSA, 2015c). “Trauma-informed care is an approach to engaging people with histories of trauma that recognizes the presence of trauma symptoms and acknowledges the role that trauma has played in their lives” (SAMHSA, 2015a, para. 10). A TIC approach includes the following understandings and reactions (SAMHSA, 2015d):

- the pervasive impact of trauma and avenues for recovery;
- identification of signs and symptoms of trauma in all organizational stakeholders, including children and adults;
- behaviors are coping strategies and outcomes of trauma;
- trauma-related knowledge is assimilated into policies, procedures, everyday practices, and organization culture;

- the environment and interactions are physically and psychologically safe for students and employees;
- communications and procedures are trustworthy, just, and transparent;
- staff actively endeavor to resist re-traumatization of students and employees (e.g., isolating a neglected student);
- stakeholders within the school community collaborate (i.e., power and decision making is shared);
- school personnel empower students, give them a voice and choice, build upon student strengths, and believe in student resiliency and capacity for healing;
- eliminates stereotypical and biased beliefs to provide supports that meet individual needs.

The SAMHSA Center for Mental Health Services began funding the National Center for Trauma-Informed Care (NCTIC) in 2005 to provide resources, consultation, education and technical support to service organizations and K-12 education (SAMHSA, 2015a). SAMHSA (2015a) frames its concept for trauma around three "E's": "event(s), experience of the event, and effect" (para. 11). SAMHSA is a leader in the efforts to develop and encourage the use of trauma-specific interventions. The principles that guide SAMHSA's trauma-informed approach can be used "for analyzing social policy and guiding advocacy efforts" (Bowen & Murshid, 2016, p. 223). A key goal of the agency is to promote recovery from trauma and build resiliency amongst trauma victims.

The National Child Traumatic Stress Initiative (NCTSI) was reauthorized in 2013 by congress as an acknowledgment of the dire impact trauma has on the mental health of children (SAMHSA, 2015b). The goal of NCTSI is to provide PD, develop and implement interventions to reduce the negative impact of trauma on youth, and improve treatment and access to

community-based mental health care services for trauma victims. As a result of this initiative, SAMHSA representatives and other agency experts formed the NCTSN, made up of 70 treatment and research organizations, whose mission is to improve trauma-informed practices and access to services, as well as establishing collaborative networks between schools and agencies (Ko et al., 2008).

Regardless of the noted advantages of becoming a trauma-informed school, few states or school districts are implementing the approach (Black, 2015). For example, California is in the beginning stages of implementing school-related initiatives to counteract the impact that trauma has had on student academic achievement, misbehaviors, and health (Adams, 2013). Teachers in some areas of Washington, Massachusetts, and Wisconsin are receiving whole-school TIC PD so that they can recognize the behavioral symptoms of trauma-induced stress, gain an understanding of the scientific research behind TIC, and acquire trauma-informed approach skills to manage traumatized student behaviors (Cole et al., 2013).

Trauma-Informed Care Framework in Ohio

The Ohio Department of Developmental Disabilities (DODD) and OhioMHAS united efforts to initiate a statewide campaign in 2013 to comprehensively embed a trauma-sensitive culture within organizations that serve traumatized individuals (OhioMHAS, 2016b). The Ohio initiative is guided by six SAMHSA principles: “safety; trustworthiness and transparency; peer support; collaboration and mutuality; empowerment, voice and choice; and cultural, historical and gender issues” (SAMHSA, 2015d, para. 4). The OhioMHAS and DODD have provided leadership and PD for psychiatric hospitals, developmental centers, and community agencies.

The Children’s Defense Fund – Ohio (2015) recommends the following policy changes in Ohio to address the implementation of TIC practices, to create school settings that are safe and

caring, in hopes of reversing the adverse effects of trauma on students so they can achieve academic success: state funding for TIC implementation and interventions in schools; utilize a trauma-informed lens to revise policies and inform classroom instruction; and require TIC PD for all school personnel. In addition, Ohio school employees are mandated to report suspected child abuse to CPS per 2151.421 of the Ohio Revised Code (LAW Writer: Ohio Laws and Rules, 2015). School leaders are responsible for educating employees about child abuse and reporting requirements, in addition to focusing on school safety.

Essentials Within a Trauma-Informed School to Promote Healing

Jaycox et al. (2006) and the OhioMHAS recommend that agencies and schools implement trauma-informed interventions and approaches. The overarching goal of a school-based TIC approach is to “reduce emotional and behavioral problems related to trauma exposure and to foster resilience in students for the future” (Jaycox et al., p. 9). The goal of care within a trauma-informed school is to help students overcome difficulties (Mayeroff, 1995), to thrive despite challenges, and to build resiliency (Brendtro & Longhurst, 2005; Oehlberg, 2008).

The fact that the number of students who are exposed to trauma is increasing each day demonstrates the need for researchers to know the best way for teachers to be prepared to provide a trauma informed teaching approach so that they can support students as they learn to operate in their neo-cortex. (Jones, 2013, p. 111)

Although resilience is a universal human trait, humans need encouragement and positive relationships to thrive (Brendtro & Longhurst, 2005). According to Lazarus and Folkman, the problems faced by individuals start with stress: “a state of physical and psychological arousal that signals some challenge or difficulty” (as cited in Brendtro & Longhurst, 2005, p. 53).

Effective interventions recommended by the NCTSN can be implemented in schools with

a trained workforce: teaching students skills to manage stress and emotions; assisting students in clarifying feelings and perceptions about traumatic events in a manner that does not retraumatize and amends inaccurate or unhealthy mindsets; utilizing journaling or the arts to articulate traumatic events and empower resiliency; and including parents in providing supports (OhioMHAS, 2016e). In addition, NCTSN (2008) advocates for the implementation of academic accommodations and modifications regardless of whether the traumatized student qualifies for special education services. Potential accommodations and modifications include shortened homework assignments, additional time to complete classwork, a plan for students to leave class when feeling overwhelmed to meet with a staff member in a safe place, and assistance with executive functioning skills, such as remembering and organizing school work.

To mitigate the negative impact of trauma on children, teachers can provide students with empathetic support, and teach students strategies for mindfulness and remaining calm during difficult situations (Bethell et al., 2014). Cook et al. (2005) expounded upon the six core components of complex trauma intervention:

- improvement of personal and environmental safety;
- improvement of self-regulation capabilities following emotional, behavioral, physiological or cognitive dysregulation;
- improvement of executive functioning, such as planning and decision making, and self-reflection of past and present experiences;
- development of coping skills to manage traumatic memories and experiences, including mourning without debilitating results;
- improvement in interpersonal relationship skills, such as assertiveness, cooperation, perspective-taking, setting limits and appropriate boundaries, empathy, and the ability to

appropriately engage in physical and emotional intimacy with others;

- improvement in affect, including a greater sense of self-worth, competency, and achievement, creativity, experiencing happiness, engaging in the community, and ability to plan for the future.

Bethell et al. (2014) found that children, ages six to seventeen, who learned resiliency strategies such as remaining calm and in control when faced with difficulties were able to ameliorate the negative effect of childhood trauma and increase engagement in academics.

Safe, calm, supportive, and healing environment.

According to Stevens (2012), trauma-sensitive schools and trauma-informed classrooms are perceived as safe, supportive and caring. School safety encompasses more than crisis plan implementation (Ko et al., 2008) or ALICE (Alert, Lockdown, Inform, Counter, Evacuate) training. In addition to the fear caused by trauma that occurs outside of the confines of the school, negative or violent experiences at school can cause students to be scared. Being called on to give a speech in class, harassment from peers or adults, feeling that nobody cares, having no one to play with, or anticipating or enduring a physical attack may make school feel unsafe for students (Bluestein, 2001). Also, receiving threats, being taunted regarding race, sexual orientation, or disability, and verbal insults may make students feel unsafe (Harris, 2000). These behaviors occur in all areas of the school facility, including hallways, restrooms, and playgrounds, and often go unnoticed (Harris, 2000).

All school personnel possess dispositions toward students and are responsible for the success of schools. The ancient African proverb, “it takes a village,” used by Hillary Rodham Clinton in the 1996 book *It Takes a Village*, rings true. According to Hattie’s (2012) review of 913 meta-analyses, the teacher had the largest effect size ($d = 0.47$) on student academic

achievement. However, teachers cannot do it alone: “Schools must develop systems to assist them” (Sitler, 2009, p. 122). Classified employees interact with students in the hallways, cafeteria, classrooms, during recess, upon arrival and dismissal from school, and on the school bus; therefore, classified staff have the potential to negatively impact student behaviors that may impede learning or provide adult supports to facilitate feelings of safety and care (Cole et al., 2013). Students who have experienced traumatic events may live with toxic stress; therefore, view the world through a lens of potential threat and danger. A safe, calm and supportive environment is critical as “academic work is viewed as secondary to recognizing warning signs of impending trouble” (Harris, 2000, p. 6). School safety includes academic safety, emotional safety, social safety, and physical safety (Bluestein, 2001).

Adults within the school setting can help students perceive that they are physically and psychologically safe and cared for, and that the adults will help them through traumatic experiences by effectively using a trauma-informed approach (OhioMHAS, 2016d). The NCTSN (2008) suggest that educators support students in maintaining routines during or after traumatic experiences to help students feel safe and to imply that life continues to move forward. Providing choices may help students feel that they control their life in the school setting, as they may lack control of their life or live in chaos outside of school. Schools can also designate an adult to support and encourage traumatized students. School personnel should communicate clear limits for appropriate and inappropriate behaviors and implement logical consequences rather than issue reprimands and punitive consequences. Additionally, NCTSN (2008) suggests that schools communicate that it is appropriate for students to talk to educators within the school setting and establish a time and safe place for students to discuss feelings and incidents leading to trauma. During these discussions, educators should provide simple and realistic responses to

student questions, explain misconceptions and rectify distorted thinking about traumatic events. Educators should proactively address potential triggers or vulnerabilities in the environment that may retraumatize or escalate negative feelings or behaviors.

Trauma-Informed Care Professional Development

“Framing professional development around a commitment to the whole child is a priority without borders” (Varlas, 2007, p. 1).

Rodgers and Raider-Roth (2006) contend that the focus on standardized assessments has overshadowed the perception of what it really means to teach: The prevailing view is that “good teaching causes good learning, which is equated with high test results. Bad teaching causes bad learning, which is evident in low test results” (p. 265). Rather than teaching to improve test results, Souers and Hall (2016) suggest that educators shift their professional focus to student strengths and building healthy relationships. Caring employees who acquire knowledge, dispositions, and behaviors based on a “NeuroRelational Framework” can form “therapeutic relationships” to “encourage natural strengths to surface within young people, helping them to overcome adversity” (White-McMahon & Baker, 2016, p. 2).

In order to change educator dispositions and behaviors toward traumatized students and to overcome the lack of understanding of how trauma negatively impacts students, school leaders can provide TIC PD for all employees. C. Blodgett described TIC PD as a “whole-staff approach” to “create opportunities for supported practice”; although he noted that PD does not necessarily shift mindsets or behaviors (personal communication, October 21, 2015).

Researchers cite ACE study findings, promising outcomes of recent attempts to address childhood trauma in schools, and SAMHSA recommendations as motives to systematically embed a trauma-informed framework within school settings (Chafouleas et al., 2016). The

successful implementation hinges on professional development to create a common language, shared vision, and an educated, responsive workforce (Chafouleas et al., 2016).

Federal and state agencies, such as SAMHSA (2015d) and OhioMHAS promote the importance of an educated workforce that focuses on the awareness of trauma sources, signs and symptoms, and the necessary supports to create safe and healing environments. PD for educators is imperative: Schools that fail to address the cognitive, social-emotional, and physical outcomes of trauma put students at risk (Ristuccia, 2013) for failure or dropping out of school (Wong, 2008). “Schools are essential to the success of a trauma-affected child...especially when parents are incapable of providing the necessary care and support or are the source of trauma” (Children’s Defense Fund - Ohio, 2015, p. 2). School personnel who have an awareness and sensitivity to the needs of traumatized students can fill the gaps of support needed for vulnerable children to become resilient (Children’s Defense Fund - Ohio, 2015).

“Trauma training can help teachers to support their students, and increase the chances that they will experience academic and behavioral success despite the negative effects of adverse childhood events” (Jones, 2013, p. 112). Schools cannot afford to ignore reality: Schools must have an educated workforce (Craig, 2016; Ristuccia, 2013). Beginning in 2005, a few schools implemented a trauma-informed approach with various levels fidelity, citing ACE studies and research on the impact of trauma on the developing brain to substantiate the need for schools to be trauma-informed (Stevens, 2012). In addition, C. Blodgett advocates for TIC PD for employees to address the public health crisis that results from trauma and the need to create compassionate schools (personal communication, October 21, 2015).

Although the literature includes information pertaining to the PD of certified staff, there is a gap in the literature regarding the PD of classified staff members in K-12 education. The

National Education Association (NEA) espouses the following beliefs regarding the PD of classified employees:

NEA believes that professional development should be required throughout the career of education support professionals. Professional development programs should provide equal opportunities for these educators to gain and improve the knowledge and skills important to their positions and job performance. They should assure that these educators have a decisive voice at every stage of planning, implementation, and evaluation.

Student achievement depends on supporting and educating the whole student. To have high standards for students, there must be high standards for the staff members who work with them. (NEA, 2015, p. 1)

Trauma-informed care PD is important for school personnel within all levels of the organization as the implementation of trauma-informed approaches benefits all members of the organization (Anderson et al., 2015).

Need for Professional Development

The lack of trauma-related knowledge and awareness has been reported in organizations other than schools, even within the mental health field. S. Bloom, a psychiatrist and Founder and Executive Director of the Sanctuary program within a hospital psychiatric unit, treated thousands of individuals who experienced childhood trauma between 1980 and 2001. As a result of trauma research, Bloom and her colleagues now recognize that they unsuccessfully identified the underlying problem, failed to understand how traumatic experiences caused the symptoms they were attempting to treat, and struggled with patients for power (Bloom & Farragher, 2013). “The result of our ignorance and confusion, that were also typical of our field, was that our patients had often experienced ‘sanctuary trauma’ – expecting a protective environment and

finding only more trauma” (Bloom & Farragher, 2013, p. 5). Moreover, they lacked hope that recovery was possible and failed to recognize their mistreatment of patients and colleagues (Bloom & Farragher, 2013).

Washington panelists, consisting of government officials, educators and teacher trainers, agreed that teachers are not prepared to support students dealing with trauma and the need for teacher preparation programs to provide future teachers with the tools to identify signs of trauma, strategies to help traumatized students feel safe, and an understanding of the impact trauma has on student learning (Mader, 2015). “Developing a pedagogy of awareness can help a teacher to reframe perceptions and consequently, help disengaged or difficult students reinvest in their learning” (Sitler, 2009, p. 119). Sitler (2009) noted the importance of educators teaching students in a caring and supportive manner, as educators may not be aware of the issues students face outside the schoolhouse walls, the effects of trauma on learning, and how to manage the resulting behaviors. “The task is to teach with a pedagogy of awareness that provides ongoing support for the needs of all learners” while remaining conscious of the physical, psychological and academic needs of the whole individual (Sitler, 2009, p 120).

Local Professional Development Implementation

In the fall of 2011, the Hancock County ADAMHS Board, in collaboration with various social service agencies, conducted a community health assessment as part of the Be Healthy Now initiative (ADAMHS, 2015). The results indicated a local need to develop “a strategic plan to address the most critical needs of the community which included substance abuse, violence and childhood obesity” (ADAMHS, 2015, p. 1). The addendum study conducted in 2013 indicated that 44% of the adult population in Hancock County reported at least one ACE, 10% reported an ACE of four or higher (A. Wolfram, personal communication, October 8, 2015). In

order to address critical issues facing community residents, ACE research indicating a direct relationship between the number of traumatic events and increased probability of health related concerns was used as evidence for the need to understand the effects of trauma throughout a lifetime (ADAMHS, 2015).

Beginning in August of 2014, representatives from 21 local organizations in Hancock County, Ohio, including mental health, juvenile justice, and school representatives, collaborated in nine Core Implementation Teams in a year-long Trauma-Informed Care Learning Community, under the guidance of National Council for Behavioral Health directors' C. Sharp and K. Johnson. The researcher (i.e., a Findlay City Schools administrator and former school counselor), a school board member (i.e. practicing mental health counselor), and school district counselors participated in the Learning Community. The Learning Community defined TIC in the following manner:

Trauma Informed Care (TIC) is an approach that explicitly acknowledges the role trauma plays in people's lives. TIC means that every part of an organization or program understands the impact of trauma on the individuals they serve and promotes cultural and organizational change in response to their clients. (ADAMHS, 2015, p. 1)

The Core Implementation Teams conducted organizational assessments and developed implementation plans based on a vision statement and a draft copy of seven trauma-informed domains developed by the National Council for Behavioral Health for the school district. As one of the nine teams, the school district conducted an organizational self-assessment survey. The results of the survey indicated district employees could benefit from TIC PD. Domain three is a trauma-informed, educated and responsive workforce. The goal of the school-based Core Implementation Team was to embed the domains into the school district's culture over a three to

five year period of time to improve supports for students and collaboration between the school district and local agencies.

The school-based Core Implementation Team presented the findings to the District Leadership Team (DLT) to obtain support for the implementation of PD as the catalyst to becoming a “trauma-informed educated and responsive workforce” capable of sustaining “a safe, trusting and healing environment” through changing “policies, procedures, and practices that may unintentionally cause distress or re-traumatize those we serve,” and implementing evidence based best practices to address the multifaceted needs of traumatized students (ADAMHS, 2015, p. 3). A trauma-informed educated and response workforce is designed “to increase the awareness, knowledge and skills of the entire workforce to deliver services that are effective, efficient, timely, respectful, and person-centered, taking into consideration that service providers may also have histories of trauma” (ADAMHS, 2015, p. 3). This was the school district’s first attempt at providing transformational learning PD for all employees, including bus drivers, aides, custodians, secretaries, interpreters, lunch and recess monitors, and technology technicians, as this type of PD was typically provided for certified employees.

A TIC Leadership Committee, including members from the Learning Community, the Hancock County Juvenile Judge, local mental health agency employees, district administrators, teachers, and school counselors, was created in January of 2015 to provide distributed leadership for the initiative. In compliance with the seventh domain (i.e., use of data to drive improvement efforts), the TIC Leadership Committee developed action steps to assess the outcomes of the TIC PD in order to provide on-going differentiated training and an annual evaluation of the organizational self-assessment survey. Additionally, in 2016 the TIC Leadership Committee used the Trauma-Sensitive School Checklist developed by Lesley University and the TLPI to

collect data from Building Leadership Teams and certified employees to assess the status of TIC implementation within each school and to inform building specific goals and action plans.

The researcher, a member of the TIC Leadership Committee, conducted a thorough review of the literature prior to the TIC PD in September, 2015 and failed to locate a valid and reliable survey that could be used to assess the desired learning and behavioral outcomes of the TIC PD. Therefore, the researcher contacted the developers of four existing surveys to request permission to modify existing survey items for inclusion in a new survey titled Trauma-Informed Care Dispositions Survey (TIC-DS). Additionally, the researcher and a school counselor (i.e., members of the Core Learning Community and TIC Leadership Committee) developed and co-lead the PD for the classified employees. The PD learning outcomes were based on trauma-related literature, scientific research, and constructs covered in the learning community meetings. The ADAMHS Board approved a grant written by Leadership Committee members to provide funds to supplement monies set aside by the school district board of education to pay for classified wages and presentation fees (i.e., P. Black from the National Council for Behavioral Health and Challenge Day). Students did not attend school for two days due to a waiver day applied for by the Superintendent and approved by the Ohio Department of Education for professional development.

Within the staff of 800 classified and certified employees existed a wide range of ages, developmental levels, beliefs, life experiences, and learning styles. Clearly presenting the problem (i.e., impact of trauma on students) and how implementing a TIC framework can benefit the students and staff appeared to motivate adults to engage in the learning process. With an understanding of transformational learning theory, the school district TIC committee made the conscious decision to include transformational learning activities in addition to the traditional

“sit and get” PD. This decision was rendered due to research that indicates feelings, rather than merely acquiring scientific knowledge, is a key motive for changing behaviors (i.e., employees must feel differently about the problem to change their behaviors) (Keysers, 2011). Three PD opportunities were offered to district employees in the fall of 2015. Adult transformational learning is about “setting the stage and providing the opportunity” (Cranton, 2002, p. 69).

The learning activities in the TIC PD intended to increase the likelihood of transformational change were also challenges to overcome. The challenges to overcome within the PD were related to implementing transformational learning that incorporated emotionally charged content and real-world examples of trauma that required classified and certified employees to consider their past perceptions and behaviors toward traumatized students. There was also a risk that the PD could reveal sensitive traumas that employees personally experienced. Activities could also prompt participants to question their self-concept or identity, causing employees stress. The vast difference in prior knowledge, readiness to engage with the new knowledge, and work related experience due to the quantity and quality of interpersonal interactions with diverse students varied greatly between classified and certified employees. These factors added to the challenge of achieving a successful outcome of the PD.

Transformational leadership.

Transformational leaders can address employee self-worth within the transformational learning PD, as they may question their self-concept upon the realization of past perceptions and behaviors toward students, motivating employees to do more and be more than they thought possible, to achieve the extraordinary without using power or extrinsic rewards (Bass, 2008). Transformational leadership can be used to make employees aware of the importance of the problem, the desired outcomes of the PD and how to reach the goal of a fully embedded TIC

framework within the school district culture (Burns, 1978). Leaders must motivate employees to forgo self-interests (i.e., maintaining old world-views as a means of self-protection) for the best interest of the district and well-being of students, and advance employees on Maslow's hierarchy of needs from one of safety to self-actualization (Burns, 1978).

According to Bass (2008), transformational leaders act as visionaries, intellectually engaging employees to foster autonomy and elevate employee morality about what is truly important, modeling expectations and behaviors, setting high standards for employees to follow, demonstrating respect and confidence in employees. Transformational leaders question old perceptions and reframe challenges (Bass, 2008), such as the old ways of viewing student misbehaviors and lack of academic progress, to uncover solutions. A clear vision was shared with the DLT to inspire employees to become excited about collectively tackling the challenge to form a trauma-informed organization, a vision of a future that would be appealing to employees due to the mutual benefit of TIC to staff and students, all the while cultivating interpersonal relationships built on empathy (Bass, 2008). All school stakeholders (e.g., school leaders, classified and certified employees, and students) benefit from a physically and psychologically safe and caring environment in which members can work and learn (Blaustein, 2013). Transformational leadership is crucial as you cannot offer incentives or coerce adults into genuinely caring for traumatized students, improving their interpersonal relationships, and empathetic concern.

Transformational Learning Theory

“Knowledge is power, but knowledge about self is the greatest power” (Rogers & Freiberg, 1994, p. 119).

A commitment to change (i.e., reframing beliefs and organizational practices) is essential

to become a learning organization (Giesecke & McNeil, 2004). The first step is to understand how organizations learn and the motivations for behaviors (Giesecke & McNeil, 2004). As the reality of traumas faced by students becomes evident, educators must evaluate their former perceptions and dispositions toward traumatized students and how they may need to change in the future. Some challenges or dilemmas, such as managing the behaviors of traumatized students, cannot be solved by continuing to use past practices or by learning more; employees must challenge old assumptions and grow (Mezirow, 1978). Transformational learning occurs when there is a change in a point of view, or belief, or the habit of mind (Merriam et al., 2007). According to Merriam et al. (2007), Mezirow's theory of transformational learning can be broken down into four parts:

1. An experience that does not align to the learner's existing meaning perspective prompting a disorienting dilemma.
2. Critical reflection of how one's assumptions and beliefs interpreted the experience causing emotions such as guilt or embarrassment (i.e., awareness of a discrepancy between what was perceived as true and the new information).
3. Reflective discourse with coworkers regarding the mismatch of assumptions to come to a consensus of understanding and investigation of possible actions.
4. Implementing behaviors and plans for action, culminating in the integration of new knowledge into a fresh perspective.

Cranton (2002) explained that a traumatic event or even a thought provoking question can prompt an individual to become aware of and critically reflect on their limiting perceptions and alternative viewpoints. Past experiences reinforce current perceptions and expectations; habits of mind impact our self-perceptions, interpretation of experiences, beliefs and work-

related knowledge (Cranton, 2002). “It is easier and safer to maintain habits of mind than to change” (Cranton, 2002, p. 65). Adults may undergo transformational learning as a result of experiencing a significant event or acquiring new knowledge that prompts critical reflection of whether past beliefs are still valid (Cranton, 2002). On the other hand, learning may happen over time without recognition that transformational learning occurred until later (Cranton, 2002). Through a new awareness, discussing assumptions, beliefs and concepts with others within a supportive and encouraging environment helps the process (Cranton, 2002). When faced with experiences such as those integrated into the TIC PD, participants may experience emotions such as guilt or anxiety, challenging an individual’s meaning perspectives, motivating the individual to critically examine the assumptions that formed the foundation of one’s selfhood.

For example, an educator may interpret experiences with students based on their misbehaviors, labeling students as unmotivated, antagonistic, or bad, when in reality the behaviors were a coping mechanism, a response to trauma (Overstreet & Chafouleas, 2016). The perceptions of students become embedded into teacher habits of mind, and are reinforced over time (e.g., the student is lazy, does not care, or cannot learn). In reality, when educators understand the science behind TIC, they realize how trauma impacts the brain, student learning, and behaviors, and therefore understand that fear of failure may underlie what appears to be laziness (Cole et al., 2013). Furthermore, a negative experience with a student after gaining TIC knowledge (i.e., a disorienting dilemma that does not align with past assumptions) may cause educators to critically examine past beliefs and behaviors toward students, feeling guilt or shame. Participating in reflective discourse with colleagues to find a new common understanding, forming new points of view or perspectives, enables educators to collectively determine appropriate courses of action to take to better support traumatized students.

Educators must forgive themselves for destructive, stereotypical beliefs and behaviors, to move past their history toward a more compassionate future (Starratt, 1991). Adult learners look for evidence that supports or negates revisions to new assumptions by engaging in dialogue with others, hence the importance of school administrators' developing an open, trusting, and collegial school culture for educators to participate in transformational learning. "Adult educators must be aware that helping adults learn how to move from an argumentative mindset to an empathic understanding of others' views is a priority" (Merriam et al., 2007, p. 134).

As adults (i.e., educators) develop and face new experiences, the assumptions created by past experiences (i.e., meaning perspectives) prompt an integration or transformation of the new learning into one's personal existence (Mezirow, 1978). When faced with an experience, life crisis, or dilemma that causes anxiety or challenges an individual's meaning perspectives, in essence forcing a person out of their comfort zone (i.e., managing a traumatized student's behavior), the individual must critically examine the assumptions that formed the foundation of oneself in a process called "perspective transformation" (Mezirow, 1978, p. 102). Changing one's assumptions may occur when an educator personally experiences trauma, witnesses the profound affect of trauma on students, or faces the truth about their interactions with traumatized students. Transformational learning is different from learning informational text.

Transformational learning involves a root change in how we view ourselves and the world we live in as we develop during adulthood (Merriam et al., 2007).

Mezirow (1978) suggested that adults move along a maturation continuum, as allowable by an individual's culture, revising the lens utilized for understanding and creating personal meanings or perspectives. The goal of TIC PD is to persuade adults to utilize a trauma-informed lens to understand students and modify personal dispositions and behaviors. In addition, when

current perspectives do not adequately fit or explain new experiences and a person becomes conflicted, transformation may occur by adopting others' perspectives through the conscious recognition that the new viewpoint, or perspective, is more advantageous than the old viewpoint or perspective (Mezirow, 1978). PD regarding the prevalence of trauma, the multifaceted impact of trauma on students, and the research regarding ability of the brain to heal itself with the support of nurturing adults may create an opportunity for educators to perceive that a TIC approach is more advantageous than former dispositions or behaviors. The new meaning perspective includes "dimensions of thought, feeling and will" (Mezirow, 1978, p. 105), determines how a person views themselves, their roles and relationships with others, and influences whether action is taken or behavior is changed.

Cranton (2002) noted that there are no specific PD methods that guarantee transformational learning will occur as each participant will respond to something that speaks to their individual thoughts or feelings. Transformational learning takes place within an environment that balances challenging participants with safety, support, participant empowerment and honoring their feelings and individuality (Cranton, 2002). The transformational learning PD included activities to meet the needs of diverse learners and to encourage critical reflection and rational discourse: informative videos, illustrations and handouts for visual learners; real-world stories of trauma, the iceberg metaphor (i.e., the realities of a student's existence that is readily hidden from teachers; teachers only see student behaviors), and group discussions for auditory learners; interactive activities and games requiring movement, and role plays for kinesthetic learners. Cranton (2002) noted that videos and stories may serve as the catalyst or activating event, exposing participants to alternative perspectives and new information. Asking participants personal questions about their experiences and analyzing

metaphors, modeling self-reflection of perceptions for participants, and openly talking about alternative points of view, requires participants to communicate and ponder the consequences of former assumptions (Cranton, 2002). Bass (2008) wrote that transformational leaders stimulate intellectual reflection through the use of metaphors, potentially revealing hidden beliefs. Role-plays and simulations provide an opportunity for participants to practice new perspectives, behaviors, and interpersonal communication skills within a safe environment to solve a problem such as an educator response to student misbehavior (Cranton, 2002).

Critical reflection, decision-making and implementing change require conscious thought and cognitive functioning. Unlike Mezirow's theory that utilized cognition during transformation, Merriam noted studies, such as those conducted by Freire, Taylor, McDonald, Kovan and Dirkx, in which people did not possess advanced cognitive skills or were unconscious of the critical reflections while perspectives were transformed, resulting in the realization that noncognitive approaches to transformational learning were possible (Merriam, 2004; Merriam et al., 2007). The research findings that indicate transformational learning can occur without a specific level of cognitive development, purposeful critical reflection, and awareness that one is undergoing change.

In addition to Mezirow's views on individual transformations, Laurent Daloz's psychodevelopmental view of transformational learning encapsulated the importance of story telling and Robert Boyd's psychoanalytic view (i.e., an emotional and spiritual approach) clarified the value of symbols and the unconscious during the learning process (Merriam et al., 2007). While Mezirow's approach to transformative learning was largely based on a cognitive framework, Boyd utilized Jungian theory to understand the affective and spiritual nature of adult learning (Dirkx, 2006). In addition to advancing educator learning, school leaders can use

storytelling, metaphors and symbolic language to strum the heartstrings of educators and inspire a shared vision of the future of the school district (Kouzes & Posner, 2012). Real world stories of the traumas faced by students shared by a passionate and authentic leader may motivate educators to step out of their comfort zone and collectively experience transformational learning.

Dirkx (2006) explored how emotionally provocative images can assist learners in giving a voice to the unconscious conflicts or dilemmas that arise during transformational learning experiences. The possession of emotions is a core tenant of humanity (Keyers, 2011). Trauma-informed care PD is about “changing the heart” of trainees (C. Blodgett, personal communication, October, 21, 2015). TIC PD typically includes video reenactments of childhood abuse that depicts the real impact of trauma on childhood emotional regulation and behaviors. The reenactments have the potential to conjure powerful emotional responses in PD participants. Regardless of the importance of emotion to human existence, emotion or affective aspects of learning are often overshadowed in research by the cognitive aspects of learning (Dirkx, 2006). Dirkx (2006) noted the impact emotions have on the process of critical reflection on assumptions described by Mezirow, prompting feelings such as guilt, shame, fear or anxiety. The feelings that surface as educators explore taboo topics such as assumptions about the motives for student behaviors, or stereotypes of students who may have experienced trauma, and the impact of reflections on how educators view themselves and their behaviors toward students, is an example of how emotions affect the process of critical reflection during transformational learning.

Mezirow’s theory typically applies to individual transformation resulting in some form of personal decision or action, although disorienting dilemmas may prompt social action with the aide of like-minded individuals (Merriam et al., 2007). Maintaining new meaning perspectives and the resulting action requires support from others who share the same perspectives (Mezirow,

1978). The need for close social relationships for the development of perspective taking, introducing action for school improvement and transformational learning has implications for school leaders charged with the task of helping educators develop professionally. Kouzes and Posner (2012) and Tschannen-Moran (2004) note the importance of traits such as vulnerability, benevolence, reliability, competence, honesty, and openness in the development of trust between school leaders and educators. Caring educators must be honest and genuine (Mayeroff, 1995). These leadership traits are vital to creating a school culture conducive to transformational learning as well as developing trusting relationships that supports shared perspectives and yet respects the unique differences of individuals.

