STUDENT PERCEPTION OF SAFETY AND POSTIVE SCHOOL CLIMATE AFTER TRAUMA INFORMED CARE PROFESSIONAL DEVELOPMENT

Darlene J. Mack

A Dissertation

Submitted to the Graduate College of Bowling Green
State University in partial fulfillment of
the requirements for the degree of

DOCTOR OF EDUCATION

December 2019

Committee:

Judith Jackson May, Advisor

Karen D. Johnson-Webb
Graduate Faculty Representative

Matthew R. Lavery

Jaclyn S. Schalk

Chris Willis

ABSTRACT

Judith Jackson May, Advisor

In recent years educational settings have offered increased attention to relationships between students emotional and physiological health and academic achievement. Some authors have reported high prevalence rates of social, emotional, academic and cognitive impacts of traumatic experiences on students in the school environment. To address these issues, a trauma-informed school culture (TISC) can provide an environment in which students who have been exposed to trauma are supported in a variety of manners such as relationship building and developing resilience where they are academically successful.

Depending on the population and type of trauma investigated, reports show that 50-75% of youth in the United States are exposed to trauma. The consequences of such exposure is often exhibited in students' learning and behaviors, and the need to understand impact of trauma on students' learning and school behaviors has led to a push for effective trauma-informed treatment approaches in school systems. A review of current trauma literature shows a lack of research which assessed students' perceptions of school safety and positive school climate, especially as they relate to academic performance and school attendance. To address this gap, the present study was conducted to expand upon previous work which assessed a Midwest middle school district's development of a trauma-informed school culture, with the intent to measure student-reported perceptions of safety and positive school climate after delivering a trauma-informed professional development course to school staff.

Two separate exploratory factor analyses showed that survey data collected from two student cohorts loaded similarly to create a 10-item measure of assessment for school safety and school climate. Cohort comparison analyses indicated a significant decrease in students' perceptions of school safety and positive school climate after delivery of a trauma-informed professional development intervention for staff at the target middle school. Additionally, findings showed that male students had more discipline incidents than did female students, and a

significant increase in grade point average was observed between cohorts. However, it is not possible to directly attribute this increase in academic performance to the professional development.

Overall, study findings led to the conclusion that the professional development as provided to school staff was not effective in increasing students' perceptions of school safety and positive school climate as expected. Implications for leadership, policy and practice are provided, along with suggestions for future research and for improving the efficacy of trauma-informed professional development.

Lao Tzu's quote "A journey of 1,000 miles begins with a single step" is extremely appropriate for this dedication. When accepted into the Leadership Studies Program, I was searching for a new challenge in my life and desired to fulfill a long-term goal of earning a doctorate degree. During my time in the program, there have been many major life challenges and celebrations, and through it all, I have continued to take steps to reach the goal of earning a doctoral degree.

In the fall of the first year of my program, my older brother completed suicide, and I continued to take steps. A week later, my dad, who attained 88 years of wisdom, became ill. After three months of providing care, we said good-bye to my humble dad and I continued to take steps. In the same week my dad died, my second grandson, Samuel, joined our family, and I continued to take steps. My son, Jason, was engaged and married to Celestia, and I continued to take steps. My husband's mother was successfully treated for cancer, and I continued to take steps. Due to health reasons, my 88-year-old mother moved from our family farm home to a nursing home facility, and I continued to take steps. My husband, semi-retired from our business, and I continued to take steps. My husband and I purchased and revived a bankrupt business, and I continued to take steps. My daughter, Sonya, her husband, Chris, and our two grandsons, Henry and Samuel, moved out state after living minutes from us, and I continued to take steps. In the midst of letting go to familiar life, celebrating new life, and working as a full-time school counselor, my interest in the potential of trauma informed care to positively impact students and learning, continued to grow and I continued to take steps.

This dissertation is dedicated to my humble parents who taught me to sacrifice and be as servant, be generous, kind and strong, value education and continue to take steps. To my husband, my rock, who has supported me while not always understanding my pursuit of endeavors to continually learn, grow, and strive for new experiences and make a positive difference in this world, so I can continue to take steps. To my children who have been my greatest teachers and inspiration to continue to make a positive difference in the lives of children and leave a legacy of setting high goals and continued learning and growth. I dedicate this to all traumatized children who have the courage and determination to overcome adversity to develop into healthy, resilient students and future adult members of society. Finally, I dedicate this dissertation to all educators who endeavor to develop positive, safe, and caring relationships with students, so the students too, may continue to take steps.

ACKNOWLEDGMENTS

I acknowledge the friends and colleagues made while working in the school district, especially the superintendent for the support to implement trauma-informed care throughout the entire district and the permission to utilize the existing data set for this dissertation. I would like to acknowledge Dr. Kelly Glick for the countless hours of work, trauma-informed collegial discussion to grow and develop, and help creating trauma-sensitive organizations. In addition, I acknowledge the care and support of the Bowling Green State University Interdisciplinary Leadership Studies faculty, especially Dr. Judy Jackson May, my dissertation chair and Dr. Matthew Lavery, my methodologist, and colleagues in the Cohort 18 Leadership Studies Program.

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CHAPTER I. INTRODUCTION

Background of the Problem

Public education in the United States has historically focused on successful academic achievement with the intention of leading to students earning a high school diploma (credential) and functioning as productive citizens (Chafouleas, Johnson, Overstreet, & Santos, 2016). However, in the maturation process of reaching adulthood there is a plethora of challenges that students face which may impede their process of becoming healthy, functioning adults. Such barriers may be the result of having one or more traumatic or adverse childhood experiences. Exposure to trauma activates the brain's stress response system and has been shown to impede healthy socioemotional development and academic success (Perry, 2000; Perry & Daniels, 2016). In this area, researchers have reported many negative impacts of trauma exposure on children and adolescents, including trauma and anxiety disorders, impaired academic functioning, and other negative academic outcomes, such as lower grade point averages, increased absenteeism, and lower graduation rates (Jaycox et al., 2009, p. 49).

The Substance Abuse and Mental Health Services Administration (SAMHSA) defines trauma as:

> Individual trauma results from an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or life-threatening and that has lasting adverse effects on the individual's functioning and mental, physical, social, emotional, or spiritual well-being. (SAMHSA, 2014, para. 4)

Bethell, Newacheck, Hawes, and Halfon (2014) provided examples of childhood trauma that included, but were not limited to, neglect, family divorce, parents' abuse of substances, and several forms of abuse. According to the National Center for Education

Statistics, 90% of students attend a public school (Silvia et al., 2011) in the United States. Given the prevalence and impact of trauma exposure, schools may be positioned to provide interventions which ameliorate the negative consequences of trauma exposure on learning and behavior (Jaycox et al., 2009).

Purpose of the Study

Since delivering community-wide (i.e. organizations, agencies, and school district) professional development on trauma-informed care (TIC) in 2014, an urban school in the midwestern United States determined the need and importance of developing a trauma-sensitive district workforce. This determination was made after an examination of whether certified trauma-informed professional development (TIC-PD) influenced students' perceptions of safety and a positive school climate. Additional relationships of interest included potential effects of the TIC-PD on cumulative grade point average, attendance, and behavior (by way of discipline incidents and suspension rates).

The target school district was located in a city with a population over 41,000 (School district website[1], 2018). At the time of data collection, the city experienced an 18.5% poverty rate with median household income of $45,262 (United States Census Bureau, 2016). Within the district were 13 schools serving over 5,500 students (School district website[2], 2018), and the district was known for its tradition of excellence in academics, athletics, and extracurricular activities, which resulted from collaboration between students, staff, administrators, parents, and the general community.

[1] "School district website" was used to maintain anonymity of school district used in this study.

[2] "School district website" was used to maintain anonymity of school district used in this study.

Recently, the district led an effort to foster a trauma-sensitive culture within its entire school community, which was guided by the National Council on Behavioral Health's seven domains (Appendix A). After completing an assessment of district employees' levels of TIC understanding and knowledge, efforts included providing trauma-informed professional development to all certified (i.e. teachers, counselors, administrators, psychologists, speech therapists) and classified personnel (i.e. bus drivers, food service staff, librarians, nurses, classroom aides, paraprofessionals) in the district's 13 schools. While all staff from the district's 13 schools completed TIC-PD, the present study examined pre-existing survey data from South Middle School. The survey data was collected by district administrators prior to the delivery of the TIC-PD (2013-2014 school year) and 2016-2017 school year. In addition, examination of student behavior metrics, such as days present at school, grade point averages, and behavioral incidents, was completed.

The questionnaire included items that inquired about students' perceptions of school building climate. Beginning in 2013-2014 and continuing annually each spring semester, the student perception data were gathered from middle school students. The data from these surveys have been utilized for several years to assess the district's strategic planning goals relative to the Ohio Improvement Process. The Ohio Improvement Process (OIP) provides a structured way to align educational processes, tools and staff to improve instructional practices and student outcomes.

Data on the outcomes described were first collected during the spring semester of the 2013-2014 academic year, prior to delivery of the district-wide TIC-PD, which was offered in the fall semester of 2015. In the present study, data from the target school's

spring 2013-2014 data collection prior to delivery of the TIC-PD were used to represent a cohort control group, and data from the 2016-2017 school year after delivery of the TIC-PD were used to represent a treatment group. This quasi-experimental study utilized students' perception data to determine any potential changes in student-reported perceptions of safety and positive school climate. Also examined was students' academic outcomes of grade point average, attendance, and behavioral incidents and consequences before and after delivery of the TIC-PD.

A trauma-informed school culture (TISC) provides an environment in which students exposed to trauma are supported in relationship building, in managing their emotions and behaviors, in expressing healthy lifestyles, and in which students are academically successful (Ristuccia, 2013). The current movement to develop TISCs includes providing school officials with concentrated professional development to better understand the impact, signs, symptoms, and prevalence of trauma, in addition to offering opportunities to evaluate changes in adult behaviors as a way to determine effectiveness of professional development training (Phifer & Hull, 2016).

Accordingly, van der Kolk (2014) suggested that the first step in creating a trauma-sensitive organization is to create safe environments by training all district personnel including teachers, principals, and staff such as bus drivers and cafeteria workers. As school staff receive trauma-informed training and learn to identify the impact of trauma, they may be better able to nurture students and to provide environments that are safe and predictable, and where student behaviors are more appropriately understood. As a result, students may be expected to receive a more adequate education (van der Kolk, 2014).

The present study was intended to expand upon a previous study conducted by Goodwin-Glick (2017), who collected data in the same target school district. While Goodwin-Glick's (2017) retrospective study focused on only classified and certified staff's dispositions after the 2014 district-wide TIC-PD, the present study investigated the district's development of a trauma-informed school culture by measuring student-reported perceptions of safety and positive school climate after the 2014 TIC-PD. While there is minimal research reported on classified staff's role in trauma-informed professional development, some authors (e.g. Bloom & Farragher, 2013; SAMHSA, 2014; Trauma Learning Policy Initiative, 2019; van der Kolk, 2014) have encouraged organizations to employ staff to work toward supporting students who have experienced trauma. Results of this study were intended to supplement the small amount of existing research in schools in an effort to help determine if there was an association between students' reports of safety and positive school climate before and after delivery of trauma-informed professional development (TIC-PD) to school staff.

A review of current literature revealed a lack of focused research on student perceptions of safety, positive school climate, grade point average, behavior, and attendance. Hales, Nochajski, Green, Hitzel, and Woike-Ganga (2017) presented research on agency staff satisfaction of the organization (i.e., safe, supportive, trusting environment) after TIC implementation. While the authors acknowledged the growth of trauma-informed implementation, they also cited the lack of outcomes research after TIC implementation. Anderson, Blitz, and Saastamoinen (2015) further reported minimal research on TIC outcomes of classroom staff, such as teaching assistants, classroom aides, and paraprofessionals. These findings are important because a primary duty of

classified staff is to support students' needs after attending TIC-PD and then apply their new knowledge and skills.

Why Create Trauma-Informed Care in Schools

Educational settings are paying increased attention to the relationships between emotional and physiological health and student achievement. The recognition of the social, emotional, behavioral, and mental health issues resulting from trauma experiences has led to an evolving study of trauma-informed care (TIC). Trauma experiences are often part of the human experience (van der Kolk, 2014), and experiencing one or more traumatic events is identified as an adverse childhood experience (ACE; Felitti et al., 1998).

Depending on the population and type of trauma, between 50% and 75% of youth in the United States are reportedly exposed to trauma (Simonich et al., 2015). In studying high school students, Stevens (2012) reported that 13 (43.3%) of 30 sophomore through senior grade high school students experienced three or more traumatic experiences, and 24 (80%) out of 30 experienced at least one traumatic experience. Perry and Daniels (2016) further stated that if 13 of 30 students experienced three or more ACEs, then it may be plausible to estimate that students in every classroom experience trauma.

The prevalence of ACEs is noteworthy in the student population. As Walker and Walsh (2015) reported, nearly half (48%) of U.S. children aged 0-17 experienced at least one ACE, and nearly one quarter (23%) experienced two or more childhood traumatic events.

The Centers for Disease Control and Prevention's (CDC; 2015) National Center for Health Statistics also reported findings from a 2011-2012 national representative

sample of adolescents from 12-17 years old. Their report indicated that nationwide 52.1% of the population in this age group had no adverse family experiences, 25.3 had one experience, and 22.6% had two or more experiences. In the state of Ohio, the findings were 49.2%, 25.1%, and 25.8% respectively (National Survey of Children's Health, n.d.). As evidenced, Ohio's child trauma statistics are aligned with national averages. Given the current data on trauma exposure of students, it should be clear that a substantial number of students attending public schools have been exposed to trauma. Researchers have also reported that youth who have been exposed to trauma may experience enduring academic problems and mental health issues if their experiences are not identified and treated (Bell, Limberg, & Robinson, 2013).

The consequences of children's exposure to trauma exposure may be exhibited in students' learning and behaviors, and the need to understand the impact of trauma on student learning and behavior has led to an impetus for effective trauma-informed treatment approaches in school systems (Chafouleas et al., 2016). Further, students' environments are important for their wellbeing and development (Bronfenbrenner, 1979). In this area, Tishelman, Haney, O'Brien, & Blaustein (2010) contended that schools may either safeguard or aggravate the impact of trauma on children and that schools are ideally positioned to systematically incorporate TIC into practices and policies to intervene with the consequences of trauma exposure (Chafouleas et al., 2016; Tishelman et al., 2010). As such, it is important for school personnel to recognize and respond to students who have experienced trauma. To properly assist with trauma-related experiences, it is important for school employees to develop positive relationships which

stimulate feelings of safety, trust, and connection with students (Black, 2015; Vicario & Gentile, 2015).

A focus of the TIC movement has been to create trauma-sensitive organizations that provide professional development for all staff (Bloom & Farragher, 2013; van der Kolk, 2014). For the purpose of the present study, the trauma-informed organization is a middle school. Craig (2016) explained that the term *trauma-sensitive schools* is used in literature to describe institutions in which climate, instructional design, and behavioral supports are available to help students achieve academic and social growth.

As a practice, professionals (e.g. teachers) in schools receive minimal professional development regarding the effect on trauma exposure on students, or regarding how associated care practices might improve student learning and behavior, while still being expected to balance classroom responsibilities (Ko et al., 2008). Phifer and Hull (2016) reported on the importance of schools providing ongoing professional development, which is highly focused on negating the effects of trauma on learning and behavior. Furthermore, West et al. (2014) suggested that teaching personnel should receive professional development on trauma in order to better understand student behavior.

As a benefit to better understanding trauma exposure on students' behaviors, teachers and other school professionals may learn how to more appropriately respond to the behaviors, rather than reacting in a punitive manner to students' externalizing behaviors (West et al., 2014). As such, the focal point of the present study is the evolving use and assessment of TIC and its potential relationship with middle school students' school-related outcomes, including perceived school safety and climate,

academic achievement, days present at school, and behaviors after TIC professional development was delivered to school staff.

Trauma-Informed Care

Educational organizations have responded to data on students who were exposed to trauma, and some organizations are allocating resources to develop trauma-informed school cultures (TISC). A school's culture includes the implicit long-standing expectations and normal ways of being and interacting among staff and students, which are sustained through social interactions in the school environment (Craig, 2016). Because school culture is constructed, in part, by behaviors, beliefs, and unconscious assumptions, developing a TISC entails acknowledging and addressing the role of trauma in children's education and providing appropriate delivery of services for children who have experienced trauma (Craig, 2016).

As a result, appropriate direction is needed to guide the implementation of TIC in educational settings. SAMHSA has provided leadership and guidelines to support the expansion of TIC in schools and has also suggested *Four Rs* to develop TIC in organizations to create a framework of mutual respect, including that staff work to promote healing and recovery after traumatic experiences. The Four Rs offered by SAMHSA include: (a) *realizing* the widespread impact of trauma and understanding the potential for recovery; (b) *recognizing* the signs and symptoms of trauma in students, families, staff, and others involved in the system; (c) *responding* by fully integrating knowledge about trauma into policies, procedures, and practices; and (d) *resisting* re-traumatization of students, families, and school staff.

An organization that practices as a TIC organization considers the whole of individuals' experiences. By utilizing the Four Rs, caregivers and care receivers can work together for the optimal outcomes of healing and wellness after trauma exposure (SAMHSA, 2014). SAMHSA (2014) also provided six principles of a TIC organization which include: safety; trustworthiness and transparency; peer support and mutual self-help; collaboration and mutuality; empowerment and voice and choice; and cultural, historic, and gender issues. To summarize these principles, staff and clients throughout an organization should feel physically and psychologically safe, and decisions should be conducted with transparency with a goal of building and maintaining trust among stakeholders. Following these principles is a key strategy for building trust, establishing safety, and facilitating empowerment with students who have experienced trauma. Additionally, the six principles guide the creation of TIC-PD and a TISC.

Throughout a TISC, individual strengths are recognized, developed, and validated, and new skills are expanded to provide opportunities of empowerment, and choice for students and staff. Through TIC-PD, staff members in schools may better understand the definitions and examples of trauma, the prevalence of trauma, and how trauma impacts students. As a result, these staff members may be better able to respond appropriately to students who are exposed to trauma. In turn, the students may be expected to report increased perceptions of safety and positive school climate. Adhering to SAMHSA's Four Rs and six principles when developing a trauma-sensitive school is surely an exhaustive process because the organization will likely need to address the impact of trauma and to also provide interventions that promote healing and resilience.

Implementation of TIC in Schools

Perry and Daniels (2016), Craig (2016), Walker and Walsh (2015), and the Center for Disease Control (2015) all reported the high prevalence and social, emotional, academic, and cognitive impacts of trauma experiences on students in the school environment. Ideally, schools are positioned to provide support, as well as preventative and evidence-based services to traumatized children (Atkins, Frazier, Adil, & Graczyk, 2010; Listenbee et al., 2012). Interacting with students who have experienced adverse childhood experiences requires unique skill sets and attitudes (Craig, 2016).

As a result of the prevalence of trauma exposure, the TIC approach is gaining momentum across the United States. As of 2016, 17 states had begun to focus on TIC in a variety of ways from individual schools to entire districts (Overstreet & Chafouleas, 2016). Massachusetts, California, Pennsylvania, Washington, and Wisconsin were among the first states to lead the school TIC movement (Craig, 2016). The Every Child Succeeds Act of 2015 (ESSA), which is the reauthorized Elementary and Secondary Education Act of 1965, provides further support for the need for TIC. ESSA components include in-service training for teachers and school personnel during which the educators would be trained to understand when and where to refer students impacted by trauma or mental health issues. Provisions are also intended to provide information about trauma-informed practices and procedures for classroom management.

Trauma and Student Achievement

For students to be academically successful, cognitive skills are required to perform a variety of adaptive behaviors such as reading, writing, appropriate verbal communication, and processing (Hertel & Johnson, 2013). Additionally, students must

be able to display proper attention, comprehension, and organization of thoughts (Hertel & Johnson, 2013). However, an area of the brain impacted by traumatic stress is in the prefrontal cortex, and exposure to trauma may impede acquisition of these academic and cognitive skills if trauma exposure impacts the prefrontal cortex (Perfect, Turley, Carlson, Yohanna, & Saint Gilles, 2016). Another function of the prefrontal cortex is executive functioning, such that when students possess healthy executive functioning they are better able to follow through with goals, develop plans, make decisions, and determine alternative solutions to problems (Hertel & Johnson, 2013). Conversely, students who experience trauma may have a deficit in executive functioning skills.

In a systematic review of 83 studies, Perfect et al. (2016) explored school-related outcomes on school-aged youth who experienced trauma. The authors presented information about cognitive functioning (i.e., intelligence, memory, language/verbal ability, attention) of students who experienced trauma. The authors reported that lower IQ scores were observed among youth who had witnessed or experienced violence. Additionally, studies reported impaired visual, verbal, spatial, and/or working memory among youth who experienced trauma exposure, and students who have been exposed to trauma were reported to maintain reduced verbal abilities (Perfect et al., 2016). Attention difficulties were also associated with exposure to trauma along with reduced academic achievement, decreased test scores, and lower scores on vocabulary, reading, math, spelling, language, and science.

Students who experience trauma may lack self-management skills and display inappropriate behaviors. Students' ability to effectively interact with appropriate verbal and physical responses may be impacted by trauma exposure. The inappropriate

behaviors occur because of changes in the structure and function of the brain. Behaviors include sleep disturbances, risky behaviors, aggression, and withdrawal (Hertel & Johnson, 2013).

Students also may not be able to successfully function in academics if they lack proper social-emotional skills. For example, social-emotional functions are associated with qualities and skills that are needed to manage and regulate emotions, to have social aptitude, and to have meaningful peer relationships and interactions. In this area, Perfect et al. (2016) reported that externalizing and internalizing behaviors have been associated with trauma exposure. The authors described externalizing behaviors as those that are disruptive to others, such as aggression and defiance, while internalizing behaviors were described as those that affect only the individual, such as sadness, depression, anxiousness, and withdrawal. Additionally, depending on the type of trauma, high incidences of externalizing and internalizing student behaviors were reported.

Traditionally, children's troublesome behaviors have been reported as the result of poor choices or purposeful defiance (Craig, 2016). While school personnel routinely provide interventions that are positive or negative consequences, such techniques often do not bring the desired change in student behavior (Craig, 2016). Exposure to trauma affects learning and may lead to low academic performance (Beers & De Bellis, 2002) and long-term effects on child development (Walker & Walsh, 2015).

In the Perfect et al. (2016) literature review on trauma exposure on school-age youth, several impacts of trauma on the cognitive, academic, and social-emotional-behavior functioning issues were identified. Table 1 below illustrates reported impacts of trauma on these issues as reproduced from Goodwin-Glick (2017, p. 55).

Table 1

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

Cognitive functioning	Academic functioning	Social-emotional-behavioral
Reduced visual memory [a]	Less engaged in academics[a]	Low self-esteem[ahi]
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[ae]	Behavior problems[dfglk]
Attention problems for sexually abused[a]	Increased school absences[acdf]	Hypervigilant to potential problems with safety concerns[h]
Reduced readiness to learn[d]	Avoids academic risks and quits easily[gj]	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 conflicts[n]
	Difficulty interpreting oral, nonverbal or written instructions[l]	Lack of awareness to accept physical and psychological boundaries of others[g]
	Difficulty setting and achieving	Unpredictable and easily

goals[g]	overwhelmed[g]
Perfectionistic with academics[l]	More risk-taking behaviors[hm]
	Lacks trust[gi]
	Views world as unjust[n]
	Difficulty in perspective taking[j]

[a] Perfect et al. (2016), [b] Delaney-Black et al. (2002), [c] Wong (2008), [d] Souers & Hall (2016), [e] Porche et al. (2008), [k] Jaycox et al. (2009), [l] Hertel & Johnson (2013), [m] Ko et al. (2008), [n] Craig (2016), [o] Wiebler (2013)

Creating Trauma Sensitive School Cultures

Craig (2016) contended that a school's culture is expressed in nonverbal expectations and historic behaviors with longstanding collective meaning. Stories and symbolic gestures may be reinforced by staff to create hidden curriculum or a culture of how things are done at the setting, including behaviors, beliefs, and unconscious assumptions. Shifting from traditional school cultures to trauma-sensitive cultures is important because of the impact of trauma on students (Cole et al., 2005). Overstreet and Chafouleas (2016) further argued that all staff in trauma-sensitive schools should recognize the impact of trauma exposure on learning and behavior.

A trauma-informed school culture (TISC) provides an environment in which students exposed to trauma are supported in relationship building, in managing emotions and behavior, and in developing a healthy lifestyle, and are academically successful (Ristuccia, 2013). Along these lines, the Trauma Learning Policy Initiative (2019) was developed to include the following characteristics of trauma-sensitive schools: (a) provide all students with a safe school environment (socially, emotionally, academically, and physically); (b) increase staff understanding of and ability to mitigate the potential impacts of traumatic experience on students' learning and behavior; (c) encourage all

school staff to work together to meet the needs of students in school; (d) address student needs in relationship development, self-regulation, academic competency, and health and well-being; (e) ensure that all students are included in and connected to the school community; (f) adapt school planning and operations to the ever-changing needs/demands of the students; and (g) include community resources and parents in the support network to address student needs (p. 255).

Shifting traditional school culture to a trauma-informed culture. In the absence of TIC training, educators dealing with students who are impacted by trauma exposure may focus on the adverse reactions of a child rather than providing appropriate assistance. Shifting the paradigm of how schools have traditionally functioned is a momentous process that requires schools to review their framework of operations and to identify areas of improvement to meet students' needs (Ristuccia, 2013). For example, providing a trauma-informed approach in schools entails examining current and long-standing zero-tolerance policies, understanding the link between trauma and academic performance, applying evidence from neuroscience, understanding troublesome behaviors, and strengthening neural pathways (Craig, 2016).

Schools that focus primarily on academic achievement and controlling student behaviors to create safe environments often fail to fully adhere to these approaches and conversely do not provide a safe and tolerant culture for their students. School outcomes that focus on punishments often reduce school attachment and connectedness, thereby resulting in lowered student achievement (Ristuccia, 2013), and punishing students for behaviors often does not lead to productive results; in contrast, it perpetuates the school-to-prison pipeline (Craig, 2016).

The term *school-to-prison pipeline* has been broadly used to describe schools' discipline practices and their connection with the legal system. For instance, not recognizing the signs and symptoms of trauma exposure, thereby responding inappropriately (e.g. with harsh, judgmental comments or actions), may re-traumatize a student. In contrast, a trauma-informed approach includes identifying the signs of trauma, providing appropriate interventions, or referring students to counseling for treatment. Educational organizations that engage staff in TIC-PD with a focus on the prevalence and impact of trauma and also provide effective intervention strategies may be better prepared to provide appropriate help and support. Creating safe and supportive school environments further improves academic, social, emotional, and physical health and wellbeing (Ristuccia, 2013).

Providing all certified and classified staff with TIC-PD is a key step in developing the framework of a TISC. TIC-PD includes signs, symptoms, and impact of trauma, efforts of preventing re-traumatization, and knowledge of how to develop physically and psychologically safe environments (SAMHSA, 2019). Daily routines, consistency, and predictability are typically cornerstones of a school operating with a trauma-informed approach (SAMHSA, 2014). Incorporating trauma-informed knowledge into instructional practices and cultures may ameliorate the impact of trauma exposure (Plumb, Bush, & Kersevich, 2016; SAMHSA, 2019).