School leaders must recognize that educators are as uniquely different in personal histories, heredity, cultures, learning styles, and social-emotional competencies as students, and therefore must honor the differences by respecting the wealth of accumulated life experiences and knowledge that educators bring to the PD table. School leaders must be sensitive to the reality that educators, like students, may have experienced trauma. Assuming that teachers will grow professionally from a traditional “sit and get” type instructional format utilized in the K-12 classroom fails to meet the criteria for transformational learning. School leaders must sustain a safe and trusting climate for educators to embrace a TIC lens and approach, which requires methodical self-awareness of adult dispositions and behaviors toward students. C. Blodgett (personal communication, October 21, 2015) advocates for a “coaching and consultation” model of PD. Adult stakeholders within schools must feel safe to coach and be coached by colleagues following PD to create opportunities for continual transformation learning.

The “heart of transformative learning” for educators within the field of education is a type of knowledge defined by Habermas as emancipatory knowledge: “critically questioning and

reflecting on what we do, how it works, and why we believe it is important” (Cranton & King, 2003, pp. 31-32). PD activities may lack transformative learning opportunities for educators by focusing on what Habermas termed technical knowledge (Cranton & King, 2003).

Transformational learning, rather than acquiring technical knowledge, requires an open, honest, and vulnerable examination of an educator’s practice. School leaders must create a safe and trusting atmosphere for educators to risk a critical reflection of their beliefs and behaviors, privately or with their peers, for transformational learning to occur (Cranton & King, 2003).

Genuine PD is more than the acquisition of a set of strategies for the educators’ toolbox; “It must involve educators as whole persons – their values, beliefs, and assumptions about teaching and their ways of seeing the world” (Cranton & King, 2003, p. 33). Teaching must be driven by more than curriculum and resources such as textbooks; teaching must be driven by a teacher’s understanding of the moment by moment needs of individual students, and be able to take the perspective of the student to understand their understandings, in order for the teacher to accurately diagnose and respond to student’s behaviors in the classroom (Rodgers & Raider-Roth, 2006). Just as school leaders promote the use of differentiated instruction for students, they must acknowledge and meet the diverse adult learning needs of individual teachers. “When educators are led to examine their practice critically and thereby acquire alternative ways of understanding what they do, transformative learning about teaching takes place” (Cranton & King, 2003, p. 32). Transformational learning that informs pedagogical change is a key goal for school leaders and educators striving to achieve school improvement efforts.

School leaders are charged with the critical task of delivering quality PD to teachers in order to improve the art and science of teaching and subsequently student learning (Bredeson, 2001; Kose, 2009; Payne & Wolfson, 2000). While descriptions of the five PD roles of school

leaders (e.g., transformative visionary, transformative learning leader, transformative structural leader, transformative cultural leader, and transformative political leader) are not critical to the premise of this research, it is important to note the use of the term transformative within the title of each role (Kose, 2009). Quality and meaningful PD that results in real learning, improving instructional performance and teacher attitudes within the classroom, must counter potential resentment created by mandated PD, inadequate preparation by the administrator, or ineffective presentation strategies utilized by the PD presenter (Beavers, 2009). Wei, Darling-Hammond, Andree, Richardson, and Orphanos (2009) assert that on-going, collaborative PD and job-embedded practice increases student learning. Although the literature does not address the need for quality PD for classified staff to improve student learning, school leaders must consider the impact that all adult-student relationships and interactions have on student learning. To attain continual school improvement, Beavers (2009) noted the benefits of understanding adult learning theory as school leaders attempt to increase the effectiveness of PD.

Knowledge of transformational learning is applicable to the examination of the perceived learning outcomes of the faculty workshop presented by a national non-profit organization for certified staff and the PD developed and implemented by a school counselor and administrator for classified employees within this research study. The theory can be used as a framework to examine whether educators perceived a transformation in their knowledge, dispositions, and behaviors toward traumatized students as a result of attending TIC PD. When faced with interactive experiences such as those integrated into the professional developments, participants may have experienced emotions such as empathy, anxiety, or guilt, challenging an individual's meaning perspectives, motivating the individual to critically examine the assumptions that formed the foundation of one-self. In addition, participants may have felt sadness, anxiety,

empathy, or even fear, as mirror neurons respond to real-world stories and video-depictions of students experiencing a traumatic event (Keysers, 2011).

Deep-seated change in personal beliefs about the nature and impact of trauma on students, as well as colleagues, transforms the lens by which educators view students and colleagues, impacting the quality of collective self-efficacy, and beliefs of individual student's potential to achieve academic success. This is an ideal example of the type of adult transformational learning that has the potential to transform adult-student relationships. Furthermore, improved relationships may result in an improved school culture, in which all students feel accepted and all stakeholders perceive that the school district has a safe and caring climate (Harris, 2000). Schools may benefit from providing educators with experiences that transform their foundational beliefs about students' capacity to learn, regardless of trauma, so that all students feel equally accepted, challenged, and justly treated, improving the likelihood of an equitable education for all.

The purpose of the Trauma-Informed Care PD, implemented in a manner to promote transformational learning, was to improve educator knowledge of trauma and the impact of trauma on students within the school setting, and educator dispositions toward traumatized students. Heartfelt change is challenging (C. Blodgett, personal communication, October 21, 2015). Newberg and Waldman (2012) indicated that changing the manner in which adults listen, communicate and behaviorally interact with others is difficult and is often met with resistance because learned behaviors slip into unconscious long-term memory: Old behaviors are often the first to emerge even after learning new behaviors that are perceived as more effective. "Change does not occur immediately – time and effort are needed" (Kotsou, Nelis, Gregoire, & Mikolajczak, 2011, p. 834).

People who possess strong beliefs in their capabilities set higher goals for themselves and persist in their efforts to achieve goals and to overcome challenges (Bandura, 1989). Self-efficacy, the belief that one is capable of meeting the needs of traumatized students and changing one's behaviors as a result of new knowledge, is a vital to the success of PD. Bandura (1989) recognized the distinction between acquiring knowledge and skills and effectively and consistently applying knowledge and skills within various situations. PD that requires participants to learn new knowledge and skills will produce widespread and enduring effects if the PD enhances participant self-efficacy. School leaders can enhance participant self-efficacy through encouragement and belief in their abilities, successfully modeling skills to overcome challenges, and providing participants with opportunities to successfully practice skills (Bandura, 1989). Alternately, if participants are not convinced that they are capable of successfully implementing the new knowledge and skills they will abandon their efforts if they fail to get results or if it is perceived as too difficult (Bandura, 1989). Employees who participate in TIC PD must believe that they can make a difference in the lives of their students.

Teachers are the most significant factor in schools influencing educational outcomes for students (Hattie, 2012). "It matters what teachers do – but what matters *most* is having an appropriate mind frame relating to the impact of what they do. An appropriate mind frame combined with appropriate actions work together to achieve a positive learning effect" (Hattie, 2012, p. 15). Hattie (2012) advocates for educator practice that aligns with evidence based mind frames, such as believing change is possible, setting high expectations for all students, developing trusting environments, and critically reflect on one's effect on student learning. Educator perception of their role in student learning is critical: Teachers must perceive that they can make a difference and that students can overcome obstacles (Hattie, 2012).

In summation, transformational learning theory has evolved since 1978 to incorporate concepts from multiple theories (e.g., cognition, feminist, critical social, and postmodern) into a holistic approach to adult learning theory that encompasses storytelling, emotions, the arts, and relational learning (Taylor & Cranton, 2012). Transformative learning theory has altered the landscape of adult learning, endured revisions of additional constructs, has been examined across many disciplines during international conferences, and prompted the publication of hundreds of journal articles, more than a dozen books and 150 doctoral dissertations (Kitchenham, 2008). As a guide to adult learning, this theory can be utilized to revolutionize PD for educators.

Professional Development to Change Dispositions

Transforming dispositions and the behaviors that ensue requires relevant experiences that engage the whole person (i.e., body, mind, and spirit) within an empathetic, accepting, respectful, and safe environment that meets the needs of the adult learner and is appropriately challenging (Usher, 2004). Regardless of the opportunity to engage in relevant experiences within a collegial environment, the largest downfall of quality educator training is the lack of time to sufficiently reflect on how the new knowledge is pertinent to the learner, and to investigate, dissect, and modify dispositions and behaviors (Usher, 2004). These criteria must inform TIC PD implementation.

Educators tend to focus on assessing content knowledge and the professional skills of teachers, neglecting to focus on the importance of assessing or including dispositions in PD programs (Wilkerson & Lang, 2007). Wilkerson and Lang (2007) advocate for assessing the dispositions of employees with all levels of experience based on the notion that “unlike skills, values may or may not increase with experience” (p. xxii). A study conducted by Avalos (2011) on the history of teacher PD between 2000 and 2010 determined that only five articles were

published in the U.S. that examined the effectiveness of PD in terms of teacher cognitions, beliefs, and practices. Most teachers participate in the minimum amount of PD required by the state's licensure requirements or the local school district (Hill, 2009). Furthermore, less than a fourth of teachers reported that PD changed their instructional practices and most reinforced current practices: "Participation doesn't mean results" (Hill, 2009, p. 471).

Teacher dispositions form an important element of teacher quality and professional teaching standards and "yet dispositions remain a neglected part of teacher education" (Thornton, 2006, p. 53). A national survey revealed that only 20% of teachers felt they were prepared to meet the needs of diverse learners (Parsad, Lewis, & Farris, 2001). The prevalence of childhood trauma noted in research indicates that there is a need for TIC PD in schools, including trauma theory (Craig, 2016). Practitioners and educational researchers agree that the teacher's ability to impact student academic achievement is linked to his or her content knowledge and use of appropriate pedagogical strategies; however, teacher effectiveness is also associated with teacher beliefs and judgments of students' intelligence, aptitude, behaviors, and character (Cooper, 2003). Focusing on content knowledge and instructional strategies as solutions to closing the achievement gap in order for all students to achieve academic success ignores the root of the problem (i.e., how schools are going to address the prevalence of trauma and the overwhelming negative impact on students).

With an understanding of adult learning, school leaders can implement effective PD and monitor perceived outcomes. The literature includes a few studies on the effectiveness of PD implementation that provide beneficial insights on how school leaders can utilize research-based strategies to maximize learning outcomes and behavioral change. Gaining knowledge without behavioral change will result in a failure to achieve the goals of the PD. For example, Le Fevre

(2014) conducted a two-year case study within an elementary school to examine the role risk-taking plays in failed attempts to implement instructional change following a professional learning (i.e., school-wide literacy) initiative. Le Fevre (2014) concluded that as the level of perceived risk-taking by the teacher increased, the teachers' willingness to engage in the change process decreased. Building relational trust between leaders and teachers, in addition to identifying related values, was critical to employee willingness to take risks (Le Fevre, 2014).

Although teachers appeared to agree with the idea of using new materials and implementing student choice, Le Fevre (2014) concluded that teachers possessed a "conservative impulse" to maintain the status quo to avoid uncertainties, public failure, or the fear of losing control (p. 64). Providing students with choice and options, to enhance feelings of safety and control, are key elements of a trauma-sensitive school. For change to occur, teachers must relinquish the predictable results attained in the past from the use of traditional textbooks and teacher-centered instruction, step out of their comfort zone, and risk failure. In essence, the teachers in Le Fevre's (2014) study espoused a theory that did not align with their behaviors in an attempt to protect themselves from negative feelings or potential negative repercussions. Likewise, teachers may experience similar emotions as they forgo traditional authoritarian behaviors in favor of trauma-informed approaches to student misbehaviors.

Research on diversity PD was examined in order to broaden the scope of available research regarding the effectiveness of PD within school settings, as trauma may be considered an aspect of diversity. A review of the literature confirmed mixed results regarding the effectiveness of diversity PD and a lack of research specifically designed to measure teacher learning outcomes and perceptions of the effectiveness of PD. "Future research integrating attitude and training theory and models into diversity training research is needed" and "more

direct measures of motivation or perceptions of training importance and value” (Kalinowski et al., 2013, p. 1099). Kalinoski et al. (2013) suggest that trainers need to know more about how to design and deliver programming that supports participants in modifying reactions and responses to diversity attributes through both implicit and explicit processes. The researchers also advocated for examining the differences between the affective-based outcomes after training for favorable versus unfavorable participants’ attitudes toward diversity.

A study by Kose and Lim (2011) defined PD as engaging learning activities embedded within the school rather than the traditional “sit and get” workshop or college course. Kose and Lim (2011) collected data from 330 elementary teachers in 25 small urban communities in a Midwestern state to measure professional learning process (PLP) and transformative professional learning (TPL) variables. The focus of the study was the transformation of teacher’ beliefs regarding reduction of bias and acceptance of diverse students, professional expertise, and instructional practice as a result of transformative PD. The researchers determined that PLP and TLP were correlated with a low to moderate variance in the transformation of teacher’ beliefs regarding reduction of bias and acceptance of diversity, professional expertise, and instructional practices. PLP was somewhat superior in transforming teacher’ beliefs, while TPL was superior in transforming professional expertise and slightly superior in transforming instructional practices (Kose & Lim, 2011). The only factor associated with reducing deficit thinking was in-service and staff meetings associated with the PLP model. Kose and Lim (2011) concluded that successful PD must include specific academic content related to the intended learning outcomes for transformative teaching to occur.

Kalinowski et al. (2013) determined that diversity training longer than four hours had a small to medium-sized effect on affective-based outcomes. Affective-based outcomes were

defined as internal attitudes and motivation that impact perceptions and behaviors. Interestingly, the researchers determined that studies showed a significantly larger effect on participant self-efficacy compared to attitudes (Kalinowski et al.). Shockley and Banks (2011) also found that non-traditional PD, rather than “sit and get” traditional coursework, including more social interaction and interdependent exercise completion between participants, had a greater impact on affective-based outcomes.

Research findings indicate that teachers should receive training in relationship building skills to understand the social and emotional needs of students in addition to content knowledge (McCollum & Yoder, 2011). Arghode (2013) recommends that teachers participate in PD to improve social and emotional intelligence capabilities so that they are better prepared to form responsive and deep relationships with students. Following a qualitative study conducted by Belousa and Uzulina (2012), the researchers concluded that the social-emotional component of an educator’s professional competence is malleable, not static, and may undergo a transformative process. “To understand learners, teachers must first understand themselves and this brings together both the emotional and social aspects” of the transformative learning (Belousa & Uzulina, 2012, p. 168). In kind, the research study conducted by Kotsou et al. (2011) revealed significant changes in adult emotional competencies and interpersonal relationships following a PD that included group discussions, self-reflection, role-plays and practice of strategies to enhance dispositions. Conditions of effective PD include the following: the PD is based on theory and science; includes understandable content and processes; experiential activities; provides opportunities to recognize old habits and emotional tendencies; and encourages emotional self-awareness and behavioral plasticity (Kotsou et al.).

Within a trauma-informed school, ethics and Kohlberg’s stages of moral judgment can

provide a lens to critique educator dispositions to identify needed change, in order to improve perceptions of safety, care and interpersonal relationships. The socio-moral perspective is a construct that underlies both role-taking and moral judgment (Kohlberg, 1984). Kohlberg's level III (i.e., postconventional moral stage) is correlated with a prior-to-society perspective in which an individual (teacher) does what is right because one believes it is right, and behaviors align with principles rather than laws (justice), respecting the dignity of all individuals, recognizing that persons (students) are ends in themselves and must be treated accordingly (Kohlberg, 1984). Seemingly, PD leaders would attempt to provide transformational learning opportunities for employees to examine beliefs and behaviors in order for them to operate in a postconventional stage based on the intentions of creating a trauma-informed organization. In a postconventional stage, the reason something is right or wrong is important: This stage is not about societal expectations; moral obligations are the priority and relationships are based on trust and respect.

Research on trauma-informed care professional development.

Dorado et al. (2016) acknowledge the lack of research on TIC effectiveness due to the recent implementation in schools. A limited number of research studies were located in the literature regarding the outcomes of trauma-informed PD in a K-12 school setting. The most relevant research to this study was the use of a retrospective pre-post survey design to assess the learning outcomes of certified employees within four San Francisco schools (i.e., three K-5 and one K-8) who participated in the HEARTS program (Dorado et al.). HEARTS (i.e., based on the TLPI framework) was supplemented by a three-tiered Behavioral Response to Intervention (RtI) approach. Within this model, a tier one preventative approach utilizes a trauma-informed lens to address the needs of all students, Positive Behavioral Interventions and Supports to teach behavioral expectations, social-emotional education, restorative practices to address

misbehaviors, and TIC training for all staff. Discipline policies and procedures were examined and revised using a TIC lens. A tier two approach addressed skill building and interventions for at-risk students and self care for employee secondary trauma (i.e., compassion fatigue). Tier three provided intensive care for students with several ACEs and severe symptomology, small group or individual counseling, and intensive supports for staff, parents, or caregivers.

Attendees completed the nine-item survey on a yearly basis following the initial half-day and follow-up PD beginning in 2009 (Dorado et al., 2016). Of the 280 surveys distributed, 175 were completed. Study results indicate the outcomes of implementation over a five-year period. The HEARTS Program Evaluation Survey assessed certified employee perceptions of gains in trauma-related knowledge, adult use of TIC skills and practices, secondary trauma, and changes in student ability to learn, focus on academics, and attendance. All nine items produced large t values, ranging from 6.67 to 21.86; with effect sizes ranging from .54 (i.e., My students' school attendance) to 1.72 (i.e., My knowledge about trauma and its effects on children) and were significant at the $p < .001$. Survey outcomes also suggest that participants perceived large gains in use of trauma-informed behaviors, how to support traumatized students, belief in students' ability to learn, and improvement in academic engagement.

Within the schools that implemented HEARTS the longest, discipline referrals, violence, out-of-school suspensions significantly decreased ($p < .001$) and had effect sizes ranging from 2.42 to 4.09 (Dorado et al., 2016). Dorado et al. (2016) suggested that the decreases in discipline and increases in academic engagement may be due to educators shifting their paradigms regarding misbehaviors, managing their emotional response, thus reducing the potential for triggering and retraumatizing students as a result of gains in trauma-related knowledge and practices. Additionally, school leaders reported that their behavioral responses to misbehaviors

have transformed by demonstrating empathy, allowing time for students to regain control of their emotions, and thus they avoided unwarranted suspensions. Significant improvements, listed from largest effect size and t score (i.e., $t = 4.95$, Cohen's $d = .74$) to smallest (i.e., $t = 2.20$, Cohen's $d = .33$), were also found in the following areas for traumatized students who received HEARTS related therapy: emotional regulation, development of positive relationships, ability to conduct daily activities, detachment, and reduction of trauma-related thoughts that debilitate attention and behaviors. However, researchers acknowledged that several co-occurring factors might have contributed to the long-term positive study outcomes.

Dorado et al. (2016) referenced Collaborative Learning for Educational Achievement and Resiliency (CLEAR) as the only research regarding TIC related program effectiveness, although the results were not available to inform their study or this research. CLEAR was implemented in 32 high poverty, rural, suburban, and urban schools in Washington and California in 2015-2016 (Blodgett & Dorado, 2016). Approximately 1,100 educators completed anonymous surveys regarding the effectiveness of CLEAR, a model based on on-going professional development and coaching. According to Blodgett and Dorado (2016), educators recognized that TIC was germane to their professional practice and the progressive inclusion of trauma-informed practices over time. Additionally, data suggested that discipline referrals decreased, and job approval, employee morale, and staff retention significant increased (Blodgett & Dorado, 2016).

Thomas et al. (2015) designed a study to evaluate the outcomes of a PD program developed for case managers within elementary and secondary schools. The quantitative study used a non-experimental pre-post test design to determine knowledge gained regarding the impact of trauma on students within the school setting immediately following the PD and 30 days later (Thomas et al.). The researchers determined that school based mental health case

managers gained knowledge in the PD but failed to retain knowledge over time, with the exception of a continued increase in the ability to identify the impact of trauma on student behaviors and “the importance of using a trauma sensitive lens in their work” (Thomas et al., p. 12). Thomas et al. recommend on-going PD or administrative coaching on the use of trauma-informed practices to increase retention of trauma related concepts.

Noting the “significant roadblocks to TIC research” due to “the shortage of psychometrically robust instruments to evaluate TIC” and an “unclear operational definition of TIC”, Baker et al. (2016) conducted a quantitative study on the development of the Attitudes Related to Trauma-Informed Care (ARTIC) scale to evaluate the attitudes of 595 human service and 165 recruited, certified school employees on TIC implementation (p. 61). Participants were highly educated, averaging four years of experience in their field of employment, primarily female (83%), and white (92%). The revised ARTIC scale, comprised of 45 items within seven subscales that address important components of TIC (i.e., “underlying causes of problem behavior and symptoms, responses to problem behavior and symptoms, on-the-job behavior, self-efficacy at work, reactions to the work, personal support of TIC, and system-wide support for TIC”), was administered on-line using Qualtrics (p. 67). Cronbach’s alpha indicated a strong internal reliability ($\alpha = .93$) and test-retest correlations were strong at 120, 150 and 180 days.

Baker et al. (2016) claimed that ARTIC was the first reliable and valid tool available to assess buy-in and barriers for implementation, TIC outcomes, to identify TIC practices and models that are most effective in producing systematic change, the degree to which the culture is trauma-sensitive, and to assess the attitudes of prospective employees regarding TIC. Noting the challenge to implement and sustain TIC practices with fidelity over time, the authors suggest that the scale could be used to assess whether school systems are regressing to former norms. Results

by demographic category varied slightly: Human service, white, female, experienced and educated employees, who had less interaction with students, showed more favorable attitudes toward TIC. An important finding that school leaders can use to advocate for TIC PD is the correlation between the first three subscales, which address employee understanding of and behavioral response to trauma symptoms, and personal and system-wide understanding of and support for TIC. In addition, a correlation was noted between feelings of trauma-informed competency and reduced work-related stresses and improved perceptions of on-the-job support and satisfaction (Baker et al.).

The initial step to develop a trauma-informed organization was the implementation of TCTY trauma training in a North Dakota public school (Simonich et al., 2015). The training, a combination of traditional learning and experiential activities, was similar to the PD developed for this study: an understanding of the forms and symptoms of trauma, the traumatic stress response, ACE study outcomes, the impact of trauma on the brain, and defining trauma-informed practices and school culture. Although a thorough analysis of the PD outcomes was not provided, Simonich et al. (2015) noted that teacher response was positive (i.e., a 4.7 on a 5.0 Likert scale): TIC training motivated teachers to support traumatized students and training should be mandatory.

A mixed-method study conducted on employees in a Northeastern U.S. urban elementary school compared the perceptions of teachers and aides following cultural sensitivity and trauma-informed care professional development (Blitz et al., 2016). The school, situated within a community facing high crime rates and unemployment, experienced rapid changes in racial and economic diversity; 90% of students met the guidelines for free or reduced lunch and 50% were minority (Blitz et al., 2016). Alternately, a majority of teachers and aides were White, female.

A series of four, 45-minute trainings were conducted over a four-month period of time (Anderson et al., 2015). The researchers utilized lecture, large and small group discussions, handouts, videos, role-plays, and modeling and practice of strategies, such as deep breathing and muscle relaxation.

The goals of the PD were to help classroom staff understand the following concepts about students and trauma-informed supports (Anderson et al., 2015):

- “impetus for students’ behavior as physiological rather than psychological” (p. 118);
- impact of trauma and traumatic stress on student behaviors and ability to concentrate;
- difficulty remembering new knowledge, understanding curriculum, following directions and learning;
- importance of positive behavior reinforcement and strategies rather than punishment;
- stress reduction techniques for students and teachers;
- how to teach students to identify emotions and emotional-regulation techniques;
- how to teach executive functioning skills, problem solving, and the relationship between their actions and the outcomes.

An anonymous survey that assessed beliefs, knowledge, and school climate was completed following the last training. The survey outcomes were as follows: 80% reported that the training was beneficial to their occupation; 62.6% reported that adults must use a hostile tone to stop student misbehaviors; 68.8% understood that a harsh or loud voice can cause stress and make student behaviors worse; 93.7% understood that misbehaviors can be associated with stress induced physical changes; and 67% reported that adults failed to provide constructive feedback when witnessing another adult talking punitively to a student (Anderson et al., 2015).

Staff members shared the following opinions in focus group discussions: an increased

concern about student trauma; stakeholders were experiencing added stress within the current climate of the school; misbehaviors and social-emotional concerns impeded learning; staff needed PD to effectively care for and interact with traumatized students; and aides lacked authority to talk to the teacher about the PD and felt that their opinions were not important (Anderson et al., 2015). Additionally, the staff discussed the benefits of talking about TIC, new understandings and strategies, and how they planned to use the knowledge and stress reduction strategies be more patient, monitor their communications, and to calm down before interacting with students. The researchers determined that job-related roles must change to better serve students; therefore, it is important to change how employees are trained to deal with the changing needs of students (Anderson et al., 2015).

Study participants reported that externalizing behaviors outnumbered internalizing behaviors three to one and the frequent inability to complete lessons due to student misbehaviors (Blitz et al., 2016). Both teachers and aides reported higher effectiveness in helping depressed or internalizing students learn, while approximately half of the aides and a third of the teachers reported low to moderate effectiveness in managing student misbehaviors. Although employees were generally confident in meeting student emotional needs, 41.7% of teachers and 58.8% of aides rated themselves low to moderate in this skill. Approximately one-third of respondents had a low to moderate level of self-confidence in their emotional regulation skills when responding to student needs. Teachers and aides indicated similar levels of stress and self-efficacy.

Participants in the Blitz et al. (2016) study indicated frustration with parents or guardians who seemed to disrespect the school, lacked parenting skills, failed to meet the basic needs of students, and avoided contact with school personnel. Furthermore, employees requested assistance in understanding student behaviors and gaining strategies to help students to learn.

Qualitative statements further indicated that employees felt unable to provide adequate care and educational supports to traumatized students, the inability to use strategies because they were unaware of student adversities, and feelings of sadness, worry, anxiety, and even fear during aggressive encounters. Finally, study findings indicated that teachers reported significantly higher perceptions that minority students and parents distrusted them to provide an education compared to aides (Blitz et al., 2016). Although researchers concluded that the employees were deeply concerned for the well-being of their students and seemed to understand the importance of the PD content, participants appeared to be offended by the implication that they needed cultural sensitive training (i.e., employees denied biased beliefs related to race or ethnicity). Blitz et al. did not evaluate the PD to determine whether the negative feelings were due to the PD content, activities, or the absence of a relationship with the presenters to create an environment safe enough to discuss sensitive topics. Regardless, the researchers acknowledged that the detrimental feelings hampered learning.

Brown, Baker, and Wilcox (2012) conducted a study on the outcomes of TIC training for 261 employees within five child congregate care agencies. The researchers found a significant increase in knowledge, positive beliefs, and behaviors aligned with TIC following pre and post self-report surveys. Although changing employee behaviors to improve the health of clients is the ultimate goal of PD, Brown et al. (2012) acknowledged that gains in knowledge and a paradigm shift in beliefs does not necessarily result in behavior change. Surprisingly, self-report TIC-related behaviors continued to increase five to ten months later. Demographic data (e.g., gender, position of employment, age, and years of experience) was collected, although the PD outcomes were not analyzed based on demographics (Brown et al.).

Lastly, a qualitative study conducted by Jones (2013) reported no prior studies regarding

teacher understanding and response to trauma PD and suggested further studies be conducted to determine whether PD would be most beneficial at the elementary or secondary level. Moreover, the researcher concluded that trauma PD has the potential to positively impact social change by providing teachers with the skills to support traumatized students. Teacher support may help students avoid negative behaviors and increase students' ability to focus and retain information within the classroom so that students can reach their full learning potential (Jones, 2013).

The qualitative study conducted by Jones (2013) examined teacher perceptions of complex trauma, how complex trauma impacts student learning, and the application of PD concepts within the classroom. Six elementary teachers (i.e., one male and five females) participated in the interviews and focus group discussions. The major findings of the study were as follows: teachers acknowledged that traumatic events could alter the manner in which student brains processed information, and therefore teachers could intervene and positively impact student learning; teachers learned that students need to access the neo-cortex portion of the brain to remember information, problem solve and think critically, and students with complex trauma often operate in the limbic zone of the brain; teachers can learn to recognize the behaviors and nonverbal indicators that students are functioning in the limbic zone and can utilize trauma-informed approaches to help students calm the limbic system in order to access the thinking part of the brain; and teachers perceived that they were more equipped to assist students with complex trauma as a result of attending the PD (Jones, 2013).

A study conducted on the perceptions of social work college students determined that students reported a range of emotions (e.g., sadness, anxiety, shame, and fear), as well as cognitive (e.g. visualizing traumatizing scenes, avoidance of thoughts, and positive thoughts about their life and relationships), behavioral (e.g., increased alcohol use, overeating, avoidance

of known triggers, implementing positive self-care, and coping strategies), physical (e.g., tightening of the chest, teeth clenching, and nausea), and relational reactions (e.g., less empathy for minor problems, increased sensitivity to conflict, difficulty talking about the trauma curriculum, and improved relationships) to the curriculum of a trauma-related college course (Shannon, Simmelink-McCleary, Im, Becher, & Crook-Lyon, 2014). Shannon et al. (2014) determined that half of the students had experienced a traumatic event ($n = 8$). The outcomes of the Shannon et al. (2014) study may help school leaders predict and provide supports for employee reactions to transformational learning activities in TIC trainings.

None of the research studies focused on evaluating the outcomes of trauma PD on the notion of changing educator dispositions. Sockett (2009) noted the difficulty in defining, gaining consensus for, and assessing necessary dispositions for educators. Furthermore, Sockett (2009) touted that “ambiguity promotes dialogue”, and that consensus on the nature of educator dispositions should follow years of research and conversation, as “the extant literature already suggests a range of perspectives on dispositions – pedagogical, institutional, philosophical, and psychological” (p. 293). Although dispositions may be difficult to precisely define, educator dispositions, by the very nature of the construct, are the key components of what makes a teacher approachable and perceived as safe, trustworthy, and caring.

Educator Dispositions

The importance of the construct of dispositions within the field of education became paramount when the National Council for Accreditation of Teacher Education (NCATE) mandated that teacher candidates be evaluated to meet standards related to dispositions. The literature reveals various definitions of dispositions. NCATE (2006) defines dispositions in the following manner:

The values, commitments, and professional ethics that influence behaviors toward students, families, colleagues, and communities and affect student learning, motivation, and development as well as the educator's own professional growth. Dispositions are guided by beliefs and attitudes related to values such as caring, fairness, honesty, responsibility, and social justice. For example, they might include a belief that all students can learn, a vision of high and challenging standards, or a commitment to a safe and supportive learning environment. (p. 53)

Educators must acquire specific skills (Katz & Raths, 1985), knowledge, and the understanding of how and when to use the knowledge (Schussler, Bercaw, & Stooksberry, 2008) in order to employ desired professional dispositions.

Katz and Raths (1985) define "dispositions as 'habits of mind' – not as mindless habits" (p. 303) and "an attributed characteristic of a teacher, one that summarizes the trend of a teacher's actions in particular contexts" (p. 301). Likewise, Thornton (2013) defined dispositions as "teacher's habits of mind that shape ways that they interact with students and the ways they make decisions in the classroom" (p. 17). Although the nature of a habit implies action without thought, educator behaviors are likely based on thought, even if they appear unconscious (Simpson, 2012).

Sockett (2009) defined dispositions as the character, qualities, and behaviors educators exhibit which are dependent on self-awareness, open-mindedness, knowledge, attitudes, caring, and commitment to students. Arghode's (2013) definition of social-emotional intelligence capabilities aligns with the concept of dispositions: use of behaviors that indicate an empathetic nature; ability to develop deep and emotive relationships; caring about student learning; and the ability to communicate, understand, and manage one's own and students' emotions.

Dispositions include what adults consistently do or their behaviors (Kotsou et al., 2011).

Research conducted in 2000 by Northern Kentucky University determined that most pre-service teachers who failed student teaching had sufficient content knowledge and skills but lacked appropriate dispositions (Wasicsko, Wirtz, & Resor, 2009). Furthermore, the dispositions did not radically change during the undergraduate teacher preparation program (Wasicsko et al., 2009). “Candidates who appear to be ‘dispositional misfits’ seem to be the most resistant to making accurate self-reflections that would lead to self-selecting out of programs, or to realistically see themselves as others perceive them” (Wasicsko et al., 2004, p. 5).

Kotsou et al. (2011) recognized the difficulty in changing adult social-emotional competencies, replacing old habits, and adopting new behaviors. On the other hand, research also indicates that the environment can change the disposition of individuals at any age (Kotsou et al.). Most PD programs designed to address adult dispositions and emotional competencies “were developed and conducted without proper scientific evaluation or validation...without a direct link to the academic research field;” therefore, the effects were assessed with methodological shortcomings (Kotsou et al., p. 828).

The Perceptual Dispositions Model adopted by Northern Kentucky University was based on the research and perceptual psychological theory of Arthur W. Combs, a colleague of Maslow and Rogers. Likewise, Usher (2004) based his definition of disposition on Combs’s work. Combs (1949) argued that certain teachers possess human qualities that allow them to foster greater positive change in students, that their behaviors are based on their core perceptions, and that their perceptions form and evolve slowly over a lifetime. Dispositions, based on an individual’s perception of the world, self, and others, can be categorized into five main components: empathy (i.e., perspective taking and caring are vital to helping students learn); a

positive self-efficacy (i.e., belief that they have the capacity to help a traumatized student achieve); a positive perception of others (i.e., belief that traumatized students have academic potential); genuineness (i.e., perceived to be accessible, honest, and sincere); and committed (i.e., driven by a meaningful purpose and vision) (Usher, 2004). Furthermore, effective educators are people-centered, reflective in nature, and develop dispositions as learned outcomes of experiences within the context of social interactions (Usher, 2004).

Changing adult dispositions toward students is challenging because change takes the human brain a great deal of energy to build new circuitry, and every change made is perceived as stressful by the brain (Newberg & Waldman, 2012). To further compound the issue, Newberg and Waldman (2012) noted that stress inhibits the neurological pathways that control language and perceptions, activating the emotional portion of the brain (i.e., the limbic system), diminishing the activity of the frontal lobe that controls language, prompting a tone of voice with a frustrated or irritated attribute, causing facial muscles to produce expressions that are often perceived by the listener (i.e., the student) as suspicious. Communication studies further demonstrated that the listener's brain produces a defensive response when the speaker (i.e., the educator) is perceived as suspicious (Newberg & Waldman, 2012).

Educators attempting to implement change based on new learning may experience stress as a result of impending change, compounded by the natural stress produced by interacting with traumatized students, and subsequently display facial expressions that traumatized students perceive as suspicious (Newberg & Waldman, 2012). This may in turn negatively impact interpersonal relationships. Traumatized students who respond to "suspicious" educators with defensiveness will exhibit behaviors that may cause the educator to become further stressed, compounding the challenge of implementing sustainable change. Self-awareness and the

maintenance of a relaxed disposition will “convey openness, confidence, and trustworthiness” (Newberg & Waldman, 2012, p. 10). Newberg and Waldman (2012) noted that mindfulness (i.e., relaxed awareness of feelings and thoughts in a detached manner) is considered to be one of the most successful ways to reduce stress, anxiety, and irritability, and improve control of negative emotions and cognitive functions related to language and social awareness.

Dispositions within a Trauma-Informed School

Educators have a unique opportunity to recognize the signs and symptoms of trauma and intervene using a TIC approach, to advocate and provide supports for traumatized students, and promote healing before students reach adulthood (Bell et al, 2013). Due to the amount of time educators spend with students, educators are in a unique position to observe and assess behavioral changes that may indicate a student is abused or traumatized. Nevertheless, only 17.5% of the reports to CPS of suspected child abuse came from educators in 2013 (U.S. Department of Health and Human Services, 2013). Gamache Martin et al. (2010) contend that school leaders must understand teacher perceptions of the impact of trauma on student learning and behaviors due to the low rate of reporting, a conceivable lack of confidence in the ability to accurately identify abuse, and the fear of making a false report to CPS. Accurately differentiating the symptoms of abuse and trauma from other causes of disrupted learning and behaviors, such as the behaviors associated with ADHD or Autism disorders, is a challenge for educators. With an accurate understanding of employee perceptions of the impact of trauma on students, school leaders can provide PD to help educators recognize and appropriately respond to student needs, in addition to making confident and appropriate referrals to CPS.

Several schools in Connecticut, including the Metropolitan Business Academy in New Haven, implemented a TIC approach to discipline to address negative student behaviors, in lieu

of a punishment focused, “zero-tolerance” discipline policy; resulting in a two-third reduction of suspensions over three years to three percent, a reduction in fights from 40 to less than five in four years, and an increase in the graduation rate from 82% to 90% and enrollment in college from 48% to 70% in two years (Kolodner, 2015). School leaders developed a safe environment for students to disclose personal trauma within the confines of the school in order to proactively provide nonjudgmental supports and eliminate obstacles to academic success. With the understanding of how exposure to complex trauma leads to high levels of stress, essentially rewiring the brain, school leaders chose to eliminate a punitive atmosphere that has the potential to compound stress and deteriorate relationships (Kolodner, 2015).

Stevens (2012) noted that the stress resulting from trauma often causes students to exhibit behaviors that violates school or classroom rules, such as using profanity, truancy, laying their head down on the desk or appearing to zone out. When educators look at student behaviors as misbehaviors rather than coping mechanisms, students may be retraumatized through harsh punishments and exclusion from school (Overstreet & Chafouleas, 2016). In trauma-informed schools, these behaviors are not punished and retraumatizing the student is avoided: supports are put into place to help the student gain control, build self-regulation skills, de-stress, and to feel safe so that they can return to the classroom setting ready to learn (Dorado et al., 2016).

Newberg and Waldman (2012) suggest that teachers should practice aligning verbal (e.g., pitch, loudness, temp, and rhythm) and nonverbal communications (e.g., gestures and facial expressions) in a meaningful manner, to improve students’ schoolwork. “With a school-wide strategy, trauma-sensitive approaches are woven into the school’s daily activities: the classroom, the cafeteria, the halls, buses, the playground” (Stevens, 2012, para. 9).

Educator Self-Awareness and Presence

“Dispositions address human behavior. Because of this, awareness and self-reflection are essential to the learning process and to one’s own growth” (Schulte, Edick, Edwards, & Mackiel, 2004, p. 12). Educators must be attentive to the impact of the classroom climate, their instruction, and their dispositions on student learning (Hattie, 2012). From the student’s perspective, a self-aware teacher is one who is acutely present in the classroom and capable of understanding and responding to the cognitive, emotional, and physical needs of the student so that the students feels safe (Rodgers & Raider-Roth, 2006). An educator’s ability to understand a student is dependent on the ability to understand his or her own feelings, attitudes, and behaviors (Belousa & Uzulina, 2012). Moreover, Sockett (2009) argues that educators must investigate how they are perceived by students to gain self-knowledge, be open-minded to feedback, and reflective about beliefs and behaviors. Acquiring accurate feedback from students is difficult as educators have an authoritative role over students (Sockett, 2009). Sockett (2009) noted that educators must understand the challenge of gaining accurate self-knowledge from students as they play the roles of teacher, disciplinarian and student advocate. Educators must be aware of their thoughts, feelings, behaviors, and triggers to understand their dispositions, better control their emotions, and choose trauma-sensitive responses to student behaviors (Souers & Hall, 2016). Arghode (2013) recommends that educators remain self-aware of their emotions in order to manage and intentionally use their emotions to improve instruction, interpersonal interactions, and to engage students, as learning occurs within an emotional context.

According to Rodgers and Raider-Roth (2006), teachers must be present at all times, meaning that they must be self-aware and aware of the immediate needs of their students, so that they can compassionately analyze student progress and learning within a safe and loving

environment, not only for the sake of the students who are temporarily present, but also for the staff members who are likely long-term stakeholders. However, remaining aware and present while on the job to student needs in addition to the increasing demands of academic achievement is a challenge (Sitler, 2009). Presence or awareness is a state of vigilant mindfulness, openness, and connectedness to the cognitive, emotional, and physical needs of another, and the capacity to respond with purposeful empathy (Rodgers & Raider-Roth, 2006). Regardless of the importance of educator presence to student learning and the art of teaching, presence is rarely taught in teacher preparatory programs or included in the requirements for licensure, nor do supervisors consistently discuss the concept of presence with educators; moreover, presence is challenging to measure and identify evidence of use (Rodgers & Raider-Roth, 2006).

Presence requires reflection, much in the same way that transformational learning requires educators to reflect on their dispositions (e.g., attitudes, beliefs, and feelings). The portions of the brain responsible for developing self-awareness, reflection, and listening skills (e.g., insula and anterior cingulate) appear to be used during social interactions, and are responsible for the expression of empathy, compassion, and conflict resolution, and work together to manage our emotions and behaviors and the fear or anger generated by the amygdala (Newberg & Waldman, 2012). Increasing compassionate communication skills have been shown to “increase the size, thickness, and activity in both the insula and the anterior cingulate” (Newberg & Waldman, 2012, p. 49). Self-awareness is critical to the ability to identify inner feelings of irritation and the prospect that a situation or person will push our buttons (Newberg & Waldman, 2012). Educators must remain self-aware and seek help when a time-out is needed for themselves or students to calm the amygdala when triggered (White-McMahon & Baker, 2016).

Educator Awareness of Beliefs

Educators establish routines, habits, and behaviors to manage the day-to-day demands of the job, including nonverbal and verbal communication characteristics, which may indicate stereotypical beliefs, negative perceptions, and attitudes toward students, further emphasizing the importance of acquiring self-knowledge and an honest evaluation of one's behaviors (Socket, 2009). Educators must be honest with themselves and whether their behaviors are helping or hindering student growth (Mayeroff, 1995). Sitler (2009) illustrates the beliefs that teachers have of students based on behaviors, such as laziness, uncaring, and lacking effort, when in reality underneath the visible behaviors lay the invisible truth: The students faced trauma that overwhelmed their ability to be successful in the classroom.

DeCastro-Ambrosetti and Cho (2011) discovered that a majority of teachers were unaware of their perceptions and resolute that they did not hold stereotypical views of students. Educators establish routines, habits, and behaviors to manage the day-to-day demands of the job, including nonverbal and verbal communication characteristics, which may indicate biased beliefs, prejudices, and negative attitudes toward students, further emphasizing the importance of acquiring self-knowledge and an honest evaluation of one's behaviors (Sockett, 2009). Awareness of neuroscientific research developments has the power to transform teacher perception of the ability to impact student learning, regardless of student IQ or SES: Teachers are more likely to stop blaming external factors for student failure and take ownership of student growth if they accept the fact that all brains have the capacity change and IQ is not static (Jensen, 2009). Self-knowledge, awareness, and reflection on one's beliefs are precursors for making sound judgments, sound decisions, and sound execution of behaviors (Sockett, 2009).

All people, educators and students, have conscious and unconscious biases based on past

experiences that may cause either to perceive or respond to the other in an unfavorable manner (White-McMahon & Baker, 2016). The issue of educator bias and the impact on the adult-student relationship is vitally important if educators are going to close the achievement gap between traumatized students and their peers who cooperate with educators, follow school rules, behave appropriately within the classroom, are prepared mentally and physically to learn, possess school supplies, and have safety and physical needs met within their homes. Communication research suggests that people tend to believe that they are effective communicators when in fact they are poor communicators, resulting in what neuropsychologists call “positivity bias” (Newberg & Waldman, 2012, p. 19). Interestingly, positivity bias, the belief that we are better at something than we really are, enhances neurological and emotional stability, even in challenging times, and is activated by the same part of the brain that generates empathy toward others (Newberg & Waldman, 2012).

In addition to misbehaviors, DeCastro-Ambrosetti and Cho (2011) found that student physical appearance had an impact on teacher expectations of academic ability and motivation. Teacher expectations differs by gender, student behavior, economic status, physical appearance, and ethnicity, and has an effect size of $d = 0.43$ on student learning (Hattie, 2012). Academic achievement varies depending on whether teachers’ believe that student ability to learn is inherited, unchangeable, or malleable (Hattie, 2012). Personal bias and stereotypical expectations of students alters teacher expectations for achievement, creating inequities within the classroom, and disparate access to educational opportunities. Moreover, Weinstein (2002) demonstrated that students perceive differential treatment by teachers based on teacher expectations, which according to Hattie (2012) is a concern because students tend to meet teacher expectations, whether they are high or low. A majority of the teachers who participated

in the study conducted by DeCastro-Ambrosetti and Cho (2011) were unaware of their perceptions and resolute that they did not hold stereotypical views of students. Teachers report that the effort to sustain a mental focus on curriculum and instruction, classroom management, and other job duties inhibits the amount of time and ability to focus on personal bias and behaviors (Shockley & Banks, 2011).

McKown and Weinstein (2008) defined teacher bias as differing teacher expectations based on aspects of diversity. Bias, the beliefs and consequent behaviors toward students, may be explicit, subtle, intentional, automatic, conscious, or unconscious (Schniedewind, 2005). As human beings, teachers may consciously or unconsciously hold one or more forms of bias: race, ethnicity, gender, age, physical appearance, personality traits, behavior, sexual orientation, cognitive functioning, disability, weight, form of religion, and socioeconomic status.

Biased beliefs toward various types of diversity perpetuate separateness and negatively impact the teacher-student relationship. Teachers form beliefs based on their education, socialization, and past experiences with race or diversity (Cooper, 2003). Student perception of teacher bias will vary depending on past experiences with biased behaviors and discrimination, stage of cognitive and moral development, and the influence relatives and friends have to sway sensitivity to the perceptions of teacher-student interactions. Biased beliefs influence teacher interpersonal behaviors and use of instructional strategies (Brok & Levy, 2005; Cooper, 2003). The biased behaviors toward students negatively impact the quality of the teacher-student relationship, which is directly related to student achievement (Fraser & Walberg, 2005) and emotional and cognitive engagement in school (Klem & Connell, 2004). Teacher acknowledgment of the inequities that result from biased beliefs, differing expectations for student achievement, and subsequent behaviors toward students is critical due to the impact bias

has on the relationship teachers build with their students.

The examination of personal bias held by teachers is particularly challenging due to the nature of the profession and the perception that educators should treat all students fairly; therefore, examining biased beliefs with colleagues involves risk and vulnerability (Shockley & Banks, 2011). Educators need time and a safe place to talk to colleagues about the impact of trauma on student learning and behaviors and interventions that can be put in place to assist students (Sitler, 2009). Horsman (2000) noted that trauma might be considered a taboo topic, prohibiting teachers from freely discussing sensitive issues and from engaging in constructive problem solving with coworkers (as cited in Sitler, 2009). Childhood trauma may go unreported and unidentified due to shame and societal taboos that hinder honest discussions about real-world suffering (Felitti & Anda, 2010).

The challenge for educational leaders is providing a safe and trusting environment for educators to explore and take steps toward addressing biased dispositions. Eliminating biased beliefs so that all students have the opportunity to participate in an equitable education is a critical goal of transformative learning theory in teacher education and PD (Shockley & Banks, 2011). Shockley and Banks (2011) conducted a study on the impact of practicing teacher participation in a two-year master's degree program on perceptions of racial and cultural bias toward students, social justice, and the transformation of teacher attitudes and beliefs. The researchers concluded teacher pre-service programs have inadequately prepared teachers to explore biased beliefs and assumptions about people who are different from them before entering the profession. Critical findings of the study included evidence that teachers can change beliefs and attitudes when exposed to bias related curricula in a non-traditional manner when given the opportunity to honestly reflect on personal beliefs within a safe environment, and teachers can

learn to accept others regardless of differences (Shockley & Banks, 2011).

Educator awareness of personal bias and dispositions and the development of nurturing adult-student relationships, free of beliefs that may knowingly or unknowingly negatively impact adult behaviors toward students, is linked to student academic achievement (Hattie, 2012). Simpson (2012) noted that educators might possess an appropriate attitude (i.e., a trauma-informed attitude) but fail to employ related behaviors. Limited research exists regarding quality PD programs designed to change teacher beliefs in order for them to meet the needs of diverse learners: “What often goes unstudied are the teachers’ attitudes related to transformative curricula on teacher bias” (Shockley & Banks, 2011, p. 223).

Knowledge and Self-Awareness Impacts Behavioral Change

“Awareness is the start of the change process” (Calabrese, 2002, p. 24). Self-reflection based PD improves educators’ social-emotional competencies (Belousa & Uzulina, 2012) and dispositions. Transformative experiences, such as reflection on his or her own childhood experiences (e.g., home and school experiences), how those experiences impact professional attitudes and behaviors toward students, and how the emotional reflections prompt a reevaluation of their role as a human being and educator, provokes the desire to invoke positive change (Belousa & Uzulina, 2012).

Kotsou et al. (2011) conducted a study on the aptitude of 132 adults to enhance emotional-related dispositions or competencies (e.g., ability to identify, comprehend, express, and manage personal and others’ feelings) following a 15-hour PD based on the theoretical framework of emotional competence. The model of emotional competency used in the study included three stages: knowledge of emotions; ability to utilize knowledge to manage emotions in the real world; and the propensity to behave in a specific and consistent manner during

emotional events (i.e., they assessed changes in behavioral dispositions). Results indicated that adult emotional competencies (ECs), health, psychological well-being and the quality of interpersonal relationships significantly increased, and cortisol secretion, perceived stress (24.3%), and somatic complaints (15.4%) decreased following the PD (Kotsou et al.). It is important to note that the researchers ensured that the participants were motivated to change prior to involvement in the study. Kotsou et al. suggested that PD could improve emotional competencies for adults, with long-lasting psychological and health benefits to oneself and interpersonal relationships. “On the theoretical level, the results confirm that trait ECs that are supposed to be relatively stable in adults can be modified through a well-designed, and even relatively short, intervention” (Kotsou et al., p. 833).

Behaviors and interpersonal communications.

A mixed-method study conducted by King (2013) determined that students and teachers alike identified three caring teacher behaviors as important: calling students by names, providing an environment perceived as safe by students, and maintaining high expectations for academic achievement. King (2013) described caring teacher behaviors as actions or responses to events that portrays one’s conscious or unconscious beliefs or values in a verbal or nonverbal manner, which are intended and perceived as empathetic, trustworthy, authentic, and appropriate to each student’s unique needs. Educators must determine the appropriate behaviors to respond to students’ changing needs, reflect on the outcomes of their actions and modify behaviors accordingly (Mayeroff, 1995).

Behaviors are informed by the intersection of self-concept and perceptions of the situation, including the motivation to protect or improve self-image (Usher, 2004). King and Chan (2011) confirmed previous studies that indicated educators and students differ on their

perceptions of caring teacher behaviors. Students must perceive educator behaviors as empathetic (Smith & Sharbek, 2013). Moreover, the perceptions of caring behaviors significantly differed between students and teachers on all survey subscales (Classroom Management, Academic Support, Interpersonal Relationships, and Sense of Respect and Trust) (King & Chan, 2011). This is problematic. Educators may feel they are caring, thus behavior change is unlikely, while students do not perceive the behaviors as such; student perception of educator behaviors may influence academic achievement (King & Chan, 2011).

Based on brain research, schools in California trained employees to reflect on how the tone of their verbal and nonverbal communications (e.g., gestures and facial expressions) increased antagonistic interactions with traumatized students (Adams, 2013). As the diversity between adults and students and stress level of either party increases, the likelihood that the intended message may be misinterpreted increased, which can damage trust and relationships (Bloom & Farragher, 2013). Individuals decode communications through a unique lens based on demographic characteristics and past experiences; therefore, a traumatized student's lens may utilize filters such as fear and distrust to interpret school employee communications (Bloom & Farragher, 2013).

Bloom and Farragher (2013) recognize that nonverbal communications, such as our posture and facial expressions, often more than words, consciously and unconsciously send cognitive and emotional information to the receiver. An adult's tone of voice or the words used when asking questions can trigger the stress response and fear (Evans & Coccoma, 2014). Oehlberg (2008) noted that school leaders should not tolerate educators who bully, threaten, or shame students due to the potential for retraumatization. Educators must manage their "emotional demeanor" while calmly repeating simple and clear requests regarding the desired

behavior, along with paraphrasing student concerns, to circumvent emotional hijacking (e.g., anger and defensiveness) and arguments with students (White-McMahon & Baker, 2016, p. 76).

Although feelings such as fear, anger, shame, and anxiety are inevitable in organizations, adults must be able to manage their own and others' emotions, as emotions are contagious, and can overpower our ability to think clearly (Bloom & Farragher, 2013). Furthermore, consider the potential emotional state of an educator as their mirror neurons respond to a traumatized student's externalizing behaviors, initiating a "feedback loop" between the adult and student, explaining "how emotions can spiral upward or downward" (Keysers, 2011, p. 94). When an adult is triggered to respond emotionally to a student, the potential for retraumatization exists.

Within the strategy known as "compassionate communication", the use of the right words, spoken in the right way, can foster loving and respectful relationships, in addition to aligning the brains between two individuals in a phenomenon known as "neural resonance" (Newberg & Waldman, 2012, p. 6). Individuals in neural resonance can achieve extraordinary things: "You can use Compassionate Communication with children to help them cope more effectively with interpersonal conflicts, to discuss difficult topics, and even help them achieve higher grades in school" (Newberg & Waldman, 2012, p. 6). On the other hand, if an adult expresses even small amounts of negativity, the brains of the speaker and listener (i.e., student) increase in negativity and anger, and over time may cause irreparable harm to relationships, and interfere with memory storage, making rationale decisions, and the ability to accurately perceive, evaluate and respond during social situations (Newberg & Waldman, 2012). The researchers also suggest that expressing negativity is destructive and often masks one's ability to recognize feelings of anger, which may result in an inaccurate sense of confidence and feelings of prejudice toward others; meaning educators who are expressing negativity may have prejudice feelings

toward students. Research suggests that adults should knowingly reframe negative thoughts and feelings into empathetic, solution-focused thoughts and feelings: Changing negative dispositions into positive dispositions requires mindfulness.

Reeve (2006) recommends that educators acknowledge and accept student feelings, including negative emotions, as this behavior indicates that the educator understands the student's perspective. When educators respond to a student who is expressing negative emotions in a controlling manner they are indicating that student feelings are unacceptable; therefore, the student must change to be accepted by the educator (Reeve, 2006). Educators must actively listen to students, give them an opportunity to talk, acknowledge and compliment effort and improvements, and incorporate opportunities for students to engage in autonomous learning (Reeve, 2006). Counter to positive communications, Reeve (2006) suggests educators avoid authoritative directives that include words such as must, have to, or should.

Educators may meet the needs of traumatized students by providing for basic necessities not met at home, such as food (Sitler, 2009). In addition, educators can employ behaviors that afford students opportunities to take control of their life by providing choices, use reminders and other interventions to help students stay on task, provide opportunities for students to interact with empathetic adults and peers, assist students in finding value in activities, and implement strategies to give students a voice and outlet for their emotions (e.g., journaling, art, music, or physical activities) (Sitler, 2009). On the other hand, NCTSN (2008) suggest that students re-enact trauma through their negative interpersonal interactions with adults and peers as a coping mechanism; therefore, educators should avoid engaging in negative interactions that may re-play traumatizing situations that occurred in the student's home.

Acknowledging and identifying one's knowledge, dispositions, and behaviors, including

an awareness of biased beliefs, is a critical first step to transforming knowledge, beliefs, attitudes and behaviors. Bandura (1989) noted that perceived self-efficacy and cognitive processes motivate people to regulate their behaviors based on anticipated outcomes. However, if employees lack skills to prevent or manage traumatized student misbehaviors, they may be perceived as ineffectual, resulting in a decrease in self-efficacy, frustration, and disciplinary actions to control students (Bloom & Farragher, 2013). Moreover, educators may need to ignore student outbursts and misbehaviors, choosing a prior-to-society perspective by acting on principles rather than rules, avoiding the enforcement of discipline policies or traditional consequences as an act of care (Kohlberg, 1984). Mayeroff (1995) indicated that care might include the decision to do nothing; doing nothing may be more caring than doing something.

Empathetic concern and perspective taking disposition.

The importance of an empathetic, caring disposition can be explored in a TIC PD. To provide care, educators must be empathetic, have the ability to take the perspective of the student, to understand the student's world as if the educator were in it, and to understand how the student interprets their world (Mayeroff, 1995). Furthermore, educators must have knowledge of student strengths and weaknesses, their own strengths and weaknesses, an understanding of student needs, and how to respond appropriately (Mayeroff, 1995). Keysers (2011) asserts that empathy is etched in the circuitry of human brains. Moreover, human beings are designed to be empathetic in nature; most of an individual's brain is affected by the things that happen to other people (Keysers, 2011). "Understanding the experience of the abused and neglected child assists us to develop compassion, patience and empathy. It is a key intervention in itself. Recovery from trauma will occur best in the context of healing relationships" (Downey, 2007, p. II).

Beck's (1994) ethic of care requires individuals to respond to the needs of others and to

promote human development. Educators must have hope that the student will grow as a result of their care (Mayeroff, 1995). In addition to helping students self-actualize, Mayeroff (1995) indicated that the act of caring helps others overcome obstacles and difficulties, as well as educator self-actualization and giving meaning to one's life. This premise can be applied to leaders caring for and responding to the needs of employees and to educators caring for and responding to the needs of students. This ethic focuses on the unconditional commitment to the well-being of all school stakeholders within interdependent relationships and caring communities (Beck, 1994).

McAllister and Irvine (2002) investigated elementary and middle school teacher perception of empathy following participation in a PD seminar called CULTURES (Center for Urban Learning/Teaching and Urban Research in Education and Schools). The 34 participants in the qualitative study reported that empathy, consisting of affective and cognitive components, was an important factor in working effectively with diverse students. The three activities within CULTURES that impacted teacher empathy were participation in a cross-cultural simulation, engagement with families and students of a different culture from their own, and reflection on their experiences with oppression. The simulation allowed teachers to experience the powerful emotions of being part of a different culture, such as "ostracized, demoralized, and uncomfortable" (McAllister & Irvine, 2002, p. 437), and the challenges of cross-cultural communication. Teachers described the positive impact of empathetic behaviors, such as "sensitivity, patience, respect, tolerance, acceptance, understanding, flexibility, openness, and humility" (McAllister & Irvine, 2002, p. 439), on their relationships with students and the creation of supportive, student-centered classrooms. Within this multi-cultural PD, like the TIC PD, educators were exposed to transformational learning activities that prompted reflections on

what it would be like to walk in another's shoes, whether the difficulty faced by students is oppression or adverse childhood experiences (i.e., trauma).

Perspective-taking opportunities within social experiences involves understanding another's attitude, awareness of their thoughts and feelings, and being able to put oneself in their shoes (Kohlberg, 1984). Smith and Sharbek (2013) note the difficulty in truly understanding another's situation as cognitive reflection is a necessity. However, empathy can be learned within professional practice; teaching about caring and empathy should be integrated into PD (Smith & Sharbek, 2013). "Adults who listen and show concern to the problems caused by violence in young people's lives can help heal some of the wounds that often lead to hostile aggressive behavior" (Harris, 2000, p. 17). According to Newberg and Waldman (2012), recent brain-scan research demonstrated that the more intently adults listen to others, the more their brain will align with the brain of the other person, increasing their perspective taking capacity so that they can truly understand and empathize with the individual. Furthermore, brain-scan research determined that mindfulness strategies, a detached self-awareness of thoughts and feelings, "could strengthen the neural circuits associated with empathy, compassion, and moral decision making" (Newberg & Waldman, 2012, p. 15). Despite differential treatment and inequitable relationships with students, many educators lack an awareness of how their interpersonal communication behaviors impact relationships and school climate (Newberry & Davis, 2008). Educators must remain self-aware and mindful, as the exhaustion that results from a long and stressful day of work slows the circuitry in the brain that controls empathy (Newberg & Waldman, 2012).

Newberg and Waldman (2012) suggest that adults should replace negative communication habits with skills such as empathetic listening, including the ability to interpret

facial expressions and tones of voice. Moreover, the researchers noted that adults, who practiced compassionate communication strategies with a couple of people for ten minutes each, experienced an 11% increase in feelings of empathy and interpersonal relationships.

Relationships require active listening to understand differences and focuses on hearing others and being heard (Gilligan, 1987). T. Kaptchuk, of the Harvard Medical School, utilizes compassionate communication strategies, such as a warm voice, active listening, hope, and expressions of positive expectations to enhance the healing power of therapy (Newberg & Waldman, 2012). “A strong, harsh, or dominant voice may impel others to comply with our wishes, but it will generate resentment that leads to weaker performance” (Newberg & Waldman, 2012, p. 139). Educators may have experienced success in the past by utilizing authoritative behaviors to achieve student compliance, unknowingly causing harmful feelings on the part of the student. Alternatively, educators can learn to do simple acts of concern such as asking a student how they are feeling or how things are at home (Sitler, 2009) in response to negative behaviors to display empathy toward the student.

As educators become more empathetic and aware of the unique needs of students, student engagement and academic performance will increase, while destructive interpersonal interactions will decrease (Arghode, 2013). Authentic empathetic concern and behaviors are not to be confused with charity, favoritism or sympathy; empathetic concern must be perceived as genuine (Sockett, 2009). Although people are relational by nature, caring disposition may require the attainment of specialized skills and training (Mayeroff, 1995). Jones (2013) concluded that trauma training positively impacted empathy toward students who experienced complex trauma, which compelled teachers to perceive the need to develop caring relationships with students.

The ability to step into a student’s shoes, to see an event from the student’s perspective,

to feel how the student may feel, is an important competence for educators (Belousa & Uzulina, 2012). A study conducted by Davis (1980) supported research that indicated an increased capacity for perspective taking was correlated with an increased empathetic concern for others and “less feelings of personal unease in the face of others’ negative experiences” (p. 17). Possessing a perspective-taking disposition will assist educators in understanding student behaviors, responding without offense, and carefully choosing words and actions in order to avoid conflict, humiliating or offending students (Belousa & Uzulina, 2012). Caring and compassionate educators must be vulnerable to the perceived adversity of students in such a manner as not to blame students for their plight, possess a perspective-taking disposition (i.e., empathy), and balance authentic displays of kindheartedness while holding students to high standards of academic achievement (Sockett, 2009).

Trusting and respectful dispositions.

According to Mayeroff (1995), students must trust the teacher; furthermore, the act of caring requires educators to be patient and trust that the student will grow in his or her own time and way. Additionally, educators must trust that students can make mistakes and learn from them, as well as trust themselves and their capacity to care and learn from their own mistakes, and to provide safe and caring environments conducive to learning (Mayeroff, 1995). Educators, as caregivers, demonstrate respect by taking the time to determine student needs and whether their behaviors are helping students become resilient (Mayeroff, 1995). Educators must respect students as they are, even if their reality is not perceived as good (Mayeroff, 1995). Students are ends in themselves, not means to an end (i.e., means to accomplish or gain something); therefore, students must be treated accordingly (Kohlberg, 1984; Starratt, 1991).

Students who have experienced trauma often have negative experiences in the school

setting due to the harmful impact of toxic stress on behaviors, relationships, and learning (Stevens, 2012). Moreover, adults often cause trauma, which amplifies the likelihood that traumatized students will distrust adults in the school setting (Stevens, 2012). Distrust leads to conflicts, “attachment anxiety”, and feeling unsafe, whereas trust is a critical component of positive relationships (Newberg & Waldman, 2012, p. 173). Trust and between the educator and student is key to creating the type of connection needed for students to lower their defenses so that educators can unravel the true meaning of behaviors (White-McMahon & Baker, 2016). Students must trust educators to be themselves, to reveal their weaknesses; without trust, the student will shut down, become defensive, and the educator will not know how best to help the student (Mayeroff, 1995). Possessing an honest and sincere disposition is a critical factor in being perceived as trustworthy and in developing trusting relationships (Sockett, 2009). A student’s perception of an educator’s motive is important to relationship building. Rodgers and Raider-Roth (2006) assert that educators and students need to be self-aware and possess self-trust, mutually know and trust each other, and students need to have trust in their school.

A trauma-informed approach facilitates the creation of a safe environment and mutually respectful interactions between traumatized individuals and adults within the organization (SAMHSA, 2015d). Educators who are aware of student histories can anticipate potential difficulties and proactively provide support before situations occur (NCTSN, 2008). Furthermore, educators who align their behaviors to a Compassionate Communications mindset determine what students need most: “to be listened to, and to be heard, in the briefest period of time, with the greatest accuracy, and in a manner that generates mutual respect and trust” (Newberg & Waldman, 2012, p. 7).

To enhance student perceptions of openness, trust, and interpersonal relationships,

educators must understand that how they say something (i.e., nonverbal communication) is as important as the words they choose to say (Newberg & Waldman, 2012). It is critical that educators possess communication skills to convey the intended message to traumatized students who may naturally struggle to accurately perceive the intended message. Although relationships can be hampered by trauma, caring relationships can lessen the brain's fear response in traumatized individuals (Evans & Coccoma, 2014). Busy educators must consciously remain focused on the words, facial cues, and nonverbal body language used by students in order for students to be accurately heard and for educators to determine what the student may be feeling (Newberg & Waldman, 2012). A humble apology that acknowledges negative comments or behaviors, or better yet, asking the individual how the negative comments or behaviors affected them, while showing genuine interest in how the individual feels, may help restore trust and respect (Belousa & Uzulina, 2012; Newberg & Waldman, 2012). Caring relationships are built on trust (Mayeroff, 1995).

Positive interpersonal relationships.

According to White-McMahon and Baker (2016), humans have a fundamental need to form positive connections with others in order to feel safe, respected, and important, so that individuals can understand themselves, others, and learn. The qualities of teacher-student relationships are directly related to student academic achievement (Fraser & Walberg, 2005) and emotional and cognitive engagement in school (Klem & Connell, 2004). A meaningful view of teaching requires a shift in the paradigm that good teaching equates to good test scores (Rodgers & Raider-Roth, 2006). Teaching involves the development of authentic relationships between educators and students in which teachers understand and behave empathetically, as well as intelligently, to their students and their academic well-being (Rodgers & Raider-Roth, 2006).