Challenges to creating trauma-informed school cultures. Phifer and Hull (2016) addressed challenges and the magnitude of changing mindsets when creating a TISC. In creating a TISC, three areas on which to focus have been suggested: (a) challenging traditional mindsets of staff; (b) utilizing traditional practices that repeatedly

and unintentionally trigger the trauma event; (c) addressing ongoing denial and refusal to acknowledge the role of trauma exposure in school success; and (d) avoiding punitive consequences for students with behavior issues (Craig, 2016). Further, implementing and sustaining a TISC entails a buy-in mentality from all stakeholders. In addition, organizational extensive planning, completing a needs assessment, collaboration with mental health services, community partnerships, and revision of practices and policy (Phifer & Hull, 2016).

Barriers that may inhibit and negate some staff in sustaining TIC include resistance, which results from beliefs that schools frequently change programming, limited time and financial resources, changes in district level leadership and retention of employees, or changing the focus of district and school goals (Overstreet & Chafouleas, 2016; Phifer & Hull, 2016). Other reported barriers to TIC approaches in schools included lack of administrator support, teachers having too many responsibilities, challenges to parent engagement, and differentiating the indications of other issues (Martin et al., 2017). Phifer and Hull (2016) further stressed a TISC includes more than attention to symptom relief to improve achievement and that it should also address social-emotional health and nurture a positive school climate.

Classified Staff Trauma-Informed Care Professional Development

During the literature search for the present study, few research articles were identified that focused on the roles and impacts of TIC-PD for classified staff. However, Bloom and Farragher, (2013), Trauma Learning Policy Initiative (2019), and van der Kolk (2014) all encouraged organizations to employ trauma-informed staff to work toward supporting students who experienced trauma. Ristuccia (2013) further contended

that while teachers were students' main contacts at school, other staff, such as paraprofessionals, cafeteria workers, and custodial staff, are crucial to building safe and supportive environments. Classroom staff also are important members of educator teams and often work closely with the neediest students, yet these staff members are often not included in professional development strategies (Anderson et al., 2015). For example, classroom aides or paraprofessionals may not be included in professional development that provides information to support educational services, and classified staff are often not able to collaborate with the educational team.

In the Anderson et al. (2015) study, providing professional development to classroom staff was shown to increase productivity by helping staff members to assist with students' complex issues and to maintain a positive attitude. Furthermore, Anderson et al. (2015) suggested adopting caring and collaborative cultures, which was shown to help school personnel successfully meet challenges associated with high levels of poverty. The blending of caring and collaborative environments with trauma-informed approaches may help to create safe, consistent learning environments, and may also support traumatized youth who have traumatic stress and build resilience by teaching them coping skills (Anderson et al., 2015).

After conducting a needs assessment, the professional needs of classroom staff (e.g. aides, paraprofessionals) were addressed by providing the staff with professional development and a focus group. The authors then completed a school-university collaboration to develop a culturally responsive TIC model. The authors also explored teacher and classroom aides' perceptions of student behavior, their understanding of trauma and traumatic stressors, their self-reported stress levels, and their teaching

efficacy. Qualitative results indicated that the social-emotional needs of students were recognized from a trauma perspective when participating staff took responsibility for student care.

Classified and certified staff dispositions after TIC-PD. As previously introduced, Goodwin-Glick (2017) examined the impact of TIC-PD on certified and classified staff perceptions of knowledge, dispositions, and behaviors toward students who experienced trauma exposure. In her study, a seven-subscale measure was used to collect information about TIC knowledge, empathetic concern, perspective taking, interpersonal relationship, sense of respect and trust, and student-centered behavior. Results showed that: (a) employees reported significant increases in knowledge of TIC concepts; (b) employee dispositions with the subscales of empathic concern, perspective taking, interpersonal relationships, sense of trust and respect, and student centered instruction had significant increases; (c) positive gains were found in student-centered and dispositions subscales, and female participants had higher gains than male participants; (d) classified employees reported larger gains (although non-significant) for all subscales except empathic concern when compared to certified employees; and (e) there were significant differences in knowledge gains for sessions attended by classified staff (Goodwin-Glick, 2017).

As a result of these findings, the author suggested that TIC-PD should be the first step in creating a TISC that addresses the needs of the entire student body and school staff. As certified and classified staff attend evidence-based transformational TIC-PD, the staff adopted a trauma-sensitive approach. As a result, TIC-PD participants viewed the students through a trauma-informed lens when interpreting student actions (Goodwin-

Glick, 2017). This practice allowed the staff to recognize signs and symptoms of trauma in youth and to respond in ways that created a safe and predictable environment.

Foundation of the Study

The current study expands on the outcomes of the TIC-PD in the target school district. Goodwin-Glick (2017) first studied certified and classified staff perceptions of student behaviors after attending a TIC-PD in 2014. The author's results suggested that staff had a positive change in dispositions, attitudes, and knowledge. As an extension of that previous work, the present study examined whether there were changes in student reported perceptions of safety and positive school climate, as well as any changes in student in academic metrics, such as attendance, grade point average, and behavior incidents and consequences.

For the purpose of this quasi-experimental research study, a subset of the total population of the target school district was analyzed to assess changes in perceptions and behaviors following the delivery of a TIC-PD for classified and certified staff. A cohort comparison group from the 2013-2014 academic year and a treatment group from the 2016-2017 academic year were created in this research design. Because of the present study's design, it was not possible to establish baseline and post-test results for a single group because two different sets of students responded to the survey – one prior to TIC-PD delivery (i.e., 2013-2014 comparison cohort) and the other after TIC-PD delivery (i.e., 2016-2017 treatment cohort). Data analysis was intended to determine if there were any differences in student-reported perceptions of safety and positive school climate between the two cohorts. Data analysis also examined student behavior metrics such as

grade point average, attendance, and behavior incidents and consequences (e.g. school suspensions).

Data for the dependent variables came from a student perception questionnaire in addition to data from school records from the target school during 2013-2014 and 2016-2017 academic years. The independent variable was the delivery of TIC-PD to classified and certified staff. Since 2014, in the spring of each school year the target district has collected data by way of a building climate survey, in which students report their perceptions of school experiences. The survey questions cover topics of physical and emotional safety, teacher and adult qualities that measure care, and the development of positive relationships, trust, and respect. Survey data from the 2013-2014 school year were used for the comparison cohort group, while data from the 2016-2017 school year were used for the treatment group.

In the fall 2015, the target district provided TIC-PD training for 457 certified and 361 classified staff members. Certified staff included physical therapists, interpreters, speech pathologists, special education supervisors, curriculum directors, school psychologists, school counselors, teachers, and administrators. Classified staff included food service, bus drivers, custodians, secretaries, classroom aides, playground and lunchroom monitors, school nurses, classroom and lunch aides, technology staff, and supervisors for the areas. The classified and certified staff were trained in separate sessions. This researcher, a school counselor and an administrator, created and presented the three-hour professional development for classified staff. During the session it was explained how the neurobiology of the brain defined trauma and also how trauma may impact students' learning and behavior.

The certified staff attended two sessions for a full day professional development. For the certified staff, one session was provided by an outside trauma-informed consultant who explained the neurobiology of the brain and defined trauma. The second session was provided by an outside community organization, which added a social-emotional component to develop self-awareness to change the way teachers interpreted and responded to student misbehaviors.

The constructs of safety and positive school climate were measured by examining pre-existing student survey data. Safety was measured by examining survey items that inquired about students' perception of feeling physically and emotionally safe in classrooms and physically safe outside classrooms. Positive school climate was measured by examining survey items that inquired about student and teacher/adult relationships and students enjoying coming to school. Student cumulative grade point average, attendance rates, behavior incidents, and consequences were also analyzed to determine differences. The findings of the present study may result in adding to the nascent literature or to guide implementation of TISC.

Research Questions

The following research questions were designed to determine if students perceive a change in perceptions of safety or positive school climate after the TIC-PD. The present study investigated self-reported responses to the perception-based survey items. Oehlberg (2008) posited that trauma-sensitive schools have increased academic achievement and attendance and have decreased negative behaviors. Therefore, cumulative grade averages and attendance, and discipline incidents and consequences, such as suspensions, were analyzed.

1. Is there a significant association in student reported perceptions of safety after TIC-PD?
2. Is there a significant association in student reported perceptions of positive school climate after TIC-PD?
3. Is there a significant difference in student achievement (cumulative student grade point average, days present at school) after TIC-PD?
4. Is there a significant difference in student behavior rates (behavior incidents, suspensions) after TIC-PD?

Theoretical Frameworks

The following theoretical frameworks were selected to inform the present study: trauma theory, ethic of care, attachment theory, and leadership theory. These theories were selected because each conceptually applies to the area of research and were intended to help develop a logical blueprint for the inquiry.

Trauma theory. Trauma theory developed from the assimilation of knowledge that was historically in separate areas and then converged. Trauma theory is the science of recognizing how typical human development is affected by intense circumstances. Furthermore, trauma is exacerbated when the conditions are repetitive and create toxic stress, ultimately resulting in the stress response continuum activation (Bloom & Farragher, 2013). Trauma theory provides a scientifically informed and complex biopsychosocial understanding of the impact of intense stress. Trauma theory also integrates findings from the fields of "social science, health services, epigenetic, neurodevelopmental, and biological research" (Bethell et al., 2014, p. 2106).

In the field of neuroscience, there is understanding that behaviors are determined by past experiences, even before birth (Bloom & Farragher, 2013). From a neurological perspective, trauma theory addresses how social surroundings impact the brain, the scientific knowledge that the brain is more adaptable than was once thought, and how important "belief, faith, meaning, and purpose are to changing brain" (Bloom & Farragher, 2013, p. 48). Along these lines, Bloom and Farragher (2013) discussed the *Sanctuary Model*.

Concepts of this model include the entire organizational staff comprehending the effects of toxic stress and recognizing how the stress continuum can cause maladaptive behaviors and interfere with normal development. As a result, caregivers offer appropriate help and support, increasing subsequent positive outcomes. In understanding trauma theory, the educator may realize that a student's less than desirable behaviors may stem from traumatic experience(s). The change in awareness allows educators to build cooperative relationships, to create safe environments, and to help students overcome previous adverse experiences (Craig, 2016).

Ethic of care theory. Care a theory of morality, often-termed *ethic of care* or *practice of care*, based on moral significance. Care is a central and fundamental concept of relationships and dependencies in human life (Sander-Staudt, 2018). Sander-Staudt (2018) further described care ethics as a practice of considering the social relations with caregiver and care-receivers, and the upholding of relationships by studying relationships and advancing the welfare of those involved. Care ethics is driven and built on a foundation of caring for the vulnerable and those who are reliant on others for care. Starratt (1991) further discussed the ethic of care as faithfulness to others and their

inherent right to be their true selves, and an openness to interact as authentic individuals allows these individuals to develop into whole persons.

From a historical perspective, Gilligan (1987) wrote about the ethics of care from a feminist approach to suggest an alternative viewpoint from the ethics of justice perspective. Many researchers have given voice to the concept of ethical caring, and Gilligan (1987) wrote about the ethic of care from a feminist approach. The ethic of care is based on each person having a voice, being heard respectfully, and having a positive relationship with self and others. Starratt (1991) also noted the ethic of care emphasizes human dignity, empowerment, and the value of human life, and complements ethics of justice.

Noddings (1984) differentiated between natural caring and ethical caring. According to the author, natural caring is present without work on the part of the teacher; it feels right for the teacher to care with a high level of interaction, and the caring interaction delights the person who is giving the care. Ethical caring is not natural, whereas obligatory care is based on responsibility and is an important part of education.

Noddings (2005) discussed that the primary purpose of education is the preservation and growth of care, and that the concept of care does not stand alone; it calls for justice, fairness, and equity. When care is provided to students, goals of education are often attained. In this way, ethic of care is not about the reasoning to make a decision, but rather concerns expanding the mindset and skills to maintain caring relations (Noddings, 2005).

Noddings (2005) further contended that when an adult is caring for a student there are various assumptions on the part of the person being cared for as expanded below.

When considering the student perception of caring behavior in schools, Noddings (2005) stated that “essential elements of caring are located in the relation between the one-caring and the cared-for” (p. 9). Mayeroff (1971) discussed caring from the perspective of the one who cares: “to care for another person, in the most significant sense, is to help him grow and actualize himself” (p. 1).

Attachment theory. John Bowlby, considered by many to be the grandfather of attachment theory, stated that the more secure an attachment to a primary caretaker, the better the chances of developing healthy ways of responding to the environment (van der Kolk, 2014). As such, attachment theory is built on the framework of psychological connection between people (Ainsworth, 1989; Bowlby, 1969). Children are able to take risks and to explore the world when provided consistent emotional support and safe environments (Pianta & Hamre, 2009).

Bloom and Farragher (2013) argued that human beings are "wired" for loving attachment and that attachment is necessary for "healthy physical, emotional, social, and moral development" (p. 24). Further, attachment is pioneered with the "mother/child bond," although the primary relationship does not need to be with a mother (Bloom & Farragher, 2013, p. 24). As it relates to the present study, attachment is also formed among peers and teachers at school (Birch & Ladd, 1997; Hamre & Pianta, 2001).

For healthy human development, people need a crucial relationship that "provides protection, support, security, and basic needs for food and shelter" (Bloom & Farragher, 2013, p. 24). Additionally, with recent research, a neurobiological connection to a relationship has been identified to develop attachment before and after birth and is strongly affected by ongoing environmental influences. Trauma experiences may impact

the human attachment system and thus healthy functioning. "Genetics, family history, level of support, level of understanding or sense of self-efficacy" may affect how people respond to the trauma (Bloom & Farragher, 2013, p. 25). Attachment theory focuses is on strong relationships; therefore, it is appropriate that relationships in school would impact students' development (Wang & Degol, 2016).

Leadership theory. Kouzes and Posner's (2012) five practices of leadership provide the foundation for designing and developing a model for organizational change. Modeling is the way in which leaders' values are aligned to actions and leaders' behavioral examples are in alignment with organizational values. Small wins create momentum, confidence, and continued progress. Inspiring a shared vision is a concept in which leaders foresee the way and subsequently recruit stakeholders who have a shared vision by aligning their values and interests. Challenging the process is where the leader identifies an opportunity, experiments, and takes a risk to implement the idea and learn from mistakes. Enabling others to act in ways in which people are provided information and are then allowed to integrate the information into practice fosters collaboration and builds trust. Delegation, believing in others and investing in others' educations and training, are examples of enabling others. The concept of encouraging the heart entails recognizing the contributions of others and then celebrating small wins on a regular basis (Kouzes & Posner, 2012).

Significance of the Study

Many researchers have identified the neurobiological, social, physical, and psychological impact of trauma on children's development and behavior. As a result of the burgeoning field of biopsychosocial research and the hope that something could be

different, TIC is evolving from behavioral and health care fields into the education arena both nationally and globally (National Center for Trauma-informed Care, 2012).

As places of understanding regarding the prevalence and impact of trauma and traumatic stress, schools are logical environments in which to provide trauma-informed services and interventions (Chafouleas et al., 2016; SAMHSA, 2014). Phifer and Hull (2016) and Chafouleas et al. (2016) discussed the importance of studying the relationship of professional development and changes in educator actions. Rolfsnes and Idsoe (2011) suggested the importance of training and supervision of educators in trauma-informed interventions. The outcomes of the present study were expected to further improve school efforts to provide intervention and strategy support for trauma-informed practices, policy, and practices (Walker & Walsh, 2015).

One-half of young teachers leave the field of education in the first seven years of practice, and those who remain are perceived as having a survival mentality (Glickman, Gordon, & Ross-Gordon, 2013). Few universities consistently train pre-service teachers in trauma theory or how to manage student learning and behavior from a trauma-sensitive perspective (Phifer & Hull, 2016; Wong, 2008). By providing professional development on TIC to pre-service, teachers may be able to better understand student behavior and to not take the behaviors personally. This research may help universities to educate and provide skill practice to young professional educators, which may then allow them to remain in the field for longer periods of time. This research may also add to the nascent research on certified and classified staff TIC-PD, and student perceptions of safety and school climate, grades, attendance, and behaviors, thus guiding efforts and direction as resources are devoted to this cause.

Delimitations and Limitations

This study includes the following delimitations.

1. The student perception climate survey was redesigned by school administrators to align to the district's 2015-2020 strategic plan (Appendices B, C, D). Some original survey items where retained whereas others were added, leading to new questions being excluded from analysis.
2. The pre-existing dataset was a convenience sample. Not all students were able to complete the survey.
3. Data were collected overtime; however, the data were not from the same group of students due to attrition. Because middle school students in grade 6 would be in grade 8 for the 2016-2017 school year data collection, only survey data gathered for this group represent the same group of students. However, the students in grade 7 in 2014-2015 were in grade 9, and students in grade 8 were in grade 10 for the 2016-2017 school year. The attrition was the result of students progressing to the next grade level each year.
4. Students were not given definitions of items (i.e. care, trust, respect, physical safety, emotional safety), so their interpretations of some survey items is subjective.
5. Potential researcher bias and confirmation bias could be considered because the researcher worked as a school counselor in the school and was a leader in the TIC implementation for the district.
6. Generalizations of the results to other schools should be made with caution because of attrition of students and lack of survey reliability and validity.

Assumptions

1. Students who completed the student perception survey accurately represented their opinions, and adults or other students did not influence how the students responded to the survey items.
2. Students understood and interpreted the survey items accurately.
3. While 100% of the student population did not participate in the data collection, it was assumed that the sample was representative of the total grade 6-8 population.
4. Student respondents had similar exposure to adverse childhood experiences as the state and national averages reported in this paper.

Definitions of Key Terms

Various terms and phrases were utilized to explain the concept for the proposal.

Adverse Childhood Experiences (ACES): Stressful or traumatic events, including physical, sexual, and emotional abuse, physical and emotional neglect, domestic violence, a member of household with mental illness, parental separation or divorce, incarcerated household member, witnessing domestic violence, or growing up with family members who have substance use disorders (SAMHSA, 2017).

Biopsychosocial: "of, relating to, or concerned with the biological, psychological, and social aspects in contrast to the strictly biomedical aspects of disease" ("Biosocial," 2019).

Care: The construct of care is a complex and rich area to study and define. While there is a plethora of definitions from various scholars and it is difficult to limit the definition of care, for the purpose of this study, Mayeroff's (1971) definition of care was

utilized. Mayeroff (1971) discussed caring from the perspective of the one who cares: “to care for another person, in the most significant sense, is to help him grow and actualize himself” (p. 1).

Certified employee: Under section 3301.071 of the Ohio Revised Code (LAW Writer: Oho Laws and Rules, 2017) an employee of a school district who has a minimum of a bachelor’s degree will be granted an educator’s license to work in the educational setting. For the purpose of the present study, certified staff included teachers, school counselors, principals, superintendents, school psychologist, and speech therapists.

Child well-being: The state of one’s health from physical, mental, and social perspective in the present, and how the present impacts their future and future development (Child Trends, 2016).

Classified Employee: According to the National Education Association (2015a), an employee of a school district who does not have an educator's license is an "Educational Support Professional." For the purpose of the present research study, classified employees included: paraeducators (instructional and non-instructional support), clerical services (secretarial, clerical, and administrative support, custodial and maintenance services (building and ground maintenance and repair), health and student service, food service (food planning, preparation, and service), transportation services, technical services (computer, audiovisual and language technical support; media, public relations), and security services.

Complex trauma: Describes both children’s exposure to multiple traumatic events, often from a caregiver, and interferes with the child’s ability to form a secure attachment,

which is often of an invasive, interpersonal nature, and the wide-ranging, long-term impact of this exposure (The National Child Traumatic Stress Network, 2017).

Emotional Disability: The Individuals with Disabilities Education Act (IDEA) defines emotional disturbance as follows:

…a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance: (a) an inability to learn that cannot be explained by intellectual, sensory, or health factors, (b) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers, (c) inappropriate types of behavior or feelings under normal circumstances, (d) a general pervasive mood of unhappiness or depression, and (e) a tendency to develop physical symptoms or fears associated with personal or school problem. (Ohio Department of Education, 2018a)

Physical safety: Physically safe environments are free from threats of violence from self or others, and includes "being free from threats, lack of self-care, risk-taking behaviors, risky sexual behavior, substance abuse, self-harm, physical harm to others, financial insecurity" (Bloom & Farragher, 2013, p. 148).

Psychological safety: Bloom and Farragher (2013) described psychological safety as "the ability to be safe with oneself, to rely on one's own identity, to rely on one's ability to protect oneself against any destructive impulses originating from within oneself or from other people and to keep oneself out of harm's way" (p. 144).

Professional development: According to the National Education Association (2017), professional development is defined as the process of enhancing one's personal growth and job skills and improving one's job performance in order to contribute to

outstanding educational results for students. For the present study, professional development pertains to educating classified and certified employees about how trauma impacts students' learning and behaviors.

Resilience: Newman and Dantzler (2015) described developmental resilience as a "positive process through which some children who experienced stress and hardships developed competency and success in spite of experiencing adverse risky situations" (p. 80).

Respect: A virtue that communicates to an individual their value and individuality in a non-judgmental way, and which creates a positive emotional effect on the individual (Ellis, 1997; "Respect," 2019).

Trauma: A set of conditions that produce strong physical, emotional, or stress responses in an individual which has potential long-term effects on social, physical, and emotional wellbeing (SAMHSA, 2014).

Trauma-Informed Approach: A trauma-informed approach can be implemented in a variety of service settings or organizations and is distinct from trauma-specific interventions or treatments that are designed specifically to address the consequences of trauma and to facilitate healing (SAMHSA, 2014).

Trauma-sensitive: An understanding and need to responsibly respond to students and families with an awareness of trauma (Blodgett et al., n.d.).

Universal: "Address the needs of all students, including those who have a trauma history, those who have a high probability of being exposed to trauma, and those who may experience vicarious trauma through family members with trauma histories" (Phifer & Hull, 2016, p. 205).

Organization of the Study

The remainder of this manuscript is organized in four chapters in addition to a bibliography and appendices. Chapter II presents a literature review of the concepts, principles, and relevant research regarding trauma and educational settings, relational caring, and student perception of adult caring. Chapter III describes the design and methodology of the present study. The instrument used to gather the data, the procedures followed, and determination of the sample selected for the study are described. Chapter IV then explains the analysis of data and the findings. The summary, conclusions, and recommendations for future research are presented in Chapter V.

CHAPTER II. LITERATURE REVIEW

In the field of K-12 education, researchers have called for further study on the topic of TIC in educational settings (Phifer & Hull, 2016; Rolfsnes & Idsoe, 2011). An influx of articles is expected in the near future, in part because the topic of TIC appears in the United States federal law for K-12 public school students. The 2015 Every Student Succeeds Act (ESSA) includes language that states, "Staff development for school and community personnel working in the schools" (p. 201) and the importance of schools using "trauma-informed practices that are evidenced based" (p. 201). Another indicator of the growth of TIC is a 2015 court ruling in California in which a federal judge ruled that students who have experienced trauma could be considered to be disabled. As a result, the ruling may change the ways in which students are educated in that they would be entitled to the same services and protections that schools provide to traditionally disabled students (*Peter P., et al. v. Compton Unified School District, et al*., 2015). The national and global movement is bringing additional attention to the area of TIC (Phifer & Hull, 2016).

At the onset of the current research there were few articles and dissertations on TIC in schools. As this research project progressed, authors began to fill the research gap, including work by Hall (2018) on trauma-informed care in a residential trauma-informed school and McKee's (2018) qualitative study on trauma-informed care and school crisis. With the study competition, this author had not identified research on TIC-PD's impact on students' achievement, attendance, behavior, or perspectives on safety and positive school climate. This literature review discussed the impact of trauma exposure on youth's learning and behavior, education, school climate, and academic

achievement. The goal of this study was to provide additional information to the nascent research on TIC-PD to determine if there any changes in academic achievement and student-reported perceptions of middle school climate.

The Role of Education and Childhood Trauma

Public education in the United States has historically focused on academic achievement, specifically earning a high school diploma and functioning as productive citizens. Childhood trauma has been reported as a potential barrier to social-emotional development and academic achievement (SAMHSA, 2014). Overstreet and Mathews (2011) reported chronic childhood trauma experiences substantially increased the chances of issues with developmental outcomes including internalization and externalizing symptoms, post-traumatic stress, anxiety, depression, and disruptive behavior. In addition, cognitive impairments were reported among children who experienced trauma, including deficiencies in executive functioning and maintaining attention (Oehlberg, 2008).

Overstreet and Mathews (2011) further suggested a correlation between low academic achievement and students who have experienced trauma, such as the development of mental health symptoms due to trauma experiences, which impede academic achievement. Blodgett et al. (n.d.) studied K-6 students in Spokane, Washington, using ten adverse event exposures and controlled for the variables of special education status, students' grade level, race, free and reduced meals, teachers, school building, and gender. While the sample in their study was small, their outcomes established the beginning of research on the limited number of studies in TIC in schools. The authors' results suggested that students who experience adverse childhood

experiences (ACES) were significantly at risk for academic and chronic health problems compared to students with no known ACES exposure, and that the more ACES a child experiences, the more likely he or she is to experience school and health issues. The present study supported the target school district's initiative to provide TIC-PD for staff given the connection of the number of ACES to learning and behavior issues (Table 2).

Table 2

Odds of Students who Experience ACEs Compared to Students with no ACE Exposure

Number of ACES	Academic failure	Severe attendance problems	Severe school behavior concerns	Frequent reported poor health
Once ACE	1.5	2.1	2.2.	2.3
Two ACES	2.5	2.9	4.2	2.4
Three or more ACES	2.9	4.9	6.0	3.9

Research of K-12 education has not fully addressed the learning and behavioral problems that result from trauma. When trauma-related learning and behavior issues are not adequately addressed, achievement goals or the full potential of the student is not met (Oehlberg, 2008). Furthermore, schools have not entirely integrated TIC into their systems when compared to the juvenile justice system, child welfare, and substance abuse treatment systems. However, schools are ideally positioned to develop trauma-informed care and to be an "integral part of a much-needed community-wide solution," which supports student recovery, and in which students meet academic potential and develop into fully functioning adults (Martin et al., 2017, p. 965). By addressing trauma issues in schools, students have an opportunity to develop resiliency and to overcome potential consequences of adverse childhood experiences (Phifer & Hull, 2016).

Positive student-teacher relationships. Student-teacher relationships are foundational to all aspects of schools and are a central aspect of the connection that

students feel with their school, and they influences academic outcomes. Classrooms are learning environments in which many meaningful interpersonal relationships are cultivated. Students who receive support from teachers have been found to demonstrate increased commitment to school and motivation, in addition to an elevation of social and emotional wellbeing (Longobardi, Prino, Marengo, & Settanni, 2016).

Tosolt (2008) classified caring teacher behavior into three areas: "interpersonal caring, academic caring, and fairness caring" (p. 20). The author described student perception of caring as familiar (i.e. relational interactions with teachers, like family relationships), which includes friendly embraces, warm greetings, and joking. In the study, academic caring motivated students to continue putting forth effort into their academic work. Fairness caring was described as actions that treat all students fairly, such as understanding and motivating students to master content regardless of ability level. Graff (2012) discussed research that supports student-teacher relationships as an essential variable connected to an increase in student achievement. The author wrote that while teachers may put forth maximum effort to communicate care, if students do not perceive teachers as caring, then the attempt is null and void.

Pervasive organizational implementation of TIC is becoming prevalent, but there is limited research to support its impact (Hales et al., 2017). McHatton, Farmer, Bessette, Shaunessy-Dedrick, and Ray (2014) suggested that positive teacher-student relationships, with a foundation of care as determined by the student along with high expectations, are more likely to result in higher academic achievement. Positive teacher-student relationships are rooted in care, as perceived by the student, thus supporting the need for obtaining student input when examining the environment.