According to Reeves (2006), teachers who possess attunement (i.e., sensitive and responsive to student's emotions, thoughts, needs and behaviors), relatedness (i.e., care that results in students feeling important), supportiveness (i.e., acceptance for who students really are and belief in their abilities), and gentle discipline (i.e., helping students understand why certain thoughts or behaviors are better than others rather than the use of authoritative behaviors that assert a power differential) characteristics are likely to possess positive relationships with students, which in turn improves student motivation and academic engagement. Essentially, relationships form the foundation of teaching and learning and establish school climate, which has become increasingly more challenging as each student's needs within the interpersonal relationship are unique (Newberry, 2010). Education, as a profession, is relational in nature, requiring employees to recognize and respond to students needs and behave in a manner to alleviate student suffering (Gilligan, 1987).

A fundamental principle of a trauma-informed school is relationship building (Phifer & Hull, 2016). "Relationships thrive when people are immersed in an environment of positivity, mutual respect, cooperation, and trust" (Newberg & Waldman, 2012, p. 173). Human relationships can be characterized in terms of equality and attachment; everyone is vulnerable to neglect and cruelty (Gilligan, 1987). Childhood trauma can hamper the ability to form social attachments that are important to human development (Evans & Coccoma, 2014). Relationships ask educators to care at a level that honors and respects the dignity and worth of students, longing to see a student enjoy a full life (Starratt, 1991), and responding to the perceptions of what students' need (Gilligan, 1987). Furthermore, caring relationships must exist at all levels of the organization (i.e., adults must also care for each other) (Starratt, 1991).

Educators must be loyal to the relationship and open to the students' perspective of

reality, accepting them as they are without criticism (Beck, 1994; Starratt, 1991). Like Mayeroff (1995), who stated that the act of caring helps educators develop and self-actualize, Starratt said that individuals become whole persons through developing relationships with others (1991). On the other hand, caring relationships also require sacrifice, as relationships are not always convenient (Beck, 1994), and the courage to remain committed to students when times get tough, to take risks to help students, even when educators do not know who students will become (Mayeroff, 1995). The relationship does not give the educator power to control or manipulate the student or to impose their personal goals or beliefs on the student (Mayeroff, 1995).

Newberry and Davis (2008) believe that the quality of the teacher-student relationship and feelings of closeness positively impacts student motivation, academic achievement, and emotional regulation. Perceptions of closeness (i.e., an emotional bond), affinity for the student's personality (i.e., attitudes and behaviors), potential rejection or acceptance by the student, and beliefs about the likelihood of academic success impact teacher behaviors and the type and amount of time spent with students (Newberry & Davis, 2008). According to Newberry and Davis (2008), student misbehaviors made it more difficult to establish a positive rapport; although personal relationships were more easily established when students attempted to establish a relationship, regardless of their behaviors. Moreover, educators reported that some relationships developed easily while others required emotional labor, prompting the educator to use a formal approach with students to avoid vulnerability to rejection or failure (Newberry & Davis, 2008).

According to Newberry and Davis (2008), educators rely on old strategies to avoid conflict when faced with challenging student behaviors, and when those fail, they became reflective or chose to not worry about the problems. The amount of emotional work expended to

develop and maintain the relationship was assessed through a cost to benefit analysis (i.e., prospect of student academic growth or personal satisfaction from positive student responses) (Newberry & Davis, 2008). Educators felt that there was a detrimental breakdown of the relationship when they put emotional work into cultivating the relationship and failed to get the response they desired (Newberry & Davis, 2008). Consider the emotional work needed to develop and maintain a caring relationship with a traumatized student who lacks interpersonal skills, distrusts adults, and fails to readily modify their behaviors following the genuine attempts of an educator to provide supports. Newberry and Davis (2008) reported that educator reflection on their relationships with particular students prompted improved feeling of closeness, benefiting those students, as the act of reflection increased the investment in the relationship and influenced meaningful dispositional change.

Educator beliefs influence interpersonal behaviors, altering teacher-student relationships (Brok & Levy, 2005; Newberry & Davis, 2008). Belousa and Uzulina (2012) stated that an educator's competence is first based on self-understanding, self-awareness, including feelings or mindsets, and secondly, their ability to develop empathetic, flexible, and tolerant relationships with students. The development of positive and caring adult-student relationships within the school setting is a key component of a trauma-sensitive school. Teachers must understand and be sensitive to the racial, ethnic, and socioeconomic backgrounds of their students, possess the self-efficacy to teach diverse learners, build caring relationships with students, and accept the responsibility for the academic achievement of all students regardless of diversity (Cooper, 2003), rather than placing blame for educational inequities outside of themselves.

Emotional competence, including understanding and managing one's own and other's emotions, plays a critical part in interpersonal relationships (Arghode, 2013; Kotsou et al., 2011).

Educators possess varying levels of social and emotional intelligence and capabilities. Therefore, the ability to understand and interpret one's own and others emotions and effectively exhibit appropriate behaviors during interpersonal interactions varies: The expression and interpretation of emotion is unique to each individual (Arghode, 2013). Regardless of initial capacity, Arghode (2013) concluded that educators could improve their social and emotional intelligence capabilities in order to improve empathetic and enriching relationships with students. The success of an individual's career and relationships depends on their capacity to correctly interpret the emotions of others (Keysers, 2011). Self-aware, socially and emotionally intelligent educators are more skilled at creating and sustaining caring environments and understanding the unique needs and thoughts of all students in order to improve learning (Arghode, 2013).

Educators must be self-aware and remain present to manage behavioral reactions during interpersonal interactions and events. The detrimental impact of trauma on student health is noted throughout the literature. The impact of adult emotional competence on interpersonal relationships is germane to student health: "Indeed, numerous studies have shown that the quality of social support buffered the effect of adverse life events on both mental and physical health" (Kotsou et al., 2011, p. 828). "The strong impact of relationships on health through social support is well-established" (Kotsou et al., 2011, p. 835). Furthermore, improving adult emotional competencies not only improves relationships with students, it improves the overall school institution, professional conflicts, and work performance.

The ability to formulate empathetic relationships with students is the cornerstone of an educator's professional competence, reducing student stress and improving learning (Belousa & Uzulina, 2012). "Research has demonstrated that supportive, responsive relationships with caring adults early in life can prevent or reverse the damaging effects of toxic stress" (Children's

Defense Fund - Ohio, 2015, p. 2). If we want educator-student relationships to flourish, adults must mindfully focus on positive thoughts, rather than negative thoughts, as the brain can only focus on one of those at a time (Newberg & Waldman, 2012). Unfortunately negative thoughts are more powerful; therefore, expressing genuine and heartfelt appreciation rather than complaining is beneficial to relationships (Newberg & Waldman, 2012). While negative or hostile thoughts and words negatively impact the brain by interrupting the normal expression of genes in the language areas of the brain, causing misunderstandings, positive thoughts and words are important to developing positive relationships, building resiliency to overcome various problems, and even the expression of stress-reducing genes (Newberg & Waldman, 2012). This understanding implies that educators and traumatized students can mutually benefit from the use of positive thoughts and words and the reduction of hostile thoughts and words when building relationships. In addition, educators can utilize appropriate humor in communications to create a positive psychological climate and improve student learning (Belousa & Uzulina, 2012).

Witherspoon (2011) examined how teacher beliefs and biases influenced expectations of student academic abilities and affected teacher behaviors toward students. The researcher determined that an encouraging teacher-student relationship positively impacted student academic achievement. Furthermore, student perceptions of teacher care and respect were positively correlated to academic achievement (Witherspoon, 2011). Witherspoon (2011) suggested that further research needed to be conducted on practices that provide a foundation to improve teacher-student relationships. In summation, research indicates that the quality of the teacher-student relationship is the foundation to student learning, academic achievement, motivation, and engagement, and requires the teacher to utilize all of their cognitive, physical, emotional and relational assets (Rodgers & Raider-Roth, 2006).

Teachers must understand and be sensitive to the backgrounds of their students, possess the self-efficacy to teach diverse learners, build caring relationships with students, and accept responsibility for the academic achievement of all students (Cooper, 2003), rather than attributing the inequities in student achievement to external stressors. Educator acknowledgment of the inequalities that result from biased beliefs or dispositions is vital due to the impact dispositions have on the relationship educators build with their students.

Assessing educator dispositions.

A survey developed by Simpson and Diaz was utilized in a quantitative study to determine the perceived importance of dispositions to educators (Simpson, 2012). The categories of dispositions assessed that are important to this study are as follows:

- responding to students' social and educational needs;
- building rapport with entire educational community;
- exhibiting personable qualities that make you approachable to students;
- communicating enthusiasm to students;
- exhibiting psychosocial maturity...;
- demonstrates awareness of one's own strengths and limitations;
- is capable of responding appropriately to challenging situations. (Simpson, 2012, p. 112)

All categories were rated as "extremely important" on a 4-point Likert scale. Simpson (2012) noted that "responding appropriately to challenging situations" was considered an advanced disposition, requiring numerous on-the-job experiences, to manage misbehaviors and conflict in a calm manner (p. 112). Citing literature regarding the importance of dispositions and study findings, Simpson (2012) concluded that teacher educator institutions and school leaders should make a concerted effort to ensure that all educators develop the essential dispositions to meet the

needs of all students. Furthermore, an operationalized definition of dispositions needs to be developed and understood by educators, and policies and procedures need to be developed to monitor and address dispositions (Simpson, 2012).

Leadership in a TIC Culture

In well-performing schools, leaders create sustainable change to bind members together focused on a shared vision, common values, collaborative decision making, innovation, and communication within a safe atmosphere (Van der Westhuizen et al., 2005). School leaders can employ Kouzes and Posner's (2012) five practices of exemplary leadership to obtain stakeholder support for engraining trauma-informed care into school culture: "model the way, inspire a shared vision, challenge the process, enable others to act, and encourage the heart" (p. 15). Leaders inspire a shared vision by imagining a positive future and having hope (Kouzes & Posner, 2012) for employees as well as traumatized students.

Leaders encourage the heart by inspiring employees to believe that they have the capacity to help traumatized students heal and thrive, express pride in accomplishing collaborative goals, celebrate achievements, and provide relevant feedback (Kouzes & Posner, 2012) on employee dispositions and behaviors following the TIC PD. School leaders must also model the behaviors (i.e., trauma-sensitive behaviors) that they seek in school personnel (Kouzes & Posner, 2012). Budgeting time and finances for the professional development of all employees sends the message that "I believe in you, I'm investing in you, and I expect your best efforts" (Goleman, Boyatzis, & McKee, 2002, p. 62).

Challenging the process requires leaders to question the status quo, take risks, and challenge old mindsets (Kouzes & Posner, 2012) regarding traumatized students' behaviors, resiliency, and ability to learn. Furthermore, leaders must search for opportunities for growth

and improvement of the organization and all stakeholders, as well as assess the outcomes of initiatives (Kouzes & Posner, 2012) such as the implementation of trauma-informed practices. Exemplary leaders clarify and share their values and beliefs, allow values to guide decisions and behaviors, and affirm shared values with organizational members (Kouzes & Posner, 2012). “Shared values are the result of listening, appreciating, building consensus, and resolving conflict” (Kouzes & Posner, 2012, p. 66).

Policy and Practice

According to Starratt (1991), school leaders have a moral responsibility to create an ethical school environment. Leaders must commit to changing the traditional paradigm, one that fails to address trauma, to a universal approach within a trauma-informed organization (Harris & Fallot, 2001; Phifer & Hull, 2016). A universal approach focuses on resource allocation, identifies priorities, examines policies and practices, and educates all employees about trauma so that every individual is treated with sensitivity and patience rather than insensitivity (Harris & Fallot, 2001; Phifer & Hull, 2016).

In the same manner that awareness led to building modifications to meet the needs of handicapped citizens, a trauma-sensitive workforce can meet the needs of trauma-victims (i.e., trauma victims interact with a wide-array of employees who have the capacity to be welcoming or disagreeable) (Harris & Fallot, 2001). Oehlberg (2008) noted that school leaders should not tolerate educators who bully, threaten, or shame students due to the potential for retraumatization. Regardless of the type of challenge, student misbehaviors, mental health concerns, or learning difficulties, educators are typically reactive rather than proactive in efforts to solve problems (Bluestein, 2001). Bluestein (2001) asserted that reactivity is focused on quick fixes and often relies on rules, directives, and consequences to achieve goals. Proactivity is

focused on a collective agreement to a process; being proactive to prevent problems takes longer to achieve (Bluestein, 2001). The development of a trauma-informed culture with aligned policies and practices may take three to five years (Black, 2015).

Neuroscience findings that note the strong impact of the environment on brain development and the importance of emotion to learning have prompted a shift from a policy that focuses on individual treatments to policies that focus on reforming the environment and practices (Hinton et al., 2008). Maintaining the status-quo or relying on external mental health agency supports for traumatized students neglects the need for improving the school environment. Reflection on whether district policies and procedures conflict with goals is vital (Bluestein, 2001). Leaders must address policies, practices and relationship behaviors that may inadvertently retraumatize individuals (Harris & Fallot, 2001; Phifer & Hull, 2016). The language used in policies sends a message about what is really important and what the school cares about (Starratt, 1991).

The importance of the teacher-student relationship to academic achievement should not be erased from policy-making; hence interpersonal relationships should be essential to educational policy debates (Gehlbach, Brinkworth, & Harris, 2012). Although students learn best from teachers they like (Gehlbach et al., 2012), Hattie (2012) noted that students do not belong to specific teachers but to the school as a whole. The goal is to encourage policy development requiring TIC PD for all school employees in order to improve adult-student relationships to help traumatized students become resilient and thrive academically.

The Trauma and Learning Policy Initiative (TLPI, n.d.), a collaborative effort between the Massachusetts Advocates for Children and Harvard Law School, created a Flexible Framework for trauma-informed school environments. According to the director of the TLPI,

understanding trauma will fill the gap in school reform efforts; therefore, the policy process focuses on TIC PD. The mission of the TLPI is to propose policy initiatives to ensure that all traumatized students succeed in school (Cole et al., 2005). To accomplish their mission, the TLPI advocates for the development of laws and policies to support schools in becoming trauma-informed. “One of the important next steps in the trauma-informed schools movement is to develop more intensive and sustained professional development opportunities and to assess whether the professional development leads to changes in educator behavior and decision making” (Phifer & Hull, 2016, p. 204).

Data regarding the prevalence and impact of childhood trauma on students and the outcomes of TIC PD may be pivotal in legitimizing and justifying PD policy and practices. Despite the impact neurobiological findings have had on practices, Perry (2009) noted that educator awareness of brain development and functioning can legitimize trauma-related policy, which has been inconsistent and unproductive. Including school administrators, community representatives, and teacher leaders in the planning, training, and follow-up stages of PD legitimizes policy and creates a platform for rich discussion about the needs of students (Haney & Lumpe, 1995). As school reform efforts continue to evolve, so should policy and practices that addresses PD.

The realization of a trauma-informed culture requires organizational change in the areas of policy, physical environment, appropriation of funds, and PD for all employees (Phifer & Hull, 2016). PD policy and practices will promote either a positive or negative environment (i.e., school culture) for teachers to cognitively and emotionally interact with the PD learning outcomes (Avalos, 2011). School leaders must develop and implement policy that creates a climate in which the complex nature of educator learning can thrive; increasing educator

capacity and inclination to examine personal knowledge of instructional strategies, beliefs, and behaviors in preparation for meaningful change in educator practice (Avalos, 2011). Bloom and Farragher (2013) contend that leaders must put policies and procedures in place to ensure a physically, psychologically, socially and morally safe environment for all stakeholders, while building honest and trusting relationships so that employees feel safe sharing their thoughts, being themselves, and learning new skills. Educators must have patience with themselves while learning to provide care (Mayeroff, 1995).

School districts may approach PD strategically by developing policy, practices, and using data to determine PD needs, or use a “shot gun approach” and implement readily available programming within a vacuum of guidelines. “A broken system of professional learning requires decisive action in order to ensure wise expenditure of limited resources” (Hill, 2009, p. 470).

Although school leaders can impact positive social change by educating their entire staff on TIC concepts (Jones, 2013; Oehlberg, 2008), determining the cost to benefit ratio of providing PD for all employees is a challenge due to the dearth of data regarding the effectiveness of TIC PD.

School leaders are faced with the challenge of making informed financial decisions regarding the most beneficial programming and PD to improve student academic achievement. Understanding how employees perceive the impact of TIC PD on their dispositions and behaviors toward students will assist leaders in providing on-going, appropriate, and differentiated PD for staff.

CHAPTER III. METHODOLOGY

This chapter describes the methodology used to determine whether school personnel perceptions of knowledge, dispositions, and behaviors toward students who experience trauma significantly improve after participation in Trauma-Informed Care professional development (TIC PD). The research design, participants, instrumentation, research process procedures, treatment, research questions, data collection and analysis, study variables, and assumptions of the study will be described in detail within the following sections.

Research Design

The research design used in the study was a quasi-experimental retrospective pretest-posttest design developed by Moore and Tananis (2009). Slavin (2007) reported that survey research is common in education due to the ability to collect large quantities of data at minimal cost and the ability to “describe the opinions, behaviors, or characteristics of a population of interest” (p. 105). The quasi-experimental design was appropriate because the target population was a naturally occurring group; therefore, a convenient non-random sample was studied to examine the impact of a TIC PD on outcomes by comparing retrospective pretest and posttest survey results (Creswell, 2014). The purpose of the study was to determine the extent to which employees reported that their knowledge of TIC concepts, dispositions (empathetic concern, perspective taking, interpersonal relationships, sense of respect and trust, and student-centered), and behaviors improved as a result of participation in the PD, and if there were significant gains in PD outcomes based on demographics of participants (employee classification, grade level, gender, number of years of employment in schools, and sessions attended).

A quasi-experimental retrospective pretest-posttest design was selected to evaluate the outcomes of the PD in lieu of a true experimental design or a traditional pretest posttest design

because TIC research is difficult to conduct due to the lack of a standardized definition and scarcity of instruments to measure TIC (Baker et al., 2016); therefore, “program evaluation relies on self-report measures of a participant’s perceived change as a measure of program effectiveness” (Moore & Tananis, 2009, p. 189). Other challenges, such as design options that compensate for the restrictions that occur in educational settings, as well as lack of time, money, and control groups, have made the use of self-report retrospective designs a practical alternative in order to efficiently collect data (Moore & Tananis, 2009). Likewise, Klatt and Taylor-Powell (2005) advocated for the simultaneous collection of post and retrospective pretest data to improve efficiency and minimize infringing on participants.

The inclusion of a control group was neither feasible nor preferred for this study. Utilizing a self-assessment survey was a practical alternative to evaluate the TIC PD (Moore & Tananis, 2009). Randomly assigning school personnel to a control and experimental group was counter to the premise of providing a PD for all employees to cultivate trauma-sensitive schools.

Researchers and educators have failed to agree on the best definition or assessment of educator dispositions (Wilkerson & Lang, 2007). Measuring whether the intended affective outcomes (i.e., dispositional change) of interventions have been achieved is challenging, requiring researchers to develop self-report measures aligned to the constructs and valid research designs (Howard, Schmeck, & Bray, 1979). As a result of the studies conducted by Howard, Ralph et al. (1979), researchers have advocated for the use of retrospective study designs when measuring the outcomes of an intervention with self-report measures due to a confounding effect known as “response-shift” bias (Brooks & Gersh, 1998; Howard, Schmeck et al., 1979). Howard, Ralph et al. advocated for the use of a retrospective design following five traditional pretest-posttest studies designed to evaluate the outcomes of various interventions or PDs on

attitudinal variables: The studies indicated internal invalidity concerns with “response-shift” bias in self-report measures within different settings, using different instruments, and “in every instance, the bias operated to increase the probability that the experimental hypothesis would be rejected” (p. 16). The scores on traditional pretests are often significantly higher than retrospective pretest scores, as participants often overrate themselves prior to fully understanding the constructs, resulting in response shift bias (Taylor, Russ-Eft, & Taylor, 2009). Although grossly overrating one’s abilities is problematic, people tend to overestimate their abilities when self-reporting (Bandura, 1989). In the event that the understanding of the construct changes between the pre and post survey, the difference between the pre and post will not only include the potential changes due to the treatment but also the changes in understandings of the construct (Howard, Schmeck et al., 1979).

To summarize, retrospective designs require participants to respond to each survey item twice; the first answer indicates how they perceive themselves after participation in the intervention and the second answer indicates how they perceive themselves prior to participation (Howard, Ralph et al., 1979). Taylor et al. (2009) suggest that retrospective pretests have been preferred over traditional pretests or use of control groups due to ease of collecting data, to eliminate the potential for response-shift bias and to obtain a more accurate measure of the effectiveness of a PD. “In cases where the response-shift bias is greater than any bias introduced in using the retrospective pretest, the retrospective pre-post test score becomes a less-biased measure of program effectiveness” (Moore & Tananis, 2009, p. 200).

Participants

The participants for this study were Findlay City Schools’ employees during the 2015-2016 school year. All certified ($n = 457$) and classified ($n = 361$) employees identified by school

district administrators were scheduled to participate in the TIC PD. Certified employees included administrators, teachers, counselors, school psychologists, special education supervisors, speech pathologists, licensed interpreters, and physical therapists. Classified employees included food service, secretaries, bus drivers, custodians, classroom aides, monitors, school nurses, technology, librarian aides, bus aides, and attendance aides. A single stage, convenience sampling method was utilized due to the availability of participants (Creswell, 2014) and the requirement that study participants must have participated in the TIC PD as the eligibility criteria for the study (Delost & Nadder, 2014).

Of the 818 employees scheduled to attend the PD, 428 certified and 331 classified employees signed the transformational learning PD attendance sheets, and 673 certified and classified employees signed the attendance sheets for the presentation by a national TIC speaker. Certified employees were expected to participate in the transformational learning and traditional PD sessions because the sessions were conducted on a previously scheduled professional development day in which students were not in attendance. An additional day for PD was approved by the Ohio Department of Education for certified employees to conduct other forms of PD while classified employees participated in the transformational learning PD. A portion of the classified (e.g., food service, part time lunch monitors, and classroom aides) employees were not scheduled to work on either day due to the absence of students; therefore, they were paid their hourly rate if they chose to attend either PD but were not required to participate.

Obtaining an exact number of participants in the PD sessions was not possible, as participants may have failed to sign the attendance sheets. Additionally, a portion of the employees (e.g., part-time lunch monitors and classroom aides; $n = 106$) scheduled to participate in the PD did not have e-mail addresses. Therefore, only 712 employees scheduled to attend

were able to receive and complete the survey. Of the certified and classified employees who signed attendance sheets indicating participation (some of which did not have district e-mail addresses), 552 employees answered one or more items on the survey.

Description of the Setting

In 2015, Findlay City Schools, a large urban school district in Northwest Ohio, was comprised of one high school, two middle schools, eight elementary schools, one preschool, and one on-line learning center in 2015. The school district educated approximately 5,900 students and employed approximately 800 certified and classified staff members during the 2015-2016 school year. The school district's career center educated roughly 270 students from 14 regional school districts enrolled in 19 Tech Prep programs. The percentages of free and reduced lunch recipients ranged from a high of 81.76% in one elementary school to a low of 28.64% in the high school, for an overall district average of 37.95% (Ohio Department of Education, 2014). In 2015, 43.59% FCS were identified as living in poverty (Ohio Department of Education, 2015). The 2015 demographics of the student body were as follows: 80.56% White; 6.19% Multiracial; 8.22% Hispanic or Latino; 2.50% Asian; 2.39% Black or African American; 1.70% Limited English Proficiency; and 17.59% of students were identified as having a disability (Ohio Department of Education, 2015). The employees of the school district were less racially diverse as evidenced by the 2014 demographics of school personnel: 97.96% Caucasian; 1.11% African American; .93% Hispanic or Latino; 78.04% female and 21.96% male.

According to the United States Census Bureau (2015), the city had an estimated 41,098 residents in 2014; 88% of the residents categorized themselves as White, 5.7% were Hispanic or Latino, 2.2% were African American, 2.5 % were Asian, and 2.1% were Multiracial. Approximately 22% of residents lived below the poverty level between 2009 and 2013; the

median household income during the same time period was \$42,901 (United States Census Bureau, 2015).

Trauma-Informed Care was an ideal PD for this school district due to the suicide and drug abuse statistics. According to the Hancock County ADAMHS Board, there were 79 suicides between 1995 and 2014 within the city limits, averaging four suicides per year. During 2014, the Hancock County Opiate Prescription Drug Abuse Task Force reported 115 overdose visits to the hospital emergency room, 11 overdose deaths, and 20 infants were prenatally exposed to drugs (Z. Thomas, personal communications, November 16, 2015). Within Hancock County in 2014, there were 292 admissions to jail due to drugs, 128 admissions due to opiates, and 233 individuals received substance abuse treatment related to opiates.

Instrumentation

School personnel perceptions of knowledge, dispositions, and behaviors were measured through a survey titled Trauma-Informed Care Dispositions Survey (TIC-DS). The TIC-DS was developed by the researcher for the school district following an exhaustive search of the literature that failed to reveal an existing survey that would assess the impact of TIC PD on employee knowledge, dispositions, and behaviors.

TIC-DS items were selected from four existing instruments and modified into a retrospective design: the Pretest/Posttest Instrument by Thomas et al. (2015) used to measure the effectiveness of trauma PD for school case managers; the Interpersonal Reactivity Index (IRI) (Davis, 1980); A Survey of The Behavioral Characteristics of Teacher Caring (King, 2013); and the Teacher Dispositions Index (TDI) (Schulte, Edick et al., 2004). The TIC-DS also included locally developed survey items specific to the learning outcomes of the PD.

The survey contained 52 closed-form items, one open-ended response, and was measured

on a Likert scale ranging from “1” strongly disagree to “5” strongly agree, with a summation range in data of 52 - 260. The survey utilized the retrospective pretest-posttest item design used by Moore and Tananis (2009) in which participants were asked to rate their competence “after” they had attended the PD, followed by rating their level of competence “before” the PD (“I am/was”; “I can / could”; “I understand / I understood”) (p. 201). Participants were able to select “does not apply” if the participant perceived that the statement did not apply based on their job position and the nature of contact with students. Three survey items (i.e., 22, 26, and 27) were negatively worded and recoded in IBM SPSS 22.

The TIC-DS contained seven subscales: Knowledge; Empathetic Concern, Perspective Taking, Interpersonal Relationship, Sense of Respect and Trust, and Student-Centered dispositions; and Behavior. Demographic survey items were located at the end of the survey. The purpose of the demographic survey items were to determine the gender, age range, number of years of employment in schools, employee classification, grade level, and sessions attended by the participants, and whether there were significant gains in PD outcomes based on demographic data. The following sections provide descriptions of the instrument subscales (see Table 5). Appendix A includes a full copy of the TIC-DS.

Table 5

Summary of TIC-DS Subscales

Subscale	Literature Base	Number of Items
Knowledge	Pretest/Posttest Instrument by Thomas et al. (2015)	8
Knowledge	Developed by the researcher	8
Empathetic Concern	Interpersonal Reactivity Index by Davis (1980)	5
Perspective Taking	Interpersonal Reactivity Index by Davis (1980)	6
Interpersonal Relationship	A Survey of The Behavioral Characteristics of Teacher Caring by King (2013)	5
Sense of Respect and Trust	A Survey of The Behavioral Characteristics of a Caring Teacher by King (2013)	5
Student-Centered	Teacher Dispositions Index by Schulte, Edick et al. (2004)	5
Behavior	A Survey of The Behavioral Characteristics of a Caring Teacher by King (2013)	5
Behavior	Developed by the researcher	5

Knowledge

A thorough search of the literature prior to the PD conducted for the school district identified one instrument that was developed to measure the learning outcomes of trauma training for school case managers. Selected items from a survey developed by Thomas et al. (2015) were modified for the TIC-DS to measure knowledge gains. The original 17-item survey was measured on a four-point Likert scale ranging from “strongly disagree” to “strongly agree”. Eight of the survey items were modified into a retrospective design for the TIC-DS. The items not selected for the TIC-DS pertained to case managers, diagnosis, screening tools and defining trauma. Item 7 and 9 on the TIC-DS were based on a single item on the Thomas et al. survey. These items were included in the TIC-DS to determine whether school personnel gained knowledge about steps to take if a student has been identified as traumatized versus the appropriate steps that should be taken if a student is suspected of being traumatized. Eight items developed by the researcher on the Knowledge subscale were used to measure TIC concepts such

as forms of trauma, the impact of trauma on student behavior, academic success, and brain functioning, knowledge about how to talk to students who may be experiencing trauma, and the role empathy plays in creating positive and trusting adult-student relationships. Approval was obtained from D. Pooler (personal communication, July 1, 2015) and B. Thomas (personal communication, July 2, 2015) via e-mail for use and modification of the survey items into a retrospective design for inclusion in the TIC-DS.

Empathetic Concern and Perspective Taking

The Interpersonal Reactivity Index (IRI) developed by Davis (1980) consists of four, seven-item subscales comprised of 28 items; the results were measured on a five-point Likert scale ranging from “does not describe me well” to “describes me very well”. The IRI was developed with the notion that an instrument designed to assess empathy must include measures of cognitive and emotional reactivity aptitudes which impact an individuals’ reactions and behaviors toward others (Davis, 1980). Items selected from the Perspective Taking ($n = 6$) and Empathetic Concern ($n = 5$) subscales of the IRI were used to measure school personnel ability to “spontaneously adopt the psychological point of view of others” (Davis, 1983, pp. 113-114) and assess “other-oriented feelings of sympathy and concern for unfortunate others” (p. 114). Items from these subscales were included in the TIC-DS because the literature indicates that empathy and perspective taking are important components of positive adult-student relationships and a trauma-informed school culture. Items were not selected from the Personal Distress or Fantasy subscales due to the lack of relevance to this study. Two items from the Empathetic Concern scale were excluded from the TIC-DS due to similarity with other survey items and nature of the items themselves. For example, “I am often quite touched by things that I see happen” was excluded (Davis, 1980, p. 7). One item was excused from the Perspective Taking

scale: “I sometimes try to understand my friends better by imaging how things look from their perspective” (Davis, 1980, p. 11).

Davis (1980) reported that the IRI possessed “excellent psychometric properties” and an acceptable internal reliability (p. 17). The reliabilities were calculated for each subscale by gender, resulting in higher alpha coefficients for females (.75) than males (.71) on the Perspective Taking and Empathetic Concern scales (i.e. females = .73; males = .68). Davis (1980) determined that females scored significantly higher than males on all four subscales. M. H. Davis approved the use and modification of IRI survey items into a retrospective design (personal communication, August 17, 2015) for inclusion in the TIC-DS via e-mail.

Interpersonal Relationships, Sense of Respect and Trust, and Behavior

The survey used by King (2013) and King and Chan (2011), titled A Survey of The Behavioral Characteristics of a Caring Teacher, consisted of four subscales comprised of 22 items; the results were measured on a five-point Likert scale ranging from “being the least important” to “being the most important”. The TIC-DS included all of the modified survey items from the Interpersonal Relationships ($n = 5$), Sense of Respect and Trust ($n = 5$), and Classroom Management ($n = 5$) subscales. The title of the Classroom Management subscale was changed to Behavior subscale on the TIC-DS because trauma-informed care pertains to all areas and employees within schools. Although the construct of classroom management was not addressed overtly during the TIC PD, the manner in which educators respond to student misbehaviors was addressed. This subscale contains items designed to indicate the perceived behavioral changes in school personnel as an indicator of their desire to modify behaviors to improve student feelings of safety and to “reinforce good behavior” in lieu of negatively addressing “bad behavior”, which has the potential to retraumatize students. The researcher constructed five additional

items that were specific to the adult behavioral outcomes aligned with the intended PD outcomes.

Items from the Academic Support subscale were not included due to the length of the TIC-DS and similarity with other survey items. The survey's reliability was examined for internal consistency of the subscales; the Cronbach's alpha was .8 (King, 2013). P. King approved the use and modification of the survey items into a retrospective design for inclusion in the TIC-DS via e-mail (personal communication, July 2, 2015).

Student-Centered Disposition

The Teacher Dispositions Index (TDI) was developed to measure the dispositions of effective teachers that align with the standards defined by the 1991 Interstate New Teacher Assessment and Support Consortium (Schulte, Edick et al., 2004). The 45-item survey included Student-Centered and Professionalism and Curriculum-Centered subscales measured on a five-point Likert scale ranging from "strongly disagree" to "strongly agree". In addition, Frederiksen (2010) utilized the TDI in a mixed methods study to determine whether setting or experience affected dispositions. The TDI is a reliable and valid instrument to use for measuring the dispositions of effective teachers: The reliability coefficient of the Student-Centered subscale on the TDI was found to be .98 (Schulte, Edick et al., 2004).

Five items from the TDI Student-Centered subscale pertaining to patience, respect, learning about students and their communities, and empathy, were modified into a retrospective design for the TIC-DS. Items pertaining to teacher professionalism, such as punctuality, collaborating with educators in planning instruction, and professional appearance were not included in the TIC-DS. The TDI included items that could have been included in the TIC-DS to address trauma-informed dispositions, such as correctly interpreting nonverbal student

communications, providing meaningful feedback to encourage student growth, and willingness to adjust lesson plans to meet the needs of all students, although the length of the TIC-DS precluded the inclusion of every survey item that may have been applicable to the PD outcomes.

For the purposes of this study, items selected from the Student-Centered subscale of the TDI were utilized to determine the extent to which school personnel report that participation in TIC PD improves their dispositions toward traumatized students. L. Schulte approved the use and modification of items from the TDI into a retrospective design for inclusion in the TIC-DS (personal communication, July 2, 2015) via e-mail.

Survey Demographics

The inclusion of TIC-DS demographic categories (gender, age range, number of years of employment, affiliation to the school district, grade level, and sessions attended) was based on demographic categories in similar surveys. In this study, affiliation to the school district equates to employee classification. The TIC-DS demographic items based on King and Chan's (2011) survey were grade level, number of years of experience, and gender. Grade level equates to location of employment (K-5 or 6-12) on the TIC-DS. However, the TIC-DS did not include King and Chan's (2011) subject(s) taught, whether classes contained one or two teachers, or race due to the lack of employee diversity in the school district and the inclusion of all employees in this study. Due to the inclusion of classified employees in the PD, the TIC-DS demographics included "other" for location of employment and teacher, administration, counselor or psychologist, or classified employee within employee classification. Sessions attended was also added to the demographics in order for district administrators to monitor attendance per session.

Schulte, Edick et al. (2004) included gender, age, and certification level (e.g., elementary and secondary) demographics in the Teacher Dispositions Index. The researchers determined

that a statistically significant relationship did not exist between participant perceptions of their effectiveness as teachers on the Student-Centered subscale and age, gender, or certification level.

TIC-DS Validity and Reliability

Taylor et al. (2009) suggest that retrospective design surveys include items that measure constructs the PD did not address as a means to rule out forms of bias, such as inflationary bias. Although the TIC-DS was constructed from subscales of existing instruments designed to measure intended constructs of TIC PD, respondents would have little to no motivation to show change on certain survey items.

To address content validity, Slavin (2007) suggests that researchers give experts the opportunity to provide feedback on items, with the intent to utilize the feedback to make revisions or eliminate survey items. In addition to the school district superintendent's approval of the TIC-DS, the survey was assessed by a panel of five experts for use of the survey within a school setting, retrospective design word choice, the appropriateness of negatively worded survey items, formatting of the survey for user-friendliness, elimination of vague, weak, or confusing items, readability, clarity of directions, and the appropriateness of the Likert scale. The survey was revised four times based on the suggested revisions by the co-creator of the locally developed PD, who served as a TIC content expert; an elementary and secondary teacher served as experts from the participant perspective; an Executive Director of Teaching and Learning (Ed.D.) served as a PD expert; and the dissertation chair and methodologist for the study served as a survey development expert. Moore and Tananis (2009) noted the importance of constructing a well-written survey that measures the constructs as intended to reduce measurement error and the potential for retrospective pretest item bias. Furthermore, research conducted by Moore and Tananis (2009) supports other research findings that retrospective

pretests are answered with a greater consistency than traditional pretest items, improving the reliability of the survey and consistency of responses over time.

The participants were given anonymity to minimize the potential for social desirability bias (i.e., answering questions based on what the participant believes the researcher is seeking rather than an honest answer) (Slavin, 2007). The survey directions notified participants that their responses would be pooled with the responses of all employees, that there were no right or wrong answers, and to answer as honestly as possible. Requesting that the participants answer as honestly as possible is important to reduce impression management bias, in which participants consistently overrate themselves on survey items in order to present themselves in a positive light (Moore & Tananis, 2009). Internal reliability of subscales and overall instrument reliability were calculated using Cronbach's alpha (see Table 6). Five of the seven subscales produced internal reliability coefficient scores greater than .700. Moreover, the Cronbach's alpha for the TIC-DS was found to be .960 on the retrospective pretest responses and .955 on the posttest responses, which suggests strong internal reliability.

Table 6

Internal Reliability of TIC-DS Subscales

Subscale Name	Items	Cronbach's Alpha	
		Pre	Post
Knowledge	1 - 13, 16, 19, 20	.938	.943
Empathetic Concern	21, 23, 25, 26, 30	.678	.626
Perspective Taking	22, 24, 27, 29, 31, 32	.607	.630
Interpersonal Relationship	38 - 42	.716	.713
Sense of Respect and Trust	43 - 47	.903	.870
Student-Centered	48 - 52	.943	.899
Behavior	14, 15, 17, 18, 28, 33 - 37	.870	.874
Total TIC-DS	1 - 52	.960	.955

Procedures

The Bowling Green State University Human Subjects Review Board determined that this study was not HSR on May 26, 2016 due to the analysis of secondary data (see Appendix B) and receipt of a letter from the FCS Superintendent giving the researcher permission to analyze the data for this study (see Appendix C). Findlay City Schools collected secondary data in September 2015 following the implementation of the TIC PD. The collection of the data by school district administrators is described in the following paragraphs.

Procedures for Implementation of Professional Development

In preparation for the PD, payroll secretaries created a list of employees. Building administrators and classified supervisors updated the list of employees and assisted the PD coordinators in dividing certified and classified employees into two groups, dependent on their work duties and availability, with the intent to create diversified groups by grade level taught, school building, gender, and job title. Classified employees were scheduled to attend a three-hour transformational learning PD. Certified employees were scheduled to attend a separate three-and-a-half-hour transformational learning PD. In addition, certified and classified employees were scheduled to attend the same three-and-a-half-hour presentation by a national TIC speaker. A small percentage of the classified employees (e.g., lunch monitors and classroom aides) were not scheduled to work, as students were not in attendance. Participation in the PD, with pay at their hourly rate, was optional for these employees.

Professional Development for Classified Employees

The three-hour transformational learning PD for classified employees was developed and implemented by the researcher and a practicing school counselor. The co-developers participated in the Hancock County Trauma-Informed Care Learning Community and conducted

research in preparation for the PD. The transformational learning PD was developed using literature regarding TIC, ACE studies, brain research, research on the impact of trauma on the physical, psychological, and social-emotional well-being of students, the impact of trauma on student learning and behaviors, and trauma-informed practices suggested by organizations such as National Council for Behavioral Health, SAMHSA, and TLPI.

The three-hour PD was held in a middle school gymnasium. Participants viewed TIC videos that depicted incidents of trauma, learned TIC and brain-based vocabulary, interpersonal communication strategies to support students who may be experiencing trauma, and analyzed role-plays which demonstrated negative and positive interactions between classified staff and students. Classified employees also participated in activities to deepen their understanding of how the brain's limbic system responds to events, causing a stress response, hijacking the thinking part of the brain, consequently disrupting student learning. The potential for classified employees to recognize concerns or changes in student behaviors during unstructured times of the school day, notably on the school bus, in the hallways, and during lunch, was emphasized as a critical aspect in referring students to the appropriate school personnel for support. The presenters encouraged classified employees to develop supportive and trusting relationships with all students and alleviated any concerns that they were expected to provide counseling services. The importance of adult responses to student misbehaviors in a trauma-sensitive school was emphasized, as classified employees may unknowingly retraumatize a student. These interactions may derail the student, furthering the likelihood that the emotional response will disrupt learning, not only for the traumatized student, but also for their classmates.

Professional Development for Certified Employees

The three-and-a-half-hour faculty workshop was conducted for certified staff by the

Challenge Day organization in a middle school gymnasium. Challenge Day was founded in 1987 as a 501 (c) (3) non-profit organization (Challenge Day, 2016b). The faculty workshop was designed and piloted in 2011 for Teach for America teachers in California, Massachusetts, Colorado and Ohio (N. James, personal communication, October 2, 2015). The content related to trauma was tailored to the needs of the school district.

The program was designed to offer educators “an experiential engagement with Social and Emotional Learning areas, an opportunity to strengthen the teaching community, to increase self-awareness, to gain insights into the neurological realities shaping student development, and to design lesson plans utilizing Challenge Day teachings” (Challenge Day, 2016a). The learning objectives for the workshop were as follows:

Increased emotional literacy, self-awareness and mindfulness; acquisition of Challenge Day communication tools for positive self-expression, active listening, and supportive relationship building; improved awareness of triggering classroom behaviors and new strategies for managing reactionary habits; exposure to the impact of negative and positive emotional states on neurological functioning, learning potential and academic outcomes; acquisition of strategies for teaching students who have expressed complex trauma; and understanding of the role compassion plays in cultivating trusting teacher-student relationships. (Challenge Day, 2016a)

Challenge Day leaders utilize interactive activities to promote an awareness of the life experiences and hardships faced by colleagues in their youth; therefore, transferring the awareness and emotions to the hardships potentially faced by their students. Certified employees reflected on habitual interpersonal behaviors they exhibit and brainstormed desired behavioral changes. The iceberg analogy allowed participants to reflect on the 10% of thoughts, feelings

and behaviors that are publically displayed, like the 10% of the iceberg that is above the waterline, versus the 90% that remains hidden below the surface. This analogy may help adults understand the potential for students to have hidden trauma and masked feelings, such as underlying feelings of fear that result in behaviors that are interpreted as anger (fight) or indifference (flight). The visible behaviors that occur above the waterline, disruption or anger outburst, may cause the adult to avoid the student or emotionally respond out of frustration, due to a lack of awareness of the real issues that lay below the waterline. During the “power shuffle” activity, participants walked across a line that divided the room to symbolically face others who did not have to cross, when categories that separate us as human beings, such as experiencing homelessness, violence, feeling neglected by a loved one, alcohol or drug abuse in the family, or loss of a family member are called out. The activity takes place in silence, creating a safe environment for an emotional response. “If you really knew me”, the activity in which participants had the opportunity to share facets of their life with colleagues in small groups, enabled participants to “lower their waterline” and share the life events and feelings that are typically hidden from colleagues. This activity gave participants an opportunity to understand that colleagues may have faced similar hardships; therefore, students, like adults, may have hardships that remain hidden. The program was intended to create a greater awareness of the variety of hardships that humans face, engender feelings of empathy, and the mindfulness to avoid hurried conclusions about student behaviors.

Presentation by National Speaker

The three-and-a-half-hour presentation for classified and certified employees was conducted in the high school auditorium. P. Black, former teacher and administrator, and current consultant for the National Council for Behavioral Health Trauma-Informed Schools Initiative

and member of the Wisconsin Department of Public Instruction's Trauma Sensitive Schools Committee, presented facts regarding the forms and prevalence of trauma, the results of the original ACE study, the neurobiology of trauma and impact of trauma on brain development, physical and emotional health, academics and behaviors, and how educators within schools can shift their mindsets or the lens that is used to interpret student behaviors. Black (2015) described triggers, such as unexpected events, that may escalate traumatized students and how educators can effectively respond in a supportive manner, through the use of appropriate nonverbal body language and a calm tone of voice. Moreover, adults were encouraged to ask questions such as "What do you need?" to create physically, emotionally and academically safe school environments. The presentation focused on a compassionate approach to adult-student interactions, building trusting and transparent relationships, unconditional positive regard, maintaining high expectations for traumatized students, empowering students by providing them with choices, and the need for educators to teach students self-regulation and executive functioning skills to build resiliency.

Data Collection

The Director of Technology cross-referenced a directory of employee e-mail addresses with the list of potential participants. Employees with a school district e-mail address received an email from the Superintendent with a link to the Qualtrics survey the day after the PD (see Appendix D). Employees were asked to complete the survey if they participated. A Qualtrics e-mail was sent to district employees on two subsequent Mondays with a reminder to complete the survey. The researcher was provided access to the data by the district administration.

Research Questions

This study addressed the following research questions:

1. Do employees report that knowledge of TIC concepts improve as a result of participating in the TIC PD?
2. Do employees report that their dispositions (empathetic concern, perspective taking, interpersonal relationship, sense of respect and trust, and student-centered) and behaviors improve as a result of participating in the TIC PD?
3. Are there significant gains in PD outcomes based on demographic data (gender, grade level, employee classification, number of years of employment in schools, and sessions attended)?

Data Analysis

The independent variables in this study were participation in TIC PD for research questions number 1 and 2 and demographic variables (employee classification [classified and certified], grade level [K-5 and 6-12], gender [males and females], number of years of employment in schools [0-5; 6-10; 11-15; 16-20; 20+], and sessions attended [transformational learning PD; traditional PD; combined transformational and traditional PD]) for research question number 3. The independent, categorical, variables were evaluated by comparing two responses (posttest and retrospective pretest) by each participant for each survey item. The continuous, dependent variables were school personnel perceptions of knowledge, dispositions (empathetic concern, perspective taking, interpersonal relationships, sense of respect and trust, and student-centered), and behaviors.

Survey data was collected by Findlay City Schools in Northwest, Ohio using Qualtrics. “Collecting data from program participants is relatively easy, and, when measuring attitudes or relatively private behavior, program participants are often in the best-sometimes the only-position to have observed program-induced changes” (Taylor et al., 2009, p. 31). Data was downloaded by the district and then sent to the researcher for analysis. The survey data was

password protected and only accessible by the researcher and dissertation chair. Using IBM SPSS 22 for analysis, the researcher conducted pre-analysis data screening described by Mertler and Vannatta (2013) to determine the accuracy of the data, to assess missing data and extreme values, and to “assess the adequacy of fit between the data and the assumptions of a specific procedure” (p. 28). Therefore, data were examined for outliers, missing data, and violations of normality. A stem-and-leaf plot was used to identify and eliminate outliers. A Shapiro-Wilk’s test and histogram was used to examine the normal distribution of the data. Homoscedasticity was assessed using Levene’s Test for Equal Variances.

A *t*-test of paired samples was conducted for research questions 1 and 2. A one-tailed test was conducted to investigate whether school personnel perceptions of knowledge, dispositions, and behaviors significantly increase after participation in the PD. The paired samples *t*-test was appropriate for this study because it determined whether there was a significant difference between each pair of scores on the survey, the independent variables were categorical, and the dependent variables were quantitative (Mertler & Vannatta, 2013).

The mean and standard deviation for the post and retrospective pretest scores for each survey item are presented in tables (see Table 9 – Table 15). The *p* values were used to determine whether to reject or fail to reject the null hypothesis. The effect size for paired samples, Cohen’s *d*, was calculated using a mathematical formula ($d = t \div \sqrt{N}$) if the null hypothesis was rejected, indicating “the strength of the conclusions about group differences,” and “shows the practical significance of the results apart from inferences being applied to the population” (Cresswell, 2014, p. 165). The inferential statistics was conducted at the 95% confidence level, indicating that there was a 95% certainty that the observed value lies within the range of values.

An independent sample *t*-test was conducted utilizing SPSS to examine whether there was a significant difference between group means for the independent variables within two groups on the same, continuous dependent variable in research question 3 (Mertler & Vannatta, 2013). The independent variable for research question 3 (grade level) was categorized into two groups, demographic data for elementary schools (grades K-5) and for secondary schools (grades 6-12). Gender consisted of males and females. The employee classifications consisted of classified and certified employee groups. The assumptions tested prior to hypothesis testing fulfilled the requirements of the *t*-tests (Mertler & Vannatta, 2013). In addition, the effect size of independent samples, Cohen's *d*, was calculated for each demographic category using the effect size calculator on <http://www.uccs.edu/~lbecker/>.

A one-way ANOVA was conducted to examine whether there was a significant difference between group means for the categorical independent variables in research question 3 pertaining to the number of years of employment in schools (0-5; 6-10; 11-15; 16-20; 20+) and sessions attended (transformational learning PD; traditional PD; combined transformational and traditional PD) (Mertler & Vannatta, 2013). ANOVA test assumptions were examined prior to hypothesis testing and were fulfilled (Mertler & Vannatta, 2013). Effect size (η^2) was also calculated ($\eta^2 = \text{treatment sum of squares} \div \text{total sum of squares}$). The *F*-ratio was reported to indicate whether the mean differences were due to the treatment, and the effect size indicated how much the differences in the dependent variable were a result of the independent variables. Post hoc tests (Scheffe Tests) were conducted to determine which group was different if group differences were determined by the ANOVAs. Mean and standard deviations are reported for the independent variable categories in the results section, in addition to an ANOVA summary table.

Descriptive statistics were conducted on the most frequent responses to the open-ended survey item and presented in a table. Descriptive statistics were also be calculated on the school personnel demographic data and presented in tables, including the frequency and percentage of the following items: gender, age range, number of years of employment in schools, employee classification, grade level, and PD sessions attended. Table 7 includes a summary of the data analysis.

Table 7

Research Questions, Variables, and Data Analysis

Research Question	Independent Variables	Dependent Variables	Data Analysis
1. Do employees report that knowledge of TIC concepts improve as a result of participating in the TIC PD?	Participation in PD (before/after)	TIC Knowledge (Items 1-13, 16, 19, 20)	<i>t</i> -test of paired samples
2. Do employees report that their dispositions and behaviors improve as a result of participating in the TIC PD?	Participation in PD (before/after)	TIC Dispositions <ul style="list-style-type: none"> • Empathetic Concern (Items 21, 23, 25, 26, 30) • Perspective Taking (Items 22, 24, 27, 29, 31, 32) • Interpersonal Relationship (Items 38-42) • Sense of Respect and Trust (Items 43-47) • Student-Centered (Items 48-52) TIC Behavior (Items 14-15, 17-18, 28, 33-37)	<i>t</i> -test of paired samples
3. Are there significant gains in PD outcomes based on demographic data?	Employee classification (classified and certified); Grade level (K-5 and 6-12); Gender Years of employment in schools (0-5; 6-10; 11-15; 16-20; 20+) Sessions attended (transformational learning PD; traditional PD; combined PD)	TIC Gain Scores (post-pre) <ul style="list-style-type: none"> • Knowledge • Dispositions • Behavior 	Independent samples <i>t</i> -test One-way ANOVA One-way ANOVA

Assumptions

In this study, the researcher assumed that participants followed the retrospective design survey directions and responded to each survey item with an understanding that the first response indicated how they perceived themselves after participation in TIC PD and the second response indicated how they perceived themselves before participation in TIC PD. Second, participants honestly answered survey items based on an accurate memory of knowledge, dispositions, and behaviors prior to PD in order to avoid inflationary bias. Third, employees had the technology skills to access and complete the Qualtrics survey without error.

The TIC-DS was constructed from modified items of four existing surveys that have been successfully used in research; therefore, the validity and reliability of the TIC-DS is partially based on the validity and reliability of former surveys. Potential confounding variables which may have impacted study outcomes were as follows: the capacity to reflect on knowledge, dispositions, and behaviors; prior PD or work experience that may have impacted the awareness of trauma on students; number of years of employment in a school setting; sessions attended; and gender. Validity threats impact a researcher's ability to deduce that the intervention affected the outcomes rather than other factors; therefore, the identification of potential validity threats and purposeful design of the study to minimize the threats was important (Creswell, 2014).

Internal Validity

Internal validity threats are research procedures, experimental interventions, or participant experiences that negatively impact the researcher's ability to make correct interpretations about the population based on the data (Creswell, 2014). Limitations due to the history and maturation effects were minimized due to the limited amount of time between survey responses and the intervention (Creswell, 2014). Using a retrospective design, the participants

answered the “post” response, followed immediately by the “then” response, for each survey item (Klatt & Taylor-Powell, 2005). Participation in the TIC PD was the only school sponsored intervention that occurred during the interval between the PD and survey completion. Participants received the e-mail link to complete the survey the day after the PD. The window to complete the survey was four weeks. The short time interval minimized the potential impact of participant maturation.

School personnel were not selected randomly to participate in the PD or survey completion; therefore, selection may be a limiting factor (Creswell, 2014). School personnel who elected to complete the survey may have possessed dispositions associated with a trauma-sensitive employee and may be more comfortable with the sensitive nature of the PD curriculum: possessing caring relationships with students, respectful behaviors, and a greater self-awareness than the typical employee. However, it was also possible that employees, who were uncomfortable with the sensitive nature of trauma PD, the experiential activities, or self-reflection on behaviors toward traumatized students, may have possessed ulterior motives in completion of the survey. Participants may have chosen to respond to survey items in a manner that demonstrates little change between the post and retrospective pretest responses. All participants possessing a school district e-mail address were encouraged to complete the survey, increasing the likelihood that the participants who completed the survey represented the diverse characteristics of the PD participants.

Potential internal validity threats that relate to study procedures include testing and instrumentation. The short interval between the post and retrospective pretest survey responses may result in the testing effect. The design of the survey permits participants to simultaneously read post and retrospective pretest responses on the survey and intentionally alter responses in a

manner that aligns with perceptions of the intended outcomes. However, researchers who advocate for the use of a retrospective design attempt to avoid a response-shift bias by having participants answer the post and retrospective pretest simultaneously after the treatment; response shift bias may be viewed as more problematic to study outcomes as compared to the testing effect (Moore & Tananis, 2009).

Content validity, meaning the survey items measure intended constructs, is important to establish. Content validity was improved by having knowledgeable “experts” review the survey to make sure the content is appropriately aligned to the intended constructs. Fowler (2014) stated that the content validity of a survey can be improved by reviewing items for readability, ambiguity and vagueness, and ensure that the wording means the same to participants, (i.e., making sure the items are reliable as possible). Second, Fowler (2014) stated that the validity can be improved by having an appropriate number of ratings on the scale; more categories increases validity. Third, Fowler (2014) suggests having multiple survey items that measure the same subjective variable. In addition, Fowler (2014) reported that having a good question design and pretesting the survey are ways to reduce measurement errors, and referring to the literature to determine how to measure the intended constructs (i.e., referring to existing surveys). According to Fowler (2014), measuring attitudes, opinions and feelings are subjective items. Only the participant themselves can report on their attitudes, opinions, and feelings; therefore, subjective items can be checked for validity by correlations between their answers (Fowler, 2014).

External Validity

Threats to external validity may occur when inaccurate inferences are made from the population of school personnel who participated in the TIC PD to the larger population of school district employees who may participate in alternative TIC PD. The unique setting of the school

district and demographics of the study participants' limit potential inferences to other settings, racially diverse populations, or future professional developments (Creswell, 2014). The results are time-bound; therefore, it is possible that interaction of history and treatment limitations will exist (Creswell, 2014). The results have limited generalizability to similar school districts with comparable TIC PD.

Reliability

Reliability measures whether results are stable over time. The reliability of the TIC-DS and subscales were tested by determining a coefficient of reliability, Cronbach's alpha, which measures internal consistency reliability among a group of items combined to form a single scale and reflects how well the different items correlate or complement each other in measuring the variable. A Cronbach's alpha of .70 or higher is considered sufficient. A survey can be reliable (i.e., test-retest) and still not measure what it was intended to measure (i.e., no validity) (Fowler, 2014). If the survey items poorly align to the TIC constructs, but the survey is reliable, the researcher can continue to get consistently bad information each time the survey is given.

Retrospective Design Bias

Retrospective designs are not free of potential bias. Although Taylor et al. (2009) discovered significantly lower retrospective pretest scores compared to traditional pretest scores, indicating a possible response shift, the researchers discovered evidence to support the notion of an implicit theory of change bias that may exaggerate PD effectiveness. The implicit theory of change implies that participants may believe that the treatment had to produce results, resulting in an over adjustment of the retrospective pretest and posttest ratings, especially if the participants fail to remember their behaviors prior to the treatment or PD, or if they are uninterested in the PD (Taylor et al.). Taylor et al. reported that participants might use their

current behaviors as a standard to base the ratings on the retrospective pretest, rating the behaviors purposefully lower than the ratings on the posttest, to signify that the PD must have produced change. Potential motivational biases that may be incurred when using a retrospective design are self-enhancement (participants may overstate learning or change to make themselves look good), social desirability bias (participants may provide the answers they perceive as socially acceptable), or effort justification (participants may provide lower responses on the retrospective pretest to justify the effort they believe they expended in the PD, regardless of actual change) (Taylor et al.).

In the event that social desirability bias is a greater concern, Moore and Tananis (2009) suggest the use of pre-post tests to measure PD effectiveness. Due to the lack of previous PD and understanding of trauma-informed constructs, the potential to overestimate knowledge, dispositions, and behaviors on a traditional pretest is greater (i.e., response-shift bias) in this study than social desirability bias, especially when survey responses were anonymous. Furthermore, Taylor et al. (2009) suggested that the inclusion of survey items that assess behaviors the PD was not intended to address (i.e., control items) would permit researchers to test for inflationary bias. “Calculations of intervention effect sizes and significance tests can incorporate ratings on the control items, analogous to how control group scores are treated in control group designs” (Taylor et al., p. 42). The use of a retrospective pretest design is also used to “partially curb rival hypotheses of history, selective mortality,” and “to identify and mitigate the effect of response-shift bias when evaluating program effectiveness” (Nimon, Zigarmi, & Allen, 2011, pp. 8-9).

CHAPTER IV. RESULTS

This study examined school employee perceptions of knowledge, dispositions, and behaviors toward traumatized students as a result of participation in trauma-informed care professional development (TIC PD). In addition, the study examined whether there were significant gains in outcomes based on demographic variables (employee classification [classified and certified], grade level [K-5 and 6-12], gender [males and females], number of years of employment in schools [0-5; 6-10; 11-15; 16-20; 20+], and sessions attended [transformational learning PD; traditional PD; combined transformational and traditional PD]). This chapter will summarize descriptive and inferential results by demographics of participants, research question, survey item, and TIC-DS subscales (Knowledge, Empathetic Concern, Perspective Taking, Interpersonal Relationship, Sense of Respect and Trust, Student-Centered, and Behavior). Descriptive statistics are presented on the most frequent responses to the open-ended survey items ($n = 101$).

Demographic Summary of Participants

A description of the participant demographics is important to the interpretation of the data and significance of the study (see Table 8). Findlay City Schools' employees ($n = 818$) were invited to participate in the TIC-PD. Certified ($n = 428$) and classified ($n = 331$) employees attended separate transformational learning professional developments; however, certified and classified employees attended the traditional PD together ($n = 673$). A portion of the part-time employees ($n = 106$) who were invited to participate did not have school district e-mail addresses. Of the employees ($n = 712$) who received the Qualtrics survey via e-mail, 552 completed one or more of the survey items (77.5%).

Table 8

Participant Demographics

Demographics	<i>n</i>	% of Total
Gender	550	
Male	129	23.4
Female	421	76.5
Age Range	550	
<29	58	10.5
30-39	136	24.7
40-49	143	26.0
50+	213	38.7
Number of years of employment in school district(s)	552	
0-5	120	21.7
6-10	109	19.7
11-15	128	23.2
16-20	84	15.2
20+	111	20.1
Employee Classification	548	
Teacher	320	58.4
Administrator	31	5.7
Counselor or Psychologist	18	3.3
Classified Employee	179	32.7
Grade Level	548	
Elementary School (K-5)	225	41.1
Middle School (6-8)	103	18.8
High School (9-12)	141	25.7
Other	79	14.4
Professional Development Session(s) Attended	547	
1 session: transformational learning PD (classified employees)	52	9.5
1 session: traditional PD (certified or classified employees)	39	7.1
2 sessions: transformational and traditional PD (classified employees)	146	26.7
2 sessions: transformational and traditional PD (certified employees)	310	56.7

A majority of the PD participants who responded to demographic survey items were female ($n = 421$), teachers ($n = 320$), 50 or more years of age ($n = 213$), worked in an elementary building ($n = 225$), and attended both the transformational and traditional PDs (i.e., certified employees; $n = 310$). The percent of employees who participated in the transformational and

traditional professional developments and completed the survey was estimated, as there may have been employees who received the survey but did not attend the PD. Additionally, response rates per survey item varied as participants had the option to skip a survey item or select “does not apply” if they perceived the survey statement did not apply to their job.

Research Question 1

Do employees report that knowledge of TIC concepts improve as a result of participating in the TIC PD?

To address research question 1, one-tailed *t*-tests of paired samples were conducted to compare the post and retrospective pretest survey item scores in the Knowledge subscale to determine whether there was a statistically significant increase in school personnel perceptions of trauma-related knowledge after participation in the TIC PD. Results indicate that there was a significant increase in the Knowledge subscale from before ($M = 3.81, SD = .68$) to after ($M = 4.26, SD = .51$) participation in TIC PD; $t(541) = 15.13, p < .001$, one-tailed. The treatment (i.e., participation in the TIC PD) had a medium effect on improving participant knowledge (Cohen’s $d = .65$).

Paired *t*-test tests were also conducted with each Knowledge subscale item. All Knowledge subscale items had large *t* statistics (i.e., over 1.0), ranging from 3.27 to 14.84, indicating significant increases from retrospective pretest data to post ($p < .001$). Significant item gains in trauma-related knowledge as a result of participation in the PD are presented in Table 9. Of all 52 TIC-DS survey items, item 1 (i.e., I am / I was familiar with the symptoms traumatized students display) generated the largest increase between before ($M = 3.76, SD = .91$) and after the PD ($M = 4.34, SD = .62$); $t(534) = 14.84; p = < .001$, one-tailed. The effect size, Cohen’s d of .64, indicated a medium treatment effect. The results suggest that participants

perceived the greatest gain to be in knowledge of the symptoms traumatized students' display (i.e., impact on the brain, health, social-emotional well being, and behaviors).

Within the subscale, item 20 (i.e., I do / I did believe that all students can learn) showed the smallest significant increase between before ($M = 4.60$, $SD = .64$) and after the PD ($M = 4.66$, $SD = .59$); $t(524) = 3.27$; $p < .001$, one-tailed, Cohen's $d = .14$. However, this item had the largest mean value for the pre, leaving little room for growth. Item 7 (i.e., I am / I was knowledgeable about the next steps to take once a student has been identified as experiencing a traumatic event) had the lowest mean value before ($M = 3.34$, $SD = 1.04$) and after the PD ($M = 3.87$, $SD = .90$). The low mean value of this survey item indicates that participants were somewhat unsure of the next steps to take once a traumatized student has been identified. Fourteen of the knowledge subscale items (i.e., 1 - 13, and 19) had Cohen's d values that indicated the professional development had a medium effect on trauma-related knowledge; additionally, two survey items (i.e., 16 and 20) had Cohen's d values that indicated the professional development had a small effect on increased knowledge.

Table 9

Descriptive and Inferential Statistics of Knowledge Items and Subscale

	<i>n</i>	After PD		Before PD		<i>t</i>	Cohen's <i>d</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
1. Familiar with symptoms traumatized students display	535	4.34	0.62	3.76	0.91	14.84*	0.64
2. Knowledgeable about impact of trauma on student success	534	4.49	0.62	4.11	0.80	11.22*	0.49
3. Knowledgeable about impact of trauma on student behavior	533	4.52	0.59	4.19	0.78	10.21*	0.44
4. Know how to make behavioral observations that help identify signs of trauma	523	4.12	0.78	3.63	0.93	12.41*	0.54
5. Knowledgeable about different types of trauma	530	4.26	0.76	3.80	0.96	10.47*	0.45
6. Understand that the symptoms of trauma may be similar to the symptoms of diagnoses	531	4.26	0.73	3.51	1.08	14.05*	0.61
7. Knowledgeable about next steps to take once a student has been identified	523	3.87	0.90	3.34	1.04	12.22*	0.53
8. Knowledgeable about trauma in school-aged children	526	4.27	0.68	3.88	0.89	9.84*	0.43
9. Knowledgeable about next steps to take	521	3.93	0.85	3.48	1.01	10.94*	0.48
10. Knowledgeable about how my behaviors impact students	518	4.34	0.68	3.85	0.97	11.20*	0.49
11. Knowledgeable about how to talk to students	524	4.03	0.78	3.53	0.94	12.24*	0.53
12. Knowledgeable about the impact of trauma on student learning	524	4.38	0.63	4.01	0.85	10.06*	0.44
13. Knowledgeable about how to deescalate and manage student behaviors	513	3.98	0.77	3.60	0.97	9.95*	0.44
16. Knowledgeable about the role empathy plays in relationships	513	4.49	0.63	4.27	0.76	7.63*	0.34
19. Knowledgeable about the impact of emotional states on brain functioning and learning	515	4.26	0.72	3.64	1.02	13.46*	0.59
20. Belief that all students can learn	525	4.66	0.59	4.60	0.64	3.27*	0.14
Knowledge Total	542	4.26	0.51	3.81	0.68	15.13*	0.65

* $p < .001$

Research Question 2

Do employees report that their dispositions and behaviors improve as a result of participating in the TIC PD?

Paired samples *t*-tests were conducted to compare the post and retrospective pretest survey item scores for the Dispositions (Empathetic Concern, Perspective Taking, Interpersonal Relationship, Sense of Respect and Trust, and Student-Centered) and Behavior subscales to determine whether there were statistically significant increases in employee perceptions of dispositions and behaviors after participation in the TIC PD (see Table 10 – Table 15). For this study, employee dispositions were defined as the feelings, attitudes, beliefs, and preferences that result in the tendency to respond or behave in specific ways (Eberly et al., 2007).