When schools and the community are unsafe and unpredictable, students are at a higher risk for academic failure (Cohen, Berliner, & Mannarino, 2010; Urban, Lewin-Bizan, & Lerner, 2009). Adult social support was found to be a protective factor connected to academic outcomes (Werner & Johnson, 2004). Positive relationships with teachers and other stakeholders (e.g. parents, community members) were important protective factors for students who were at risk (Urban et al., 2009). Furthermore, youth behavior is shaped by supportive relationships and high expectations for behavior in various school settings (Hopson, Schiller, & Lawson, 2014). Positive student-teacher relationships and supportive adult relationships may be a protective factor associated with positive academic outcomes for students, especially for students at risk of academic failure

Defining Trauma

The United States Department of Health and Human Services' department of Substance Abuse and Mental Health Service Administration (SAMHSA) developed the following trauma concept:

> Individual trauma results from an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or life-threatening and that has lasting adverse effects on the individual's functioning and mental, physical, social, emotional, or spiritual wellbeing. (SAMHSA, 2014, para. 4)

When youth have witnessed or experienced a trauma, the experience may impact the person's behavior and mental health (Ford & Blaustein, 2013). The event may be an

acute one-time occurrence or a chronic repetitive occurrence, and the event can be real or perceived as real.

Situations can become traumatic depending on how the person perceives the event and whether the situation was perceived as dangerous (van der Kolk, 2014). When a situation is perceived as dangerous, it may be considered trauma. Acute trauma is a single event and can be traumatic, such as a car accident or learning that a close family relative was diagnosed with a life-threatening disease (van der Kolk, 2014). Chronic trauma occurs repeatedly over time such, such as domestic violence or abuse (van der Kolk, 2014). Complex trauma includes various and multiple traumatic events and is often invasive and interpersonal. Complex trauma typically occurs early in life and impairs the child's development and sense of self (van der Kolk, 2014).

Examples of complex stress include ongoing sexual abuse, physical abuse, and witnessing domestic violence. If complex trauma occurs with a caregiver, the process of developing a secure relationship is interrupted. If sufficient time to process the event or social support is not provided to help buffer the event, then healing cannot ensue. As a result, stress reactions from the adverse experience can accumulate and cause developmental hardships (van der Kolk, 2014). The trauma occurrence triggers a biological response and stress response with possible consequences associated with toxic stress.

Basic Brain Structure and Function

To understand the impact of trauma on learning and behavior, a fundamental understanding of the anatomy and function of the brain is essential. The highest priority of the brain is to guarantee continued existence through collaboration and coordination

(van der Kolk, 2014). When trauma occurs, it can interfere with the brain's ability to carry out the task of survival. To survive, the brain must be able to do the following: Generate internal signals that register what our bodies need, such as food, rest, protection, sex, and shelter. Create a map of the world to point us where to go to satisfy those needs. Generate the necessary energy and actions to get us there. Warn us of dangers and opportunities along the way. Adjust our actions based on the requirement of the moment. (van der Kolk, 2014, p. 55)

For the purpose of the current study, three parts of the brain will be discussed: the brainstem, the limbic system, and the cortex, as van der Kolk (2014) presented. The brain develops from the bottom up – that is, beginning from brain stem. The "reptilian brain" within the brain stem is responsible for all involuntary functions. For example, the functions of a newborn baby to "eat, sleep, wake, cry, breathe, feel temperature, hunger, wetness and pain; and rid the body of toxins by urinating and defecating" (van der Kolk, 2014, p. 56). The hypothalamus sits above the brain stem and together the two areas of the brain manage the energy levels in the body and coordinate the functioning of the heart and lungs, endocrine, and immune systems. The brain stem and hypothalamus thus work together to guarantee the "life-sustaining systems are internally balanced known as homeostasis" (van der Kolk, 2014, p. 56).

The limbic system is above the reptilian brain and, after birth, develops during the first six years of life. The limbic system is the center for emotions and scans and screens one's environment for danger to discern what is "scary or pleasurable" (van der Kolk, 2014, p. 56) and decides what is or is not important for survival purposes. The limbic system is the "central command" (van der Kolk, 2014, p. 56) office for managing life's

complexities. While the limbic system is shaped by environmental experiences, personality and genetics also influence a person's disposition. However, a baby's experiences shape the "emotional and perceptual map" (van der Kolk, 2014, p. 56) of the world through the developmental process. The limbic system and reptilian brain make up the "emotional brain" (van der Kolk, 2014, p. 57), that is, the center of the central nervous system. The central nervous system's function is to sense hazardous or unique experiences. When the central nervous system is stimulated by a perceived threat, it releases hormones that interfere with whatever a person is undertaking and causes physical or mental movement in a different direction. This movement is called "fight or flight response" (van der Kolk, 2014, p. 57). When a fight or flight response is activated, logical and conscious thinking is not possible until the perceived threat is over (van der Kolk, 2014).

The upper and outer parts of the brain, the cortex, is the last area of the brain to develop and is the thinking part of the brain. The cortex manages large amounts of information and finds meaning in information in order to plan, reflect, and predict consequences. The cortex also houses creativity and helps to make choices. The various regions of the brain work together, and when the emotional area of the brain is stimulated, the cortex, which is the rational or thinking part of the brain, cannot function at capacity or goes "offline in response to threat" (van der Kolk, 2014, p. 59). There are various degrees of stimulation to the limbic system, and the more intense the stimulation, the more difficult it is for the cortex to function or to think and reason (van der Kolk, 2014). Figure 1 illustrates the location of the brain stem, limbic system, and prefrontal cortex in the brain.

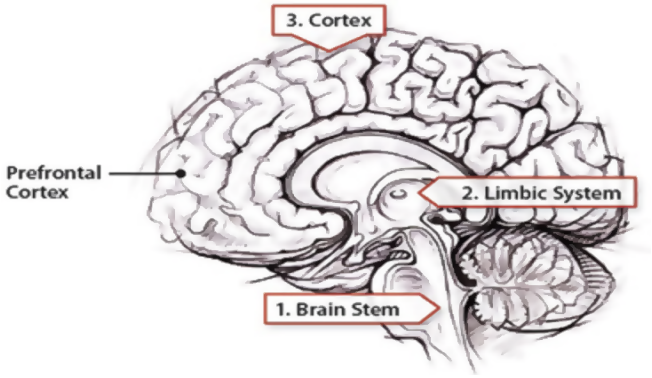

Figure 1. Thoughtful learning image of human brain.

Trauma and Adolescent Development

Students who have experienced trauma may experience interruptions to healthy child development (Blaustein & Kinniburgh, 2010). The focus of the present research is on the middle school population; therefore, normal and trauma-impacted adolescent development was explored.

Blaustein and Kinniburgh (2010) provided a summary of normal adolescent development. Adolescence is a time of fast changes including the development of "cognitive abilities, social skills and perspective- taking abilities mature, and physiological development changes rapidly" (p. 15). The changes must be integrated into youths' lives in a worthwhile way. Additionally, during adolescence, a sense of self is established while simultaneously separating and developing one's individuality from the family of origin. The youth view the future as real and significant, and as cognition and neural pathways mature adolescents can connect their actions to subsequent consequences (Blaustein & Kinniburgh, 2010).

Blaustein and Kinniburgh (2010) described adolescent development that is impacted by trauma. The adolescent may exhibit high-risk behavior, lack skills to

regulate their own experiences, disconnect from relationships, or have oppressive interactions with others. From their early traumatic experiences, children feel different and broken, which may lead to painful self-consciousness and establishment of a negative self-identity. Healthy youth develop a healthy sense of self, but when a teen experiences trauma exposure, a sense of self is not fully developed. Therefore, it is challenging for youth to separate and to create individuality from their family of origin, which may lead to dissociative coping, depersonalization, and de-realization. The disconnect and feelings of separation from self and environment may result in diverting goals, opinions, and values. The adolescent may also experience negative peer connections and be swayed by peer influence or may isolate and withdraw from peer interaction. These individuals are also at risk for adult or peer victimization.

Bowlby (1969) developed the conceptual framework of attachment and asserted that infants have a biological predisposition to form a primary attachment bond. Early attachment relationships provide the framework for all "physical, psychological, social and moral development" (Bloom & Farragher, 2013, p. 69). Creating a secure attachment is based on the interaction with and responsiveness of caregivers. As the caregiver responds and interacts with the child, the more profound the attachment and, as a result, the higher the chances are that the child will acquire healthy coping mechanisms for interacting with the environment (van der Kolk, 2014). Children who experience secure attachments have an internal sense that their caretakers and environment are safe, and while disputes may occur in relationships there is a recovery from misunderstandings (Craig, 2016).

Children who do not develop a secure attachment as a result of early trauma lack

feelings of security and have trouble navigating social situations and the nuances of relationships (Craig, 2016). The youth may react to peer insubstantial interactions, which is an indication of past experiences with adult disapproval and brings up feelings of shame (Craig, 2016). When children experience abuse of neglect, healthy secure attachment may not occur or be reversed and as result in feeling unsafe and lack of trust with adults (Bath, 2008; van der Kolk, 2014).

Providing physically and emotionally safe environments, in which students experience appropriate attachment, is an important need for children who have experienced trauma (Bath, 2008). According to the author, a feeling of safety depends on connection, and when connection occurs positive relationships can develop (Bath, 2008). Positive relationships promote healing and growth after experiencing ACES as trauma undermines trust, which is a barrier to positive relationships (Bath, 2008). By providing TIC implementation, educators may understand the *why* of students' behaviors, to then interact and respond in ways that help students to feel safe and attached to the staff. As a result, students may develop positive relationships that promote healing and resilience (Bath, 2008) Furthermore, positive student-teacher relationships support students and are an important component to an increase in student achievement (Graff, 2012).

Stress Continuum and Stress Activation System

The brain is wired for survival and is responsible for detecting hazards for survival and orchestrating a response to event stimuli (van der Kolk, 2014). When an event occurs, information enters the limbic region of the brain, specifically the thalamus. Through the senses, the thalamus then takes the information and from the perception of the event, creates an "integrated, coherent experience of 'this is what is happening to

me’” (van der Kolk, 2014, p. 60). From the perception of the experience, the information is then passed to two areas of the brain: the amygdala, which lies in the limbic system, and the frontal lobe, which is part of the cortex (van der Kolk, 2014). When traveling to the amygdala and frontal lobe, the information will reach the limbic center before reaching the frontal lobe.

When information reaches the amygdala, with the assistance of the hippocampus, the amygdala and hippocampus screen the input, which then aligns past experiences to the new information to determine if the new information is a threat to survival. If the event is perceived as a threat, a message is sent to the hypothalamus and the brain stem, which activates the "stress-hormone system" (van der Kolk, 2014, p. 60) for the autonomic nervous system to prepare a full body reaction (van der Kolk, 2014). The input arrives in the thalamus with information received from the amygdala, and the body may react. The amygdala responds before the frontal lobes can respond to the event with logic and reasoning.

When the amygdala perceives danger, whether real or perceived, cortisol and adrenaline hormones are released, which initiates a fight-or-flight response (van der Kolk, 2014). The release of hormones increases "heart rate, blood pressure, and rate of breathing, preparing us to fight back or run away" (van der Kolk, 2014, p. 61). When the perceived danger has passed, the body returns to homeostasis. However, when recovery does not happen and the body is ready to defend itself from the perceived threat, people may feel "agitated and aroused" (van der Kolk, 2014, p. 61).

Part of the human experience includes suffering and the stress that accompanies the suffering (van der Kolk, 2014). Bloom and Farragher (2013) discussed the stress

continuum, which progresses from positive stress to tolerable stress to toxic stress. Positive stress is a short-lived physiological response that produces growth and change and is an important part of healthy development. Tolerable stress also provokes a physiological response and may interfere with functioning, particularly the brain. However, with help and reinforcement to work through the situation, damage is prevented. Toxic stress occurs when the stress activation system is engaged from ongoing and concentrated stress. Toxic stress can change the way a child's brain develops and thus may have long-term consequences. Bloom and Farragher (2013) discussed that traumatic stress occurs when "a person experiences an event that is overwhelming, usually life threatening, or horrifying in the face of helplessness" (p. 10).

When students experience traumas, they may perceive danger and the stress activation system is engaged. One of the ways in which students may perceive danger in schools is by how the adults interact with them. If interactions cause a student to have a stress reaction because the student does not perceive safety, then the student can be retraumatized, which may, in turn, impact learning and behavior. Understanding the basic brain functions and the stress response system helps adults who care for students to understand students' inappropriate behaviors so that they do not re-traumatize students through inappropriate interactions and responses (Chafouleas et al., 2016; SAMHSA, 2014).

Trauma and Education

The trauma-informed approach is built on the results of a retrospective study completed by the Kaiser Permanente Health Center in San Diego, California and the Centers for Disease Control. Felitti et al. (1998) completed the landmark longitudinal

study that linked negative adult health and wellbeing to ACES and correlated the prevalence of childhood trauma and long-term impact with later adult health and well-being. The researchers also reported a powerful dose response between the number of ACES and later health and well-being. When a child experiences one or more traumas, it is identified as ACES. Numerous authors (Bethell et al., 2014; Felitti et al., 1998; Perry, 200; Souers & Hall, 2016; Staten, 2013) also suggested various types of trauma exposure/categories including: emotional (e.g., threats and/or humiliation); physical, verbal, or sexual abuse; neglect; and household dysfunction (e.g., alcoholism, drug use, domestic violence, imprisoned family members, chronically mentally ill or suicidal family members, and not being raised by both biological parents).

Additional forms of trauma were proposed to include natural disasters, feeling unloved or not supported, lack of sufficient basic care, having separated or divorced parents, exposure to violence (e.g. community violence, war, terrorism, political violence, school violence), death of parent, social inequality, severe accident, sickness or medical action, bullying, system-induced trauma and re-traumatization, and homelessness.

When children experience chronic stress as a result of family or community violence or ACES, then the event(s) may have an impact on brain development and thus negatively affect learning and behaviors (Oehlberg, 2008). The prevalence of ACES is significant in the student population. Walker and Walsh (2015) reported that "48% of children ages 0-17 years in the United States experience at least one ACE and 23% experience two or more" (p. 68). Furthermore, Stevens (2012) reported that in the state of Washington, 13 out of 30 students in a classroom experience three or more ACES. Perry and Daniels (2016) subsequently suggested that if 13 out of 30 students

experienced three or more ACES, then it can be assumed that students in every classroom have similar experiences. The CDC's National Center for Health Statistics reported findings from a 2011-2012 national representative sample of adolescents aged 12-17 regarding children's well-being and ACES. It found that 52.1% of the national population and 49.2% of the Ohio population experienced no adverse family experiences. Nationwide 25.3% of the population, and 25.1% in Ohio experienced one adverse family experience, and nationwide 22.6% of the population and 25.8% of the Ohio population experienced two or more adverse family experiences (see Table 3; National Survey of Children's Health, n.d.).

Table 3

Percentage of Adverse Family Experiences Comparing Nationwide to the State of Ohio

	No adverse family experiences	One adverse family experience	Two or more family experiences
Nationwide	*52.1%*	*25.3%*	*22.6%*
Ohio	*49.2%*	*25.1%*	*25.8%*

Impact of Trauma on Children's Health

Blodgett and Lanigan (2018) noted that the original ACES and subsequent multitudinous studies provided data on the effect of ACES on adult physical and mental health, although there is limited research on the effects of ACES exposure on children. From the original ACES landmark study, Bethell et al. (2014) explored data from a 2011-2012 National Survey of Children's Health to identify incidence of ACES to connections between factors that affect a child's development and lifetime health. The National Survey of Children's Health garnered data from telephone interviews in a sample of 95,677 children ages 0-17 in a nationally representative survey, utilizing an adjustment of the original nine ACES categories to provide high quality data for various areas and

cross-sections of children's lives. Bethell et al. (2014) subsequently suggested that a relationship between pre-existing and ongoing health conditions was connected to ACES and that, if children had exposure to ACES, they were then more likely to experience negative health conditions. The authors also suggested a dose response similar to the original ACES study, meaning that the more ACES a person is exposed to, the more negative health conditions they have (Felitti et al., 1998). The children with two or more ACES were more likely to have specific medical needs (Bethell et al., 2014), including increased risks of obesity (Burke, Hellman, Scott, Weems, & Carrion, 2011).

Impact on academic performance. Bethell et al. (2014) reported lower rates of school engagement and increased risk of repeating a grade when children are exposed to adverse experiences. Specifically, the authors reported that students are "2.67 times more likely to repeat a grade in school" (Bethell et al., 2014, p. 2111) compared to children who do not have exposure to trauma. Blodgett and Lanigan (2018) expounded on the Bethell et al. (2014) investigation of ACE exposure and school performance. These authors reported that 75% of children reported post-traumatic responses of "affect dysregulation, attention/concentration, negative self-image, impulse control and aggression/risk-taking" (p. 6) after being exposed to a mean of 2.9 traumas. Using a K-6 student population, the researchers noted a positive relationship between ACES and higher rates of "academic failure, attendance problems, and school behavior" (p. 16).

As the number of ACEs increased, the percentage of children with negative academic experiences increased. Hunt, Slack, and Berger (2017) suggested that there is a greater chance of being diagnosed with Attention Deficit Disorder and expressing higher levels of externalizing and internalizing behaviors with children who are exposed to

ACES compared to children without exposure to ACES. When students experience exposure to trauma, the brain's stress activation system may be activated, and their behavior can be negatively affected, and then school systems are obligated to manage the activation as the experience affects learning and behavior (Perry & Daniels, 2016). Trauma exposure can lead to low academic performance (Beers & De Bellis, 2002; Oehlberg, 2008) and has long-term effects on child emotional well-being (Walker & Walsh, 2015) and later adult health and wellbeing (Felitti et al., 1998).

When educators understand the impact of trauma on children's behavior and the stress response system (i.e. fight, flight, freeze) they can respond appropriately (Souers & Hall, 2016). Adults may be able to teach students how to express or utilize healthy coping skills. As students learn and employ healthy coping skills, there may be fewer distractions/behaviors (i.e. fight, flight, or freeze) in their learning environment. Souers and Hall (2016) provided a table of "What flight, fight, or freeze looks like in a classroom" (p. 29) as depicted in Table 4.

Table 4

Student Display of Fight, Flight or Freeze in the Classroom

Flight	Fight	Freeze
Withdrawing	Acting out	Exhibiting numbness
Fleeing	Behaving aggressively	Refusing to answer
Skipping class	Acting silly	Refusing to get needs met
Daydreaming	Exhibiting defiance	Giving a blank look
Seeming to sleep	Being hyperactive	Feeling unable to move or act
Avoiding others	Arguing	
Hiding or wandering		
Becoming disengaged		

Poverty

Redmond (2014) noted negative social and emotional developmental consequences of children and youth who live in poverty. The historical definition of poverty is based on inability to adequately control financial resources, and as a result there is an experience of a lack of access to resources for a child's wellbeing. Expanded definitions of poverty included a lack of resources and materials connected to child well-being. The discussion of poverty also includes considerations of the impact of poverty on human development and social relations (Redmond, 2014). The emphasis on capabilities, opportunities, and exclusions (reduced possibilities for participation, and discrimination) from a human development perspective further expands the discussion of poverty.

One of the newer developments in poverty discussions is social exclusion, which is the processes in society that lead some people to be excluded from a range of societal practices, pursuits, or environments. People or organizations may or may not involve

others in community or socially normal events because of their financially deficient status or other reasons such as geographic location, mental health status, disability, or race (Redmond, 2014). Social relation describes individuals' positions within a social hierarchy, where they live in different communities, and other societal and economic characteristics (Redmond, 2014).

Poverty and Trauma

Poverty is associated with childhood trauma (Bethell et al., 2014; Child Trends, 2016). More than 20% of children live with families with income below the poverty line and are at risk for a wide range of problems including experiencing trauma and abuse, violent crime, divorce, low quality childcare, and poor nutrition (Child Trends, 2016). Children living in poverty, or who are close to living in poverty, are more than twice as likely as children not living in poverty to experience three or more adverse experiences (Bethell et al., 2014; Child Trends, 2013). Shanahan, Copeland, Costello, and Angold (2008) noted a relationship between traumatized youth from low socioeconomic status families and internalizing and externalizing behavior. Blodgett and Lanigan (2018) discussed an association between poverty, inadequate school achievement, and exposure to childhood trauma. Burke et al. (2011) also reported a relationship between low-income children in an urban setting who had exposure to four or more ACES and an increased risk for learning and behavior issues. Figure 2 was reprinted from Child Trends (2016) and illustrates the number of ACES experienced by poverty level.

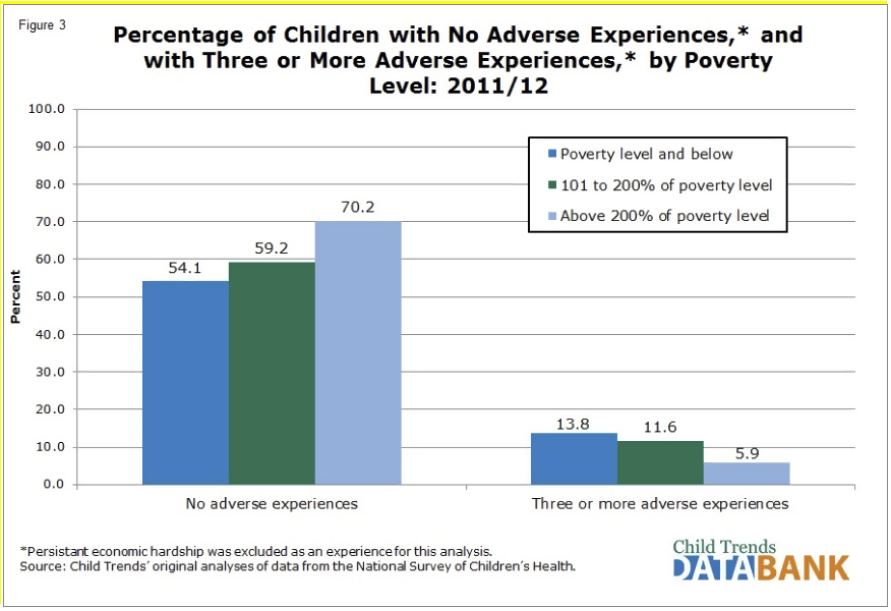

Figure 2. Child Trends (2013) percentage of adverse childhood experiences and poverty

Note. Reprinted from "Child Trends" (2013, July). Retrieved from https://www.childtrends.org

School Climate

Given the research on the prevalence of students who experience ACES and the amount of time that students spend in school, reviewing the literature on school climate is a necessary component of this research. School climate is a multidimensional construct that has been acknowledged to positively impact academic students' achievement, behaviors, and dropout rates (Wang & Degol, 2016). Components of school climate include social and psychological influences on students and educators (Hemmelgarn, Glisson, & James, 2006). Lenzi et al. (2017) provided a latitudinous definition of school climate, which "includes the physical and social features of the school context and is represented by the aggregation of students', teachers', and other staff members' perceptions and behaviors" (p. 537).

The National School Climate Center (2018) defined school climate as the "quality and school character of school life" (para. 1). Characteristics of a positive school climate include the norms, values, and expectations that support feelings of social, emotional, and physical safety, relationships, social support, engagement, and respect for diversity. Students, families, and educators can work together to develop a shared school vision (school improvement process), and educators may model and nurture attitudes that empathize the benefits and satisfaction gained from learning and from care for the physical environment (National School Climate Center, 2018; Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2013).

Hopson et al. (2014) reported that students who have positive interpersonal relationships with adults and other students, along with structure and predictability, experience feelings of safety. As a result, these children feel connected to their school, avoid misbehavior, and have better grades. Thapa et al. (2013) maintained that school climate has an important positive impact on students' mental and physical health, and a positive school climate results in "cooperative learning, group cohesion, respect, and mutual trust" (p. 365). Wang and Degol (2016) reported that there was not a universal definition of *school climate*, although the authors attempted to conceptualize the term into four quality school climate categories: academic, safety, community, and institutional environment.

Teacher training, curriculum, instruction, and professional development produces safe academic climates. Physical and emotional safety in the school, along with dependable and just discipline, produces a safe school climate. The quality of interpersonal relationships results in community, and the organizational design of the

school produces institutional environment. The combination of the four categories impacts student development. Overall, a positive school climate may impact students' mental and physical health, and structure and predictability may help students to feel safer while promoting their learning capacity.

Discipline

Discipline that is consistent and fair is integral for building a positive school climate, and as TIC-PD is administered in schools it may positively impact school climate because discipline is an important component when creating trauma-informed school cultures. The time during middle school impacts students' future educational performance. Therefore, it is justified to keep students in school, rather than removing them from school with suspensions, to help them to reach their highest level of development. While there is no absolute proof that suspending a student creates a safer school, school suspensions have increased in recent years. The introduction of zero tolerance policy to address student misconduct has been one of the reasons for the increase in school suspensions, although suspensions during this time may have serious negative future consequences (Losen & Skiba, 2010).

Punitive discipline policies, such as zero tolerance, have increased substantially, and suspension and expulsions have not resulted in improved student behaviors or in creating more secure environments (Losen & Skiba, 2010). When disciplined students are removed from the learning environment, their opportunity to learn is extinguished (Balfanz & Byrnes, 2012; Losen & Skiba, 2010). The purpose of suspension is to dissuade inappropriate behavior, to maintain order, and to help provide a more secure environment (Finn & Servoss, 2014). However, in cases in which danger is not

imminent, suspension does not decrease additional unacceptable behaviors, but rather fosters them. Furthermore, in-school suspensions may be a gateway to out-of-school suspensions (Finn & Servoss, 2014).

School policies that encourage harsh discipline, such as suspensions that subsequently lead to students being out of class, have been referred to as the *school-to-prison pipeline* (Mizel et al., 2016). The American Psychological Association (APA) Zero Tolerance Task Force (2008) stated that the harm from punitive discipline practices is in opposition to child development theory, forms a lapse in education, does not change negative behavior into positive behavior, and may increase the probability of involvement in the criminal justice system. Additionally, there are no indications that suspensions or expulsions reduce behavioral issues or that they have a positive impact on school climate **(**APA Zero Tolerance Task Force, 2008).

The use of punitive discipline to address students' negative behaviors may have long-term consequences (Balfanz, 2003; Losen & Skiba, 2010). Researchers have studied the impacts and levels of suspensions and discipline disparities regarding gender and race by reviewing imprisoned ninth grade students' final eighth grade academic records. Specifically, attendance rates, class failure, and reading level were examined and results show that students' school data could predict future behaviors and consequences (Balfanz, 2003).

In 2006, the average middle school suspension rate was 11.2%. When discipline data from a study of 18 urban school districts were disaggregated by race and gender, the out-of-school suspension rate was 22.2%, which was disproportionately higher regarding subgroup suspension rates. Losen and Skiba (2010) also noted substantial disparities by

racial group when comparing by race and gender in that African American and Latino students had higher suspension rates than Whites, while Asian American students had lower rates than Whites (Mizel et al., 2016). Additionally, male students are suspended at higher rates than female students (Finn & Servoss, 2014; Mizel et al., 2016). When controlling for race and gender, males in each racial group were at increased risk for suspension (Finn & Servoss, 2014; Losen & Martinez, 2013; Losen & Skiba, 2010).

Attendance

Attending school is important for students to gain necessary academic skills and experiences to be successful. School attendance researchers have distinguished and explored the overlap between truancy and school refusal. For example, Havik, Bru, and Ertesvåg (2015) reported four types of missing school: somatic symptoms, health reasons, truancy, and school refusal. The term *school refusal* is given to explain students not wanting to attend school (Kearney & Albano, 2004). School refusal is linked to school-related experiences that cause psychological and peer unease. These students choose not to come to school as a way to diminish psychological distress associated with attending school. Truancy is further linked with positive out-of-school reinforcements, such as parent attention, reducing feelings of unease, and seeking gratifying activities (Kearney & Silverman, 1990). Missing more than five days in a school year is considered irregular attendance (Balfanz & Byrnes, 2012).