Empathetic Concern Subscale

Of the five items in the Empathetic Concern subscale, only three (i.e., items 21, 23, and 25) generated significant increases as a result of the PD (see Table 10). Item 23 (i.e., I will / I did feel empathy for students when they are having problems) showed the largest increase between pre and post scores, but still maintained a small effect (Cohen's $d = .18$). Two items in this subscale revealed no significant increases. The first was item 26 (i.e., Students misfortunes will not / did not disturb me a great deal [-]). This negatively worded item was reverse coded to create a unidirectional subscale. The other item was item 30 (i.e., I would / I did describe myself as a softhearted person), which generated nearly equivalent pre and post means. Retrospective pretest mean values indicated that participants agreed with the statements prior to participating in the PD leaving little room for growth.

Table 10

Descriptive and Inferential Statistics of Empathetic Concern Items and Subscale

	<i>n</i>	After PD		Before PD		<i>t</i>	Cohen's <i>d</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
21. Concerned feelings for students less fortunate than me	518	4.65	0.58	4.62	0.58	2.17*	0.10
23. Feel empathy for students	515	4.57	0.60	4.49	0.59	4.18**	0.18
25. Feel protective toward students	509	4.59	0.60	4.54	0.61	2.38*	0.11
26. Student misfortunes will not/did not disturb me [†]	512	4.02	1.20	3.99	1.19	1.24	0.05
30. Describe myself as a softhearted person	522	4.25	0.78	4.24	0.79	1.07	0.05
Total Empathetic Concern	530	4.40	0.54	4.36	0.51	3.12*	0.14

* $p < .05$; ** $p < .001$; [†]Reverse Coded

Perspective Taking Subscale

Perspective Taking subscale items generated large t values and small effect sizes for five of six items (see Table 11). The PD had the largest effect on Item 24 (i.e., I will / I did try to look at student's side of a disagreement before making a decision) and item 32 (i.e., Before criticizing / critiquing a student, I will / I did try to imagine how I would feel if I were in their place). Of the 52 TIC-DS survey items, item 22 (i.e., I will / I did sometimes find it difficult to see things from the student's point of view [-]) had the smallest mean value before ($M = 2.90$, $SD = 1.23$) and after the PD ($M = 2.90$, $SD = 1.28$) and was the only item in the Perspective Taking subscale that generated no significance difference between the pre and post data. Based on the Likert scale, the mean values for item 22 suggest that the participants disagreed that they had a difficult time seeing things from the student's point of view. The total subscale indicated that the treatment had a medium effect on employee perspective taking dispositions ($d = .43$).

Table 11

Descriptive and Inferential Statistics of Perspective Taking Items and Subscale

	<i>n</i>	After PD		Before PD		<i>t</i>	Cohen's <i>d</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
22. Find it difficult to see things from the student's point of view [†]	516	2.90	1.28	2.90	1.23	0.13	0.01
24. Try to look at student's side of a disagreement before making a decision	504	4.40	0.65	4.17	0.76	8.09*	0.36
27. If I am right about something, I will not/did not waste much time listening to student's arguments [†]	507	3.87	1.11	3.75	1.13	5.29*	0.23
29. Believe that there are two sides to every story and look at them	519	4.45	0.64	4.35	0.67	4.94*	0.22
31. When upset with a student, I try to "put myself in his or her shoes"	509	4.34	0.67	4.12	0.76	7.97*	0.35
32. Before criticizing/critiquing a student, I try to imagine how I would feel in their place	507	4.38	0.64	4.14	0.74	8.15*	0.36
Total Perspective Taking	526	4.05	0.53	3.90	0.55	9.91*	0.43

* $p < .001$; [†]Reverse Coded

Interpersonal Relationship Subscale

Three of the five Interpersonal Relationship subscale items generated significant increases but small effect sizes as a result of participation in the PD (i.e., items 38, 39, and 42) (see Table 12). Mean values were close to or greater than "4" for all subscale items, indicating that participants agreed with each survey statement before and after the PD. The largest increase between pre and post data in the subscale was item 38 (i.e., I will / I did take a personal interest in what students do outside their class); $t(493) = 3.89$, $p < .001$, one-tailed, Cohen's $d = .18$.

Table 12

Descriptive and Inferential Statistics of Interpersonal Relationship Items and Subscale

	<i>n</i>	After PD		Before PD		<i>t</i>	Cohen's <i>d</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
38. Take a personal interest in what students do outside their class.	493	4.39	0.66	4.31	0.72	3.89**	0.18
39. Call students by their name	509	4.66	0.57	4.61	0.61	3.58**	0.16
40. Provide students with "treats"	449	3.92	1.03	3.94	1.01	-1.10	-0.05
41. Joke around with students in an appropriate manner	507	4.15	0.99	4.15	0.97	0.00	0.00
42. Recognize students for extra-curricular achievements	480	4.39	0.68	4.33	0.70	3.09*	0.14
Total Interpersonal Relationship	519	4.30	0.57	4.25	0.58	3.00*	0.13

* $p < .05$; ** $p < .001$

Item 40 (i.e., I will / I did provide students with "treats" and "goodies" on special occasions) had a larger pre mean value ($M = 3.94$, $SD = 1.01$) than post ($M = 3.92$, $SD = 1.03$), although the difference was not significant (Cohen's $d = -.05$). Item 41 (i.e., I will / I did joke around with students in an appropriate manner) produced the same mean before ($M = 4.15$, $SD = .97$) and after ($M = 4.15$, $SD = .99$) participation in TIC PD; therefore, participation in the PD had no effect on how employees will joke around with students; $t(506) = 0.00$, $p = 1.00$.

Sense of Respect and Trust Subscale

Sense of Respect and Trust subscale items generated large t values and significant increases after participation in the professional development, including the subscale total; $t(516) = 5.91$, $p < .001$, one-tailed (see Table 13). Cohen's d for the subscale total indicated that the PD had a small effect on participant perception of respect and trust toward traumatized students ($d = .23$). Item 43 (i.e., I will / I did attempt to greet students when entering the classroom or my work environment) showed the largest mean value before ($M = 4.58$, $SD = .58$) and after ($M =$

4.64, $SD = .55$) participation in TIC PD, indicating that participants strongly agreed with the statement; therefore, the treatment had the smallest effect on greeting students by name ($d = .16$). Within the subscale, the PD had the most effect on asking students to help with tasks ($d = .23$).

Table 13

Descriptive and Inferential Statistics of Sense of Respect and Trust Items and Subscale

	<i>n</i>	After PD		Before PD		<i>t</i>	Cohen's <i>d</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
43. Attempt to greet students	500	4.64	0.55	4.58	0.58	3.54*	0.16
44. Ask students to help with tasks	444	4.50	0.64	4.41	0.74	4.79*	0.23
45. Ask students for their opinions	479	4.48	0.61	4.38	0.67	4.16*	0.19
46. Maintain eye contact when talking to students	507	4.59	0.56	4.53	0.60	4.16*	0.18
47. Give students opportunities to make choices and decisions	484	4.52	0.60	4.43	0.63	4.65*	0.21
Total Sense of Respect and Trust	517	4.53	0.52	4.63	0.53	5.91*	0.23

* $p < .001$

Student-Centered Subscale

The *t* values generated by the Student-Centered subscale items ranged from 2.11 to 4.60, indicating significant increases from retrospective pretest to post data, including the subscale total; $t(520) = 4.45, p < .001$, one-tailed (see Table 14). Cohen's *d* for the total subscale indicated that the PD had a small effect on participant student-centered disposition ($d = .19$).

Within the TIC-DS, item 49 (i.e., I will / I did attempt to treat students with dignity and respect at all times) generated the highest mean value before ($M = 4.65, SD = .56$) and after the PD ($M = 4.68, SD = .56$). Although alpha indicated that there was a significant increase between the pretest and post scores, $t(515) = 2.11, p < .05$, Cohen's *d* indicated that the PD had no effect ($d = .09$). This suggests that participants perceived that they would treat students with dignity and respect in a similar fashion after the PD as they did before the PD. Item 52 (i.e., I do / I did

believe it is important to learn about students and their community) showed the largest increase between pre and post scores, although the effect size was small (Cohen's $d = .20$).

Table 14

Descriptive and Inferential Statistics of Student-Centered Items and Subscale

	<i>n</i>	After PD		Before PD		<i>t</i>	Cohen's <i>d</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
48. Demonstrate qualities of humor, empathy, and warmth with students	511	4.63	0.57	4.49	0.57	2.58*	0.11
49. Attempt to treat students with dignity and respect at all times	516	4.68	0.56	4.65	0.56	2.11*	0.09
50. Attempt to be patient when working with students	505	4.64	0.57	4.56	0.59	4.06**	0.18
51. Communicate in ways that demonstrate respect for the feelings, ideas, and contributions of others	506	4.64	0.58	4.56	0.59	4.02**	0.18
52. Believe it is important to learn about students and their community	504	4.63	0.58	4.54	0.61	4.60**	0.20
Total Student-Centered	521	4.63	0.53	4.57	0.51	4.45**	0.19

* $p < .05$; ** $p < .001$

Behavior Subscale

Nine of ten Behavior subscale items generated t values ranging from 4.37 to 10.24, indicating significant increases in trauma-informed behaviors after participation in the PD ($p < .001$). Only survey item 37 showed no significant increase with retrospective pretest and post means maintaining similar values indicating that participation in the PD had no effect on the enforcement of the same rules for all students. Table 15 presents the t -tests results and effect sizes of the Behavior subscale.

Table 15

Descriptive and Inferential Statistics of Behavior Items and Subscale

	<i>n</i>	After PD		Before PD		<i>t</i>	Cohen's <i>d</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
14. Believe that my interactions with traumatized students positively impact his/her ability to learn	512	4.38	0.66	4.11	0.84	8.39*	0.37
15. Utilize strategies with the intent to create a safe environment for students	503	4.46	0.64	4.14	0.80	9.61*	0.43
17. Self-aware and mindful of my interactions with students	515	4.57	0.57	4.27	0.70	10.24*	0.45
18. Use active listening strategies when interacting with students	513	4.50	0.58	4.24	0.72	8.87*	0.39
28. Believe that I have the ability to assist traumatized students so that they can learn	496	4.18	0.77	3.95	0.84	7.90*	0.35
33. Create an environment where students feel safe	508	4.66	0.54	4.53	0.64	6.54*	0.29
34. Positive with students	519	4.65	0.52	4.56	0.59	4.91*	0.22
35. Intervene when students pick on each other	503	4.62	0.58	4.53	0.63	4.86*	0.22
36. Give students positive reinforcement for good behavior	504	4.62	0.60	4.55	0.64	4.37*	0.19
37. Enforce the same rules for all students	502	4.07	1.01	4.09	0.94	-1.01	-0.05
Total Behavior	531	4.46	0.45	4.28	0.51	10.70*	0.46

* $p < .001$

According to the total subscale, the treatment had a medium effect on employee behaviors toward traumatized students ($d = .46$). Two of the subscale items also produced medium effect sizes. Item 17 (i.e., I will be / I was self-aware and mindful of my interactions with students) generated the largest increase between pre and post scores; $t(514) = 10.24$, $p < .001$, one-tailed, Cohen's $d = .45$. Similarly, item 15 (i.e., I will / I did utilize strategies with the

intent to create a safe environment for students) showed a medium effect. Seven survey items (i.e., 14, 18, 28, and 33 – 36) generated values that indicated the PD had a small effect on behaviors (i.e., d = between .19 and .39).

Total Subscales Summary

Results indicate that there were significant increases in all six total subscales due to participation in the PD (see Table 16). Additionally, results reveal that the PD had a small effect on the subscales of Interpersonal Relationship, Empathetic Concern, Student-Centeredness, and Sense of Respect and Trust. The PD created medium effects on the Perspective Taking and Behavior subscale totals. This suggests that participants perceived the most improvement in perspective taking and behaviors toward traumatized students after participating in the PD.

Table 16

Descriptive and Inferential Statistics of TIC-DS Subscales

	<i>n</i>	After PD		Before PD		<i>t</i>	Cohen's <i>d</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Empathetic Concern	530	4.40	0.54	4.36	0.51	3.12*	0.14
Perspective Taking	526	4.05	0.53	3.90	0.55	9.91**	0.43
Interpersonal Relationship	519	4.30	0.57	4.25	0.58	3.00*	0.13
Sense of Respect and Trust	517	4.53	0.52	4.63	0.53	5.91**	0.23
Student-Centered	521	4.63	0.53	4.57	0.51	4.45**	0.19
Behavior	531	4.46	0.45	4.28	0.51	10.70**	0.46

* $p < .05$; ** $p < .001$

Research Question 3

Are there significant gains in PD outcomes based on demographic data?

Gain scores were computed between pre and post scores for each subscale (see Table 17). Independent sample t -tests were utilized to compare the subscale gain scores of the demographic groups based on gender, grade level, and employee classification (see Table 18 – Table 20). Additionally, a one-way ANOVA was conducted to compare the subscale gain scores for five

groups based on years of employment in schools and three groups based on sessions attended (see Table 21 – Table 23). Results indicate the largest gain was in Knowledge ($M = 0.44$). The Behavior ($M = 0.18$) and Perspective Taking ($M = 0.15$) subscales showed the second and third largest gains, in that order.

Table 17

Descriptive Statistics of Subscale Gains

	<i>n</i>	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>
Knowledge	542	-1.88	3.00	0.44	0.68
Empathetic Concern	530	-2.80	1.80	0.04	0.29
Perspective Taking	526	-1.00	2.33	0.15	0.36
Interpersonal Relationship	519	-1.00	4.00	0.04	0.31
Sense of Respect and Trust	517	-1.80	2.00	0.08	0.30
Student-Centered	521	-3.00	2.00	0.06	0.32
Behavior	531	-1.40	3.00	0.18	0.38
Total Dispositions	534	-1.87	3.52	0.08	0.30

Gender Differences in Subscale Gains

Independent sample *t*-tests were conducted to determine whether there was a significant difference in the TIC-DS subscales gains between males (1) and females (2) (see Table 18). Of the seven subscales, only one generated significant gender differences. The Student-Centered subscale revealed significantly higher female gain scores than male. However, the effect size (Cohen's $d = .19$) was small. The Total Dispositions scale also revealed that females reported significantly higher gains than males.

Table 18

Descriptive and Inferential Statistics of TIC-DS Subscale Gains by Gender

	Males			Females			<i>t</i>	Cohen's <i>d</i>
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>		
Knowledge	124	0.34	0.70	411	0.47	0.67	-1.83	0.19
Empathetic Concern	123	0.01	0.44	402	0.05	0.23	-0.80 [†]	0.11
Perspective Taking	120	0.10	0.36	402	0.17	0.35	-1.77	0.19
Interpersonal Relationship	121	0.03	0.30	394	0.05	0.32	-0.46	0.06
Sense of Respect and Trust	118	0.04	0.35	395	0.09	0.28	-1.49	0.16
Student-Centered	119	0.01	0.44	397	0.08	0.28	-2.19*	0.19
Behavior	124	0.16	0.44	401	0.18	0.35	-0.43	0.05
Total Dispositions	124	0.03	0.33	405	0.10	0.29	-2.38*	0.23

[†]Equal variance not assumed; * $p < .05$

Grade Level Differences in Subscale Gains

Grade level differences in all subscale gain scores were analyzed using independent sample *t*-tests (see Table 19). A significant difference was found between elementary and secondary school employees for all subscales (i.e., Empathetic Concern and Student-Centered, $p < .05$; Knowledge, Perspective Taking, Behavior, and Total Dispositions, $p < .001$) except Interpersonal Relationship and Sense of Respect and Trust. Gain scores for all subscales were higher for K - 5 than grades 6 - 12 employees. Cohen's *d* indicated that participation in the PD had the larger effect on elementary employee behaviors, knowledge, perspective taking, total dispositions, empathetic concern, and student-centeredness as compared to secondary employees. The Behavior subscale generated significantly higher gain scores for elementary ($M = 0.24$, $SD = 0.36$) than secondary ($M = 0.10$, $SD = 0.32$) employees and a medium effect size; $t(425) = 4.19$, $p < .001$, two-tailed, Cohen's $d = .41$.

Table 19

Descriptive and Inferential Statistics of TIC-DS Subscale Gains by Grade Level

	K-5			6-12			<i>t</i>	Cohen's <i>d</i>
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>		
Knowledge	220	0.54	0.68	237	0.30	0.59	4.04**	0.38
Empathetic Concern	213	0.07	0.25	234	0.01	0.32	2.42**†	0.21
Perspective Taking	213	0.22	0.38	233	0.09	0.31	3.82**†	0.37
Interpersonal Relationship	211	0.06	0.35	233	0.03	0.24	1.16	0.10
Sense of Respect and Trust	211	0.10	0.31	231	0.06	0.27	1.52†	0.14
Student-Centered	211	0.11	0.30	233	0.03	0.32	2.51**†	0.26
Behavior	213	0.24	0.36	236	0.10	0.32	4.19**†	0.41
Total Dispositions	216	0.13	0.33	235	0.04	0.25	3.26**†	0.31

†Equal variance not assumed; * $p < .05$; ** $p < .001$

Employee Classification Differences in Subscale Gains

Table 20 presents the Independent *t*-tests results and effect sizes for each subscale for certified (e.g., administrators, teachers, counselors, and psychologists) and classified employees (e.g., bus drivers, secretaries, classroom and bus aides, lunch monitors, custodians, maintenance, non-licensed librarians, and food service employees). There were no significant differences between certified and classified employees, although classified employees generated higher subscale gains than certified employees for all subscales except Empathetic Concern.

Table 20

Descriptive and Inferential Statistics of TIC-DS Subscale Gains by Classified and Certified

	Certified			Classified			<i>t</i>	Cohen's <i>d</i>
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>		
Knowledge	357	0.40	0.63	174	0.53	0.77	-1.87†	0.18
Empathetic Concern	352	0.05	0.30	167	0.02	0.28	1.31	0.10
Perspective Taking	353	0.14	0.34	163	0.19	0.39	-1.59	0.14
Interpersonal Relationship	350	0.03	0.22	160	0.07	0.45	-1.21†	0.11
Sense of Respect and Trust	351	0.07	0.25	157	0.11	0.39	-1.18†	0.12
Student-Centered	351	0.06	0.28	160	0.08	0.41	-0.57†	0.06
Behavior	353	0.16	0.37	167	0.22	0.39	-1.62	0.16
Total Dispositions	355	0.07	0.23	168	0.11	0.41	-1.01†	0.12

†Equal variance not assumed

Years of Employment Differences in Subscale Gains

A one-way analysis of variance (ANOVA) was conducted to determine whether there were significant differences in the TIC-DS subscale gains between five categories of years of employment in schools (i.e., 0-5; 6-10; 11-15; 16-20; 20+) (see Table 21). Results indicate that there was no significant difference in the subscale gains between the categories of years of employment in schools at the $p < .05$ level.

Table 21

Inferential Statistics of TIC-DS Subscale Gains by Years of Employment

	<i>df</i>	<i>F</i>	<i>p</i>
Knowledge	4, 531	1.87	0.115
Empathetic Concern	4, 519	0.64	0.638
Perspective Taking	4, 516	0.73	0.570
Interpersonal Relationship	4, 509	0.80	0.526
Sense of Respect and Trust	4, 507	1.66	0.157
Student-Centered	4, 510	1.63	0.165
Behavior	4, 520	0.75	0.559
Total Dispositions	4, 523	1.05	0.380

Sessions Attended Differences in Subscale Gains

An ANOVA was also conducted to determine whether there was a significant difference in the subscales for the sessions attended (i.e., transformational only; traditional only; transformational and traditional combined) by classified employees (see Table 22). The subscales were not analyzed for certified employees due to the school district's expectation that certified employees attend both the transformational and traditional PD sessions.

Table 22

Descriptive and Inferential Statistics of Knowledge and Behavior Subscale Gains by Sessions

Classified Employees	<i>n</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>
Knowledge Growth				4.16	0.017
Transformational PD	50	0.35	0.74		
Traditional PD	37	0.30	0.63		
Both Sessions	142	0.62	0.77		
Adult Behavior Growth				2.43	0.091
Transformational PD	50	0.13	0.41		
Traditional PD	37	0.15	0.46		
Both Sessions	136	0.27	0.45		

$p < .05$

There was a significant increase at the $p < .05$ level in the Knowledge subscale gain between the three categories of sessions attended; $F(2,226) = 4.16, p = .017$. The effect size was small ($\eta^2 = .036$). Post hoc comparisons using the Scheffe Test indicated that the mean score for knowledge growth for participation in both sessions ($M = .62, SD = .77$) was significantly higher than the mean score for attending only the traditional PD ($M = .30, SD = .63$). There was no significant difference in Behavior growth between the sessions attended for classified employees.

Within the Disposition-related subscales, the only significant difference was found in the Student-Centered subscale between the three categories of sessions attended; $F(2,211) = 4.62, p = .011$, two-tailed (see Table 23). The PD had a medium effect on student-centeredness ($\eta^2 = .042$). Post hoc comparisons using the Scheffe Test indicated that the mean score for participating in both sessions ($M = .14, SD = .38$) was significantly different than participation in the transformational PD ($M = -.03, SD = .55$). There was no significant difference in Empathetic Concern, Perspective Taking, Interpersonal Relationship, and Sense of Respect and Trust subscales between the sessions attended by classified employees.

Table 23

Descriptive and Inferential Statistics of Disposition Subscale Gains by Sessions

Classified Employee Dispositions	<i>n</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>
Empathetic Concern Growth				0.72	0.491
Transformational PD	49	-0.01	0.24		
Traditional PD	37	0.04	0.32		
Both Sessions	137	0.05	0.32		
Perspective Taking Growth				1.10	0.336
Transformational PD	48	0.13	0.28		
Traditional PD	35	0.11	0.28		
Both Sessions	136	0.20	0.43		
Interpersonal Relationship Growth				0.24	0.790
Transformational PD	47	0.06	0.25		
Traditional PD	36	0.04	0.30		
Both Sessions	131	0.09	0.51		
Sense of Respect and Trust Growth				1.97	0.142
Transformational PD	47	0.01	0.31		
Traditional PD	35	0.11	0.31		
Both Sessions	130	0.13	0.41		
Student-Centered Growth				4.62	0.011
Transformational PD	48	-0.03	0.55		
Traditional PD	36	-0.02	0.23		
Both Sessions	130	0.14	0.38		

p<.05

Descriptive Statistics of Open-Ended Survey Item

A description of the participant responses to the open-ended response item (i.e., When I believe a student has or is experiencing trauma I will...) is important to the interpretation of the data and significance of the study. The responses are organized by frequency (see Table 24). Of the 552 employees who completed one or more TIC-DS survey items, 101 employees responded to the open-ended survey item (18.3%). Helping the student was the most frequent response (34%). The following responses were similar in frequency: contacting the school counselor (21%); listening to the student (20%); providing a safe environment (19%); seeking help for the student (18%); and talking to the student (17%).

Table 24

Descriptive Statistics of TIC-DS Open-Ended Survey Item

When I believe a student has or is experiencing trauma I will...	<i>f</i>	% of Total
Help the student	34	34
Contact the school counselor	21	21
Listen to the student	20	20
Provide a safe environment	19	19
Seek help for the student	18	18
Talk to the student	17	17
Demonstrate empathy; care; compassion; nurturing	11	11
Contact a teacher	7	7
Treat the student with dignity and respect	6	6
Be more patient; demonstrate patience	6	6
Identify the root of the problem	6	6
Build a relationship	3	3
Contact the parents	2	2

Response length ranged from two words (i.e., “tell teacher”) to several sentences. One participant responded as follows:

I believe this was a beneficial training. It was a nice reminder to be compassionate and treat the whole child. Especially since we have become so data driven. It is still children we are working with, and many of them have so many more problems than passing a test... For sure, as a classroom teacher, I will be more aware of what I can do, but I believe the counselors need to be doing a lot more as well.

Another participant wrote, “Show empathy towards the student, make sure they feel safe and appreciated in their learning environment, and consult with guidance counselor, school psychologist, and/or administrator as needed.” A third participant responded, “Continue to not just sympathize but put actions behind my words.”

Although a majority of responses were positive and addressed how the employee would respond to students, there were three negative comments. For example, one employee made negative comments about participating in the traditional PD; however, the importance of trauma-

informed care to the school district was acknowledged.

TIC is very important in this district. But if I was asked BEFORE this training, the powers at be would have understood that I deal with students with chronic trauma every day. I have spent years learning about how to reach students... After this training, I am no more aware of the changes that the district is going to implement to better serve those students who suffer constantly....This was a waste of time and it is unfortunate because TIC is important, and I feel as though staff in the district will be turned off as the district moves forward.

Likewise, another employee responded that the PD was not a good use of his/her time. "This was an utter waste of my time. I will not get involved with any student unless I know that they are in immediate danger. I have little or no contact with students."

Summary

This study sought to examine school employee perceptions of knowledge, dispositions, and behaviors toward traumatized students as a result of participation in trauma-informed care professional development (TIC PD). In addition, the study examined whether there were significant differences in subscale gains based on demographic variables. The sample consisted of 552 Findlay City School certified and classified employees who answered one or more items on the TIC-DS; 101 employees responded to the open-ended survey item. A majority of the participants who responded to demographic survey items were female (76.5%), teachers (58.4%), 50 or more years of age (38.7%), and worked in an elementary school (41.1%). Of the 547 employees who responded to the session(s) attended demographic item, 26.7% ($n = 146$) were classified employees who attended the transformational and traditional PD sessions; 56.7% ($n = 310$) were certified employees who attended both sessions.

Of the seven TIC-DS subscales, trauma-related Knowledge showed the largest significant increase as a result of participation in TIC PD. The subscale totals indicated that participation in the TIC PD had a medium effect on improving participant trauma-related knowledge (Cohen's $d = .65$), behaviors toward traumatized students (Cohen's $d = .46$), and perspective taking dispositions (Cohen's $d = .43$). Additionally, results indicate that the professional development had a small effect (ranging from .13 to .23) on the following subscales: Interpersonal Relationship, Empathetic Concern, Student-Centered, and Sense of Respect and Trust.

Results indicate significantly greater gains in Total Dispositions and Student-Centeredness, as well as larger mean values in all subscales for females than males. A significant difference was also found for five of the seven subscales (Empathetic Concern, Student-Centered, Knowledge, Perspective Taking, and Behavior), as well as Total Dispositions, between elementary and secondary employees; the means for elementary employees were larger than secondary employees. No significant difference was found between the years of employment in schools or employee classification for the TIC-DS subscales. There was a significant difference between the sessions attended by classified employees for the Knowledge and Student-Centered disposition subscales. Participating in a combined transformational and traditional PD had higher mean values than attending a single PD for classified employees.

Table 25 includes a summary of results by research question.

Table 25

Summary of Results by Research Question

Research Question	Results
1. Do employees report that knowledge of TIC concepts improve as a result of participating in the TIC PD?	<ul style="list-style-type: none"> • Significant increase in overall Knowledge and all Knowledge items at $p < .001$ • PD had a medium effect on overall Knowledge
2. Do employees report that their dispositions (empathetic concern, perspective taking, interpersonal relationships, sense of respect and trust, and student-centered) and behaviors improve as a result of participating in the TIC PD?	<ul style="list-style-type: none"> • Significant increases in all Disposition and Behavior subscales due to PD • PD had a medium effect on Perspective Taking and Behavior; small effect on Interpersonal Relationship, Empathetic Concern, Student-Centeredness, and Sense of Respect and Trust subscales • Nine of 10 Behavior subscale items showed a significant increase at the $p < .001$; no significant change for enforcement of same rules for all students • Two Behavior subscale items had a medium effect (being mindful of interactions and utilizing strategies to create safe environments)
3. Are there significant gains in PD outcomes based on demographic data (gender, grade level, employee classification, number of years of employment in schools, and sessions attended)?	<p>Gender</p> <ul style="list-style-type: none"> • Gains in Student-Centered and Total Dispositions subscales were significantly higher for females than males; PD had a small effect <p>Grade Level</p> <ul style="list-style-type: none"> • K - 5 educators reported significantly greater gains in Knowledge, Empathetic Concern, Student-Centered, Perspective Taking, Behavior and Total Dispositions than secondary (6-12) educators • PD had largest effect on Behavior subscale for K – 5 when compared to grades 6 - 12 <p>Employee Classification</p> <ul style="list-style-type: none"> • Classified employees reported larger gains (but insignificant) in all subscales except Empathetic Concern when compared to certified employees <p>Years of Employment</p> <ul style="list-style-type: none"> • No significant difference was found in the subscales <p>Sessions Attended</p> <ul style="list-style-type: none"> • Significant difference in Knowledge gains for sessions attended by classified staff and small effect size; mean value of both sessions was higher than traditional PD • Significant difference in Student-Centered gains for sessions attended by classified staff and medium effect; mean value of both sessions was significantly different than transformational PD

Chapter V includes a summary of the study and the researcher's analysis of results by research question. In addition, relevant connections to the literature and researcher conclusions are presented. Recommendations for leadership, policy, and future research are provided.

CHAPTER V. DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this quasi-experimental retrospective study was to determine the extent to which employees report that their knowledge of TIC concepts, dispositions (empathetic concern, perspective taking, interpersonal relationships, sense of respect and trust, and student-centered) and behaviors toward traumatized students improve as a result of participation in TIC PD, and if there were significant gains in outcomes based on demographics of participants (employee classification, grade level, gender, number of years of employment in schools, and sessions attended). Until recently, much of the information to support TIC implementation was generated by government or non-governmental agencies and focused on juvenile justice, medical and mental health professions (Dorado et al., 2016), child-welfare, homeless shelters, and crime victims (Evans & Coccoma, 2014). Research focused on TIC within the school setting is limited (Chafouleas et al., 2016); therefore, this study will add to the nascent literature. The results of the study are examined within the context of the literature review and three theoretical frameworks: trauma theory, transformational learning, and dispositions.

According to the literature, childhood trauma is widespread and the manner in which school employees respond has the potential to positively or negatively impact traumatized students (Barth, 2008; Oehlberg, 2008). The prevalence and detrimental impact of trauma on students' physical and social-emotional well-being, brain development, learning, and behaviors is well established in the literature and impossible for school leaders and educators to ignore. Feelings of anxiety, fear and helplessness experienced by traumatized students (Jaycox et al., 2006) may be reduced if students feel they are members of a caring community (Beck, 1994). Feeling safe in school is dependent on trust, respect, the predictability of the environment, caring adult-student relationships, acceptance, and support, which has been shown to affect learning,

memory, and higher-order thinking (Willis, 2006).

Educators receive little training on how trauma impacts students and how to provide supports so that students can learn (Ko et al., 2008; Wong, 2008); therefore, school leaders cannot ignore the need for educators to understand the connection between academic achievement and childhood mental health problems caused by trauma (Chafouleas et al., 2016; Wong, 2008). Research indicates becoming a trauma-informed school increases academic achievement, test scores, graduation and attendance rates, perceptions of emotional and physical safety, improves relationships within a healthier school climate, and reduces discipline referrals, bullying and harassment, school consequences, such as suspensions, and the need for special education services (Oehlberg, 2008). Additionally, empowering employees to confidently address student trauma may reduce the frustration and burnout faced by employees (Blodgett, 2016), as well as improve teacher satisfaction, retention, and feelings of safety (Oehlberg, 2008).

For schools to achieve their mission, educators must acknowledge the pervasiveness and impact of trauma on learning and provide differentiated supports to traumatized students (Ko et al., 2008). According to Craig (2008), an educated workforce is essential to the establishment of a trauma-informed school; every employee needs the understanding and skills to manage student emotions and behaviors in a manner that does not retraumatize students and encourages physical, social, emotional, and academic safety (Cole et al., 2013).

The following sections of Chapter V include the researcher's analysis of results by research question and pertinent connections to the literature. Researcher conclusions are presented, in addition to recommendations for leadership, policy, and future research. Lastly, the researcher's final thoughts, experiences, and insights are presented to describe what occurred following the initial implementation of TIC in FCS and the completion of the study.

Discussion by Research Question

Research Question 1

Do employees report that knowledge of TIC concepts improve as a result of participating in the TIC PD?

TIC-DS results indicate that Findlay City School employees had the most significant improvement in the trauma-related Knowledge subscale as a result of participating in the professional development (Cohen's $d = .65$). Specifically, the greatest gain on the 52-item TIC-DS was in familiarity with the symptoms that traumatized students' display (Cohen's $d = .64$). The study conducted by Dorado et al. (2016) on the outcomes of HEARTS implementation also produced large gains and effect sizes in trauma-informed knowledge; the largest gain was found in "my knowledge about trauma and its effects on children". This finding is significant as an educated, responsive workforce is essential to the establishment of a trauma-informed school that focuses on the awareness of trauma sources, signs and symptoms (Craig, 2008; Craig, 2016; Ristuccia, 2013) and utilizes professional development to create a common language and shared vision (Chafouleas et al., 2016). Participants likely gained the most knowledge in the symptoms that traumatized students display because this was a major focus of the traditional PD attended by both the classified and certified employees. Moreover, the transformational PD attended by the classified employees also stressed the academic, social-emotional and behavioral symptoms of traumatized students.

The next largest improvement measured by the TIC-DS related to the understanding that the symptoms of trauma may be similar or identical to the symptoms of other diagnoses, such as emotionally disturbed, Attention Deficit Hyperactivity Disorder or autism. This is important to school leaders because one of the benefits of becoming a trauma-informed school is a decreased

need for special education services (Oehlberg, 2008). If employees are better equipped to use a trauma-informed lens to interpret behaviors (i.e., to differentiate trauma-related symptoms from a disability), and identify potential trauma victims, fewer students may be misdiagnosed (Gamache Martin et al., 2010; Perry, 2001). According to White-McMahon and Baker (2016), trauma-related PD helps all employees manage challenging student behaviors, regardless of level of education or years of experience.

Within the Knowledge subscale, the PD had the smallest effect (Cohen's $d = .14$) on the belief that all students can learn, although there was significant increase at the $p < .001$ level. The belief that all students can learn is an important educator disposition. NCATE (2006) and Wasicsko et al. (2004) include the belief that all students can learn in their description of the dispositions of an effective educator. There are two possible explanations for the small effect size. First, survey results suggest that employees believed this prior to the PD, and the high retrospective pretest mean score left little room for growth. However, the professional development's focus on the brain and learning may have caused the significant difference in knowledge. This conclusion is supported by the significant increase of two survey items: item 19 (i.e., I am / I was knowledgeable about the impact of positive and negative emotional states on neurological functioning [brain functioning] and learning potential) and item 12 (i.e., I am / I was knowledgeable about the impact trauma has on a student's ability to learn) (i.e., $t = 13.46$ and 10.06 respectively). Although neuroscientific research provides educators with an understanding of how trauma negatively impacts learning, research also provides educators with hope. To enhance the belief that all students can learn, the PD also focused on human resiliency and neuroplasticity, the brain's ability to rewire, although not to same extent as the negative impact of trauma on the brain.

Research Question 2

Do employees report that their dispositions (empathetic concern, perspective taking, interpersonal relationships, sense of respect and trust, and student-centered) and behaviors improve as a result of participating in the TIC PD?

The following sections examine the perceived impact of the TIC PD on employee dispositions and behaviors. The theoretical frameworks of trauma theory, dispositions and transformational learning provide a lens to understand the outcomes of research question 2.

Impact of PD on dispositions.

The researcher defines a trauma-informed disposition as a collection of mindsets and tendencies founded on an understanding of trauma-theory that informs caring and respectful behaviors toward all individuals. Possessing a caring and empathetic disposition is critical to the success of an educator (Smith & Sharbek, 2013). Perspective taking, a component of dispositions, include how adults perceive others, as well as themselves, and whether their frame of reference is people and relationships or thing-oriented (M. Wasicsko, personal communication, February 25, 2015). Participants reported growth in attempts to understand students' perspectives before making decisions, when they are upset with students, and before providing feedback.

Results also reveal that participants perceived the PD had a small effect on the dispositions of Sense of Respect and Trust, Student-Centered, Empathetic Concern, and Interpersonal Relationship. All Sense of Respect and Trust subscale items (Cohen's $d = .23$) indicated significant gains; the largest effect sizes were found in asking students to share their opinions and to help with tasks, providing students with choices, and using eye contact when appropriate. In addition, each Student-Centered item within the subscale (Cohen's $d = .19$)

indicated significant gains. Effective educators possess student-centered dispositions (M. Wasicsko, personal communication, February 25, 2015). Participants perceived an increase in student-centered dispositions, such as treating students with care and dignity at all times, and possessing the qualities of humor and warmth. The largest effect sizes were found in the belief that educators ought to learn about students and their community, communicating in a manner that shows respect for student feelings and thoughts, and being patient when interacting with students. Within the Empathetic Concern subscale, results indicate that participants perceived significant gains in feeling empathy and protective toward students. Significant gains were also noted in taking a personal interest in what students do outside of class, use of student names, and recognizing students for achievements within the Interpersonal Relationship subscale. These dispositions are associated with trauma-informed practices and have the potential to improve relationships with students.

According to the dispositions theoretical framework, the definition of dispositions include habits of mind (Katz & Raths, 1985; Thornton, 2013), feelings, attitudes, beliefs, and preferences that result in the tendency to react or behave in specific ways (Eberly et al., 2007), and are the third component of an effective educator (Wasicsko et al., 2004). Habits of mind (i.e., dispositions) are harder to change than to maintain, because past experiences reinforce current mindsets (Cranton, 2002). Habits of mind impact self-perceptions, interpretation of experiences (i.e., transformational PD activities), and work-related knowledge (Cranton, 2002). Although the nature of a habit implies a behavior that occurs without thought, educator behaviors are likely based on thoughts, even if they appear unconscious (Simpson, 2012). This suggests that knowledge is easier to change than beliefs, attitudes, feelings, and habits of mind.

One might expect more change in trauma-informed dispositions than behaviors based on

researchers, such as Baker et al. (2016), who contend that attitudes toward trauma-informed care determine behaviors. Furthermore, the understanding that educator behaviors are impacted by the interconnectedness of knowledge, goals, and dispositions can be used to inform professional development (Schoenfeld, 2011). Dispositions are slow to change, especially if educators lack awareness of their dispositions (Schoenfeld, 2011). Leaders must provide educators with an opportunity to explore their dispositions toward traumatized students within a safe and accepting environment in order to open their mindsets to new knowledge and trauma-informed behaviors.

Transformational learning occurs when there is a change in a point of view, or belief, or the habit of mind (Merriam et al., 2007). Results suggest that the PD had a small to medium effect on dispositions; therefore, transformational learning occurred. Transformational learning likely occurred because new knowledge (i.e., neuroscientific, trauma related research, and ACE studies) presented during the TIC PD prompted a critical reflection of whether past beliefs were still valid (Cranton, 2002). This form of learning is different from learning informational text: transformational learning involves a root change in how people view themselves and the world they live in (Merriam et al., 2007). Although the classified and certified transformational professional developments included distinctive hands-on activities intended to touch the heart, C. Blodgett acknowledged that TIC PD does not necessarily shift mindsets or behaviors (personal communication, October 21, 2015). Furthermore, Brown et al. (2012) acknowledged that gains in knowledge and a paradigm shift in beliefs does not necessarily result in behavior change. Changing employee behaviors to improve the well-being of the people they serve is the ultimate goal of TIC PD.

Although transformational learning occurred and participants reported a perceived change in behaviors, the PD had more effect on knowledge. TIC PD activities were designed to

prompt critical reflection on past assumptions about student behaviors and learning, and adult dispositions and behaviors. The critical reflection of how one's past assumptions and beliefs interpreted interactions with traumatized students can cause emotions, such as guilt or embarrassment (i.e., awareness of a discrepancy between what was perceived as true and the new information) (Merriam et al., 2007). For example, a traditional mindset about student misbehaviors includes the belief that behaviors were largely manipulative, intentional and choice, requiring punishment. A trauma-informed mindset understands that there may be an underlying cause of the behavior (i.e., trauma), and students want to do well but lack the skills. Therefore, employees need to examine behaviors constructively, focus on student strengths rather than weaknesses, teach students how to follow rules, and use discipline measures with caution and care to avoid retraumatization.

Students who once were thought of as lazy or unmotivated, may be viewed through a TIC lens as withdrawn (i.e., frozen to remain safe) (Cole et al., 2013). Using a TIC lens, employees understand that all behaviors serve a function (i.e., a coping strategy) and communicate “something” that needs to be understood (White-McMahon & Baker, 2016). Teachers who were offended in the past by student misbehaviors may now realize the need to remain objective, demonstrating respect in the face of behavior that may be considered disrespectful (White-McMahon & Baker, 2016). Statistically, many students have adverse childhood experiences (ACEs); therefore, employees must approach every interaction with care (Children's Defense Fund-Ohio, 2015). This type of a paradigm shift may prompt employees to admit that their mindsets about students need to change.

Employees must challenge old assumptions (Mezirow, 1978) during a TIC PD. Challenging old assumptions and shifting paradigms (i.e., dispositions) is likely to be more

challenging to an individual, especially if the individual is not acutely aware of his or her beliefs and willing to grapple with the need to change, than adopting new behaviors (Sockett, 2009), such as creating a safe environment or intervening when students are picking on each other. Perceiving that one will employ trauma-informed behaviors is less personal than acknowledging former dispositions that are in opposition to the nature of the profession, especially in light of the heart-wrenching stories of traumatized youth. TIC-DS results indicate that participants felt they were softhearted prior to the TIC PD. Critically examining oneself through a trauma-informed lens, within a profession founded on caring for kids, is exceptionally arduous for employees who already perceive themselves as soft-hearted.

Impact of PD on behaviors.

Study results indicate that the PD had a positive effect on participants' perceptions of future use of trauma-informed behaviors. For example, data suggest that the PD improved participant self-efficacy in that participants believed that they had the ability to help traumatized students learn and that their interactions with students mattered. Prior to the PD, participants perceived that they were unsure whether they had the ability to assist traumatized students learn ($M = 3.95$). According to Bandura (1989), a strong sense of self-efficacy is important because learning new knowledge and skills requires perseverance when faced with challenges, such as those presented by traumatized students.

Two behaviors with the largest effect sizes were self-awareness of interactions with students (Cohen's $d = .45$; interpersonal behaviors) and using strategies with the intent to create safe environments (Cohen's $d = .43$). The use of intentional behaviors to create physically and psychologically safe environments is the foundation of a trauma-informed approach (SAMHSA, 2014). Furthermore, trusting interpersonal relationships support physical, psychological, social,

and moral safety (Bloom & Farragher, 2013). Participants also reported perceived increases in behaviors, such as being positive during interactions, actively listening to students, and providing positive reinforcement for good behaviors. Taking action to intervene when students are mean was another area of perceived growth, which is important because perceptions of being bullied may be traumatizing to students (Vicario & Gentile, 2015).

According to trauma theory, childhood trauma negatively impacts self-regulation skills, physical health, relationships, perceptions of safety, and academic aptitude (Tishelman et al., 2010). Student feelings of safety at school are dependent on factors, such as trust, respect, and environmental predictability; caring relationships with adults; and feelings of acceptance and support; all of which have been shown to affect learning, memory and higher-order thinking (Willis, 2006). Additionally, longitudinal studies have reported that positive student perceptions of safety and care were associated with higher scores on most achievement assessments (Ratner et al., 2006). The current study reveals that the PD positively impacted employee feelings of protection and empathy for traumatized students. In addition, results indicate improved perceptions of the importance of trauma-informed dispositions and behaviors that may increase student perceptions of safety, trust, respect, and caring relationships, so that traumatized students can succeed in school at the same rate as non-traumatized peers.

Educator behaviors and responses to incidents may favor some students over others (Newberry & Davis, 2008), as well impact their relationships (Souers & Hall, 2016). Results indicate that the PD also positively impacted adult behaviors that would increase the sense of respect and trust felt by students: welcoming students, making eye contact, asking students for their opinions, allowing students to choose and make decisions, and asking for their help with tasks. Empowering students with a voice and choice are critical components of a trauma-

informed framework (SAMHSA, 2015d).

Comparison of Outcomes for Research Questions 1 and 2

Although there were significant increases in the Dispositions and Behavior subscales, results suggest that participants perceived greater gains in trauma-informed Knowledge. Survey outcomes indicate that participants were not as aware of trauma-related knowledge prior to attending the PD, although they perceived possessing trauma-related dispositions and behaviors. Before the PD, participants indicated feeling knowledgeable on only five of sixteen items in the Knowledge subscale (i.e., $M > 4$ on a 5-point Likert scale). In contrast, participants positively responded to 23 of 26 Disposition subscale retrospective pretest items (i.e., before the PD). Furthermore, participants positively responded to nine of ten Behavior survey items prior to PD. In other words, participants perceived themselves to portray caring dispositions and behaviors toward students prior to the PD; however, the study by King and Chan (2011) indicated that students may not have the same perceptions. Understanding how past experiences impact students' interpretation of adult behaviors is an important motivator for change following the PD. This may provide an explanation for the gains regardless of the large retrospective pretest values.

This study examined the outcomes of the first trauma-related training attended by certified or classified employees; therefore, a greater gain in Knowledge, as opposed to Behavior and Dispositions, is a logical outcome of the study. Although a portion of the transformational PD for classified employees was experiential in nature, more time was spent learning trauma-related content compared to openly discussing changes in trauma-informed dispositions and behaviors. Participants perceived significant gains in Dispositions and Behavior after participation in the PD; however, perceiving changes and actually changing are two different things. Time is needed to reflect on changes in attitudes, beliefs, mindsets and behaviors, to

implement trauma-informed practices, and to analyze whether new dispositions and behaviors are mutually beneficial to students and staff.

Change involves loss, giving up old ways of doing things (i.e., behaviors), which may produce feelings of anxiety or frustration. Therefore, change is difficult (Bloom & Farragher, 2013). Regardless, the PD had a medium effect on the Behavior (i.e., Cohen's $d = .46$; being mindful of interactions and utilizing strategies to create safe environments) and Perspective Taking subscales (Cohen's $d = .43$), although the PD had a slightly greater effect on Behavior than Perspective Taking.

Evidence against inflationary bias.

All but six of the 52 items on the TIC-DS showed significant growth following the PD (i.e., 88.46%) (see Table 26). Two of the six items that indicated no growth addressed concepts that were not specifically addressed in the PD. For example, items 40 (i.e., I will / I did provide students with “treats” and “goodies” on special occasions) and 41 (i.e., I will / I did joke around with students in an appropriate manner) showed no significant change as a result of the PD. Neither the transformational or traditional PD addressed providing treats or goodies or appropriately joking with students as a means to build positive interpersonal relationships. As Taylor et al. (2009) suggested, these survey items may provide the researcher with the means to rule out inflationary bias within the retrospective design survey. The items were included because the TIC-DS was constructed from subscales of existing instruments designed to measure the intended constructs of the TIC PD. Respondents would have little to no motivation to show change on these survey items as the survey was anonymous. For example, it would be an exaggeration for participants to perceive a change in their behaviors regarding providing “students with treats and goodies on special occasions” or a change in “joking around with

students in an appropriate manner” as a result of the Findlay City Schools TIC PD.

Table 26

TIC-DS Items with No Significant Gains

	<i>n</i>	After PD		Before PD		<i>t</i>	Cohen's <i>d</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
22. Find it difficult to see things from the student's point of view [†]	516	2.90	1.28	2.90	1.23	0.13	0.01
26. Student misfortunes will not/did not disturb me [†]	512	4.02	1.20	3.99	1.19	1.24	0.05
30. Describe myself as a softhearted person	522	4.25	0.78	4.24	0.79	1.07	0.05
37. Enforce the same rules for all students	502	4.07	1.01	4.09	0.94	-1.01	-0.05
40. Provide students with "treats"	449	3.92	1.03	3.94	1.01	-1.10	-0.05
41. Joke around with students in an appropriate manner	507	4.15	0.99	4.15	0.97	0.00	0.00

[†]Reverse Coded

Three of the 52 TIC-DS items were negatively worded and reverse coded (items 22, 26 and 27); two of which indicated no significant growth following the PD (item 22 and 26). Only one of the three negatively worded items after reverse coding indicated a significant gain as a result of participation in the PD (item 27). In general, mean scores indicate that participants read survey items carefully when responding to the survey. In other words, negatively worded item mean scores (despite reverse coding) were lower on the Likert scale than positively worded items, indicating less agreement. Moreover, item 22 of the 52 item TIC-DS (i.e., I will / I did sometimes find it difficult to see things from the student's point of view [-]) had the smallest mean value before and after the PD ($M = 2.90$) and was the only item in the Perspective Taking subscale that generated no significant difference between the pre and post data. The mean value suggests that the participants disagreed that they had a difficult time seeing things from the student's point of view, indicating a perception that they possessed perspective-taking skills prior

to the PD and training had no effect on this particular item. This was the only item within the subscale that the PD did not have a significant effect. Although participants answered this negatively worded item as expected by disagreeing with the statement, participants perceived agreeing with item 26 (i.e., student misfortunes will not/did not disturb me a great deal) after the PD ($M = 4.02$). Results indicate that the PD did not have a significant effect on this item; participants may have been confused by the expressions “student misfortunes” or “disturb me a great deal”.

Research Question 3

Are there significant gains in PD outcomes based on demographic data (gender, grade level, employee classification, number of years of employment in schools, and sessions attended)?

Demographic group differences in study outcomes can be analyzed in comparison to analogous research found in the literature. However, few studies were located that examined the impact of demographics on participant perceptions of PD outcomes within educational settings. Some studies only collected demographic data to provide a description of participants. For example, Brown et al. (2012) collected demographic data (e.g., gender, position of employment, age, and years of experience), although the outcomes of TIC PD for agency employees were not analyzed based on demographics. One study was found that specifically investigated the impact of demographic variables on the perceptions of educators concerning the effectiveness of health curriculum on students’ social-emotional needs at predominately White and minority post-secondary institutions (Fisher, Reynolds, & Cavin, 2014). Therefore, the conclusions to research question 3 will add to the nascent literature and inform professional development practices.

Gender differences in subscale gains.

This study revealed that the gender of participants had a significant effect on the Student-Centered subscale and Total Dispositions. Females reported significantly higher gains than males ($p < .05$) in student-centeredness and dispositions following participation in the TIC PD. Although a significant difference was not found in the other TIC-DS subscales, female mean scores were higher than male mean scores in Knowledge, Empathetic Concern, Perspective Taking, Interpersonal Relationship, Sense of Respect and Trust, and Behavior. Davis (1980) determined that females scored significantly higher than males on the Empathetic Concern and Perspective Taking subscales. Likewise, researchers determined that females show more favorable attitudes toward TIC (Baker et al., 2016) and significantly higher perceptions that they possess positive dispositions toward diversity compared to male self-perceptions (Schulte, Edwards, & Edick, 2008).

Alternatively, the study conducted by Schulte, Edick et al. (2004) found no significant relationship between gender and teacher perceptions of their effectiveness on the TDI's (Teacher Dispositions Index) Student-Centered subscale. Regardless of the preconceived assumptions around gender (i.e., females have traditionally been primary caretakers), researchers found that males and females had similar attitudes regarding the social-emotional needs of students (Fisher et al., 2014). Although these researchers found no difference between males and females, a possible explanation for females having higher gains than males in this research study is the societal expectation that men avoid feelings of fear, sadness, or incompetence.

Good, Gilbert, and Scher (1990) assert that men have historically denied needing help, having emotions that could be perceived as feminine (i.e., vulnerability), and generally lack self-awareness. Furthermore, Good et al. contend that males may avoid emotionally charged

interpersonal interactions and have “much to learn about the ethics of care” (p. 379). For this study, female participants were more open to the sensitive nature of PD activities, such as videos depicting childhood trauma shown in the traditional and classified employee transformational PD and Challenge Day’s “power shuffle” activity in the certified employee transformational PD. In addition, participants in the TIC PD had varied job classifications (e.g., teachers, bus drivers, secretaries, classroom aides, and custodians), education levels, and past experience dealing with student hardships. Many of the male participants were custodians or secondary educators, who by the nature of their job are more task or curriculum driven. Although females had higher mean score differences than males and the Total Dispositions subscale had significantly higher gains, the PD had a small effect on gender differences.

Grade level differences in subscale gains.

The research study revealed that the grade level of participants had a significant effect on the gains in Knowledge, Empathetic Concern, Perspective Taking, Student-Centered, Behavior, and Total Dispositions subscales. Participants employed in elementary schools (K-5) had significantly larger mean differences than secondary school employees (6-12) following participation in the TIC PD. Although significant differences were not found in the other TIC-DS subscales, elementary mean scores were higher than secondary mean scores in Interpersonal Relationship and Sense of Respect and Trust. Results further indicate that participation in the PD had the largest effect on Behavior (Cohen’s $d = .41$), Knowledge (Cohen’s $d = .38$) and Perspective Taking (Cohen’s $d = .37$) for K-5 educators.

Unlike this study that found significant differences between elementary and secondary educators on TIC-DS subscales following the TIC PD, Schulte, Edick et al. (2004) found no significant relationship between grade levels and teacher perceptions of their effectiveness on the

Student-Centered subscale on the Teacher Dispositions Index (TDI). Other researchers also found no difference between grade levels related to stress, burnout, and resiliency. Richards, Levesque-Bristol, Templin, and Graber (2016) studied the impact of elementary and secondary educator resiliency on work-related stress and burnout. Although the researchers collected demographic data on gender, years of experience, race and ethnicity, level of education, subject taught, and amount of time dedicated to teaching per day, the researchers focused the study on the differences between elementary and secondary teachers (e.g., resiliency, emotional exhaustion, depersonalization, reduced personal accomplishment, role conflict, and overload). Richards et al. found that elementary and secondary teachers are similar in terms of stress, burnout and resiliency, with the exception of depersonalization. Secondary teachers reported a significantly higher rate of depersonalization, as measured by survey items such as “I feel I treat some students as if they were impersonal objects” (p. 520). Teachers responded to other Likert-type survey items that relate to trauma-informed dispositions:

I often work under incompatible policies and procedures (role conflict), I can easily understand how my students feel about things (reduced personal accomplishment; reverse scored), I feel emotionally drained from my work (emotional exhaustion), and I am able to adapt when changes occur and during times of stress/crisis, I know where to turn for help. (Richards et al., pp. 519-520)

Richards et al. hypothesized that similar stress, burnout, and resiliency were felt at both levels due to high-stakes testing and accountability. The teaching profession is growing in complexity due to additional stressors, such as secondary trauma (i.e., compassion fatigue) felt by educators who interact with traumatized students (Children’s Defense Fund – Ohio, 2015; Cole et al., 2013). A fundamental purpose of trauma-informed care is to provide appropriate supports, so

that students can become resilient in the face of life stressors. TIC is a whole-school approach; therefore, TIC also benefits staff (Blaustein, 2013). Richards et al. determined that educators who felt resilient were better equipped to manage work-related stressors, experienced less emotional burnout, greater job satisfaction, and improved interpersonal interactions.

The researcher asserts that elementary employees had greater gains than secondary employees due to the nature of their jobs. Although all grade levels are impacted by state achievement tests or accountability measures, secondary teachers have the added pressure of teaching students, so that they can pass classes and graduate from high school. In the state of Ohio, this pressure has extended into junior high and middle school (i.e., students may earn high school credit for classes). This compels secondary teachers to focus efforts on curriculum and instruction. The Ohio Department of Education recommends a ratio of 25 students per teacher in grades K to 4; secondary educators may teach over 150 students throughout the school day. Therefore, elementary teachers instruct fewer students, allowing more time for relationship building, than secondary teachers due to daily schedules that require grade 6 to 12 students to change classes throughout the day. For these reasons, the researcher asserts that elementary teachers may have perceived the TIC PD to be more relevant to their job responsibilities.

As a result of participation in the TIC PD, the grade level (elementary versus secondary) of participants had a greater impact on gains than gender (female versus male). In other words, grade level produced significant gains in five subscales while gender had one subscale with significant gains. However, both demographic groups showed significant gains in Student-Centered and Total Dispositions. The PD had the greatest impact on K-5 female employees.

Employee classification differences in subscale gains.

Although significant gains were not found in the TIC-DS subscales for employee

classification, classified mean score differences were larger than certified mean score differences in all subscales except Empathetic Concern. The Knowledge (Cohen's $d = .18$) and Behavior (Cohen's $d = .16$) subscales indicated a small effect size; classified employees had a larger subscale gains than certified employees. There are a few possible explanations for the results. First, classified employees have less professional development related to student well-being than certified employees; therefore, there was more room for growth. This conclusion is supported by researchers who found that employees who interacted less with students showed more favorable attitudes toward TIC (Baker et al., 2016). Second, classified employees attended a locally developed transformational PD that embedded factual information regarding trauma, which may explain why the largest mean difference for either demographic group was in the classified employee Knowledge subscale ($M = .53$). The transformational PD for certified employees (i.e., Challenge Day) did not include factual information regarding trauma research.

The researcher acknowledges that TIC PD may be more relevant to the daily responsibilities of certified employees due to the amount and type of interactions with students. However, trauma-informed dispositions and behaviors apply to all employees. The TIC PD for this study addressed the reasons that trauma-informed care was relevant to every job type (i.e., any student or adult may be impacted by trauma). Regardless of efforts to convey this notion, classified employees may have found the PD less relevant to their job duties than anticipated by the researcher, accounting for the small difference. Further professional development and time may be needed for employees to fully understand how TIC impacts their work responsibilities.

Classified employee mean scores may have been higher than certified employee mean scores because certified employees were required to attend both sessions while only a portion of the classified employees were required to attend. Classified employees who were not scheduled

to work elected to attend; therefore, they may have been more receptive to the PD. However, classified employees were also paid for their participation, which may have motivated participation. Another explanation for the absence of significant gains by classified employees is the lack of experience with surveys, especially Likert scale on-line surveys after a professional development. Lack of experience may have impacted their interpretation of survey items and responses to the survey. In addition, the TIC-DS was the first retrospective design survey used in the school district. Participants may have answered survey items incorrectly if they failed to follow the directions or incorrectly interpreted negatively worded items.

Years of employment differences in subscale gains.

No significant differences were found in the subscales between the categories of years of employment. Likewise, Fisher et al. (2014) found that older, more experienced, health teachers had the same attitudes concerning the effectiveness of health curriculum on students' social-emotional well-being as younger and less experienced educators. This is in contrast to the findings of a study by Baker et al. (2016), who determined that experienced and educated employees showed more favorable attitudes toward TIC. The researcher asserts that the PD had a similar impact on employees regardless of years of employment because years of employment do not impact the amount or type of interactions with students. Inexperienced employees may have considered the PD relevant because the information filled gaps in knowledge, while experienced employees may have considered the PD relevant because trauma research provides an explanation for the student behaviors they have experienced over time. Regardless of the reasons the PD may have been relevant or produced gains, this was the first PD that presented research related to the brain and trauma for employees within the school district.

Sessions attended differences in subscale gains.

Certified employees attended a three-and-a-half-hour traditional PD provided by a national speaker from the National Council for Behavioral Health alongside classified employees. In addition, classified employees participated in a three-hour transformational PD developed and co-lead by the researcher and a school counselor, while certified employees participated in a three-and-a-half-hour transformational PD provided by Challenge Day. The traditional and transformational PD for certified employees occurred on the same day (i.e., seven hours of training), while the transformational PD for the classified employees took place on the day prior to the traditional PD. Classified employees may have attended one or both of the professional development opportunities based on their work schedule.

This research study revealed that the sessions attended by classified employees had a significant effect on the Knowledge and Student-Centered disposition subscales. The PD had a small effect on Knowledge growth ($\eta^2 = .036$). The mean difference for participating in both sessions was almost double ($M = .62$) that of attending the transformational ($M = .35$) or traditional ($M = .30$) alone; Scheffe Test results indicated that the difference was significant between participation in both sessions versus attending the traditional PD alone. The PD had a medium effect on Student-Centered disposition growth ($\eta^2 = .042$). The gain of attending both sessions was significantly larger than attending the transformational PD alone. Mean differences were greater for attending a combination of traditional and transformation PD than attending only one or the other for all subscales. No significant difference was found in Behavior, Empathetic Concern, Perspective Taking, Interpersonal Relationship, Sense of Respect and Trust subscale growth between sessions attended by classified employees.

The present study reveals that classified employees gained more trauma-related

knowledge, dispositions, and behaviors as a result of attending transformational and traditional professional developments rather than attending one or the other. One possible explanation for the results is participating in both PD sessions provided classified employees with twice the amount of trauma-related information. Time may have also been a factor in allowing participants to process new information. Classified employees attended the transformational PD the day before the traditional PD.

An important finding was the significant difference in Knowledge gains between participation in both sessions versus attending the traditional PD alone. This finding indicates that the transformation PD was instrumental in increasing knowledge gains that may have occurred in the traditional PD. This could be due to the double dose of information, or participation in the transformation PD with other classified employees who have similar work experiences increased feelings of safety to interact with the information. A second important finding was the significant difference in Student-Centered gains between participation in both sessions versus attending the transformational PD alone. Results suggest that the traditional PD was instrumental in increasing Student-Centered gains that may have occurred in the transformational PD. The traditional PD stressed that all school personnel need to understand how to positively respond to student behaviors and build relationships that promote feelings of safety, trust, empowerment, and connection (Black, 2015). The researcher was unable to confirm whether the results would be similar for certified employees because they were required to participate in both sessions.

Conclusions

Based upon these results, the researcher presents the following conclusions as a result of TIC PD:

1. Participants indicated significant gains in all seven subscales (Knowledge, Dispositions, and Behavior).
2. Participants reported greater PD gains in trauma-related Knowledge than Dispositions and Behavior.
3. Females reported significantly greater gains in Student-Centeredness and Total Dispositions than males.
4. Elementary (K-5) educators had significantly greater PD gains in Knowledge, Empathetic Concern, Perspective Taking, Student-Centered, Behavior, and Total Dispositions subscales than secondary (6-12) educators.
5. Classification of employees and years of employment did not generate significant differences in any subscale gains. However, subscale gains were larger for classified than certified in all subscales except Empathetic Concern.
6. Classified employees gains in Knowledge, Dispositions, and Behavior were greater for the transformational and traditional professional developments than participating in one or the other; therefore, employees may have greater gains from attending both type of sessions.
7. The TIC-DS is a valid and reliable instrument to determine gains in Knowledge, Dispositions, and Behavior following trauma-informed care professional development.

These broad conclusions are the basis for the following recommendations.

Recommendations for Leadership, Policy, and Practice

“Our experience indicates that the continuing advancement of trauma-informed school practices needs to systematically address leadership development but that this is a critical point of alignment with overall evidence-based efforts if we expect to shift educational success” (Blodgett & Dorado, 2016, p. 31).

This study contributes to recent literature on the outcomes of trauma-informed professional development within school settings. Unlike existing research, this study examined classified and certified employee perceptions of TIC PD in the areas of knowledge, dispositions, and behavior. Quantitative studies, such as those conducted by Dorado et al. (2016), Thomas et al. (2015), and Baker et al. (2016), focused on select certified employees. The emphasis on all classifications of employees and trauma-informed dispositions is unique to this study and will add to the nascent literature. An opportunity exists for school leaders to use the theoretical frameworks and research findings as support for the importance of providing trauma-informed professional development for all employees, to improve employee knowledge, dispositions, and behaviors, as well as school district policies and practices.

As a result of the study findings, the researcher first recommends that school leaders provide a combination of transformational and traditional research-based TIC PD for certified and classified school employees with the intent to develop a trauma-informed workforce capable of providing the supports needed by traumatized students. Similarly, C. Blodgett noted the importance of including all employees in PD that has the potential to change the heart, shift mindsets, and improve adult behaviors (personal communication, October 21, 2015). Educators need thorough trauma-informed PD to understand the impact of trauma on students (Oehlberg, 2008; Phifer & Hull, 2016).

The recommendation that school leaders provide TIC PD is further supported by the lack of university pre-service education on how to identify and instruct traumatized students (Wong, 2008). The dearth of pre-service instruction on how trauma impacts students forces teachers to learn how to respond to difficult student behaviors while on the job (Phifer & Hull, 2016). Furthermore, Shockley and Banks (2011) concluded that teacher pre-service programs have

inadequately prepared teachers to explore biased beliefs and assumptions about people who are different from them before entering the profession. A study conducted by Shannon et al. (2014) determined that half of the social work college students had experienced a traumatic event, and students reported a range of emotions, as well as cognitive, behavioral, physical, and relational reactions as a result of the curriculum in a trauma-related college course. Therefore, the researcher recommends that university leaders implement trauma-informed theory into pre-service education courses with the sensitivity and understanding that college students may have experienced childhood trauma and must be prepared to provide appropriate supports to traumatized students throughout their career as an educator.

K-12 and postsecondary institutions should provide trauma-informed training that is sensitive to practicing and pre-service educator histories, potential opposition to sensitive subjects, such as childhood trauma, and educator dispositions or behaviors that may be in conflict with the nature of the profession. Participant responses to the TIC-DS open-ended survey item were intended to gauge participant perceptions of what they would do (i.e., behaviors) if they believed a student was experiencing trauma. Including an open-ended item gave participants an opportunity to share their perceptions of the PD. Although there were only three negative responses out of 101, school leaders must be cognizant of potential resistance to sensitive topics, such as trauma and a whole-school approach to TIC PD (i.e., inclusion of all employees regardless of job classification). In a study conducted by Blitz et al. (2016), educators felt offended by professional development on cultural sensitivity and trauma-informed approaches to support the needs of traumatized, impoverished, and racially diverse students. Blitz et al. recommends obtaining buy-in from employees rather than administratively mandating training (i.e., school leaders required the PD due to the disparity between academic achievement

and discipline issues) prior to professional development. The researchers acknowledged that seemingly caring, empathetic, and experienced educators felt that the professional development lacked content that would help them in the classroom setting. Therefore, school leaders must address the potential for educators to feel self-protective and resist PD intended to help (Blitz et al., 2016).