Not attending school may also impact students' current and future academic, social, and career experiences (Havik et al., 2015; Kearney & Graczyk, 2014). As a result of school absences, there may be an immediate negative impact on school experiences, grades, and future school outcomes, such as not completing school, social

development, career barriers, and mental health issues (Havik et al., 2015; Kearney & Graczyk, 2014). School refusal might also be rooted in greater family and societal problems such as mental health disorders (Kearney & Albano, 2004).

Resilience

According to The National Child Traumatic Stress Network ([NCTSN]; 2016), traumatic events, whether from abuse or natural disasters, can cause children to have disturbing and persistent emotions that impact their day-to-day life activities, thereby negatively affecting the process of maturing into healthy adults and capacity to function. Children can have the ability to overcome a traumatic event, depending on the severity of the event and the child's strength to adjust and recover following the event.

Staten (2013) discussed that ACES research has prompted those who work with children to perceive children differently by moving inquiry from "what is wrong with you?" to "what has happened to you?" (p. 160). Staten reported that children who experience two or more ACES are less likely to demonstrate resilience and are also less likely to live in a protective environment or a safe and supportive neighborhood. The NCTSN (2016) defined *resilience* as "the ability of a child to recover and show early and effective adaptation following a potentially traumatic event" (para. 1).

Newman and Dantzler (2015) described developmental resilience as a "positive process through which some children who experienced stress and hardships develop competency and success in spite of experiencing adverse risky situations" (p. 80). Lee (2014) defined resilience as a group of internal traits that afford humans with the power and determination to move forward through challenges. Rose and Steen (2014), Lee (2014), and Benard (2004) stated that resilience occurs when students become successful,

even when obstacles are present. Traits of resilient children include having proficient social skills, being able to solve problems, being independent, and being motivated to prioritize to meet goals.

Lee (2014) suggested that at-risk students who have positive and supportive adult relationships are better able to overcome adversity. Mentoring and positive adult relationships are protective factors that may help youth to overcome adversity and increase their success later in adulthood. When a child has an adverse experience, he or she demonstrates resilience by responding to stress with minimal difficulty or minimal impact on daily functioning. The child will have a temporary decline in functioning after the adverse experience but then resumes their typical level of functioning (Lee, 2014).

Walker and Walsh (2015) and Bethell et al. (2014) discussed the pivotal role of schools in providing sanctuary and by building resilience when students experience ACES. Bethell et al. (2014) suggested that building resilience can improve the destructive consequences of adverse life experiences in children ages 6-17. According to the authors, schools initially need knowledge of the signs and symptoms of traumatized children and should then follow up by connecting students and families to necessary resources that help heal from the trauma and help to develop resilience. The researchers found higher rates of school engagement when building resilience with children.

According to The NCTSN (2016), factors that augment resiliency include support from social networks within the home, educational environments, and neighborhoods. Resiliency resources can act as buffers for negative consequences that result from the impact of trauma. Resources include having a safe community and home environment, having a sense of self-worth, having a belief that the child will be successful in all areas

of life, having meaning in life, having a connection with others, having and developing skills (such as hobbies and extra-curricular activities), and having the ability to cope with various life situations.

Resiliency can be fostered in children who have support from primary caregivers, schools, and community. A positive school climate is an important component of developing student resilience and involves all stakeholders in a school. A positive school climate has a positive impact on students both physically and mentally and helps them to feel safe.

The strength of the child's relationship with his or her primary caregiver relationship is instrumental to building resiliency and ensuring wellbeing and security after a traumatic event. In addition to stimulating the child to grow cognitively, schools provide a positive social environment, provide a safe environment, and foster connectedness through the support of school staff, such as teachers, school counselors, social workers, school resource officers, and classified staff. Care is an important component of developing positive relationships with students.

Care

Horace Mann stated "Teachers teach because they care. Teaching young people is what they do best. It requires long hours, patience, and care" (National Education Association, 2018, para. 1). Typically, in education when care is discussed, the focus is on teacher caring. However, classified staff and certified staff, in addition to teachers, also require consideration. While there is some research on student-teacher relationships, there is a lack of research that assessed all classified and certified staff regarding students' perception of adults who care for them.

In the literature review on care, many scholars offer discussion around the intangible concept of care. While Noddings (1992) asserted that humans care for many things (i.e. animals, plants, things, ideas, objects or causes), for the purpose of the present study, the concept of care is the relationship between human beings. In literature, care has been described in a wide variety of approaches and actions and as a combination of the terms, "honesty and patience, trust and respect, humility and courage, experience of others, encouragement, and devotion" (Alder, 2002, p. 243). To help conceptualize the information on care, this review will cover topics such as characteristics of care, caring relationships, care from a multicultural perspective, ethics of care and theories of care.

The purpose of care is to help another grow or progress, and care is a special type of relationship between people which includes knowing, motivational displacement, and engrossment (Mayeroff, 1971; Noddings, 2005). *Knowing* is recognizing and understanding a person and responding appropriately for what is beneficial to growth (Mayeroff, 1971). While a person may believe that they care about another person or have the intention to care, such a case is not a warranty of care.

Motivational displacement is the concern for the welfare, protection, or enhancement of the person being cared for (Noddings, 2005). *Engrossment* occurs with consideration (really hearing, seeing, or feeling what the person conveys) and commitment to the growth to the person receiving care (Noddings, 2005). *Caring in a relationship* includes unconditional perspective taking such as having a mindset of openness, attention, connection, and sacrifice with a level of commitment (Beck, 1994; Noddings, 2005). As a result of caring relationships, if authentic care responses have occurred, then trust is experienced. Additional benefits of caring in a relationship include

"not feeling alone, feeling understood, feeling attached, accepting being helped, genuine interactions, and feeling safe to open up" (Beck, 1994, p. 17). Educators need to value the relational aspect of their positions, and to acknowledge and appreciate the opportunity to be responsive to students' needs (Noddings,1982).

Noddings (2005) outlined four components of moral education, which include modeling, confirmation, dialog, and practice. These four components provide students with caring behaviors by teachers, which, in turn, model caring interactions between students and adults. Additionally, dialogue among individuals helps to build connection and understanding. Dialog is the exchange of conversation that involves mutual discovery, understanding, empathy, and appreciation (Noddings, 2005). As a result of appropriate dialog, positive relationships are developed, adults affirm that students are doing their personal best, and students are raised to a higher level of self (Noddings, 2005).

Alder (2002) and Noddings (2005) connected personalized leadership to caring student teacher relationships. *Personalized leadership* is defined as caring reciprocity between adult and student, which helps the student to learn from their behaviors, to take responsibility for choices, and to create new beginnings. Adults who provide care to a child, such as caseworkers, teachers, and other staff, create student relationships and support systems (Purvis, Cross, & Lyons, 2007). Purvis et al. (2007) also indicated the importance of children having a caring relationship with at least one adult and for one adult to care about the child. Continuity is an important aspect of care in schools. Developing accommodations in specific areas of care and providing continuity of teachers, students, and curriculum are all important aspects of care in schools (Noddings,

2005).

In a qualitative study, Noblit (1993) wrote about the relationship between creating caring cultures and the adult control in respect to the moral authority. In classrooms, caring and trusting relationships develop from having teachers who are engaged and empathic. As a result, when teachers endeavor to recognize and respect students, they increase the prospect of learning and developing positive social-emotional development. Noblit, Rogers, and McCadden (1995) suggested the importance of creating caring cultures in schools and contended that caring is foundational to all actions in schools including academics, discipline, and policy creation. To fully understand care, one must look at the relationships between students and teachers.

Student perspective of care. It is fundamental to understand care from the perspective of the student. In reviewing research on care from the student perspective, a discussion on the characteristics of care follows. Tosolt (2008) reported students benefit from feeling physically and emotionally safe when they perceive that their teachers care for them. Cooper and Miness (2014) more recently reported that students' perceptions of connection and belonging are affected by the relationship that they have with teachers. Teachers have an instrumental role in student's psychological experiences. In school, students spend much of their time with teachers; however, they also have contact with other adults such as classified staff in schools that provide supervision, and they also interact in various capacities with other students. These relationships with other staff may also provide caring relationships and support.

Wentzel (1997) discussed the limited research on cultures and minority student perception of care and contended that the negative consequences of social injustice in

education may be addressed by caring teachers. Thompson (1998) further posited that colorblindness and the whiteness in theories of care impact political and cultural assumptions around caring. The author recommended that theories of care should be expounded to include “race, class, gender, cultural and other differences” (p. 528). Thompson (2003) stated that the ways in which people react with care might be based on that individual’s culture and situation.

Bosworth (1995) developed a definition and themes of care after completing interviews and observations with middle school students. In that study students reported that care occurs when two people are involved in an activity that involves care, which was described as the exchange of action between a giver and a receiver who can switch roles at any time during the connection. Bosworth (1995) also identified five themes of care that included "helping, feelings, relationships, personal values, and activities" (p. 687).

From the student perspective, *helping* was similar to the concept of care, and *feelings* was described as having empathy and noticing how the other feels (Bosworth, 1995; Noblit et al., 1995). *Relationships* with others was a way in which students defined care. Furthermore, "kindness, respect, and faithfulness" (p. 688) were three *personal values* that were noted to be related to care, while respect included being tolerant and considerate of others (Bosworth, 1995; Wentzel, 1997). The theme of faithfulness included having close and honoring connections. *Activities* included "spending time with someone, sharing, and listening" (p. 688), which allows for getting to know to someone better. Bosworth (1995) noted that middle school students provided high-quality

responses to the inquiry of the complex concept of care and that they demonstrated an understanding of care.

Because of the demands of the school day, Bosworth (1995) noted that there is often minimal time in the school day to demonstrate caring behavior with students. Regarding student perceptions of teacher caring in the classroom or teaching practice, Bosworth (1995) offered three themes: classroom practices, non-classroom activities, and personal characteristics. Classroom practice was described as helping with academic work and was a compelling indicator of teacher care. Valuing individuality included noticing changes in behavior and recognizing the students as individuals from a learning perspective. Showing respect can be demonstrated by students raising their hands, teachers calling on them and listening to what the student has to say, and "treating you the way you want to be treated" (p. 691).

When students make a mistake, respect refers to having a confidential conversation without loud discussion. Being tolerant includes allowing students to improve on their work and behavior, thereby giving students an opportunity to start over, in addition to explaining work in a way that students can understand. Teachers checking for understanding includes monitoring and searching for signs that students may need further support to understand a given concept. Encouraging student behavior is demonstrated by providing rewards such as special treats or caring words to promote the continued effort. Having light-hearted classrooms and planning fun activities also encourages positive behaviors (Bosworth, 1995). Non-classroom qualities were described as helping students with personal problems and continuing to support and to help the student when others would have quit helping. Personal attributes of teachers who

care include being nice/polite, an affinity for helping students, being success-orientated, and being involved.

Wentzel (1997) measured middle school responses to students' perceptions of teacher care and reported that characteristics of care include: "modeling, democratic interactions, expectations based on individuality, nurturance" (p. 416). *Modeling* signifies that the teacher cares about instruction as exemplified by expressing effort in a unique way and making content thought provoking. *Democratic interactions* include communicating with dialog when questions are asked, giving attention, and thoughtful listening. The characteristic of *expectations based on individuality* means to perceive students as unique individual and having concerns beyond classwork. Finally, *nurturance* includes checking on the students' work and affirming and validating students' efforts (Wentzel, 1997).

Cutforth (1999) studied teacher interpersonal skills and student perceptions of caring. As a result of the qualitative study of an African American physical education teacher, the author suggested that combining discipline, adult control, assuming responsibility for students' development, and caring interactions with effective teaching are perceived as caring characteristics.

Howard (2001) interviewed elementary-level African American students and reported that student perception of teacher caring included "positive reinforcement, expression of high expectations, giving praise to accomplishments, and taking time to learn about students' lives outside of the classroom" (p. 146). Alder and Moulton (1998) and Alder (2002) also discussed care from the perspective of knowing students beyond the classroom and suggested that providing personalized leadership with an attentive

pedagogy, and also enjoying dialog while fostering reforms to cultures, are important for facilitating care.

Expanding on Noddings's (2005) ideas of confirmation, personalized leadership involves, "caring interactions that provide students with positive interactions that provide students with positive direction and guidance in helping student incorporate instance of poor judgment into an ethical view of themselves that they can live honorably" (Alder, 2002, p. 244). Adding to Noddings's (2005) discussion of dialog, Alder and Moulton (1998) noted that engaging in dialog helps students to feel cared for by teachers and showing respect and attentiveness to students was also perceived as caring. In addition to teachers' interpersonal characteristics, Tosolt (2008) proposed that students perceived teacher care by way of interpersonal skills, academic success, and guaranteeing impartiality.

Noddings (2005) suggested that caring is part of a mutual relationship in which two people connect. For a teacher (or other adult in school) to be caring, the student must perceive and recognize that the teacher or adult behavior is caring and responding accordingly. Students who perceive care from teachers showed social and academic advantages including increased motivation and achievement, confidence, self-esteem, and decreased off-task behavior or disruptive behavior in middle school (Tosolt, 2008). Simms (2001) and Noddings (1984) further discussed that active listening and providing attention to the individual being cared for is not sufficient for a caring relationship; it also includes being "reactive, responsive and receptive" (p. 19).

Positive Student-Teacher Relationships

As evidenced, positive teacher-student relationships are rooted in care, as defined by the student. Thus, it is important to obtain student input when examining the learning environment. White-McMahon and Baker (2016) suggested that positive relationships help students who experienced trauma to feel secure and respected, and to heal better from the trauma. McHatton et al. (2014) suggested that positive teacher-student relationships, with a foundation of care as determined by the student, along with high expectations, are more likely to result in higher academic achievement. White-McMahon and Baker (2016) provided a list of strategies for building positive relationships with young people who may have experienced trauma. Their strategies included "(a) micro-interactions that result in macro-relationships, (b) be respectful, (c) be clear and consistent, (d) have high be reasonable expectations, (e) communicate with letters and journals, (f) involve other adult mentors, and (e) keep trying" (p. 26).

Reeve (2006) suggested four desirable relationship qualities for teachers that are more likely to advance students' "engagement, learning, achievement, and well-being than other ways" (p. 234). The four high-quality student-teacher relationship characteristics suggested by the author included attunement, relatedness, supportiveness, and gentle discipline. When teachers have connections with students, attunement to students' functioning results, and then teachers may make necessary improvements to their instruction. When practicing attunement, the teacher is aware of their students, knows what students are thinking or feeling and what students want or need, and listen carefully to the student (Reeve, 2006).

Teachers create a sense of relatedness with students when students feel distinctive and connected to the teacher. When teachers are supportive of students, students, in turn, feel affirmed and accepted and can display healthy autonomy. Gentle discipline includes guidance and an explanation of how to manage behaviors without power or control (Reeve, 2006).

While previous researchers wrote about how ACES impact brain development and learning and behavior, healthy relationships are a defensive tool that help to repair and protect the brain (Ludy-Dobson & Perry, 2010). Ludy-Dobson and Perry (2010) further suggested that a defensive obstacle against childhood trauma is social connection. These authors maintained that while therapeutic relationships can help ameliorate the impact of trauma, interactions and relationships with caregivers who understand the impact of trauma and child development may have a positive effect on traumatized children's health and brain development. Positive student teacher relationships positively impact students' scholastic outcomes, behaviors, and emotional regulation (Sointu, Savolainen, Lappalainen, & Lambert, 2017). Phifer and Hull (2016) discussed professional development as an essential component of implementing trauma-informed practice and that professional development also promotes the development of positive relationships as a core principle in trauma-informed approach.

Respect

Similar to care, concept of respect is a broad and challenging topic (Goodman, 2009). Goodman (2009) maintained that respect is a cardinal virtue and is considered to be core to societal and ethical norms. Lawrence-Lightfoot (2000) described respect as "the single most powerful ingredient in nourishing relationships and creating a just

society" (p. 13). White-McMahon and Baker (2016) provided a summary of the breadth of respect by explaining that the duality of respect varies between a person's actions to show it, and that it can be perceived. Furthermore, one can both feel respect and feel respectful for a person or group in which feelings, needs, thoughts, and ideas are considered. When giving respect, a person is perceived as having worth and value.

In reviewing the literature on student perceptions of teacher respect, Schmuck and Schmuck (1989) found that adolescent students reported wanting teachers to be real and to "show students trust, respect, and understanding of youth" (p. 10). Moreira (2002) maintained that interpersonal relationships between the student and teacher should be a cornerstone of students' perceptions of quality teachers. Characteristics described by the author included students being "treated equally, they want teachers to listen to their opinions and ideas, and they want to be known by name. They do not want teachers to put students down; they want respect" (p. 42). Rudduck, Chaplain, and Wallace (1996) reported that having teachers respect students as individuals was an important aspect of their education. Firestone and Rosenblum (1988) wrote that students often feel more committed to school when they are treated with civility and justice. Bluestein (2001) suggested creating learning environments in which students feel that they receive respect from teachers and other adults who interact with them. Ellis (1997) connected students' perceptions of respect to grades, behaviors, and school attendance.

Pomeroy (1999) ascertained that students experience feelings of respect when teachers know who they are personally, use active listening, have dialog and clearly explain concepts. A necessary component in the teacher-student relationship is that students perceive they are valued and respected (Kottler & Zehm, 2000). These reports

collectively indicate that students' perceptions of respect are relevant to student-teacher relationships and that students may feel more connected as a result, and therefore be more successful in school.

Safety

Maslow (1943) discussed the basic human needs of feeling physically, socially, emotionally, and cognitively safe. Devine and Cohen (2007) expanded on these ideas by suggesting that social, physical, and emotional safety contributes to students' learning and healthy development. While safety is an essential component of learning and healthy development, students' lack of feeling physically and emotionally safe is relevant and real. Thapa et al. (2013) suggested that "interpersonal and contextual" (p. 360) factors that are missing in school climates may contribute to students feeling unsafe.

While students' perceptions of safety are the focus of this literature review, it is also important to consider the perceptions of teachers and staff because examining safety through various stakeholder perceptions provides a view into the feelings and realities of the community (Bosworth, Ford, & Hernandaz, 2011). These authors reported that adults and students identified "physical characteristics and safety features... organizational and school discipline...school staffing and relationships" as promoting caring and community (p. 96).

According to Bath (2008), safety, connection, and managing emotions are three critical components of TIC. In addition to having a physically and psychologically safe environment, it is also essential to create environments that offer "consistency, reliability, predictability, availability, honesty, and transparency" (p. 19). When adults respond consistently to children in their daily experiences, then the interactions build new neural

pathways in the brain (Purvis et al., 2007). With ongoing and consistent interactions with healthy adults, the neural pathways are strengthened, and then children can better manage their emotions and have better future relationships (Purvis et al., 2007). As such, building positive relationships between the individuals giving and receiving care is imperative for healing and growth, which, in turn, fosters resiliency.

After TIC-PD, improvements of safe and secure physical and psychological environments may occur. As a result of these improvements, positive relationships may continue to develop among students who have been exposed to trauma as adults and peers create positive connections rather than students pushing adults away and not regulating their emotions (Trauma Sensitive Schools, 2017). Bloom and Farragher (2013) and Trauma Sensitive Schools (2017) discussed the purposeful intention of creating safe environments "in the classroom, in the cafeteria, on the bus, in the gym, on the walk to and from school" (Trauma Sensitive Schools, 2017, para. 3). Further, safety was one of SAMHSA's (2014) six principles of creating a trauma-sensitive culture, which can assist people in overcoming the impact of trauma.

Because children who have experienced trauma can be keenly aware of any real or perceived threat in the environment (Bloom & Farragher, 2013), it is imperative to create environments that are physically and psychologically safe. These authors described the importance of psychological safety and self-efficacy for students who have experienced trauma. Psychological safety is important because trauma exposure may reduce or remove one’s capacity to guard against boundaries that are crossed by others. Psychological safety is explained as having the capacity to be safe with oneself and the environment, which includes self-protection against harmful compulsion from self or

others and having a strong self-identify. Psychological safety can be undermined by unhealthy environments and negative adult interactions such as the use of irony, verbal jabs, and other undesirable verbal and non-verbal communication. Bloom and Ferragher (2013) described self-efficacy as the ability to interact with others without the misuse of power or abuse, and that self-efficacy may be forfeited when trauma is experienced.

Students can be retraumatized or re-injured in situations that are not psychologically safe (Bloom & Farragher, 2013). According to these authors, retraumatization occurs when students experience ongoing lack of success, bullying, unhealthy risk-taking behaviors, or lack of self-control over their circumstances. Traumatized students are at risk of further harm when in unsafe environments, whereas psychologically safe environments include positive attention, focus and concentration, success, humor, innovation, and self-discipline (Bloom & Farragher, 2013)

Bloom and Farragher (2013) discussed the importance of creating physically safe environments by explaining that these are environments that are free from threats of violence from self or others. Physical safety allows for the development of healthy relationships, socially safe interactions, improved self-care and awareness of danger (Bloom & Farragher, 2013, p. 148). Furthermore, when there is a breakdown in physical safety, then psychological safety cannot exist (Bloom & Farragher, 2013). As skills are gained or improved to diminish inflicted harm, which results from crossing personal and psychological boundaries, then feelings of security may develop (Bloom & Farragher, 2013).

Student perception of physical and emotional safety. Students' perception of school safety occurs when students perceive it is safe to arrive and stay at school, and the

student does not feel their physical and socio-emotional welfare is endangered (Astor, Benbenishty, & Estrada, 2009). Researchers have also explored how student perception of interactions between teachers and students may have a negative or positive consequence on students. For example, Roeser, Midgley, and Urdan (1996) reported that middle school environments that are caring and emphasize individual efforts and improvement can have positive impacts on students. School safety was associated with being intellectually challenging, producing respect among teachers and peers, and having fair discipline (Kitsantas, Ware, & Martinez-Arias, 2004).

Students' perceptions of their teachers' behaviors may impact students' connections to school. When students perceive that their teachers do not allow autonomy or that the teachers communicate criticism, then students experience decreases in social and academic achievements (Wentzel, 2002). Wentzel (1997) suggested that teachers who shout, disregard students, or otherwise provide unfavorable feedback were perceived to be not caring (Wentzel, 1997). Students are more prone to feeling as if they belong and that they are supported when they perceive that teachers give attention and respect them (Goodenow, 1993).

Wentzel (1994) and Wentzel, Battle, Russell, and Looney (2013) suggested that teacher emotional support impacts students' school performance and social interactions. Student's perceptions that teachers and peers provide well-defined social and academic expectations such as aid, guidance, and directions to achieve social and academic environments results in safe and nonthreatening classrooms (Wentzel et al., 2013). Furthermore, teachers' high expectations for academic achievement and being able to

support safe interactions depended on students' beliefs about teachers. That is, students perceive a connection between high academic expectations and perceptions of safety.

Classrooms have both social and academic features. Social connections are important to learning and behavior (Cacioppo & Patrick 2008). Social classroom environments include aspects of teacher support, encouragement of collaborative work, mutual peer respect, and goal setting among peers (Ryan & Patrick, 2001). Students' perceptions of teacher care and support were shown to positively impact student confidence, autonomous learning, and communication. When students felt understood by the teacher and the student could access the teacher for assistance, decreases in off-task and disruptive behaviors were reported (Ryan & Patrick, 2001). In the classroom, students perceived mutual respect when their ideas were respected rather than mocked or jeered. When students perceived they were being compared to other students, they tended to express less confidence, showing that a sense of community and interpersonal relationships were important to classroom climate (Reyes, Brackett, Rivers, White, & Salovey, 2012).

Regarding physical and emotional safety, differences between peer relationships in and outside the classroom have been reported (Ryan & Patrick, 2001). Students have expressed feeling safe when they perceived that they were accepted by peers (Wentzel & Asher, 1995) and classmates cared and supported them (Goodenow, 1993; Wentzel, 1994). Additionally, students who reported a positive connection and attachment at school also reported feeling safer in the environment. For example, when students perceive social and emotional support from classmates, there is a positive impact on school experience (Wentzel, 1994, 1997).

Bosworth et al. (2011) suggested students and staff identified physical features in the school that promoted feelings of safety. Features included security cameras, locked fences and doors, the surrounding neighborhood, and a smaller school population. Structure and dependable discipline where rules were clearly communicated and enforced is also a factor associated with feelings of safety. Another feature included school staffing and relationships that are caring and positive, and teacher visibility throughout the school was also described as helping students to feel safe. Students also reported that indifference, refusal to acknowledge, and complacency among staff were situations that made them to feel unsafe. Research on environmental conditions and a school's physical environment was conducted to assess the impact on students' feelings of safety. For example, Berman et al. (2018) suggested that a school's environment, such as the state of repair of school buildings and the surrounding community, were factors that impacted academic performance and attendance rates.

School Violence

Community issues may contribute to school violence and increases in school violence have impacted the ways in which many schools operate. In this area, Kitsantas et al. (2004) wrote that students bring violent behaviors from the neighborhood and community into the school environment. Furthermore, negative local community issues, such as crime, poverty, and high transient activity, are strong predictors of school violence. Community and school issues influence students' perception of school safety. Changing issues within the community have the potential to impact students and may have either positive or negative consequences for a school (Kitsantas et al., 2004).

Additionally, middle school students' perceptions of safety are influenced by the school environment (school climate, discipline fairness and school security) and substance use.

In a report that explored changes in school climate following the 2016 presidential election, key findings from interviews with 1535 public high school teachers between January and May 2017 from geographically and demographic areas included: (a) high levels of stress and anxiety; (b) student concerns on issues such as immigration, travel bans, and limitations, Lesbian, Gay, Bi-sexual, Transgender, Queer (LGBTQ) rights and restrictions, health care, or threats to the environment; (c) concerns with deportation of undocumented immigrants; (d) impact of political issues interfering with ability to focus and to attend school; concerns with educational or career goals due to polity threats; (e) polarization on political issues and incivility; (f) using unsubstantiated information and sources (i.e. Twitter, Facebook); (g) increased derogatory remarks in racial rhetoric; and (h) intimidation and hostility and verbal assaults (Rogers et al., 2017).

Compared to students in other grades, middle school has the highest occurrence of school-based violence (National Center for Educational Statistics, 2011). For the 2016-2017 school year, 4.3% of 12-18-year-old students reported victimization at school. Non-fatal crimes occurred at a rate of 67 per 1,000 incidents for students aged 12 to 14, and 41 of 1,000 middle school students experienced a violent event in middle school. This is compared to 26 per 1,000 in elementary schools and 22 per 1,000 in secondary schools (National Center for Educational Statistics, 2011). Perhaps because students spend much of their lives in school, and a large proportion of them experience adverse childhood experiences, throughout the literature there are reports on trauma-informed approaches in schools.

Trauma-Informed Approach in Schools

Students spend one-third of their lives attending school (Cummings, 2006) and the relationship between students and adults is fundamental in the development and acquisition of knowledge in schools (Noddings, 2005). For education to be successful, teachers must balance curriculum and caring behaviors with their interactions with students (Lumpkin, 2007; McEwan 2002). A student-teacher relationship that includes care and trust is an essential component of students acquiring knowledge, and thus, student academic achievement (Marzano, Waters, & McNulty, 2005). Students may at times experience physical injuries such as a broken bone, and if not treated properly the bone will not heal; the injury may impact and defer later development of full physical potential. Similarly, students may experience psychological injuries, and the injury may, in turn, impact development of their full potential (Lanis et al., 2012).