Teacher buy-in for TIC implementation is particularly critical since teachers spend the greatest amount of time with students; therefore, teachers are more likely to be familiar and able to identify students in need of interventions and services (Baweja et al., 2016). Obtaining buy-in from every employee prior to implementing TIC PD is unlikely and unnecessary, as employees have different histories (i.e., statistically some will have experienced trauma), dispositions, and contact with students. Regardless, the TIC framework is a whole-school approach that has the potential to benefit every student and employee (Cole et al., 2013). Cranton (2002) reminds leaders that there are no specific PD methods that guarantee transformational learning will occur; therefore, TIC PD must balance challenging participants, with safety, support, participant empowerment, and honoring their feelings and individuality. To ensure consistent implementation of trauma-informed interventions and supports, school leaders must also educate caretakers (e.g., parent or guardian) and the community, as well as engage all stakeholders and local agencies in a collaborative effort to improve communication and supports.

In addition to blending transformational and traditional PD, the researcher recommends mandatory, differentiated, and on-going PD for all employees. Regardless of the amount of contact with students, employees interact with colleagues or community members who may have experienced trauma or have contact with students. Due to the contagious nature of emotions within social interactions (i.e., mirror neurons) (Keysers, 2011), employees must be able to

manage their own and others' emotions, as emotions can overpower the ability to think clearly (Bloom & Farragher, 2013). On-going PD and coaching on the use of trauma-informed practices to increase retention of trauma related concepts is vital (Thomas et al., 2015). Analysis of post PD survey data can be used to develop differentiated professional development and supports for school personnel based on demographics. Moreover, Wei et al. (2009) assert that on-going, collaborative PD and job-embedded practice increases student learning.

Employee turnover also necessitates on-going PD. The recommendation to provide mandatory and on-going trauma-related PD is strengthened by the need to avoid litigation, such as the 2015 lawsuit against the Compton Unified School District, and to meet the guidelines of Section 4018, Activities to Support Safe and Healthy Students, of the 2015 Every Student Succeeds Act (ESSA). TIC PD provides educators with the “why” physically and psychologically safe and engaging school climates are important to at-risk student well-being and academic achievement.

Second, school leaders must empower employees to take action as a result of new trauma-informed knowledge. According to Kouzes and Posner (2012), challenging the process requires school leaders to question traditional habits of mind, to take risks, search for opportunities to grow the organization as a whole and each employee, as well as assess the outcomes of initiatives. Exemplary leaders clarify and share their trauma-informed vision, and beliefs, utilize a TIC lens to guide decisions and behaviors, and affirm shared values with organizational members (Kouzes & Posner, 2012). Leaders must encourage the heart by: inspiring employees to believe that they have the capacity to help traumatized students heal and thrive, demonstrating trust that employees are capable of making a difference, celebrating small achievements, and providing relevant informative feedback (Kouzes & Poser, 2012). In

addition, school leaders must model the trauma-sensitive behaviors that they seek in employees (Kouzes & Posner, 2012).

To take action, employees must clearly understand their role in a trauma-informed school. Although there was a significant gain in understanding the next steps to take once a student has been identified as experiencing a traumatic event, the post PD mean value ($M = 3.87$) indicates that participants were somewhat unsure about the next steps to take after identifying traumatized students. Knowledge is important; however, employees must know how to apply the trauma-informed knowledge with confidence (C. Blodgett, personal communication, October 21, 2015). Though the PD covered topics, such as the notification of the school counselor, administrator, or CPS; how to provide supports for the student; and basic trauma-related interventions; participants continued to question what to do next and about their role in a trauma-informed organization. For example, a bus driver may be the first employee to see a student who is exhibiting trauma symptomology or is acting noticeably different. Their next step may be to notify a supervisor, the building principal, or school counselor who can follow-up with the student, while a teacher or classroom aide may directly provide trauma-informed supports.

To appropriately address the TIC-DS results, school leaders must determine how participants interpreted the survey items. Whether leaders decide to interview participants (i.e., ask participants to describe in detail future behaviors) or follow-up with additional open-ended survey items, interpreting items within subscales will help leaders determine whether participants describe post-training dispositions and behaviors in a manner that aligns with trauma-informed dispositions and behaviors. For example, participants may have interpreted the next steps to take if a student was suspected as experiencing trauma as how to refer students for services after identification or how to implement trauma-informed interventions. These behaviors are different

and yet equally important. In addition, participants may perceive “I will be positive with students,” as having an optimistic, hopeful outlook, or behaving in an encouraging manner. The focus of additional PD will differ depending on how employees interpret survey items. Further PD may need to focus more on trauma-informed knowledge, dispositions, or behaviors depending on gaps in intended outcomes versus perceived outcomes.

Third, in addition to the standard theoretical framework on educator dispositions, the researcher suggests that school leaders emphasize the importance of employee trauma-informed dispositions to achieving the school district’s mission. The researcher defines trauma-informed dispositions as attitudes, beliefs or mindsets that are empathetic, patient, and student-centered. Furthermore, educators who possess trauma-informed dispositions are capable of actively listening to traumatized students to understand their perspectives, believe that traumatized students can learn and heal, and possess the ability to apply trauma-related knowledge to sustain a physically and psychologically safe school climate. Finally, possessing trauma-informed dispositions enable educators to develop and sustain positive relationships built on respect and trust, and learning environments that facilitate learning and resiliency. Leaders must foster the understanding that trauma-informed care is a “way of being,” a culture that is supported by caring relationships in a safe environment, not a program.

Dispositions, like the use of a trauma-informed lens, inform employee actions (Eberly et al., 2007). Although the ability to identify traumatized students is important (Ahlers, et al., 2016), whether the goal is to refer or provide research-based services or report suspected abuse to CPS, employing a trauma-informed disposition is beneficial for every student. According to Bell et al. (2013) and Blaustein (2013), students respond to trauma differently, making it difficult to identify who has and has not experienced trauma; therefore, trauma-informed care must apply

to all students and is a district-wide approach. Furthermore, an adult who possesses a trauma-informed disposition has the ability to manage their feelings in challenging situations, deescalate escalated individuals, and the self-efficacy to know they can make a difference.

Finally, in addition to providing TIC PD to enhance trauma-informed knowledge, dispositions, and behaviors for all employees, the researcher recommends that school leaders use a trauma-informed lens to revise district policies, practices, strategic plans, and goals. According to Stevens (2012), school leaders in Massachusetts and Washington cited scientific research and ACE studies as evidence to confirm the need for policy change. Policies and practices must support a caring and safe school culture that the PD is intended to foster. Additionally, the researcher recommends school leaders develop policies and practices that support the assessment of trauma-informed dispositions of potential employees during interviews and current employees during evaluations. Furthermore, frequent assessment and feedback during the evaluation process will facilitate educator growth and send a message that trauma-informed dispositions and the related behaviors are critical components of professionalism.

Recommendations for Future Research

Future use of Retrospective Design Studies

Although there are several opportunities for future research based on the findings of this study, there was little research available on the outcomes of TIC PD to inform the design of this study. For example, the Dorado et al. (2016) study was not available in 2015 and did not inform the development of this study's TIC PD, the use of a retrospective survey design, or the development of the TIC-DS. Surveys that measure attitudes toward TIC (i.e., ARTIC Scale) were also not available. However, Dorado et al. cited similar literature as this study in support of a retrospective design: to ease collection of data, to eliminate the potential for response-shift

bias, and to obtain a more accurate measure of the effectiveness of a PD. In addition, researchers have also used behavioral measurements to authenticate the use and validity of self-report retrospective measures (Howard, Schmeck et al., 1979). Therefore, the researcher recommends the future use of a retrospective survey design to assess TIC implementation in schools.

Opportunities for Research Using the TIC-DS

Researchers may collect and analyze data from diverse school settings in terms of size, geography, and demographics of employees and students following the implementation of trauma-informed care PD to measure employee perceptions of trauma-related knowledge, dispositions, and behaviors. Researchers may also compare trauma-informed school outcomes (i.e., post PD TIC-DS results) to control schools (i.e., non-trauma-informed retrospective pretest TIC-DS results) as a measure of PD effectiveness; however, control school employees may inflate retrospective pretest responses due to a lack of understanding of trauma-informed constructs. In addition, the TIC-DS may be utilized in diverse settings to corroborate the validity and reliability of the instrument and to determine if there are significant gains in knowledge, dispositions, and behaviors following PD. The researcher also recommends that studies examine outcomes of TIC-DS implementation over time. For instance, employees may complete the TIC-DS periodically to measure additional gains in knowledge, dispositions, and behaviors.

Researchers may analyze the correlation between the TIC-DS and other surveys. Due to the nascent nature of the literature related to TIC, data collection using recently published surveys such as the ARTIC Scale (Baker et al., 2016) may assist in these efforts. Additionally, TIC-DS self-report survey data may be validated through a comparison with objective measures, such as employee evaluation data and behavioral observations. While the results of this study indicate employees perceived a significant gain in the use of trauma-informed behaviors

following TIC PD, belief does not necessarily equate to use. Therefore, verifying the use of trauma-informed behaviors is important to researchers, school leaders, and the students who interact with school employees.

Comparison of educator perceptions to students and colleagues.

Important outcomes to assess following employee participation in TIC PD are student perceptions of physical and emotional safety, adult-student relationships, as well as changes in educator dispositions and behaviors. Adult perceptions of their trauma-related knowledge, dispositions, and behaviors may be correlated with student survey data to determine whether students feel improved empathy, perspective taking, student-centeredness, behavior management strategies, trust, and respect from trauma-informed school personnel. Likewise, Sockett (2009) claimed that educators must be open-minded to how they are perceived by students in order to improve mindfulness and honest reflection about beliefs, interpersonal communications and behaviors. Moreover, given a safe and trusting environment, employees can elect to compare self-perceptions of knowledge, dispositions, and behaviors with co-worker's perceptions, to determine if their self-image is aligned with how others see them. Survey data can also be disaggregated by demographics to determine if perceptions of improvement are consistent between adult and student groups. Other forms of data, such as discipline, attendance, and academic achievement (e.g., grades and state assessments), can be disaggregated to determine if the gap between student groups (i.e., traumatized students versus non-traumatized) is closing and demonstrates uniform improvement.

Likewise, Simpson (2012) suggested that researchers explore the impact of educator dispositions on students, standardized test scores, and educational, personal, and social well-being. Student perceptions matter: Educators may believe they are caring and exhibit trauma-

informed dispositions, but if students fail to have a similar perception, the disconnect between beliefs can negatively impact the relationship. While TIC is being systematically embedded into school culture and practices, administrators and researchers should utilize school data to verify benefits described in the literature, such as a reduction in reports of bullying, high school dropouts, suspensions, absenteeism, use of special education services, and referrals to the office, and improvements in graduation rates, test scores, and teacher retention (Oehlberg, 2008). Studies may be conducted to verify the perceptions of all school stakeholders (e.g., staff, students, and caretakers) regarding relationships between adults and students, school climate, employee job satisfaction, and emotional and physical safety (Oehlberg, 2008).

Determine Most Advantageous Forms of TIC PD

Educational leaders may use the outcomes of this study to determine the most advantageous and evidence-based forms of TIC PD for classified and certified employees. This study examined the impact of simultaneous participation in a traditional PD and differing transformational PD for classified and certified employees (i.e., locally developed PD for classified employees and Challenge Day for certified employees). Although this study was not able to verify that a combined traditional and transformation PD was most beneficial for certified employees (i.e., certified staff were required to attend both PD options), the results of classified employee participation indicate that a combined approach is most advantageous.

School leaders choose professional development formats based on a variety of factors, such as school goals, allocation of time and funding, availability of presenters, and stakeholder needs. However, researchers may investigate the best combination of PD options if the opportunity arises. To eliminate the potential that the format and activities of the PD is a confounding factor in the outcomes of the TIC PD as a whole, researchers should schedule all

employees to attend the same trainings. Researchers may also examine the advantages and disadvantages of classified and certified employees participating in the transformational and traditional professional developments simultaneously versus separately.

When designing and implementing TIC PD, school leaders must consider and honor the unique job responsibilities of classified and certified employees due to the unique nature of their jobs and differing types and amounts of interactions with students. Therefore, the researcher recommends the replication of this study using varying traditional and transformational professional developments to determine the most effective TIC PD for various school settings and classification of employees. Using the TIC-DS to collect data following alternative forms of PD may help school leaders determine the most beneficial combination of adult learning activities in terms of improved knowledge, disposition, and behavioral change.

Survey data can be collected longitudinally to determine which combination of PD enhances the long-term growth of employee trauma-informed knowledge, dispositions, and behaviors toward traumatized students. This recommendation is corroborated by Usher's (2004) conclusion that the largest downfall of quality educator training is the lack of time to sufficiently reflect on how the new knowledge is pertinent to the learner and to transform dispositions and behaviors. A mixed methodology may assist researchers in gathering employee opinions regarding TIC PD that could not be assessed on a survey and provide support for or negate statistical findings.

Modifications to the TIC-DS

As the research on trauma-related knowledge, dispositions, and behaviors within school settings expands, researchers may choose to modify the TIC-DS by rewording existing survey items or eliminating or adding items. Newly published trauma-related surveys may inform

potential modifications to the TIC-DS to suit diverse school settings and trainings; however, the additional measure of educator trauma-informed dispositions makes the TIC-DS uniquely different from existing instruments. Additionally, school leaders must reflect on how TIC PD will personally and professionally impact employees who may have experienced trauma. Based on ACE studies that indicate the pervasiveness of trauma, it is likely that school personnel have faced trauma within their lifetime (Blaustein, 2013). Therefore, the researcher suggests that school leaders consider adding trauma related questions to survey demographics to collect anonymous data on employees' ACE scores. This will enable researchers to determine if employee ACEs are a confounding variable to PD effectiveness: "Past experiences always influence new learning" (White-McMahon & Baker, 2016, p. 49). Additionally, an ANOVA can be conducted to determine whether there is a significant difference between employees with varying ACE scores.

Another option is to anonymously collect ACE data prior to the professional development in order to customize PD activities and to ensure that the PD occurs in an environment that is perceived as safe for the employees. Trauma theory indicates that triggers can retraumatize people (Curtin, 2008); therefore, school leaders must proactively inform participants of sensitive material to avoid retraumatizing employees. Just as traumatized students benefit from notifications of change or potential triggers, employees will also benefit.

Based on the unique nature of the community and school, demographic variables, such as race or ethnicity, may be important considerations prior to the PD. For example, the student or community population may be diverse while the educator population is homogeneous. As a result of the study conducted by Woodbridge et al. (2016), which indicated that males, Black, Native American, and Latino students reported significantly higher traumatic experiences than

female, White or Asian students, school leaders must remain cognizant of how TIC-PD may personally impact employees. Although ethnicity did not significantly effect educator attitudes toward the emotional needs of students, Fisher et al. (2014) concluded that attention must be placed on ethnicity as educators must be able to effectively teach social-emotional curriculum to diverse students and acknowledge the differences between themselves and their students. Furthermore, these demographic variables, as well as whether participants have attended prior trauma-informed trainings, may be added to the TIC-DS to examine whether there are significant differences between demographic groups following training.

Lastly, based on the statistical analysis of the TIC-DS outcomes for this study, the researcher recommends potential revisions to the survey instrument prior to further use. For example, TIC-DS mean values for item 37 indicate that participation in the PD had no effect on the enforcement of the same rules for all students prior to and after participation in the TIC PD. According to trauma theory, perceptions of safety are increased by predictability within trauma-informed schools (Willis, 2006). Although the training designed for the school district did not specifically address modifications of rules or discipline policies, the training did address the notion that adult responses to misbehaviors need to be differentiated based on individual student circumstances. Rules should be meaningful rather than oppressive: McMahon and Baker (2016) remind educators to “be flexible,” to “apply the ‘so what?’ test” (i.e., is the behavior worth addressing) and “remember that fair does not necessarily mean equal” (p. 78). Therefore, TIC-DS item 37 should be changed from the enforcement of same rules to the enforcement of same consequences. This will enable researchers to determine whether participants changed their perceptions of behavior management procedures. In a trauma-informed school, sensible rules are consistently enforced and do not change from one classroom to another; however, how

consequences and what consequences are issued may change.

Additionally, survey items within the Empathetic Concern and Perspective Taking subscales, which produced moderate ($<.70$) Cronbach's alpha values, may warrant revisions. Items from these subscales were included in the TIC-DS because the literature indicates that empathy and perspective taking are important components of positive adult-student relationships and a trauma-informed school (White-McMahon & Baker, 2016). Although the overall alpha value for the TIC-DS was high (i.e., .960 for the retrospective pretest and .955 for the post), indicating a strong internal reliability, measuring employee growth in empathetic concern and perspective taking dispositions following TIC PD is important. Moderate Cronbach alpha values may be a result of the three negatively worded survey items in the Perspective Taking (items 22 and 27) and Empathetic Concern subscales (item 26), which were modified into a retrospective design from the Interpersonal Reactivity Index (IRI) (Davis, 1980). However, Davis (1980) reported that the internal reliability of the IRI Perspective Taking and Empathetic Concern subscales were satisfactory, ranging from .68 to .75, with women scoring higher than men.

Examination of Certified and Classified Employee Outcomes

Researchers may want to examine whether certified employees significantly differ from classified employees when answering negatively worded items. The items may be revised from negative wording to positive wording if researchers suspect these items confuse employees. Certified employees typically have more education and experience with survey completion; therefore, they may be more likely to correctly respond to negatively worded items (i.e., certified employee mean values are lower than classified mean values indicating disagreement with negative items). Surveys are intended to accurately measure perceptions, not to confuse participants. Confusion may cause participants to inaccurately answer survey items prompting

researchers to commit a type II error by concluding there are no significant differences when there are significant differences or a type I error by concluding that there are significant differences when in fact there are none. Either way, this type of error will result in inaccurate research conclusions. Constructing a well-written survey that measures the constructs as intended to reduce measurement error is important (Moore & Tananis, 2009). Likewise, according to Fowler (2014) the content validity of a survey can be enhanced by improving readability and reducing ambiguity (i.e., making sure the items are reliable as possible).

As a follow-up to research question 3, another area for study would be to compare classified and certified employee responses per survey item to determine which employee classification perceived the greatest improvements following the PD and whether additional PD is warranted for specific constructs. For example, survey item number 39 (i.e., I will / I did call students by their names) produced a large retrospective pretest mean value, which suggests participants perceived they frequently addressed students by name before the PD; however, results also suggest a significant increase in the use of student names after the PD. Based on the anonymous nature of the survey responses and pooling of data, the researcher was unable to determine whether there was a difference in the use of names between certified and classified employees. The nature of the teaching profession in comparison to the job responsibilities of classified employees lends itself to behaviors, such as addressing students by name.

In light of the study conducted by Anderson et al. (2015), future research could be conducted to examine the differences in PD outcomes between categories of classified employees. Bus drivers, cafeteria staff, classroom aides and paraprofessionals, custodians, or others, have unique job requirements, and differing amounts and forms of interactions with students. Therefore, it is possible that survey results may indicate different outcomes following

TIC PD as well as the need for ensuing differentiated PD.

Final Thoughts

The process of conducting the literature review, research for this study, and preparation for the professional development had a profound impact on the researcher's practice as a school administrator. Although the researcher is a former school counselor and teacher with more than 25 more of experience interacting with at-risk students, the knowledge gained regarding trauma-informed care was relevant and informed professional decisions regarding students, staff, and practices. Change is hard, especially change that requires a transformation of long-held beliefs about one's personal and professional status and the students' one serves. This form of deep-seated change requires time and encouragement.

School leaders must provide a safe and trusting climate for employees to interact with trauma-informed knowledge, dispositions, and behaviors. Constructive feedback regarding employee beliefs and behaviors must be timely and communicated with care. There will be school employees who believe that they already exhibit trauma-informed behaviors, regardless of new scientific research that has the power to transform interpersonal communications, classroom management practices, and school discipline. School leaders must model self-reflection through a trauma-informed lens, an honest examination of past beliefs and practices, in order for staff to follow suit. For employees who perceive themselves to be caring and intentionally employ behaviors to support students, the realization that traumatized students may not perceive them as caring or that their behaviors may have been interpreted as hurtful is a hard pill to swallow.

A majority of educators care deeply for students and work tirelessly to provide appropriate supports; therefore, educators may feel that they are doing all they can to help. Educators may also suffer from compassion fatigue, making it more difficult to regulate

emotions during challenging interactions with students. School employees, as human beings, also bring unique experiences and personal challenges into the workplace. Even the most caring educators may have poor responses triggered by student misbehaviors when managing daily stressors. Remaining respectful and calm when dealing with student behaviors that feel disrespectful is easier through a TIC lens. The lens reminds educators that students, and even coworkers, have likely experienced trauma, whether confirmed or not. Therefore, all school stakeholders should be treated with care. The adverse childhood experiences studies and brain research provides caring educators with a renewed understanding of how trauma impacts the brain, physical and social-emotional well-being, behaviors, and learning.

Moreover, research helps educators view their behaviors through the eyes of students. Perspective taking and the correct interpretation of student misbehaviors are paramount to altering adult-student interactions. Leaders must acknowledge the heartfelt efforts of employees to make a difference in the lives of students while simultaneously communicating that improvements are possible. Even a small mean difference or effect size is beneficial when the goal is to improve employee knowledge, dispositions, and behaviors essential to providing healthier learning environments for traumatized students. Every small transformation in adult perceptions of students or changes in their interpersonal behaviors may prevent a suspension, a retraumatization, improve student learning, and time in the classroom.

Trauma-informed care is not a packaged program, nor is it an additional task to add to the full plate of educators. Trauma-informed care is a way of being, a lens that allows educators to interpret student behaviors and needs. TIC informs interventions, supports, policies and practices. Although the transformation of school climate and culture is inevitable over time, leaders must share a clear vision and empower all employees to collectively implement a

strategic plan to address practices and procedures that may inadvertently impede the realization of the school's primary mission. Schools must be a safe haven that empowers all teachers to teach and all students to learn.

Trauma-informed care is about caring for the well-being of every student and every staff member, including school leaders. Professional development is the first step in the process. To build trust, leaders should participate in the training alongside classified and certified employees, demonstrating vulnerability and empathy for stakeholders. TIC PD must be followed-up with data-driven decision-making, differentiated training specific to each job classification, additional skills practice, time for reflective discourse with colleagues, and coaching.

Professional developments created and presented following the original TIC PD conducted in Findlay City Schools concluded with a quote by Maya Angelou. Therefore, the same quote will be used to conclude this study: "I've learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel." All students and staff will benefit from trauma-informed school leaders who keep this quote in mind, because every interaction matters.

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APPENDIX A. TRAUMA-INFORMED CARE DISPOSITIONS SURVEY

Part 1: Survey Directions

Thank you for participating in the Trauma Informed Care professional development. In order to help the school district evaluate the outcomes of the professional development and to plan for the future, we need to determine whether you believe changes occurred to your understanding of Trauma Informed Care (TIC) and your thoughts, feelings, and behaviors toward students who may have experienced trauma.

Please read each item carefully before responding. Your responses are very important to us. There are no right or wrong answers, so please answer as honestly as you can. **Your responses will be anonymous** and will be pooled with the responses of all employees. Each statement requires two responses in which you indicate your level of agreement using the following scale behaved before the training. If you do not feel the statement applies to you because of your job responsibilities, please check “Does not apply” and move to the next item. Since each statement combines the perspectives of AFTER and BEFORE the training, you will need to separate the tenses by reading the statement in the following manner.

For example, item 1 states:

I am / I was familiar with the symptoms traumatized students display.

For your first response, which indicates knowledge AFTER the training, you should read the statement as:

I am familiar with the symptoms traumatized students display.

For your second response, which indicates knowledge BEFORE the training, you should read the statement as:

I was familiar with the symptoms traumatized students display.

Part 2: Trauma Informed Care Questions

	Does not apply	AFTER the training I will... SD D NS A SA	BEFORE the training I was... SD D NS A SA
1. I am / I was familiar with the symptoms traumatized students display.			
2. I am / I was knowledgeable about the impact trauma can have on a student's success.			

<p>3. I am / I was knowledgeable about the impact trauma can have on a student's behavior.</p>			
<p>4. I know / I did know how to make behavioral observations when interacting with students that will help me identify signs of trauma.</p>			
<p>5. I am / I was knowledgeable about different types of trauma.</p>			
<p>6. I do / I did understand that the symptoms of trauma may be similar or identical to the symptoms of other diagnoses, such as emotionally disturbed, Attention Deficit Hyperactivity Disorder (ADHD) or autism.</p>			
<p>7. I am / I was knowledgeable about the next steps to take once a student has been identified as experiencing a traumatic event.</p>			
<p>8. I am / I was knowledgeable about trauma in school-aged children.</p>			
<p>9. I am / I was knowledgeable about the next steps to take if I suspect a student is or has experienced trauma.</p>			
<p>10. I am / I was knowledgeable about how my behaviors impact students who may have experienced trauma.</p>			
<p>11. I am / I was knowledgeable about how to talk to students who may have experienced trauma.</p>			
<p>12. I am / I was knowledgeable about the impact trauma has on a student's ability to learn.</p>			
<p>13. I am / I was knowledgeable about how to deescalate and manage student behaviors.</p>			
<p>14. I do / I did believe that my interactions with students who have faced trauma might positively impact his or her ability to learn.</p>			

15. I will / I did utilize strategies with the intent to create a safe environment for students.			
16. I am / I was knowledgeable about the role empathy plays in creating positive and trusting adult-student relationships.			
17. I will be / I was self-aware and mindful of my interactions with students.			
18. I will / I did use active listening strategies when interacting with students.			
19. I am / I was knowledgeable about the impact of positive and negative emotional states on neurological functioning (brain functioning) and learning potential.			
20. I do / I did believe that all students can learn.			
21. I will / I did have concerned feelings for students less fortunate than me.			
22. I will / I did sometimes find it difficult to see things from the student's point of view. (-)			
23. I will / I did feel empathy for students when they are having problems.			
24. I will / I did try to look at student's side of a disagreement before making a decision.			
25. When I see a student being taken advantage of I will / I did feel somewhat protective toward them.			
26. Student's misfortunes will not / did not disturb me a great deal. (-)			
27. If I am sure I am right about something, I will not / did not waste much time listening to student's arguments. (-)			
28. I do / I did believe that I have the ability to assist traumatized students so that they can			

learn.			
29. I do / I did believe that there are two sides to every story and try to look at both of them.			
30. I would / I did describe myself as a softhearted person.			
31. When I'm upset with a student, I will / I did try to "put myself in his or her shoes".			
32. Before criticizing / critiquing a student, I will / I did try to imagine how I would feel if I were in their place.			
33. I will / I did create an environment where students feel safe.			
34. I will be / I was positive with students.			
35. I will / I did intervene when students pick on each other.			
36. I will / I did give students positive reinforcement for good behavior.			
37. I will / I did enforce the same rules for all students.			
38. I will / I did take a personal interest in what students do outside their class.			
39. I will / I did call students by their names.			
40. I will / I did provide students with "treats" and "goodies" on special occasions.			
41. I will / I did joke around with students in an appropriate manner.			
42. I will / I did recognize students for extra-curricular achievements.			
43. I will / I did attempt to greet students when entering the classroom or my work environment.			

44. I will / I did ask students to help with classroom or other tasks.			
45. I will / I did ask students for their opinions.			
46. I will / I did maintain eye contact, if culturally appropriate, with students when talking to them.			
47. I will / I did give students opportunities to make choices and decisions that affect them.			
48. I will demonstrate qualities of humor, empathy, and warmth with students.			
49. I will / I did attempt to treat students with dignity and respect at all times.			
50. I will / I did attempt to be patient when working with students.			
51. I will / I did communicate in ways that demonstrate respect for the feelings, ideas, and contributions of students.			
52. I do / I did believe it is important to learn about students and their community.			

Using your own words, complete the following open-ended response: When I believe a student has or is experiencing trauma I will...

--

Part 3: Background Information

Your gender:

Male

Female

Your age range:

<29

30-39

40-49

50+

Number of years of employment in school district(s):

- 0-5
- 6-10
- 11-15
- 16-20
- 20+

Affiliation to the school district:

- Teacher
- Administration
- Counselor or Psychologist
- Classified Employee

Location of employment:

- Elementary School
- Middle School
- High School
- Other

Professional development session(s) I attended:

- 1 session: Interactive / experiential workshop on 9/3
- 1 session: Presentation by TIC speaker on 9/4
- 2 sessions: Interactive / experiential workshop on 9/3 AND presentation by TIC speaker on 9/4
- 2 sessions: Interactive / experiential workshop on 9/4 AND presentation by TIC speaker on 9/4

On behalf of the school district, thank you for using your valuable time to complete the survey.

APPENDIX B. HUMAN SUBJECTS REVIEW BOARD LETTER

From: Hillary Snyder <no-reply@irbnet.org>
Sent: Monday, May 16, 2016 3:46 PM
To: Dr. Rachel Vannatta Reinhart; Kelly Liane Glick
Subject: IRBNet Board Action

Please note that Bowling Green State University Human Subjects Review Board has taken the following action on IRBNet:

Project Title: [885933-2] IMPACT OF TRAUMA-INFORMED CARE PROFESSIONAL DEVELOPMENT ON SCHOOL PERSONNEL PERCEPTIONS OF IMPROVED KNOWLEDGE, DISPOSITIONS, AND BEHAVIORS TOWARD TRAUMATIZED STUDENTS Principal Investigator: Kelly Glick, BSED; MA

Submission Type: Revision
Date Submitted: May 11, 2016

Action: RESEARCH - NOT HSR
Effective Date: May 16, 2016
Review Type: Exempt Review

Should you have any questions you may contact Hillary Snyder at hmorgan@bgsu.edu.

Thank you,
The IRBNet Support Team

www.irbnet.org

APPENDIX C. SUPERINTENDENT LETTER TO HSRB COMMITTEE

April 20, 2016

Bowling Green State University
Bowling Green, Ohio
HSRB Committee

To the HSRB Committee:

On behalf of the Findlay City School District, I permit Kelly Glick, Assistant Principal at Donnell Middle School and Trauma Informed Care Co-Director, to analyze the Trauma-Informed Care Dispositions Survey data for the Leadership Studies Program. The data will be analyzed for her research study and her dissertation.

The survey data is anonymous and will be pooled with the responses of all employees. In addition, the survey demographic items cannot be used to identify participants. Approximately 800 employees attended the trauma-informed care professional development over a two-day period in September 2015. The purpose of the demographic survey items was to determine the gender, age range (<29, 30-39, 40-49, 50+), number of years of employment within school districts (0-5; 6-10; 11-15; 16-20; 20+) affiliation to the district (teacher, administration, counselor or psychologist, classified employee), location of employment (elementary, middle, high school, other), sessions attended by the participants, and whether there were significant gains in professional development outcomes based on demographic data. The data will be used to determine whether employees, as a whole, believe changes occurred to their understanding of trauma and the impact of trauma on student physical, social-emotional, behavior, and academic well-being, and whether employee thoughts, feelings and behaviors toward traumatized students has improved. The data will be used to help administrators develop and implement future professional developments regarding trauma-informed care.

Please feel free to contact me if you need additional information.

Sincerely,

A handwritten signature in cursive script that reads "Edward P. Kurt". The signature is written in black ink on a white background.

Edward P. Kurt
Superintendent of Schools

APPENDIX D. SUPERINTENDENT REQUEST FOR SURVEY COMPLETION

Trauma-Informed Care Survey
Ed Kurt [ekurt@fcs.org]

To:

On behalf of Findlay City Schools, please complete the **anonymous** Trauma Informed Care (TIC) survey **by Friday, September 11**. Data collection and analysis is one of the seven TIC domains. The survey consists of 52 items, one item that will allow you to write a response using your own words, and a few demographic items that will help us analyze the data.

Read each item carefully. A couple of the items are written in the negative (will not OR did not). First, you will respond to the item based on your perspective **AFTER** participating in the training. Next, you will respond to the item based on your perspective **BEFORE** participating in the training. This will allow us to measure how much we learned, as well as changes in our thoughts, feelings, and behaviors. A full explanation for how to complete the survey is located in the link below, along with an example of how to read each survey item.

We are grateful for your participation in the professional development and your continued efforts to support FCS colleagues, students and their families.

Thank you for using your valuable time to complete the survey. Enjoy the holiday weekend!

Mr. Ed Kurt
Superintendent

Follow this link to the Survey:
Take the Survey