Millions of students attend school daily and have experienced ACES, which may negatively impact their physical, social, behavior, and cognitive development (Cook et al., 2005; Massachusetts Advocates for Children, 2009). Learning does not occur without a relationship, and traumatized students require positive relationships to heal the brain (Cozolino, 2006; White-McMahon & Baker, 2016). Addressing the effects of ACES on students' learning and behaviors is a relatively new area of research, and with the advent of functional magnetic resonance imaging technology and the expansion of the field of neuroscience, there is justifiable data to support and motivate governments and educators to move into a new realm of creating TISC (Walker & Walsh, 2014).

When students experience one or more traumas, there is a robust and relevant correlation such as an inverse relationship between socioemotional development and

academic stress (Oehlberg, 2008; Perry & Daniels, 2016). Because of the lack of social, emotional, cognitive, and neurobiological abilities, traumatized students are more likely to have damaging negative outcomes (Price, Higa-McMillan, Kim, & Frueh, 2013). Because of the prevalence and impact of trauma, defining the role of caring adults in the educational setting is important (Lanis et al., 2012).

Schools are ideally in a position to create trauma-sensitive cultures that are able to respond appropriately to students, are physical and psychologically safe, and avoid re-traumatizing students, thus supporting students in attaining academic achievement (SAMHSA, 2014; Walker & Walsh, 2015). Trauma-informed schools can identify and address the needs of children and families who have experienced ACES in addition to supporting students who are at risk (Bethell et al., 2014; Perry & Daniels, 2016; Walker & Walsh, 2015).

Schools have historically focused on academics, although acknowledgement of the impact of trauma on the long-term stress response system is causing a shift in perspective from academics to better understanding the whole child (Chafouleas et al., 2016). Schools are perceived as natural environments that have advantages for incorporating trauma-informed approaches and delivering services. As services are delivered, schools incorporate TIC into practices to improve student success (Chafouleas et al., 2016), and as a result, are developing trauma-informed approaches. A trauma-informed approach in schools entails a shift in perspective in how learning and behavior is viewed and is accomplished with nominal expense (Oehlberg, 2008).

There is limited research on the trauma-informed approach in schools. In a meta-analysis 19 schools, Rolfsnes and Idsoe (2011) reported positive outcomes of

interventions, including support for students after a traumatic event, and also suggested that school professionals are resources for providing school-based intervention. Alisic (2012) also reported that elementary teachers grappled with their role of teacher, and with students who experienced trauma. Additionally, balancing individual academic skills and student needs as opposed group needs, giving attention to trauma behavior rather than typical behavior, giving more attention to the student after trauma exposure, and feeling unable to balance the impact of traumatic experience on expected student behavior were all reported by teachers (Alisic, 2012). Thomas et al. (2015) reported that participants in a one-day TIC-PD gained information that shifted their perspectives on the impact of students' trauma and that the information was retained for 30 days. Perry and Daniels (2016) also suggested a shift in perspective in how students are viewed, responded to, and given support after experiencing trauma. For this shift to occur, Perry and Daniels (2016) suggested that staff-focused professional development should include an understanding of trauma and strategies for working with students who have trauma exposure. Goodwin-Glick (2017) reported on certified and classified staff gains in dispositions, knowledge, and behaviors toward traumatized students regarding TIC-PD.

McIntyre, Baker, and Overstreet (2019) reported increases in teachers' knowledge after attending trauma professional development and recommended that prior to TIC-PD participants should be educated on the alignment of the organizational guiding statements and trauma-informed concepts. To capitalize on the outcomes of professional development, alignment of the school's guiding frameworks (i.e. mission statement, strategic plan) and trauma principles was also recommended by McIntyre et al. (2019).

Beyond the TIC-PD, Chafouleas, Koriakin, Roundfield, and Overstreet (2019)

discussed the importance of evidence-based and trauma-informed interventions along with a school-wide approach that includes systematic prevention and intervention strategies and called for further research to guide efforts. In a five-year study among four schools with 1,243 participants, Dorado, Martinez, McArthur, and Leibovitz (2016), reported findings from a multi-level prevention (Tier 1, 2, 3) and intervention program for creating trauma-informed school cultures. In that study, annual training or consultation was provided to each school including a trauma-specific training, was provided for 88 students. Students' engagement was shown to increase across four areas: ability to learn, time on task, time in the classroom, and attendance.

Developing Trauma-Informed Educators

Shamblin, Graham, and Bianco (2016) reported findings of a partnership between consultants and preschool teachers who work in high poverty schools in which students were exposed to trauma. The goal of the study was to "improve teacher confidence, self-efficacy and capacity to support social-emotional development for participating teachers and determine if there was increased resilience for participating children" (p. 191). The outcomes suggested that there was an increase in teacher competence, skills and appreciation for consultation services, and that there was a decrease in punitive student behavior strategies in the classroom. Because of the specific role of schools and the extent of contact with students who may have experienced trauma, schools may be ideally positioned to shield and to provide support to help ameliorate the impact of trauma (Martin et al., 2017). These educator strategies are helpful not only for students with a trauma exposure but for all students (Wolpow, Johnson, Hertel, & Kincaid, 2009).

Goodwin-Glick (2017) defined "trauma-informed dispositions" as a "collection of mindsets and tendencies founded on an understanding of trauma-theory that informs caring and respectful behaviors toward all individuals" (p. 198). Educators who possess trauma-informed dispositions are better able to interpret nonverbal student communications, to adjust lessons to meet the needs of all students, to actively listen to students to understand their perspectives, to believe that all students can learn and heal, and to have the capacity for applying trauma-related knowledge that creates physically and psychologically safe schools. Having a trauma-informed disposition implies that the educator is predictable and approachable. Adults who possess a trauma-informed disposition can better manage their feelings in challenging situations, can deescalate aroused individuals, and have the self-efficacy to know that they can make a difference (Goodwin-Glick, 2017).

Vanderburg (2017) suggested that teachers had significant improvements in their perceptions of trauma and their beliefs in sustaining trauma-informed approaches after attending professional development. Throughout this literature review, this researcher did not identify research on students' perceptions of certified or classified staff regarding caring behavior after TIC implementation. The National Task Force on Children Exposed to Violence (2012) suggested that there is an obligatory responsibility to incorporate trauma-informed principles in all interactions with children and families when helping students to recover from the effects of adverse trauma experiences (Listenbee et al., 2012). Listenbee et al. (2012) further maintained that opportunities for trauma-informed services may reduce the long-lasting effects of trauma exposure.

Without TIC-PD, adults who interact with students may not see the relationships between students' behaviors, attitudes, and symptoms from trauma exposure. As a result, additional harm may be experienced by the child, such as higher risk of misdiagnosis, treatment mistakes, additional exposure to violence, and further psychological trauma (Listenbee et al., 2012).

When assessing low income middle school students who were exposed to community violence, Hardaway, Larkby, and Cornelius (2014) recommended that school personnel replace punitive discipline practices with trauma-informed discipline practices. Trauma-informed discipline focuses on understanding the root of student conduct, and on assigning discipline consequences that help the student to learn from their conduct which, in turn, may improve school connectedness and academic achievement (Hardaway et al., 2014). To identify students exposed to community violence, schools may use screening tools and trauma-informed psychological evaluation practices that have been tailored for use in schools (Tishelman et al., 2010). Additionally, schools that provide trauma treatment for students who experienced community violence have shown improvements in school performance (Saltzman, Pynoos, Layne, Steinberg, & Aisenberg, 2001).

Summary

As evidenced, the TIC approach has taken root in many education settings. Previous research suggests that there is a link between childhood trauma and adult wellbeing, as well as connections between students' academic achievements, behaviors, and social-emotional development. Topics in neuroscience have also increased understanding of how brains are affected by trauma experiences (van der Kolk, 2014). With the interdisciplinary consolidation of biological and social science research, there is

great opportunity to mitigate negative childhood development, the impact of ACES, and stress, which often accompanies trauma experiences (Bethell et al., 2014).

TIC is a comprehensive approach that fosters individual capacity to understand the prevalence of trauma and to foster organizational change (Overstreet & Chafouleas, 2016). Additionally, schools may act as a buffer for students who have been exposed to ACES by creating psychologically and physically safe environments that are positive and caring (Bath, 2008). Students who are taught healthy emotional regulation and coping skills have fewer behaviors that interrupt learning (Bath, 2008; Ko et al., 2008). Bethell et al. (2014) suggested that schools and society in general should provide "safe, stable, and nurturing environments in the home, school, and community" (p. 2112).

Schools that develop trauma-sensitive staff in addition to whole system integration are gaining attention in research (Overstreet & Chafouleas, 2016). Chafouleas et al. (2016) suggested the importance of creating trauma-informed school cultures and establishing a safe environment that fosters supportive student relationships, in addition to the need for providing TIC professional development for adults who interact with and care for students.

The school district in the current study previously implemented TIC across the entire district, including the provision of TIC-PD for classified and certified staff. Goodwin-Glick (2017) studied the impact of the professional development in this district and noted significant gains in staff knowledge, dispositions, and behaviors after the initial training. However, throughout the literature there is a lack of reports on students' perceptions of several relevant topics including safety and positive school climate, grade point average, attendance, and discipline received after TIC-PD. Because all staff

participated in the TIC-PD in the target school district, the next logical step was to study these perceptions after the PD. Outcomes of the research and knowledge gained from it may contribute to the ongoing efforts of implementing a TIC approach in schools, and thus contribute to development of students' resiliency.

CHAPTER III. METHODOLOGY

Chapter III explains the methodology used in the current study to assess student-reported perceptions of safety and positive school climate after TIC-PD. *Safety* was measured in terms of physical and emotional constructs. Positive school climate was measured in terms of care, respect, and positive relationships. Student cumulative grade point average and days present at school were also recorded, as were changes in disciplinary actions given to students. This chapter describes the research design, participants, instrumentation, procedures, research questions, data analysis, and assumptions for this study.

Research Design

The present study was a quasi-experimental between subjects research design with a post-test design and cohort comparison group (Creswell, 2014). To collect data, target school district administrators collected pre-existing student perception data, which is done annually in the spring semester. The data were obtained from a convenience sample because the data were archival in nature and were collected prior to beginning the present study (Creswell, 2014). Each year the district administers a climate survey to all students in the district. The present study compared responses to this survey from two student groups, referred to within as a *cohort comparison group* (school year 2013-2014) and a *treatment group* (school year 2016-2017).The cohort comparison group completed the climate survey during the 2013-2014 school year, which was before the district engaged in providing comprehensive Trauma-informed Care Professional Development. The treatment group completed the climate survey three years later, during the 2016-2017 school year.

Glenn (2005) defined cohort as a group of people who have had the same experience during a specific concurrent time period. In the present study, students in the cohort comparison group advanced to the next grade level after the TIC-PD was administered during the fall of 2015, thereby creating a cohort effect. It should be noted that such an analysis does not indicate causation. The second use of cohort analysis was to understand the basis of cultural or societal change within the organization (Glenn, 2005), although cohort analysis does have the limitations of cohort effects. Essentially, members of a cohort may be affected by different experiences as a result of aging or the passing of time. While cohort effects may be a concern for cohort studies that last for longer time periods of time (i.e. many years), data collections for the present study occurred three years apart. Therefore, the 2013-2014 student-reported perception data represents the cohort comparison group because the data were collected prior to the district's administration of the TIC-PD. Conversely, the treatment group data were collected from a cohort of students during the 2016-2017 school year. Analysis for the present study was expected to either support or refute the hypothesis that delivery of TIC-PD is associated with students' self-reported perceptions of safety and positive school climate.

Descriptive and inferential data were used to examine cumulative grade point average, days present at school, and behavior incidents with consequences from 2013-2014 to 2016-2017.

Participants

Each spring, the target school district collects data from the entire K-12 student population regarding their perceptions of school climate. The district began collecting

this data in 2013-2014, and the practice has continued through 2017-2018. The TIC-PD intervention occurred in the fall of 2015.

Because of inconsistent and limitations of data collection, data from just one of the district's middle schools (grades six-eight) was analyzed. While all students were expected to complete the climate survey, not all students did. For 2014, 555 of 595 (93.2%) students completed the survey, and in 2017, 433 of 582 students (74.4%) completed it. Table 5 illustrates student enrollment, survey participation, and percentage of students who completed the district-wide survey for the 2013-2014 and 2016-2017 school years, which represent the cohort comparison group and the treatment group, respectively. Survey data were gathered from the district's online survey collection platform (Survey Monkey), from school enrollment data, and from the state department of education.

Table 5

South Middle School Grade 6-8 Student Enrollment and Survey Completion

	2013-2014	2016-2017
Enrollment	595	582
Survey completion	555	433
Percentage of completion	93.2%	74.4%

Instrumentation

The target school district used a 10-item instrument to measure strategic goals which was designed by district personnel and included elements from its School Connectedness Survey (SCS). The School Connectedness Survey was designed to measure adult, peer, and school connections. The SCS was administered to two urban and suburban student populations and was reported to be a highly reliable instrument with a constant factor structure (Lohmeier & Lee, 2011). Between the years of data

collection for the present study, the student perception survey was modified in the spring of 2015 by adding six additional items. Items 1, 2, and 15 from the SCS were utilized along with items developed by district administrators. Table 6 provides a list of all survey items, and an asterisk indicates items added after 2015.

Table 6

Student Perception of School Climate Survey Items

Survey Item	2013-2014 and 2016-2017
Item 1	Teachers in my school care about me.
Item 2	My teachers are available when I need extra help.
Item 3	The teachers in my school treat me with respect.
Item 4	I feel physically safe in my classrooms.
Item 5	I feel emotionally safe in my classrooms.
Item 6	I feel physically safe outside the classroom while at school (cafeteria, restrooms, hallways, lockers, playground, etc.)
Item 7	My teachers give helpful feedback and encouragement.
Item 8	My teachers work well together.
Item 9	I enjoy coming to school.
Item 10	I have a positive relationship with at least one adult at my school.
Item 11*	I trust a majority of the teachers in my school.
Item 12*	I trust a majority of the adults, other than teachers, in my school.
Item 13*	I feel like I learn when I am at school.
Item 14*	I like going to school events, such as sports, dances, etc.
Item 15*	I participate in activities at my school such as teams, clubs, etc.
Item 16*	My classmates treat me with respect.

Note: * Items added after 2015

While district personnel created the student perception climate survey, they modified items 1, 2, and 15 from the School Connectedness Survey (Lohmeier & Lee, 2011). Within the measure, students' perceptions of safety and school climate were measured using Likert-type items in which students were asked to rate their responses from 1 (strongly disagree) to 4 (strongly agree).

The pre-existing student perception survey items were operationalized with a 10-item measure (1, strongly disagree; 2, disagree, 3 agree; and 4, strongly agree), which was a self-report measure to assess the dependent variables. Responses to the survey

items reflected participants' levels of relationships, care, respect, physical, and emotional safety, support, and encouragement. Data for participating students' attendance, grade point average, and behavior were collected from the school district's electronic database, Harmony.

Procedures

The school district's pre-existing data set, designed to measure the district's Strategic Plan and Ohio Improvement Plan goals, was used to provide data for the current study. At the time of the present study, student-reported perception data were collected annually in the spring for each of the 13 school district schools. The first annual data collection occurred in the 2013-2014 school year. The data from that 2013-2014 school year was used to represent the cohort comparison group for the present study because the delivery of the TIC-PD did not occur until the fall of 2015. Student perception data were again collected in the 2015-2016 and 2016-2017 school years. Data from the 2016-2017 school year was used to represent the treatment group.

A request to complete the survey was emailed from the district superintendent or curriculum supervisors to school principals. The 13 school principals then requested that teachers in their respective schools have students complete the student perception survey. The online platform survey platform Survey Monkey was used to administer the survey for data collection. Each school principal determined how and when the surveys were administered. As a result, not all students or schools in the district completed the survey.

The intention to utilize data from the district's 13 K-12 schools to examine if the TIC-PD affected student perception the school climate, safety, grade point averages, days present at school, and behavior incidents and consequences. However, there was a lack

of consistent data collection throughout the 13 schools in the 2015-2016 and 2016-2017 school years. In examining the data collection by schools, the researcher from the present study discovered that South Middle School (SMS) had consistent data collection between the 2013-2014 cohort comparison group and 2016-2017 treatment group school years. Therefore, a decision was made to focus on SMS for the present study. The SMS certified and classified staff participated in the TIC-PD.

Permission was granted by the district superintendent to access and analyze the district data for the present research study. Because pre-existing data were used, Institutional Review Board (IRB) approval was requested for the current study, under the direction of Dr. Judith Jackson-May, Dissertation Chair. The committee did not require Institutional Review Board approval. Student attendance, combined grade point averages, days present and behavior data for 2013-2014 and 2016-2017 were collected and coded for descriptive and inferential analysis.

Description of the setting. At the time of the present study, the target school district encompassed approximately 37 square miles. The district was composed of 13 buildings, an online learning center, a pre-school, eight elementary schools, two middle schools, one high school, and one vocational school. The community has been awarded *The 100 Best Communities Award* for children.

The district participated in a trauma-informed learning community led by the county mental health board. The TIC-learning community consisted of 23 organizations and was developed after a county health assessment in 2011, which identified obesity, substance abuse, and violence as three pertinent issues to address in the community. Utilizing trauma research that links adverse childhood experiences to health and well-

being, the local mental health board was tasked with addressing the root causes and to potentially intercept negative consequential trends of the trauma events. A county health assessment was subsequently completed in the fall of 2013, which indicated that 44% of the district's adult population had exposure to a minimum of one ACE, and 10% had exposure to four or more ACES. A grant from a local charity organization then helped to secure the National Council for Behavioral Health to develop and guide the county to become a trauma-informed learning community. The learning community was developed through webinars, local meetings, coaching calls, and a trauma-informed electronic resource that provided tools and resources.

A trauma-informed care leadership team was developed which included the district superintendent, school counselors and administrators, curriculum supervisors, teachers, a juvenile judge, a school psychologist, a mental health counselor/Board of Education member, and a community member to guide TIC implementation.

From the learning community involvement, the district TIC committee members began the task of developing a trauma-informed school culture (TISC). In response to data collected from the organizational self-assessment, the TIC committee moved to focus on developing a trauma-sensitive educated and responsive district by providing TIC-PD to all certified and classified school staff (Domain 3, Appendix A). District employees were invited to participate in the TIC-PD. Implementation of the TIC process was expected to be a three to seven-year task.

Role of classified staff. Classified school staff members interact with students at various levels depending on their job duties and responsibilities, which included employees such as bus drivers, secretaries, lunch and recess monitors, custodians,

librarians, and coaches. While certified staff members may have received basic courses, such as psychology, sociology, and human development in their college classes or ongoing professional development, it was assumed that most classified staff had not received professional training on the importance of childhood trauma and its potential effects on students' learning and behavior. In the target district, classified school staff are not required to receive training or professional development in child development, psychology, sociology or other areas that develop an understanding of human behavior; nor are they trained how to appropriately interact with and manage student's behavior.

The middle school classified staff typically experience various levels of time spent and interaction with students. These staff are considered to be 'educators' because they may help to educate students about how to behave in school (e.g. acting appropriately in the lunch line, walking orderly in hallways). Additionally, classified staff have daily interactions and build relationships with students and may observe changes in student behavior that are concerning. In such cases, these staff may report the instances to appropriate school personnel so that proper interventions and supports can be delivered. The appropriate school staff member, such as a school counselor or administrator, would then typically meet with the student to check on the student's wellbeing.

Because of the variety of classified job duties and responsibilities for classified staff, it is difficult to measure the amount of time that they interact with students. Six classroom aides support students in the learning environment. Athe target school, three of the classroom aides (one student is matched to one classroom aide) were assigned to manage, support, and assist a student with educational and social-emotional needs. One

aide was assigned to a classroom with students identified as Emotionally Disturbed to support and assist students who have been identified as having an Emotional Disability. Two aides had duties as interpreters for students who were hearing-impaired. While these aides had one-on-one time with students, they also interacted with other students to build relationships and to support their assigned students' engagement with other students in the hallways and classrooms. As such, these classroom aides may observe instances in which students are acting out or when the student experiences difficulty. Additionally, the students being cared for may interact differently with classroom aides than they do with teachers, and at times may disclose with aides information or situations that are unsettling.

The food service staff serve breakfast to students who qualify for free and reduced meals, and also serve lunch for students who purchase or qualify for free or reduced meals. Often, the lunchroom supervisor sits and interacts with students at the dining tables during breakfast. If the supervisor is working in her office, students may also spend time with her in her office for idle time or to speak with her about life issues. Students often spend approximately 15-20 minutes at breakfast and are in the lunch line an average of less than five minutes a day. The food service staff may also know specific students from various food service positions throughout the district, such as previous schools that the student attended. As a result, the three food service staff may be observant and report changes in student behavior.

The daytime school custodian has more opportunity to interact with students throughout the school day than do other custodians who work shifts in the afternoon and evening. The school day custodian actively monitors students during lunch time. At the

time of the study, the target middle school had three 40-minute lunch sessions for students in grades six-eight. Custodians who work after school and during the evening had substantially less time and opportunity to interact with students. Custodians may interact with students at various after-school activities. While the custodians have official duties and responsibilities, they also have opportunities to interact with students and to interact with students in capacities that differ from teachers. When custodians are hired, they are informed that their position includes a service to students, and they are encouraged to respond to opportunities to positively interact with students. Custodians also are visible in hallways when students are in the building frequently interact with students on a casual manner.

The two SMS school secretaries interact with various students. For example, students frequently enter the school office to discuss various issues or to attend to individual situations. Bus drivers interact with students, although students often have limited interaction with drivers because the drivers' responsibilities primarily include driving the bus. However, bus drivers typically welcome students onto the bus and may observe changes in students' behaviors, attitudes, and moods. Bus drivers may also observe changes in students' residence or other family patterns of behavior. Additionally, some buses also have bus aides who may also interact and build relationships with students.

Role of certified staff. Certified staff members possess a professional license, such as teacher, school counselor, principal, speech therapist, or school psychologist, and include positions such as teachers, counselors, psychologists, licensed interpreters and administrators. The certified staff interacts with students at various rates throughout

the day. At the time of the present study, English and math teachers at the target school had three 80-minutes blocks of classroom instruction while social studies and science teachers had instruction blocks of six 40-minute periods. Teachers in these classes also monitored students during a home base, which is a 40-minute period during which teachers meet with the same group of students. Home base serves as a relationship-building time during which teachers are exposed to many aspects of students' lives, and the time facilitates communication between students, teachers, and parents. Library aide, art, vocal music, band, orchestra, health and two physical education teachers also fill certified staff positions.

At the target school all teachers and many other staff are expected to be present in hallways when students change classes and transition to activities, including the principal, assistant principal, and school counselors. The school nurse works five hours a day, while for the office staff, the number of hours varies regarding how much interaction they have with students, which often depends upon the needs of the students.

Development of trauma-informed district. Utilizing SAMHSA's principles and recommended domains from the National Council on Behavioral Health (Appendix A), the district's TIC co-coordinators, along with a school counselor and assistant principal, organized and managed the district's TIC preparation efforts. The goal of these efforts was to create a trauma-sensitive culture in which classified and certified staff respond and interact with students who may have experienced adverse childhood events.

As a part of these preparation efforts, district personnel who were part of the committee organized and provided differentiated professional development for 818 district-wide classified and certified staff in September of 2015. These employees were

required to participate in the newly developed trauma-informed care professional development (TIC-PD), and 428 certified along with 311 classified staff attended the TIC-PD. Specific to South Middle School (this study's target school), 103 certified and classified staff were invited to participate in the TIC-PD. The TIC-PD was given after the cohort comparison (2013-2014) and prior to treatment (2016-2017) treatment group student perception survey data collection.

After the TIC-PD, trauma-informed components were amended into the district's guiding documents by district leadership, including the Strategic Plan (Appendix F) and the Ohio Improvement Plan (Appendix G). Two of the six subsets of the district's guiding Mission Statements included that the district would: (a) provide safe educational facilities that foster positive learning environments, and (b) create learning environments in which all students, staff, and families feel physically and emotionally protected. Strategic objectives were also developed to provide conducive learning environments, which included action steps for employees to be trained and to implement trauma-informed care approaches.

Through a better understanding of trauma, certified and classified staff may be more effective in student interactions. Educator-student interactions may demonstrate increased levels of care, respect and the development of positive relationships. In this regard, TIC trainings were designed to facilitate a unified awareness in which staff members could become more aware of their own behaviors and attitudes toward students and to develop empathic relationships with students.

Sustainability of the 2015 original TIC-PD was addressed for employees hired after 2015, and a basic trauma-informed care document was embedded in the school's

website; school employees hired after this time were invited to review the TIC training information. The district also continued to provide ongoing and differentiated professional development that included research, interventions, communication skills, and de-escalation techniques for employees such as classroom aides, bus drivers, and secretaries. The new-hire trainings were designed to further develop staff competence in TIC concepts and application of its content.

Professional development for certified staff. Professional development for certified staff included two three-and-a-half hour sessions. A trauma-informed consultant provided information in one session, which was held in the target school's auditorium. Topics covered included: definition of trauma; understanding the prevalence and forms of trauma; how trauma impacts social-emotional development, learning and behavior; understanding the neurobiology of trauma and its impact on the brain; how to use a trauma-informed lens to shift perspectives on student behavior and learning; understanding how students may be reminded of the trauma at school; and the importance of creating positive interactions with students through verbal and non-verbal communication. The second and final session for these staff members was presented in the target school's gymnasium by the local organization Challenge Day. The experiential workshop focused on interaction with staff to develop skills such as social-emotional learning, strengthening the sense of community, bringing self-awareness to educator actions, further understanding student development, and designing instruction from knowledge based on sessions attending the session.

Following the TIC-PD, Goodwin-Glick (2017) studied learning and behavior outcomes of the PD on certified and classified staff, and the author reported significant

gains in TIC staff knowledge, adult dispositions, and behaviors with students. Prior to the TIC-PD, certified and classified staff may not have had an understanding or awareness of how their interactions with students impacted the ways in which students perceived safety and attachment. With a better understanding of the prevalence and impact of trauma on students' learning and behavior, certified and classified staff members overall reported a shift in perspectives as to how they viewed and interacted with students.

Population and Sample

For anonymity, this study's target school is identified as "South Middle School." According to the state Department of Education's October headcount, South Middle School enrolled 595 students during the 2013-2014 school year and 579 students for the 2016-2017 school year. Table 8 provides SMS demographic data.

An initial concern with the finding that economically disadvantaged students decreased from 41.6% (2013-2014) to 29% (2016-2017) was investigated. The decrease was confirmed with the school's principal and the district's educator management information system (EMIS) coordinator.

Table 7

South School Demographic Data by School Year

Enrollment	2013-2014	2016-2017
Grade 6	212	176
Grade 7	180	200
Grade 8	203	206
Total Grade	595	582
Student w/ disability	15.2%	13%
White	84.2%	84.3%
Black	2.6%	3.0%
Asian	<10	<10
Native American	<10	<10
Multi-racial	6.7%	5.6%
Latino	4.8%	5.8%
Economically Disadvantage	41.6%	29.0%
Female	48.7%	46.9%
Male	51.2%	53.0%

City/County Demographic Information

The United States Census Bureau (2018) website was accessed to locate and identify demographic information for the target school's city. At the time of the present study (2016), the city had an estimated 41,422 residents living in the approximately 19-square mile city limits, with 18.5% (2012-2016) living below the poverty rate (reported in 2016 dollars).

County health statistics. From 2014 to 2016 the South Middle School surrounding community was experiencing an increase in intense student issues including homelessness, students in foster care, grandparents raising children, and increases in social-emotional issues. The target school's county mental health board collects data from several sources including the community's Opiate Task Force, medical system, and the criminal justice system, to report and health statistics and to study trends that explain

these changes. Health data from the county in which the target school district is located showed increases in emergency room visits resulting from overdose, an increase in suicide rates, and increased incarceration for drug-related charges. Additionally, the number of individuals in substance abuse treatment increased from 731 in 2014 to 961 in 2017. Citizens in substance abuse treatment related to opioids also increased from 38% in 2014 to 62% 2017. Table 8 provides a summary of several health statistics in the county from the years of 2014 and 2017.

Table 8

Summary of County Health Statistics 2014 and 2017

	2014	2017
Emergency room visits due to overdose	3.2%	7.5%
Emergency room visits for overdose	1.0%	1.5%
Overdose fatalities	1.6%	n/a
Suicide rate	6	9
Jail admission due to drugs	13.2%	19%
Jail admission due to opiates	5.8%	8.6%
Individuals in substance abuse treatment	731	961
Individuals in substance abuse treatment related to opiates	38%	62%

Research Questions

1. Was there a significant difference between student reported perceptions of safety after the delivery of TIC-PD?
2. Was there a significant difference between student reported perceptions of positive school climate after the delivery of TIC-PD?
3. Was there a significant difference in cumulative student grade point average, attendance rates after TIC-PD?
4. Are there differences in student behavior incidents, actions and in school and out-of-school suspensions after TIC-PD?

Data Analysis

The quasi-experimental design with a cohort comparison group and a treatment group tested the null hypotheses. The null hypothesis for research questions 1 and 2 questioned that there would be no difference in students' perceived safety and positive school climate between the two groups after the intervention of the TIC-PD. The null hypothesis for research questions 3 and 4 questioned that there would be no difference in grade point average, days present at school, and consequences for behavioral incidents between the two groups.

The independent variable was the presence or absence of TIC-PD delivered to South Middle School classified and certified staff, corresponding to the years in which data were collected. The dependent variables were student reported perceptions of safety and positive school climate. Safety was measured with survey items that inquired about emotional and physical safety, while positive school climate was measured with survey items that inquired about care, respect, and positive relationships with at least one adult.

Academic achievement was measured by way of grade point average. Attendance was measured according to days present at school. Discipline was measured according to number of discipline incidents that resulted in negative consequence (in- or out-of-school suspension).

A chi square test of goodness of fit analysis was performed to determine if the demographics of the respondents were significantly different from the demographics of the student population by grade level and gender for the 2016-2017 school year. However, the district survey did not include demographic information in the 2013-2014 student school year, and as a result data could not be included.

For research questions 1 and 2, an exploratory factor analysis (EFA) was first conducted on the student perception climate survey data. The purposes of the EFA was to determine what underlying constructs were measured by the items in order to determine if potential issues could impact findings of the study, to investigate how the survey items worked together, and to determine which questions might be grouped together as factors or latent variables. While the purpose of the present study was to measure emotional and physical safety, care, respect, and relationships, it is important to note that it is difficult to directly define and measure the variables because of subjective facets. The EFA identified latent variables and also measured variables that could not be measured directly and also identified clusters of variables in the survey instrument to understand the structure of variables (Field, 2013). Two constructs were identified from the EFA: safety and positive school climate. Safety addressed research question 1. Positive school climate addressed research question 2. Cronbach alpha was calculated to

evaluate the survey's internal consistency once latent variables were identified (Field, 2013).

Next, independent sample *t*-tests were conducted to examine associations between group means based on the independent variable TIC-PD and the dependent variables of safety and positive school climate. The effect size of each *t*-test was measured with, Cohen's *d*. The effect size was used to determine the strength of the association of potential TIC-PD impact and safety and positive school climate constructs. The effect size determined the practical significance of the *t*-test results (Mertler & Vannatta, 2013). The present study used suggested effect sizes of $d = 0.2$ to indicate a 'small' effect size, 0.5 to indicate a 'medium' effect size, and 0.8 to indicate a 'large' effect size (Cohen, 1992).

Reliability is the ability of an instrument to produce consistent results on repeated administrations (Field, 2013). In the present study, the cohort comparison group (2013-2014) and treatment group (2016-2017) data were collected from two different groups of students, resulting in the employment of a between-group design. Because the data were from a pre-existing data set, it is possible that measurement error occurred. However, analysis of the student perception survey data included assessing Cronbach's alpha to measure internal consistency reliability among survey items to determine correlations among individual items. Additionally, it is possible for a survey instrument to be considered reliable yet not measure what was designed to measure.

For research question three, descriptive statistics were assessed to provide the means and standard deviations for the variables of days present at school and grade point averages. Two-tailed independent *t*-tests were conducted to determine potential group

differences for each variable. The analysis determined significant differences in days present at school and grade point averages for the cohort comparison group (2013-2014) and treatment group (2016-2017).

For research question 4, descriptive statistics were again assessed to provide the means and standard deviations for the number of student discipline incidents with discipline consequences. Two-tailed independent *t*-tests determined statistical differences for each variable. The analysis determined significant differences in student discipline incidents and discipline consequences for the cohort comparison group (2013-2014) and treatment group (2016-2017). Because South Middle School had multiple categories for types of discipline incidents, the incidents were labeled and combined for the current study: Violation) damage to school property, theft; Disruption) disobedient behavior, insubordination, disruption to school, forged pass, apparel, profanity, school transportation, sexual harassment; Violence) assault, fighting, dangerous activity; Hostility) threats, bullying, fright, degrading; and Illegal Substance) narcotics, drugs, tobacco (Table 9).

Table 9

Categories of Discipline Incidents

Label	Combined Discipline Incidents
Violation	Damage to school property, theft
Disruption	Disobedient behavior, insubordination, disruption to school, forged pass, apparel, profanity, school transportation, sexual harassment
Violence	Assault, fighting, dangerous activity
Hostility	Threats, bullying, fright, degrading
Illegal Substance	Narcotics, drugs, tobacco

South Middle School also had multiple categories of discipline consequences, therefore the consequence were labeled and combined into categories for the current

study: No Action) No action given; Minor Action) verbal warning, detention, Tuesday school (staying after school for 2.5 hours with an assigned teacher) on-campus lunch; ER) emergency removal; ISS) in-school-suspension; OSS) out-of-school suspension; Call home) parent call home for attendance; and Police Report) police report (Table 10).

Table 10

Categories of Discipline Consequences

Code Label	Discipline Consequences
No action	No action given
Minor action	Verbal warning, detention, Tuesday school (staying after school for two and half hours with an assigned teacher) On-campus lunch
ER	Emergency removal
ISS	In-school-suspension
OSS	Out-of-school suspension
Call home	Parent call home for attendance
Police Report	Police Report

A factorial multivariate analysis of variance (MANOVA) examined mean differences for the race (non-minority/minority) and gender (male/female) for the cohort comparison group and treatment group. The MANOVA, a between-subjects design, was used because there were two dependent variables (cohort comparison and treatment group outcomes). The MANOVA assessed differences between the groups and addressed the potential of Type I errors. The MANOVA analysis provided more power to detect differences across the independent variables (gender, race and years).

An analysis of covariance (MANCOVA) was also conducted to examine the number of cohort comparison group (2013-2014) and treatment group (2016-2017) discipline consequences with the covariate of gender. The present study used eta squared to measure effect size for the factorial MANOVA and MANCOVA findings such that .01 was considered to be a small effect, .06 was considered to be a medium effect, and .14 was considered to be a large effect. SPSS version 25 was used to complete the statistical analysis.

Table 11

Research Questions, Variables and Type of Data Analysis

Research Question	Independent Variable	Dependent Variable	Data Analysis
One	TIC-PD	Emotional Safety Physical Safety Safety	*t*-test of Independent Samples
Two	TIC-PD	Positive School Climate	*t*-test of Independent Samples
Three	TIC-PD	Grade Point Average Attendance Rates	*t*-test of Independent Samples
Four	TIC-PD	Behavior Incidents	*t*-test of Independent Samples
		Discipline Consequences Race/gender/behavior	Factorial MANOVA
		Discipline Consequences with Gender Controlled	MANCOVA

Assumptions

For the present study to impact to the body of educational research regarding TIC and student-reported perception of safety and positive school climate, several assumptions must be addressed, and these assumptions are presented here as categorized by students, the school district, and statistics. The first assumption was that students understood and interpreted subjective terms (e.g. emotional safety, physical safety, care, trust, relationship) that were included in the survey instrument. Students' personal experiences may impact ways in which they interpreted and responded to individual survey items.

Based on a participant's perspective and experiences, interpretation of specific terms may be different among individual students. Second, the district collected the data consistently at each school and within each school year. That is, all students had an

opportunity to complete the assessment each school year under the same conditions. District administrators constructed the student perception climate survey which included modifications of the School Connectedness Survey (Lohmeier & Lee, 2011). Items 1, 2, and 15 were utilized from the School Connectedness Survey (SCS). Because Lohmeier and Lee (2011) presented evidence that SCS scores are highly reliable, including a constant factor structure across populations, the assumption was made that inclusion of items 1, 2, and 15 would be sufficient for the present study

Third, internal validity threats may interfere with appropriately interpreting participants within the larger population, potentially preventing proper assessment of the data (Creswell, 2014). Specific to the present study, a cohort comparison group was used, and because of the study design a baseline equivalent for Safety *and* Positive School Climate could not be established. That is, two sets of students (i.e. cohort comparison group and treatment group) responded to the survey, and the students may have had different experiences as a result of unmeasurable reasons.

These social issues between times of data collection (e.g. opioid epidemic, 2016 presidential race) may have impacted data collection or responses from the two groups, causing one cohort to have systematically different experiences than the other. Finally, collections for data in the present study were not structured or controlled for, which is a function of utilizing archival data. Relative to the present study, teachers were prompted to invite their students to complete the survey, yet if students were not prompted as intended there may have been an unequal distribution of data between cohorts or individual classrooms from which data originated.

External validity threats occur when incorrect inferences are made about the respondent data to other persons (Creswell, 2014). In the present study, the school setting's unique student population, demographics, and community circumstances may limit generalization of findings to other settings or populations. In addition, selection bias may threaten external validity. In the present study pre-existing data were used, thus neither random selection of student participants, nor their intended inclusion, was possible. The operationalization of study constructs (i.e. positive school climate and safety) also may be measured and interpreted in different ways. Therefore, generalizing findings from the present study to other settings is limited as a result of interpretation of operational definitions.

Chapter Summary

Chapter III presented the research design, method, and data analysis to examine student-reported safety and positive school climate in addition to academic achievement and behavioral incidents. In addition, this chapter outlined the population demographics and county health statistics. Descriptions of South Middle School and the district's county population demographics were explored. The current chapter also provided an illustration of the survey instrument including factor analysis and reliability of the survey measures. Assumptions and data analysis were also discussed for the present study. Chapter IV provides the results of the research analysis relative to research questions 1-4.

CHAPTER IV. RESULTS

The purpose of the present quasi-experimental study was to explore pre-existing student-reported perception survey data. The outcome data were used to determine potentially significant associations between certified and classified staff participation in TIC-PD and student perceptions of safety and positive school climate, in addition to students' attendance, achievement, and behavioral instances. Student perception climate data from the 2013-2014 school year represented the cohort comparison group and the 2016-2017 data served to represent the treatment group.

Research question 1 addressed safety, which as a construct included student perceptions of physical and emotional safety. Research question 2 addressed positive school climate. Positive school climate as a construct included student perceptions of care, help given, feedback, encouragement, respect, and a positive relationship. The Safety and Positive School Climate constructs were defined by a factorial analysis and reliability measure. Two-tailed *t*-test and effect sizes were assessed to determine differences for research questions 1 and 2. Research question 3 addressed the number of days students were present at school in addition to cumulative grade point average. Two-tailed *t*-tests and effect sizes were used to determine potential differences for research question 3.

Research question 4 addressed discipline incidences and consequences, which were assessed with data collected from the school district's electronic records (Harmony and District Analysis for School Leadership). Two categories of discipline groups (i.e. discipline incidents and discipline consequences) were created and coded accordingly. Two–tailed *t*-tests and effect size were used to determine differences for research

question 4. A multivariate analysis of variance and a multivariate analysis of covariance explored race and gender relative to behavior incidents and consequences. SPSS version 25 was used to complete the descriptive and inferential statistics. Results are presented below according to the respective research questions.

Demographic Summary

In the spring of each school year, the target school district administers a student perception school climate survey. During the 2016-2017 year, for which demographic characteristics were available, there was a total of n = 433 survey respondents while total enrollment in the district included n = 582 students. According to the school district's Data Analysis for Student Learning records, n = 176 students were enrolled in grade 6, n = 200 students were enrolled in grade 7, and n = 206 students were enrolled in grade 8. When completing the 2016-2017 survey, students were asked to report their grade level and gender. According to demographic results, the following student responses were gathered from 76, 178, and 172 students in grades six, seven, and eight, respectively.

It was identified that n = 7 students entered their wrong grade level as determined by SPSS frequency data. For gender, there were n = 202 female respondents and n = 209 male respondents; n = 13 respondents did not provide an answer for the gender item, and n = 9 respondents preferred not to provide a response for the item. The survey demographic section also offered an option to not identify a gender (i.e. prefer not to say). Table 12 illustrates demographic information of students in the treatment group, and also that of all enrolled students. Student respondent descriptive data were not collected for the 2013-2014 survey.

Table 12

2016-2017 Descriptive Data of Student Survey Respondents and Enrolled Students

		Survey respondents	Percentage of student respondents	Enrolled students	Percentage of enrolled students
Gender	Female	202	34.7%	273	46.8%
	Male	209	35.8%	310	53.1%
	Prefer not to say[a]	9	.015%	—	
	No answer [b]	13	.022%	—	
	Total gender	433	74.2%		
Grade	Grade 6	76	17.6%	176	40.6%
	Grade 7	178	41.1%	200	46.2%
	Grade 8	172	39.7%	206	47.8%
	Entered wrong grade level[c]	7	1.6%		
	Total grade level	433			
New students	New to the district	112	11.2%	—	
	Currently enrolled			583	

Note: [a]Student preferred not to provide gender identity. [b]Students did not provide answer to gender inquiry. [c]Student did not report the correct grade level.

A chi square goodness of fit test was performed on the 2016-2017 survey respondent demographics, and the grade level and gender of the survey respondents were compared to the student population. Findings showed that the proportion of female and male survey respondents did not differ from the entire South Middle School population χ^2 (1, n = 411) = 0.874, p < .350.

A chi square goodness of fit test was conducted to examine differences between respondents in grades six, seven, and eight and the full school population. Here, the student population significantly differed from the survey respondents, χ^2 (2, n = 426) = 31.471, p < .001. In examining the frequency data, there was a large difference in the

proportion of sixth grade student survey respondents (n = 76) compared to the school population (N = 176). As such, survey respondent data from the sixth grade participants were not representative of the full school population.

Analysis and Results of Student Perception Survey Questions

An exploratory factor analysis (EFA) was performed to explore the student perception survey items to determine the structure of latent variables and the relationships among survey items (Field, 2013). The EFA used a varimax rotation to maximize the dispersion of loading within factors, which resulted in a more interpretable group of factors (Field, 2013). Common variance (i.e. communalities) was explored to identify common underlying dimensions within the data (Field, 2013). Principal axis factoring extraction was used to determine the appropriate number of factors to retain, which was determined by the eigenvalues. The cutoff value was one. Eigenvalues were graphed, and the factors' relative rankings were illustrated in a scree plot (Field, 2013). Once the factors were extracted, Varimax with Kaiser Normalization rotation was conducted to allow the factors to converge. This process helped to determine how many factors were extracted and how many variables loaded onto each factor (Field, 2013).

The EFA was conducted on the 10 survey items that appeared in the survey for both years of data collection. Two factors produced eigenvalues over Kaiser's value of 1, and when combined explained 53.75% of the variance. Examination of the scree plot showed two potential factors within the survey (Field, 2013). When reviewing factor loadings, one factor centered around issues of safety (items 4, 5, 6) and is labeled herein as *Safety*. The second factor centered around issues of positive school climate (items 1, 2, 3, 7, 8, 9, 10) and is labeled herein as *Positive School Climate*. The term*s Safety* and

Positive School Climate are utilized because the present study assessed the impact of the TIC-PD students' perspectives of the school climate and both concepts are substantial components of a trauma-sensitive school culture (Phifer & Hull, 2016).

To measure internal consistency of the study data, Cronbach's alpha was used to analyze the 10 survey items described above. Items 1, 2, 3, 7, 8, 9, and 10 represent Positive School Climate and are related to student relationships with teachers and adults. Cronbach's alpha of these items was $\alpha = 0.838$, which displayed good internal consistency as described by Kline (1999), who suggested that an α over .7 is acceptable. Questions 4, 5, and 6 converged to a separate factor to represent Safety, and are related to student perceptions of feeling emotional and physical safety. Cronbach's alpha for these items was also acceptable at $\alpha = 0.767$ (Kline, 1999).

Internal reliability analysis of questions 1-10 suggested that deleting any of the survey items would not improve the results. Therefore, all 10 items were retained. Table 13 depicts the means, standard deviations, communalities, pattern coefficients, and factor loading for each item in the student perception survey.

Table 13

Descriptive Statistics and Factor Loading for Student Perception Survey Items 1-10

Survey item	*M*	*SD*	h^2	*Pattern coefficient*		*Factor Loaded*
				PSC	*Safety*	
Q. 1	3.43	0.60	0.59	.724	.263	PSC
Q. 2	3.31	0.59	0.49	.655	.237	PSC
Q. 3	3.40	0.66	0.62	.725	.300	PSC
Q. 7	3.41	0.65	0.69	.810	.186	PSC
Q. 8	3.56	0.58	0.57	.734	.172	PSC
Q. 9	2.91	0.92	0.43	.607	.253	PSC
Q. 10	3.68	0.56	0.34	.561	.145	PSC
Q. 4	3.53	0.62	0.70	359	.753	Safety
Q. 5	3.27	0.73	0.67	.324	.751	Safety
Q. 6	3.32	0.70	0.73	.118	.851	Safety

Note: h^2 = communality, PSC = Positive School Climate (Cronbach Alpha 0.896), Safety = Safety (Cronbach Alpha 0.790)

A second exploratory factor analysis was conducted to examine survey items 1-16 from the 2016-2017 student perception survey. Responses for only students in the 2016-2017 data collection were included for this analysis because students in this group were the only participants to complete all 16 questions. The factor analysis with survey items 1-16 was conducted to obtain eigenvalues for each factor produced by the survey data. Three factors had eigenvalues over Kaiser's value of 1, and when combined explained 60.64% of the variance. An examination of the scree plot showed three potential factors in the 16-item survey (Field, 2013). When reviewing how the survey items factored, one factor centered around safety, one factor centered around positive school climate, and the third factor centered around activities at school.

To measure internal consistency, Cronbach's alpha was used to assess the 16 survey items. Items 1, 2, 3, 7, 8, 9, 10, 11, 12, and 13 loaded together to represent the

construct of positive school climate. Items 1, 2, 3, 7, 8, 9, 10 loaded together in this analysis, as they did in the previous EFA which measured the 10 survey items. The items represented the concepts of care, students receiving help, teacher respect and trust, feedback and encouragement, teachers working well together, enjoying attending school, positive relationship with at least one adult, learning at school. Cronbach's alpha for these items was acceptable at $\alpha = 0.896$ (Kline, 1999).

Survey items 4, 5, 6 and 16 loaded together under the construct of safety. Items 4, 5, 6 loaded together in this analysis as they did in the previous EFA which measured the 10 survey items. These survey items represented the concepts of physical safety, emotional safety, and classmates' respect. The Cronbach alpha of these items was $\alpha = 0.790$, which is an acceptable level (Kline, 1999). Survey items 14 and 15 also grouped together, which represented students going to school events and participating in activities. Cronbach's alpha of these items was $\alpha = 0.405$ which is below an acceptable level (Kline, 1999), and therefore were not included as a construct. Overall, survey items 1 – 10 factored together in both the 2013-2014 and 2016-2017 data collections. When items 11-16 were added in 2016-2017, items 1-10 continued to factor together, suggesting that it is justifiable to analyze the variables across both school years when exploring the research questions. The constructs were labeled as Safety and Positive School Climate for the present study.

A trauma-informed school culture provides a physically and psychologically safe school environment and a way to help mitigate the impact of trauma exposure (Bloom & Farragher, 2013; Ristuccia, 2013; SAMHSA, 2019). There is a connection between experiencing interpersonal relationships and physically and psychologically safe

environments for traumatized students, and safety is a key component in the development of trauma-informed school cultures (Bath, 2008; Bloom & Farragher, 2013; Craig, 2016; Ristuccia, 2013; SAMHSA, 2019). As such, the construct of Safety may be helpful to measure outcomes associated with TIC-PD.

After reviewing items 1, 2, 3, 7, 8, 9, and 10, the items that factored together were called construct relational connection. While survey items 1, 2, 3, 7, 9, 10 have relational qualities, item 8 (*My teachers work well together*) was a concern because it expressed relational qualities regarding educator interactions and loaded with the survey items that appeared to be relational, although it did not pertain to student relationships with teachers. However, while students may perceive teachers working well together as relational qualities, Minckler (2013) contended that teachers working well together are more closely aligned to a feature of school climate. Therefore, the construct of relational connection was not used, and Positive School Climate was included as a construct in the present study.

Safety (items 4, 5, 6) is a key component in the development of a trauma-informed school culture (Bath, 2008; Bloom & Farragher, 2013; Craig, 2016; Ristuccia, 2013; SAMHSA, 2019). Survey items 1, 2, 3, 7, 8, 9, and 10 factored together and were referred to as Positive School Climate. A positive school climate is a component of a trauma sensitive school culture (Phifer & Hull, 2016). Table 14 shows the number, content, and factor designation for each of the 10 survey items.

Table 14

2013-2014 and 2016-2017 Survey Numbers, Content and Factors

Survey Item	2013-2014 and 2016-2017	Factor
Item 1	Teachers in my school care about me.	Positive School Climate
Item 2	My teachers are available when I need extra help.	Positive School Climate
Item 3	The teachers in my school treat me with respect.	Positive School Climate
Item 4	I feel physically safe in my classrooms.	Safety
Item 5	I feel emotionally safe in my classrooms.	Safety
Item 6	I feel physically safe outside the classroom while at school (cafeteria, restrooms, hallways, lockers, playground, etc.)	Safety
Item 7	My teachers give helpful feedback and encouragement.	Positive School Climate
Item 8	My teachers work well together.	Positive School Climate
Item 9	I enjoy coming to school.	Positive School Climate
Item 10	I have a positive relationship with at least one adult at my school.	Positive School Climate

Research Question 1

Is there a difference in student reported perceptions of safety (physical, emotional) after TIC-PD?

A two-tailed *t*-test of independent samples was conducted to address research question 1. Emotional (item 5) and physical (items 4, 6) safety variables were individually analyzed by comparing the 2013-2014 and 2016-2017 student perception data. Survey items (4, 5, 6) were explored separately and then combined into a single variable, safety.

The emotional safety measure (item 5) met the assumption of equal variances $F(974, 857) = .205$, $p = .66$. Results indicated that there was a difference before and after TIC-PD regarding student perception of emotional safety between 2013-2014

(M = 3.34, SD = .70) and 2016-2017 (M = 3.14, SD = .78), $t(974) = 1.81$, $p < .001$, which produced a small effect size (d = 0.27). The 2013-2014 and 2016-2017 physical safety items (4, 6) did not meet the assumption of equal variance for item 4 $F(984, 776) = 30.99$, $p = .001$ but did meet the assumption of equal variance for item six $F(992, 839) = .31$, $p < .001$. Results indicated that there was a significant difference before and after TIC-PD regarding student perceptions of physical safety by measuring item four for 2013-2014 (M = 3.58, SD = 56.) and 2016-2017 (M = 3.44, SD = .72), $t(984) = 3.40$, $p < .001$, which was a small effect size (d = .22). For item 6 there was a significant difference between 2013-2014 (M = 3.39, SD = .65) and 2016-2017 (M = 3.20, SD = .76), $t(992) = 4.14$, $p < .001$, which was a small effect size (d = .27).

After exploring how the survey items factored together, items 4, 5 and 6 converged into a construct referred to as safety, and its mean was calculated. A two-tailed t-test of independent samples was conducted to determine if there was any difference in student perceptions of safety between the 2013-2014 school year and the 2016-2017 school year after the TIC-PD. The safety variable did not meet the assumption of equal variances $F(963, 783.71) = 4.586$, $p = .014$. However, results indicated a significant decrease in safety after the TIC-PD between 2013-2014 (M = 3.43 SD = .52) and 2016-2017 (M = 3.26, SD = .67), $t(829.33) = 4.747$, $p < .001$, which was a small effect size (d = 0.28). Table 15 illustrates the results of the research question one.

Table 15

Descriptive and Inferential Statistics for Emotional and Physical Safety

	2013-2014			2016-2017						
	n	*M*	*SD*	*n*	*M*	*SD*	*df*	*t*	*p*	Cohen's *d*
5. I feel emotionally safe in my classrooms.	553	3.34	0.70	423	3.14	0.78	974	1.81	<.001	0.27
4. I feel physically safe in my classrooms.	560	3.58	0.56	426	3.44	0.72	984	3.40	.001	0.22
6. I feel physically safe outside the classroom while at school (cafeteria, restrooms, hallways, lockers, playground, etc.).	563	3.39	0.65	437	3.20	0.76	992	4.14	<.001	0.27
Safety (Survey items 4, 5, 6).	563	3.43	0.52	433	3.26	0.67	829.33	4.747	<.001	0.28

Research Question 2

Is there a difference in student reported perceptions of positive school climate after TIC-PD?

After exploring how the survey items factored together, items 1, 2, 3, 7, 8, 9, and 10 were converged to represent a construct referred to as positive school climate, and the mean for this variable was calculated. A two-tailed *t*-test of independent samples was conducted to determine any difference in perceptions of positive school climates between the 2013-2014 and 2016-2017 school years following the TIC-PD. The positive school

climate variable did not meet the assumption of equal variances $F(994, 858.73) = 3.261$, $p = .021$, although results indicated there was a significant decrease in student perceptions of positive school climate between 2013-2014 ($M = 3.42$), $SD = .342$) and 2016-2017 ($M = 3.31$, $SD = .51$), $t(995) = -2.441$, $p = .015$, which was a small effect size ($d = .13$; Table 16).

Table 16

Descriptive and Inferential Statistics for Positive School Climate

	n	*M*	*SD*	*df*	*t*	*p*	*Cohen's d*
2013-2014	563	3.42	0.44	858.73	3.261	<.001	0.23
2016-2017	433	3.31	0.51				

Research Question 3

Is there a difference in student cumulative student grade point average and days students are present at school after TIC-PD?

A frequency analysis was conducted to measure descriptive data regarding student gender and grade level for the number of days students were present at school. In 2013-2014, the 262 female respondents were present at school an average 157.80 days, and the 318 male respondents were present an average of 157.56 days. In 2016-2017, 277 female students were present at school 164.08 days and 317 male students present 165.79 days. In 2013-2014, 186 6th grade students attended 157.74 days, 211 7th grade students attended 159.14 days and 183 8th grade students attended 155.90 days. In 2016-2017, 183 6th grade students attended164.79 days, 208 7th grade students attended 165.00 days, and 203 8th grade students attended 165.17 days (Table 17).

Table 17

Frequency and Percentage of Days Present at School by Grade and Gender

Gender/Grade Level	2013-2014	Days present at school	2016-2017	Days present at school
Females	262	157.80	277	164.08
Males	318	157.56	317	165.79
Grade 6	186	157.74	183	164.78
Grade 7	211	159.14	208	165.00
Grade 8	183	155.90	203	165.17
Total Students	580	157.67	594	165.00

Two tailed *t*–tests of independent samples were conducted to address research question 3. Specifically, the number of days students were present at school were analyzed to explore differences between school years. The dependent variable, days present at school, did not meet the assumption of equal variances $F(1172,1136) = 472$, $p = .03$, and there was a significant increase in days students were present at school from 2013-2014 ($M = 157.67$, $SD = 27.01$) to 2016-2017 ($M = 165.00$, $SD = 23.72$), $t(1136) = 4.86$, $p < .001$, which is a small effect size ($d = .28$).

Students' cumulative grade point average was assessed to determine if there were differences in academic achievement. This variable did not meet the assumption of equal variances $F = (565, 591) = 18.08$, $p = .01$, and there was a significant increase in grade point average from 2013-2014 ($M = 3.22$, $SD = .71$) to 2016-2017 ($M = 3.41$, $SD = .62$), $t(1119) = 4.78$, $p < .001$, which is a small effect size ($d = .28$). Table 18 illustrates results regarding RQ 3.

Table 18

Days Present at School and Cumulative GPA Prior to and After TIC-PD

	2013-2014		2016-2017				
	M	*SD*	*M*	*SD*	*t*	*p*	Cohen's *d*
Days present	157.57	27.01	165.00	23.27	4.86	<.001	0.28
Cumulative GPA	3.22	0.71	3.41	0.62	4.78	<.001	0.28

Research Question 4

Are there differences in student behavior incidents, actions and in school and out-of-school suspensions after TIC-PD?

To answer RQ 4, when coding the raw discipline data the researcher combined and grouped the district's numerous discipline incident categories and actions (Table 9). Each enrolled student was assigned a line. Each discipline incident was assigned to a category group such as violation, disruption, violence, hostility, or illegal substance. Regardless of incident category assigned, discipline incident was recorded as a continuous variable ranging from students who had no discipline incidents to students who had the maximum number of discipline incidents that occurred during the 2013-2014 and 2016-2017 school years. Two-tailed independent *t*-tests examined the number of discipline incidents for all students between 2013-2014 ($n = 591$) and 2016-2017 ($n = 580$) and did not meet the assumption of equal variance $F(1169, 821.347) = 34.017$, $p < .001$. Results indicated a significant decrease in the number of students who did not have a discipline incidents from 2013-2014 ($M = 0.75$, $SD = 2.28$) to 2016-2017 ($M = 0.35$, $SD = 1.02$), $t(821) = 3.867$, $p < .001$), which was a small effect size ($d = 0.22$). See Table 19 for a summary of these results.

Table 19

Analysis of Discipline Violations Prior to the TIC-PD and Post TIC-PD

	2013-2014				2016-2017				*t*	*p*	Cohen's *d*
	N	%	*M*	*SD*	*N*	%	*M*	*SD*			
No discipline incidents	591	63.4	0.75	2.28	580	42.2	0.35	1.02	3.86	<.001	.22

Note: % = Total percent of students who did not have discipline incident

Two-tailed independent *t*-tests were conducted to examine the number of discipline incidents per category between 2013-2014 (n = 591) and 2016-2017 (n = 580). The violation category did not meet equal variance assumption $F(1169, 859.700) = 58.059$, p <.001. Results indicated a significant increase in the number of students who received discipline incidents in violation category such as damage to school property from 2013-2014 (M = 0.01, SD = .123) to 2016-2017 (M = 0.05, SD = .240), $t(859) = 3.723$, p <.001, which was a small effect size (d = .21). The disruption category did not meet the assumption for equal variance $F(1169, 1065.970) = 14.101$, $p < .001$, and results indicated a significant increase in the number of student discipline incidents in disruption from 2013-2014 (M = .0.62, SD = .2.414) to 2016-2017 (M = 1.03, SD = 3.265), $t(1169) = -2.399$, $p = .017$), which was a small effect size (d = .142).

The violence category also did not meet the assumption for equal variance $F(1169, 958.024) = 41.119$, $p < .001$, and results indicated a significant increase in the number of student discipline incidents in violence from 2013-2014 (M = .0.20, SD = .787) to 2016-2017 (M = 0.42, SD = 1.281), $t(958.024) = -3.329$, $p = .001$, which was a small effect size (d = .206). The hostility category did not meet the assumption for equal variance $F(1169, 1148.786) = 14.829$, $p < .001$. Results for this analysis indicated

a significant decrease in the number of student discipline incidents in hostility category from 2013-2014 (M = .0.13, SD = .602) to 2016-2017 (M = 0.07, SD = .522), t(1148.786) = .2.010, p = .045, which was a small effect size (d = .216). The illegal substance category did not meet the assumption for equal variance F(1169, 759.782) = 27.949, p < .001. Results for this variable indicated a significant increase in the number of student discipline incidents in the illegal substance category from 2013-2014 (M = .0.06, SD = .398) to 2016-2017 (M = 0.19, SD = .987), t(759.782) = -2.763 p = .006, which was a small effect size (d = .017). See Table 20 for a summary of these results.

Table 20

Discipline Incidents by Category Prior to the TIC-PD and Post TIC-PD

Discipline incidents	2013-2014				2016-2017						
	N	%	*M*	*SD*	*N*	%	*M*	*SD*	*t*	*p*	Cohen's *d*
Violation	591	.5	0.01	0.123	580	3.7	0.05	.240	-3.723	<.001	.21
Disruption	591	17.1	0.62	2.414	580	27.8	1.03	3.265	-2.399	.017	.14
Violence	591	7.3	0.20	0.787	580	16.6	0.42	1.281	-3.329	.001	.21
Hostility	591	7.8	0.13	0.602	580	4.3	0.07	.522	2.010	.045	.22
Illegal Substance	591	3.4	0.06	0.398	580	4.3	0.19	.987	-2.763	.006	.02

Note: % = Total percent of students who had discipline incident per category

A factorial MANOVA was conducted to examine the mean discipline incident differences for race and gender between the two groups (2013-2014 and 2016-2017). When comparing all male and female students and the number of discipline incidents, males had more discipline incidents than females, F(1, 391) = 9.70, p < .002, η^2 = .025, which was a small effect (Field, 2013). The estimated marginal means indicated that

male students (M = 7.420 incidents, SE = .623) had significantly more discipline incidents than female students (M = 3.880 incidents, SE = .947).

When comparing the number of discipline incidents between school years, there was no significant difference between discipline incidents and school years, $F(1, 391) = 1.225$, $p < .269$, $\eta^2 = .003$, which was a small effect (Field, 2013). The estimated marginal means indicated 2013-2014 school year (M = 5.023 incidents SE = .735) and 2016-2017 school year (M = 5.277 incidents SE = .862).

When comparing the number of all discipline incidents between 2013-2014 and 2016-2017 for all non-minority and minority students, there was no significant difference $F(1, 391) = 2.589$, $p < .108$, $\eta^2 = .007$, which was a small effect (Field, 2013). The estimated marginal means were observed for discipline incidents for non-minority (M = 4.738 incidents SE = 4.94) and minority students (M = 6.562 incidents SE = 1.020).

When comparing the number of all female and male discipline incidents and school years (2013-2014 and 2016-2017), there was no significant difference between discipline incidents and years $F(1, 391) = .033$, $p < .855$, $\eta^2 < .001$, which produced a small effect (Field, 2013). The estimated marginal means for discipline incidents for 2013-2014 for all female students (M = 3.149 incidents SE = 1.094) and all male students (M = 6.897 incidents SE = .983) and 2016-2017 all female students (M = 4.610 incidents SE = 1.547) and all male students (M = 7.944 incidents SE = .764).

When comparing the number of female and male discipline incidents and all non-minority and minority students, there was no significant difference between discipline incidents for non-minority and minority students $F(1, 391) = .211$, $p < .646$, $\eta^2 < .001$, which was a small effect (Field, 2013). The estimated marginal means showed discipline

incidents for 2013-2014 female non-minority students (M = 3.228 incidents SE = .827) and male non-minority students (M = 6.248 incidents SE = .541), and for 2016-2017 female minority students (M = 4.531 incidents SE = 1.704) and male minority students (M = 8.592 incidents SE = 1.122).

When comparing the number of all minority and non-minority student discipline incidents and school years, there was no significant difference between non-minority and minority student discipline incidents and years $F(1, 391) = 1.148$, $p < .285$, $\eta^2 < .003$, which produced a small effect (Field, 2013). Estimated marginal means showed discipline incidents for 2013-2014 non-minority (M = 4.718 incidents SE = .616) and minority students (M = 5.327 incidents SE = 1.335), and 2016-2017 non-minority (M = 4.758 incidents SE = .772) and minority students (M = 7.796 incidents SE = 1.542).

When comparing the number of all non-minority and minority student discipline incidents, female and male students and school years (2013-2014 and 2016-2017), there was no significant difference $F(1, 391) = .451$, $p < .501$, $\eta^2 < .001$, which was a small effect (Field, 2013). The estimated marginal means showed discipline incidents for 2013-2014 non-minority female (M = 3.485 incidents SE = .955) and minority female students (M = 2.812 incidents SE = 1.968), and 2013-2014 non-minority male (M = 5.951 incidents SE = .779) and minority male students (M = 7.842 incidents SE = 1.806), 2016-2017 non-minority female (M = 2.971 incidents SE = .1.335) and minority female students (M = 6.250 incidents SE = 2.783), and 2016-2017 non-minority male (M = 6.545 incidents SE = .751) and minority male students (M = 9.343 incidents SE = 1.331).

A multivariate analysis of covariance (MANCOVA) was conducted to examine discipline consequences between 2013-2014 and 2016-2017, with respondent gender

serving as a covariate. When controlling for gender, there was an increase in school suspension consequences between the 2013-2014 and 2016-2017 school years $F(2, 388) = 7.769$, $p = .006$, $\eta^2 = .020$, which produced a medium effect (Field, 2013). The estimated marginal means displayed students with in-school suspension in 2013-2014 ($M = 1.055$ in-school suspension, $SE = .182$) and 2016-2017 ($M = 1.549$ in-school suspension, $SE = 1.90$).

When controlling for gender, there was a significant increase between the 2013-2014 and 2016-2017 school years regarding out-of-school suspension consequences $F(2, 388) = 15.477$, $p < .001$, $\eta^2 = .038$, which was a medium effect (Field, 2013). Estimated marginal means provided students with out-of-school suspension consequences for 2013-2014 ($M = 1.127$ out-of-school suspension, $SE = .261$) and 2016-2017 ($M = 2.090$ out-of-school suspension, $SE = 2.74$).

There was also a significant increase between 2013-2014 and 2016-2017 school years for out-of-school suspensions $F(2, 388)$ 6.35, $p = .012$, , $\eta^2 = .016$, which was a small effect (Field, 2013). Descriptive statistics displayed 2013-2014 ($M = .99$ out-of-school suspension, $SD = 2.791$) and 2016-2017 ($M = 2.25$ out-of-school suspension, $SD = 4.616$).

Chapter IV contains the results of the analyses, links the analyses back to their respective research questions, and demonstrates consistency of analysis with quantitative research methods. South Middle School (SMS) preexisting student perception survey and SMS student grade point averages, attendance and discipline incident and consequence data were analyzed to determine students' perceptions of school safety and school climate after TIC-PD.

The present study employed descriptive and frequency data, exploratory factor analysis, Cronbach's alphas, *t*-tests of independent samples, Cohen's *d*, factorial multivariate analysis of variance (MANOVA) and multivariate analysis of covariance (MANCOVA) to determine differences outcome variables. The exploratory factor analysis produced two constructs from the survey instrument. The constructs were identified for the study as Safety and Positive School Climate with acceptable internal consistency. The *t*-test of independent samples determined there was no difference in levels of safety and school climate after the TIC-PD by analyzing the variables of Safety, Positive School Climate, grade point averages, and days present at school. Cohen's *d* produced a small effect size of each variable. The factorial MONOVA produced no differences between race, cohorts and discipline consequence; however, there was a difference between genders. When controlling for gender, the MANCOVA revealed increases in in-school and out-of-school suspensions after the TIC-PD.

While SMS staff attended the TIC-PD, it is evident from these results that there was a decrease in student perception of Safety and Positive School Climate after the delivery of TIC-PD. Furthermore, increases were identified in student grade point averages and days present at school, when controlling for gender, and in in-school and out-of-school suspensions. Chapter V follows with a summary of the quantitative analysis and discussion of results relative to each research question. Conclusions, limitations, and implications for leadership, policy and future qualitative and quantitative research opportunities are also described in Chapter V below.

CHAPTER V. DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

There is a growing awareness of the importance of creating trauma-informed schools as a way to engage in best practices with students. An urban school in the Midwestern United States (South Middle School; SMS) determined that it was important to develop a trauma-sensitive district workforce after delivering a community-wide professional development on trauma-informed care (TIC) in the fall of 2014. The purpose of the current quasi-experimental research study was to determine if there was an association between certified and classified staff having attended a TIC professional development (independent variable), and several student outcomes, which included perceptions of safety and positive school climate, cumulative GPA, days present at school, and negative behavioral incidents (dependent variables).

A pre-existing student perception questionnaire was administered to students to measure their perceptions of safety and positive school climate after the TIC-PD intervention. Students from the 2013-2014 school year served as the cohort comparison group, and students from the 2016-2017 school year served as the treatment group. The trauma-informed professional development (TIC-PD) was delivered to certified and classified school employees between rounds of data collection. For both cohort groups, students' school records were also accessed to measure days present at school, grade point averages, and frequency of behaviors that led to disciplinary action. The pre-existing student perception and school data sets were used to determine if staff participation in TIC-PD intervention had an impact on students' perceptions of the school climate, safety, student behavior, attendance, and grades. Chapter V provides a brief

review of the study followed by a discussion of the findings and recommendations for future research.

Statement of the Problem, Purpose, and Methodology

Many researchers have agreed and reported on the prevalence of trauma exposure in the K-12 student population (National Survey of Children's Health, n.d.; Perry & Daniels, 2016; Simonich et al., 2015; Stevens, 2012; Walker & Walsh, 2015). Because of ethical and moral issues, neither the school district nor the researcher for the present study gathered ACEs (Adverse Childhood Experiences) data from the student population. For the present research project, an assumption was made that SMS student respondents experienced trauma exposure in line with state and national averages.

As a result of the prevalence of childhood trauma, the need to understand and respond to its impact on student learning and behavior has led to an impetus for effective trauma-informed approaches in school systems (Chafouleas et al., 2016). It is well-established in the literature that childhood trauma often has injurious consequences on many outcomes including brain development, physical and social development, school experiences, and overall wellbeing. Oehlberg (2008) also argued that schools which focus on trauma-informed schools would show improved behavioral and academic outcomes over time. Furthermore, schools may be ideally positioned to systematically incorporate trauma-informed care into practices. However, limited research in this area has been conducted and reported (Chafouleas et al., 2016; Perry & Daniels, 2016; Phifer & Hull, 2016).

Creating a trauma-informed school culture (TISC) is a challenging task (Phifer & Hull, 2016), and a plethora of obstacles have been reported. Challenging traditional

mindsets of staff, including the denial and refusal of some educators to acknowledge the importance of trauma exposure, may limit schools' and students' success. Additional challenges include the use of traditional practices, such as punitive discipline, focusing on curriculum, not using de-escalation techniques to calm students, and administering punitive punishments to students who express negative behaviors (Craig, 2016).

Implementing and sustaining a TISC often requires much effort including substantial buy-in from all stakeholders, extensive planning, completing a needs assessment, and many other organizational efforts (Phifer & Hull, 2016). Characteristics of TISCs include that they embed trauma-informed concepts and attitudes into the daily practices, they create collaborative partnerships with mental health service providers, and that they develop community affiliations (Phifer & Hull, 2016). Some benefits of a TISC have been shown to include improved academic achievement, perceptions of positive school climate, increased staff morale, and better attendance rates (Oehlberg, 2008).

Many researchers have recommended that effective professional development should be included in creating trauma-informed school cultures (Bloom & Farragher, 2013; Craig, 2016; National Council on Behavioral Health, 2014; Phifer & Hull, 2016; Rossen & Hull, 2013; van der Kolk, 2014). To this end, in the fall of 2015, a school district in the midwestern United States provided differentiated TIC-PD to nearly all of the district's classified and certified staff. In a retrospective survey, Goodwin-Glick (2017) assessed the impact of differentiated TIC-PD on classified and certified staff's knowledge, dispositions, and behaviors towards students who experienced trauma. That researcher's survey data were collected immediately following delivery of the TIC-PD, and findings indicated that TIC-PD participants expressed increased knowledge,

disposition, and behaviors regarding students with trauma exposure after having attended the professional development. The present study expanded on Goodwin-Glick's (2017) work by examining the impact of the same differentiated TIC-PD on several outcomes of middle school students including their perceptions of safety at school and positive school climate, grade point averages, days present at school, and behavior incidents and consequences. As such, the present research adds to the emerging and nascent literature regarding the implementation of TIC in schools – in particular, that of TIC-PD. Theoretical frameworks, which informed this research, included trauma theory, ethic of care, and attachment theory.

Summary and Discussion of Results

The following sections summarize how the results of the study inform each of the four research questions. The research questions are presented in the order of relevant findings, and each follows the format of first presenting the study's findings, followed by potential reasons for the findings, and then how the findings are connected to the literature.

Research Question 3.

Are there significant differences in cumulative student grade point average and days present at school after TIC-PD?

Results revealed increases in students' accumulated grade point averages, such that South Middle School students in the treatment group (2016-2017) had higher grade point averages than students in the cohort comparison group (2013-2014). Similarly, attendance rates also increased as indicated by the number of days students were present at school, such that South Middle School students in the treatment group (2016-2017)

were present at school more days than the students in the cohort comparison group (2013-2014).

SMS staff attended TIC-PD which provided information about the impact of trauma exposure on students' cognitive, behavioral and academic functioning, and potential negative outcomes Examination of the outcomes of the same TIC-PD, suggested that staff reported increases in trauma-informed knowledge, dispositions and attitudes (Goodwin-Glick, 2017). That is, staff reported changes after the TIC-PD. However, when examining student's grade point averages and days at present at school there was an increase, but those increase could not be attributed to the impact of the TIC-PD.

This finding may indicate that teachers did not apply TIC content or approaches to their practice after attending the TIC-PD. This would suggest that the staff attended the TIC-PD, returned to their classrooms and continued to deliver curriculum without making changes in their teaching practices. In other words, after the TIC-PD the teachers continued to interact with students in the same manner as prior to the TIC-PD. Furthermore, this would contrast Reeve's (2006) suggestion that when teachers were more attuned to students' functioning, then student-teacher connections developed and as a result instruction improved.

It is clear from research that positive student-teacher relationships are important to student learning. Roeser, Eccles and Sameroff (2000) asserted that positive student-teacher relationships are important to academic success, such as learning. Furthermore, Wang and Eccles (2013) asserted that when students perceive that teachers like them, then students do better academically and are more engaged in school.

Quin (2016) suggested that higher quality teacher-student relationships were associated with higher grades and attendance rates and also helped to create higher levels of psychological engagement. Furthermore, positive relationships are a cornerstone of a trauma-informed school (Bath, 2008) and students with trauma exposure benefit from positive student-teacher relationships (Finn & Rock, 1997; Hamre & Pianta, 2001). However, outcomes from the present study may speak to an opportunity to review the impact of TIC-PD on student-teacher relationships and grade point averages and days present at school. Additionally, results speak to the importance of development of TIC-PD, which focuses on positive relationships and students' perceptions of the relationships.

Walker and Walsh (2015) stated that trauma-informed educators are able to respond more appropriately to students and thus students are more apt to attend school. However, findings of the present study did not allow for the assertion that students may have been more motivated to attend school. Moreover, the results may point to the need for future qualitative research opportunities to explore TIC-PD, which contains evidence-based strategies and interventions, student-teacher relationships, and impacts on attendance and grade point averages. In addition, the outcomes speak to the need for further investigation of how to adequately address barriers to development of a trauma-informed approach after a trauma-informed professional development (Rossen & Hull, 2013).

Blodgett and Lanigan (2018), Perfect et al. (2016), and Perry (2000) each reported a connection between traumatized students and poor school attendance. One of the reasons reported for students missing school was due to school refusal (Havik, Bru &

Ertesvåg, 2015), a term given to the phenomenon of students not wanting to attend school. School refusal is linked with school-related experiences that cause psychological and peer unease at school (Kearney & Albano, 2004) and might also be associated with greater family and societal problems (Kearney & Albano, 2004). However, when students attend more days of school there may be positive academic performance such as better grades through access of curriculum (Havik et al., 2015; Kearney & Graczyk, 2014). Furthermore, when students do not attend school their absences may negatively impact academic, social, and career outcomes (Havik et al., 2015; Kearney & Graczyk, 2014). If students are not in school, the delivery of the curriculum cannot occur, which may in turn negatively impact students' grade point average. Furthermore, Dorado (2016) and Oehlberg (2008) suggested that trauma-informed schools would see increases in grade point averages and attendance rates, although increases in grades from the present study are not associated with the TIC-PD.

Research Question 1.

Is there a significant association in student reported perceptions of Safety (physical, emotional) after TIC-PD?

Results regarding research question 1 revealed a decrease in students' perceptions of physical and emotional safety in classrooms and physical safety outside the classroom, such as in the cafeteria, restrooms, hallways, and playground for the treatment group (2016-2017) compared to the comparison group (2013-2014). That is, SMS students reported overall decreases in perceived safety after the delivery of the TIC-PD.

A key component of a trauma-informed school is physical and emotional safety. The content of the TIC-PD included information regarding the importance of developing

a safe school environment. The observed decrease in safety contrasts Oehlberg's (2008) assertion that a benefit of a trauma-informed school would be an increase in safety. Therefore, the negative outcome for the safety variable indicates that the TIC-PD was not effective.

A component of the SMS TIC-PD included content on relationships. Including relationship content is a recommended component of TIC-PD along with developing skills and strategies, identifying outside supports (Rosen & Hull, 2013). The TIC-PD included relationship content but did not include demonstration of intensive skills and strategies. Findings for the present study suggest that including relationship content along with skills and strategies and outside support, such as clinical mental health services, is necessary in creating a trauma-informed approach.

The process of developing SMS certified and classified staff to practice in a trauma-informed approach was not addressed adequately in the half-day TIC-PD. That is, a single three-hour PD was not enough to provide staff with knowledge and to change educators' practices such as skills and strategies.

The observed decrease in safety may speak to gaps in the implementation process, such as addressing barriers in a school. The barriers to creating a safe school in regards to TIC may not have been adequately identified and addressed. A formal review and Flexible Framework could be used to examine processes, which affords a systematic overview of a school's operations to determine where the necessary changes to enhance the safety of the school (Cole et al., 2005). While professional development is an important part of the process that contributes to creating a safe school, consideration of

the lack of SMS assessment of possible barriers prior to and/or after the TIC. The assessment may have identified barriers to enhancing the safety of the school.

In regard to the role of leadership and developing a safe climate, the reported perceptions of reduced safety may speak to the role of school leadership. School administrators are core to the successful transformation to a school culture (Devaney, O'Brien, Resni, Kesiter, & Weissberg, 2006) and are key stakeholders in leading efforts to create safe daily school practices, which are part of the school environment (Rossen & Hull, 2013). Furthermore, addressing barriers to safe school that includes personal impact on staff, balancing individual student and group needs, lack of trauma-informed skills to teach the whole child, and realize the home environment is not separate from school environment (Rossen and Hull, 2013). That is, students' home experiences also impact students at school. However, in the present study school staff may not have incorporated students' home experiences into their practices.

The present study did not find an association between the TIC-PD and perceptions of safety. Students perceive a school to be safe when they can arrive and stay at school and feel that their physical and socio-emotional welfare is not endangered (Astor et al., 2009). An association between a school environment and a safe school is one that demonstrates respect among teachers and peers, and consistent and fair discipline. Hopson et al. (2014) suggested that interpersonal school relationships also help students to feel safe. Relative to the present study, students reported a decrease in safety after the TIC-PD.

Outcomes from the present study suggest that the TIC-PD was not effective in creating student perceptions of a safe climate. Moreover, due to the basic nature of the

professional development content, the school climate did not change which speaks to the necessity of investing time and financial resources into change efforts. In the present study, barriers may not have been adequately addressed, and staff may not have applied the basic TIC-PD content with fidelity. In addition, factors outside of the school may have impacted student's behaviors at school. As a result, school staff did not possess the necessary skill set to respond appropriately to the issues. These results speak to the importance of studying school safety with a mixed methods and or qualitative approach. Furthermore, it is important to include evidence-based strategies and interventions to a TIC-PD, and to provide ongoing PD to address gaps in staff development of a trauma-informed approach.

Research Question 2.

Is there a significant association in student reported perceptions of Positive School Climate after TIC-PD?

Results from the present study revealed decreases in students' perceptions regarding Positive School Climate between the cohort comparison group (2013-2014) and the treatment group (2016-2017). That is, students in the treatment group reported lower perceptions of positive school climate, suggesting that the TIC-PD did not have a positive impact on students' perceptions of a positive school climate.

The decline in positive school climate may speak to the complexity of improving school climate. Thapa et al.'s (2013) assertion that improving aspects of school climate such as physical and emotional safety, teaching and learning, relationships and environment, should be a priority because it has also been shown to impact students' overall health, learning, togetherness, respect, and trust. When responding to the

challenge of improving school climate, efforts should be made such as grounding the ecological systems of students, families, school, and other environmental layers into school change effort (Bronfenberenner, 1979). Moreover, when implementing a change effort like the TIC-PD intervention in an entire school, it is important follow with appropriate treatment intensity and fidelity which may prevent social-emotional, behavioral, and academic challenges while encouraging wellbeing and resilience (Felner, 2001). In addition, healthy social relationships among members of the school community are also likely to result in changes in the school climate that improve student achievement (Bryk & Schneider, 2002).

It is noted in the literature that students and teachers can influence the development of the school climate (Kohl et al., 2013; Wang & Degol, 2016). Furthermore, school climate is a multidimensional construct (Sampermans, Isac, & Claes, 2018; Thapa et al., 2013). Therefore, it may be important to include teacher and student qualitative or mixed methods of school climate perceptions regarding teaching, such as how the content of the TIC-PD was woven into existing teacher practices. Furthermore, examination of the proportion of teachers who practiced in a trauma informed manner would be important.

While educators may self-report changes in practices, it is possible that change may not have occurred, although the current study did not examine teachers' perspectives of positive school climate. However, the results may speak to the importance of examining faculty perspectives of school climate. Mitchell, Bradshaw, and Leaf, (2010) posited that teachers were more attuned to classroom management and students' negative behaviors compared to students who were more attuned to student-teacher relationships.

Moreover, students' individual circumstances such as behavior problems, grades, single-parent status, having parents with low education level, and demographic characteristics have been reported to impact students' perceptions of school climate (Fan, Williams, & Corkin, 2011; Schneider & Duran, 2010).

As previously noted, safety is a component of school climate (National School Climate Center, 2018; Thapa et al., 2013). Bath (2008) discussed the interplay of safety and attachment in a trauma-informed school, contending that if students did not feel safe then they may not perceive a positive school climate. Nevertheless, the current research did not address school climate as a multidimensional concept or examine the construct by way of perceptions from various stakeholders or ecological systems. The present study revealed a decrease in students' perceptions of Positive School Climate when comparing the cohort comparison group (2013-2014) and treatment group (2016-2017), although the decrease cannot be directly linked to the TIC-PD.

Research Question 4.

Are there significant differences in student discipline incidents, discipline consequences and in-school and out-of-school suspensions after TIC-PD?

Discipline results from the present study indicated that there was an increase in students in the treatment group (2016-2017) receiving more discipline incidents (e.g. referrals to the office) compared to the comparison group (2013-2014). Specifically, 36.6% of students in the comparison group received a discipline incident while 57.8% of students in the treatment group received a discipline incident. It is interesting to note that while there was an increase of discipline incidents observed in the treatment group, there were fewer incidents per student in the treatment group (2016-2017). Taken together,

these findings indicate that discipline incidents were more spread out among students in the treatment group (2016-2017) after the TIC-PD, such that a higher proportion of students had discipline incidents but received, on average, fewer incidents per student. Additionally, in regard to discipline incidents, there was an increase in the percentage of students in the treatment group (2016-2017) who received discipline incidents that involved disruption, violence and possession of an illegal substance. A decrease was reported in hostility category.

When discipline data were further explored regarding categories of consequences, there was a decrease in the administration of less severe consequences such as verbal warnings, detentions, and Tuesday school (i.e., staying after school for two and a half hours with an assigned teacher or on-campus lunch) when comparing the cohort comparison group (2013-2014) and treatment group (2016-2017). After the TIC-PD, students received fewer verbal warnings, detentions, and Tuesday schools.

Finally, analysis examined race and gender according to discipline consequences for the cohort comparison group (2013-2014) and the treatment group (2016-2017). The results indicated that there were no differences in discipline consequences in the cohort comparison group and treatment group when comparing minority and non-minority students and years (2013-2014 and 2016-2017). However, results indicated that male students received more discipline consequences than female students for the cohort group (2013-2014) and treatment group (2016-2017). When controlling for gender, an increase was observed in in- and out-of-school suspensions in the treatment group (2016-2017) compared to the comparison group (2013-2014).

The number of discipline incidents in the treatment group (2016-2017) increased after the TIC-PD (2013-2014); however, the proportion of incidents per student decreased. That is, fewer students received disciplinary incidents while those who did receive incidents received more of them. Furthermore, results from the discipline consequences category showed increases in violation, violence, hostility, and illegal substance in the treatment group (2016-2017) compared to the cohort comparison group (2013-2014). While there were increases in discipline incidents, such that more students were being referred for a discipline incident in the treatment group (2016-2017) compared to the cohort comparison group (2013-2014), there were also increases in discipline categories that can be considered to be more severe and decreases in the less severe types of consequences given. Analysis of the discipline data further supports the assertion the half-day TIC-PD was not effective in changing staff practices.

Issues that were occurring in the community outside of SMS were beyond the scope of this research inquiry. However, Rogers et al.'s (2017) discussion of the impact of the 2016 presidential election race and the local mental health board statistics are worthy of noting. In a qualitative study, the author interviewed over 1,500 school personnel and, in turn, suggested that there was an increase in negative changes in school climate following the presidential race. Some of the changes described included high levels of stress and anxiety, threats, intimidation, hostility, and verbal assaults occurring in schools. Similarly, the local mental health board in the county where SMS is located reported increases in county residents' access to medical care for drug overdose, incarcerations, treatment for substance abuse especially opiate use, and suicide instances. While both above-mentioned events occurred outside the present study's target school,

the results may speak to the local and national change in environments outside SMS. As a result, students may have been impacted with more trauma exposure and demonstrated negative behavior due to a poor stress-response, resulting in more acting out behaviors, such as aggression and threats. During this time, more SMS students were referred to the office, suggesting staff did not possess the skills and strategies to address the potential impact of the community impact on student behaviors in SMS school.

While more students had discipline incidents for the treatment group (2016-2017) compared to the cohort comparison group (2013-2014), the proportion of incidents decreased for the students who received discipline incidents. In addition, discipline consequences decreased, which included verbal warnings, detentions, and Tuesday school. While it is not clear from the present study, the results may suggest that the SMS staff were attempting to address student behaviors in a trauma-informed manner. This may suggest that when students were referred to the office for a discipline incident, it may be that administrators practiced trauma-informed discipline when addressing student behaviors (Hardaway et al., 2014).

Trauma-informed discipline focuses on understanding the root of the student conduct and assigning discipline consequences to help students to learn from their behaviors, to encourage school connectedness, and to improve academic achievement (Hardaway et al., 2014). The decrease in the number of discipline incidents per student as observed in the present study could support previous research which suggested positive outcomes when school personnel explored replacing punitive discipline practices with trauma-informed discipline practices (Hardaway et al., 2014). However, overall the findings are not in line with previous reports, which suggested that trauma-informed

schools report fewer suspensions and office referrals (Dorado et al., 2016; Stevens, 2012). Further research is needed to investigate the impact of TIC-PD on discipline office referrals and consequences.

From the MANOVA analysis, no differences in discipline incidents were identified between minority and non-minority students, and there was also no difference in interactions between race and the two cohort groups. Furthermore, no interaction was identified between school years and discipline incidents, gender, and race. This finding contrast with several studies on race/minority status, which reported higher suspension, rates for Black males (Mizel et al., 2016). Further, the present study's analysis of discipline incidents did not align to Wallace et al.'s (2008) reports that minority students experience more discipline than non-minority student's experience. Prior research has suggested that minority youth were suspended and referred to their school's office more than non-minority youth (Finn & Servoss, 2014; Skiba, Michael, Nardo, & Peterson, 2002; Wallace et al., 2008).

The MANCOVA analysis explored results of suspensions and identified an increase in both in- and out-of-school suspensions from the cohort comparison group compared to the treatment group when controlling for gender. The finding may partly explain the independent *t*-test results in which there was an increase in the percentage of discipline incidents and also the MANOVA results, which found that male students received more discipline incidents than female students. The finding from the MANCOVA may be the result of the severity of the discipline incidents rather than the number of actual events and may be supported by the reports of higher student discipline incidents from the cohort comparison group (2013-2014) to the treatment group (2016-

2017). Specifically, increases were identified in the number of disruptions in violation, violence, hostility, and illegal substance use from the cohort comparison group and the treatment group. The more severe discipline would entail more severe consequences (e.g., in- or out-of-school suspension). Additionally, the finding may highlight the severity of discipline incidents and speak to the complexity of the process and having necessary supports available, such as alternative placements with trained teachers, when transitioning to trauma-informed discipline.

In many United States schools, disciplinary practices are often used for student misbehaviors. Furthermore, discipline consequences are typically distributed unequally by gender and race as reported by Wallace, Goodkind, Wallace, and Bachman (2008). The current findings partially supported findings from Finn and Servoss (2014) who reported that males were suspended more frequently than females in their study of minority and non-minority youth, as the present study did find disparity in discipline for gender.

Results of the present study also revealed that male students were more often referred to school administrators for discipline-related incidents, which led the author to examine discipline consequences. Records from the school data revealed an increase in out-of-school suspension rates between the cohort comparison and treatment groups. Furthermore, male students have been shown to be suspended at much higher rates than female students in schools (Mize et al., 2016). However, findings from the present study did not support the anticipation of decreased severe disciplinary consequences after TIC-PD implementation, as reported by Dorado et al. (2016) and Stevens (2012). As such, the

results suggested that the TIC-PD was not effective in reducing discipline incidents or consequences.

Conclusions

The following conclusions are based upon analysis of the cohort comparison group (2013-2014) and treatment group (2016-2017) data:

1. The TIC-PD did not impact the research variables (safety and positive school climate, GPA, days present at school, discipline) in the present study. The TIC-PD did not make a difference due to increases in discipline incidents and consequence variables where it would have been expected to see decreases in those variables. The outcomes of grade point average and days present at school showed increases. Therefore, the results of the present study lead to the conclusion that the TIC-PD did not have an impact in SMS when measuring student perspectives.
2. From a student respondent perspective, a single half-day TIC-PD is not sufficient for developing a trauma-informed school. Outcomes of the present study suggest that TIC-PD should include content beyond basic knowledge of the impact of trauma exposure on student learning and behavior and building positive relationships. Furthermore, it is important to devote additional professional development time for faculty skill building and strategies, such as trauma-informed discipline and evidence-based strategies. Likewise, providing connections to outside community supports such as clinical counselors should also increase the fidelity of the professional development. Sustaining and developing trauma-informed care efforts should include continued adult learning and development, ongoing PD, collegial dialog, and quality coaching.

3. A qualitative and/or mixed methods research design may help to measure the constructs of safety and school climate and other outcomes such grade point average, attendance and discipline incident and consequences. Specifically, qualitative research may measure and capture the subjective nature of the survey items that measure safety and school climate.

Further Considerations

The SMS TIC-PD was delivered to classified and certified staff in various sessions. The certified staff professional development included two three-and-a-half hour sessions. A basic trauma session within the PD included the definition of trauma, prevalence and forms of trauma, impact of trauma on social-emotional development, learning and behavior, neurobiology of trauma, shift from traditional to trauma-informed perspective, and creating positive interactions. Conversely, the certified staff members attended an experiential workshop, which developed skills such as social-emotional learning, strengthening the sense of school community, self-awareness of educator actions, student development, and instruction design. Additionally, classified staff attended a separate three-hour session, which covered basic trauma information, which was similar to the above-mentioned certified staff basic professional development. Classified staff did not participate in the experiential learning session and neither classified nor certified staff received training on trauma-informed interventions and strategies.

Implications for improving delivery of the professional development may be found in studies relative to developing a trauma-informed approach in schools (Chafouleas et al., 2016), which utilized a multi-tiered service delivery model. The

delivery model delivers trauma-informed care to all students and focused support for students who have more exposure to trauma. The main prevention tier includes system-wide delivery for all classrooms. Secondary tier interventions provide for at-risk students, while third tier interventions provide more intensive support such as clinical counseling (Chafouleas et al., 2016).

Another more successful research-based approach may include the Attachment, Self-Regulation and Competency tiered intervention framework. Here, the first level, attachment, pertains to safe learning environments. The second level of intervention pertains to self-regulation management, and the third level pertains to providing clinical counseling (Dorado, Martinez, McArthur and Liebovitz (2016).

A third reported delivery approach included training for both students and staff. In this approach students were instructed on the impact of stress and were encouraged to request support. The other two levels included collaboration between a team and mental health providers, including plans to address individual student needs (Perry & Daniels, 2016).

Another study implemented a tiered approach in an early education study. A universal tier for all staff and students included trauma-informed training, social-emotional curriculum, along with concentration on relationship building among teachers, such as team building and impact of trauma exposure on teachers. A second tier included strategies and student plan development to respond to negative behaviors. The top tier included providing clinical mental health support for students and families (Shamblin, Graham, & Bianco, 2016).

Perry and Daniels (2016) also investigated the delivery of TIC-PD along with additional supports to develop a trauma-informed approach in small sample pilot study. Their PD included two intensive days of training to create a trauma-informed culture shift. The sessions included Trauma 101 & 102 lectures, followed by strength-based workshops which included trauma activities, de-escalation and educator self-care. Their workshops focused on supporting staff buy-in and transparent discussion of stress, resistance to adding another initiative in education setting (Perry & Daniels, 2016).

Middle school students' subjective perceptions of the school environment are influenced by individual sociocultural contexts (Bronfenbrenner & Morris, 2006). The sociocultural context of students is a consideration to the outcomes of the presents study, in regards to the student perception survey. That is, the present study examined student perception climate data to determine safety and school climate after the TIC-PD. However, the various socio-cultural contexts of each student may have impacted how the students responded to the survey items. For example, Yu et al. (2018) reported differences in adolescent perceptions of equivalent situations based on individual experiences and backgrounds regarding student-teacher relationships. The various student experiences and backgrounds may have impacted how the students responded to the survey items. While the current study results speak to the lack of TIC-PD impact, it may cause future researchers to examine the subjective nature of safety and school climate employing a qualitative research design.

The present findings may also suggest that while SMS students completed the student perception survey, they might have responded differently based on personal sociocultural context and individual backgrounds. In this instance, findings may suggest

that a qualitative data collection would have better investigated and supported student perspectives of the context of the school environment as suggested by Yu et al. (2018).

Despite the overall findings of the present study that the TIC-PD was not effective, factors inside and outside the school building may have impacted student perceptions of school climate and safety. For example, student behaviors may have been impacted by factors inside the school building, such as school climate and fair discipline. Furthermore, factors outside of the school building, such as community safety, have been shown to impact school safety (Kitsantas et al., (2004). School buildings do not operate in isolation from the surrounding community (Stephens, 1994, 1998), and Urban et al. (2009) suggested that unsafe communities negatively impact students in school. In addition, unsafe neighborhoods impacted students' perception of feeling safe inside the school (Kitsantas et al., 2004; López et al. 2017).

A possible explanation of external influences that may have influenced students' perceptions of safety and behaviors may be found in the SMS local mental health board community reports from 2014 to 2017. Specifically, a report from this board showed an increase in adult utilization of medical care, increased mental health issues, and increased instances of drug-related prison admissions, and treatment for drug misuse was reported. Furthermore, it may also be possible that the reported increases in adults' medical needs, incarcerations, and drug use and treatment were from parents or family members of SMS students, which could, in turn, have negatively affected students' home environments. Another outside factor may have been the negative impact of the 2016 presidential election on school students (Rogers et al., 2017). Community and school issues influence students' perceptions of their school environment and the aforementioned issues within

the SMS local and national issues have the potential to impact students inside the school building and may have either positive or negative consequences for a school (Kitsantas et al., 2004).

As a result, students in the present study may have perceived the local and national issues as a single or additional trauma of their own. When students experience one or more traumatic events, a stress response may occur (van der Kolk, 2014). The impact may then lead students to have a responses fight, flight, or freeze behaviors at school (Souers & Hall, 2016). The behaviors may have resulted in in demonstration of problematic and inappropriate behaviors such as aggression and other risky acts (Hertel & Johnson, 2013; Price et al. 2013). As such, an increase in externalizing behaviors such as violence and other acting out behaviors could lead students who witness the behaviors to feel unsafe (Perfect, 2016; West et al., 2014). Regardless, the outcome of the study suggests that the quality and content of a TIC-PD is a component of developing a trauma-informed approach in a school. Professional development with appropriate content and delivery may not produce educator practice changes (Johnson, 2006). Following TIC-PD, providing time to address barriers and personal assumptions and collegial dialog is necessary to develop a trauma-informed approach (Rossen & Hull, 2013).

Limitations to the Study

Several limitations of the current study must be acknowledged. First, the sample was non-representative. Specifically, a different sample of students completed the 2016-2017 questionnaires from those who completed the 2013-2014 questionnaires. The difference in student backgrounds and experiences in each respondent group may have contributed to the decrease in students' perceptions of safety and positive school climate.

The students in the two different cohorts likely experienced different or competing social-emotional experiences in school and in their greater community. The design of this cohort comparison study may not have been strong enough to observe the expected positive results. Planning future longitudinal studies with expanded sample diversity by way of grade levels and geographic locations (e.g. rural, suburban, urban) and using the same student comparison data would provide a better representation of the population and therefore generalization of results.

As a second limitation, in order for research outcomes to provide evidence of generalization, the participants must be representative of the larger population. However, respondents from the present study were a limited sample of the population. Specifically, the school population included primarily White, urban middle school students for both the comparison group (84.2%) and the treatment group (84.3%), which represented the catchment area of the school as opposed to the entire community. As such, the target school population lacked diversity, which may have led to cultural bias in the findings. Thus, the findings from this study may not be generalized to other school districts with a more diverse student population.

A third limitation includes matters of data collection and risks of response bias because the methodology included a self-reporting approach. The participants responded to survey items based on their self-perceptions and interpretations of survey items.

A fourth limitation may be researcher bias as a threat to validity. While statistical analysis was conducted to address inherent error and bias, the researcher's understanding and preconceived notions and assumptions must be considered in light of outcomes analyzed and the analyses selected for discovery.

A fifth limitation may be the lack of adverse childhood experience (ACEs) data. Collecting individual-level student data on the number of trauma exposures may have been beneficial to further explore the impact on discipline incidents, consequences, and the academic outcomes, school climate and safety variables. However, once ACES data were collected, there would have been a moral and ethical responsibility to provide student interventions, which was not plausible at the time of this study.

A sixth limitation for consideration is validation of the measurements used in the study questionnaire. In particular, the school district administrators modified the School Connectedness Survey (SCS), which identified level of connectedness such as belongingness, relatedness, connectedness, and sources of connectedness such as school, teachers/adults, and peers, all of which may be common to, but also unique for, individual students. However, the verbiage in the instrument was deemed appropriate for students in grades six-12, and Lohmeier and Lee (2011) reported that the SCS was a highly reliable instrument score for both suburban (Cronbach's $\alpha = .93$) and urban ($\alpha = .81$) students, and was appropriate to use with adolescents from various socioeconomic, racial, and geographic backgrounds. The SCS instrument with its constant factor structure allows evaluators who are interested in one factor to be examined individually. For the present study, the district leadership selected to use only items 1, 2, and 15 from the SCS, and also added additional items to create the student perception survey.

The focus of the present research was student perceptions of safety and positive school climate. While survey items 1-10 were utilized from the preexisting survey instrument, the majority of survey items focused on SMS student perceptions of teacher

relationships. For example, items 6 and 9 may have, but is not clear, examined classified staff. Furthermore item 10 included the word ‘adult’ and when responding to the item students may or may not have considered classified staff. The minimal number and lack of clarity around the three possible survey items that pertained to classified staff is a limitation of this study.

Implications for Leadership, Policy and Practice

Trauma theory provides the scientific evidence to change how schools operate (Bloom & Farragher, 2013; Craig, 2016). Trauma-informed organizations may positively intervene as an attempt to ameliorate the impact of trauma exposure (SAMHSA, 2014), and there is a recent spike in the interest of TIC implementation in educational settings (Cook et al., 2005; Craig, 2016; Rossen & Hull, 2013). Local, state and federal policy changes have occurred to address the impact of trauma exposure on students’ learning and behavior. All 50 states in the United States and the District of Columbia have introduced or passed ACES legislation (ACES Connection, 2019), and the Every Child Succeeds Act and the Compton California class action lawsuit has necessitated school reform in this area. Moreover, there is not a universal framework to implement trauma-informed care in schools.

Students who have been exposed to trauma may need support to develop healthy relationships, to manage emotions and behaviors, to create healthy lifestyles, and to be academically successful (Ristuccia, 2013). Furthermore, providing physically and psychologically safe environments helps to mitigate the impact of trauma exposure (Bloom & Farragher, 2013; Ristuccia, 2013; SAMHSA, 2019). Moreover, a key factor in developing a trauma-informed approach lies in the connection between interpersonal

relationships and physically and psychologically safe environments (Bath, 2008; Bloom & Farragher, 2013; Craig, 2016; Ristuccia, 2013; SAMHSA, 2019). The unique and specific skillset and attitudes require staff to shift educational mindsets, attitudes in practices to adopt a trauma-informed approach.

Education has traditionally focused on teaching conventional academic subjects such as math, science, reading and social studies. Furthermore, schools are involved in overlying change efforts to address student developmental needs (Rossen & Hull, 2013). The complex change process from a traditional school to a trauma-informed culture requires strong and heavy investments from many stakeholders. The implementation process is demanding and chaotic, continues over long periods of time, and requires a high level of commitment (Barrow, McMullin, Tripp, & Tsemberis, 2012; Bloom & Farraher, 2013). Thus, it is important to provide leadership with sufficient resources to address organizational thought processes, instruments, formatting and oversight to support the change effort (Chafouleas et al., 2016).

Multi-level, inter-connected methods are utilized in education to address obstacles to student success (Taylor & Adelman, 2004). The application of a multitude of domains addresses the complexity of systematic school change to develop a TISC (Rossen & Hull, 2013). These domains include leadership, policy, training and workforce development, physical environment, engagement and involvement, community collaboration, Screening/assessment/treatment services, data collection, financing and evaluation (Chafealous et al., 2016).

Having school leaders on board early and throughout the trauma informed care change process is imperative for the success of TIC organizational implementation.

Leadership commitment is necessary to support and to encourage the staff to buy into the trauma-informed cultural, and to manage the staff who resist the change process of transitioning into a trauma-informed organization (Bloom & Farragher, 2013).

Proficient and strong leadership are important components in the framework for designing and developing a trauma-informed school culture. Kouzes and Posner's (2012) Exemplary Leadership Model may be utilized support the change effort. For example, leaders may demonstrate the modeling of positive relationships and calm interactions with families, and inspire staff to envision a safe and positive school climate. Additional actions by leaders would be to challenge staff assumptions and bias in regards to the impact of trauma exposure on students learning and behaviors, to enable staff to grow and develop, and to take risks by changing practices and sharing stories which encourage staff members to develop a trauma informed culture.

When addressing systematic change, strong leadership is a key component in creating a trauma-informed school (Alderman & Taylor). The administrative, building and support staff leadership roles and responsibilities of district, building and support staff leadership contribute to supporting the complex change process (Rossen & Hull, 2013). As a result, school leadership may need outside professional support to design and implement the framework and instruments to transform the school culture (Chafealous et al., 2016). Furthermore, leaders may look to the field of implementation science to provide guidance and assimilation to the lengthy, complex, and developmental stage processes (Phifer & Daniels, 2016).

Administrative, building and staff leadership are key elements in improving a school culture. The administrative leadership is important for inclusive and consistent

implementation development, decision and financial aspects. The appointed building-level administrator is important for guidance and is responsible for ongoing implementation with building staff to address issues. The support staff, such as school counselors and psychologists should also be included to further support change efforts. Additionally, refined job descriptions such as new roles, duties and responsibilities of staff can help to ensure that adequate time is provided to focus on the vision and to develop the delivery support system (Rossen & Hull, 2013).

TIC-PD provides entry into the process of creating a TISC. TIC-PD helps develop similar thought process and ability to become a trauma-informed school (Perry & Daniels, 2015; Chafouleas et al., 2016). The outcomes of the present study suggest that the basic content and brevity of the TIC-PD did not impact SMS students' perceptions of safety or school climate. While SMS staff attended the TIC-PD, findings may indicate support staff require further learning and development to create an effective trauma-informed approach and to integrate it into practices.

To further develop staff, trauma-informed leaders provide sustained collaboration and processing opportunities to continue staff development (Alisic, 2012). Likewise, Feinstein (2004) suggested that critical consideration and discussion promote adult learning after training. In this instance, educators who attended the TIC-PD likely needed more time to self-reflect on the content of the PD and their own personal assumptions in order to adopt the approach. Likewise, improving student success from PD delivery occurs through ongoing professional development that supports adult learning and development and is woven into educator practices (Wei, Darling-Hammond, Andree, Richardson, & Orphanos, 2009). Furthermore, collaborative learning, ongoing and

intensive PD that connects educator practice with other district initiatives, and teachers' collaboration are additional ways to encourage adult leaning and growth.

Addressing the challenges of guiding the staff to develop a trauma-informed approaches requires coaching of staff to more fully develop trauma-informed skills (Dorado, 2015). As such, the school leadership may not possess the unique aptitudes to develop trauma-informed skills such as nonverbal and verbal communication, or de-escalation and calming skills after TIC-PD. Therefore, it may be necessary to provide quality coaching to staff, which would enhance growth and support long-term application of concepts (Fixsen et al., 2009).

Coaching also has the potential to develop trauma-informed awareness, skill development, self-management, and positive mindsets for educators (Chafouleas et al., 2016; Oehlberg, 2008). This practice provides guidance and development of positive relationships, unconditional positive regard, verbal and non-verbal communication, emotional self-regulation, emotional de-escalation techniques. Additionally, biased faulty assumptions may impair them from viewing the whole student (Rossen & Hull, 2013).

The designated trauma-informed support staff or school leadership may be capable of provide coaching. However, because of the unique skillset of trauma-informed coaching, evaluating leaders' personal skillsets would be necessary to determine appropriate attitudes toward trauma-informed care and the individual coaching ability to develop faculty unique trauma-informed skills, attitudes and mindsets. Depending on the level of skillset of the appointed coach, individual training may be the first step to develop proficient coaching skills and attitudes.

Moreover, attention may be given to support the coaching of faculty by trained staff, such as school counselors or psychologists. Having the support staff coach faculty in skills and attitudes would entail administrative and school leadership supporting and reinforcing the coaching role. Additional approaches include incorporating trauma-informed coaching in job roles and descriptions of the support staff and providing consistent faculty coaching sessions to systematically address assimilation of trauma concepts and skills into practice. Coaching includes bringing staff awareness to the impediments to trauma-informed practices and includes providing guidance through collegial dialog and asking pertinent questions to address faculty barriers, mindsets, assumptions, and skills throughout the development of a trauma-informed approach.

To further address the impact of trauma exposure on students it is necessary to provide evidence-based interventions through community organizations for students in the secondary and tertiary tiers of practices of trauma-informed schools (Chafouleas et al., 2015). SMS received clinical counseling services after data collection and after the time-line for the present study. Examples of evidence-based interventions include Cognitive Behavioral Intervention for Trauma in Schools (BIT/SSET), Bounce Back, Modular Approach to Therapy for Children with Anxiety, Depression, Trauma, and Conduct Problems (MATCH-ADTC), Trauma Focused Coping in Schools (TFC)/Multimodality Trauma Treatment (MMTT) (Chafouleas, Koriakin, Roundfield & Overstreet, 2019). Additional approaches include providing stress-reduction training such as school mindfulness (Anderson et al., 2015; Zenner, Herrnleben-Kurz and Walach, 2014;).

SMS TIC-PD was developed to improve educators' knowledge, attitudes and interactions with students due to the impact of trauma on students' learning and behavior. Contention may arise when challenging adults to improve their practices and to integrate new approaches. In the present study, the TIC-PD did not change teacher behaviors (Newberg & Waldman, 2012), although high quality professional development does not always lead to a change in educator practices (Johnson, 2006). The lack of change reported in the current study may speak to staff not changing their practices. Likewise, the staff may not have been amendable to the district's trauma-informed efforts (Metz, Naoom, Hale & Barelty, 2015).

For favorable systematic outcomes, such as trauma-informed care implementation, incorporating the effort into strategic plans is essential (Taylor & Adelman, 2000). In the same year of this study's district TIC-PD, verbiage to support the organization to address trauma exposure was included in the SMS district strategic plan. Strategies focused on safe facilities, positive learning environments, adequate funding, staff and families feeling emotionally safe, and developing collaborative partnerships with community agencies to address root issues that interfere with learning (Appendix E).

A plethora of school obstacles exist which may impede the development of trauma-informed staff. For example, staff beliefs that schools frequently change programming and goals can cause staff to demonstrate resistance to change efforts. Furthermore, inadequate allocation of time and financial resources, changes in district leadership, and staff turnover are additional obstacles (Overstreet & Chafouleas, 2016; Phifer & Hull, 2016). Additionally, lack of administrator support for the effort, high

level of teacher responsibilities, and challenges to parent engagement also impede development (Martin et al., 2017).

Addressing barriers to safe school also includes consideration of the personal impact on staff, meaning that the staff is already stressed and overworked prior to developing a trauma-informed approach. Teachers who balance individual student and group need may lack trauma-informed skills to teach the whole child, and may not realize that the home environment is not separate from school environment (Rossen and Hull, 2013). School leadership's recognition of these barriers, along with intentional planning and action to address barriers are required for success prior and after TIC-PD.

As a result of biopsychosocial impacts of trauma on student behaviors, exploring alternative discipline policies and practices is a logical step for educational leadership. For example, Hardaway et al. (2014) suggested replacing punitive discipline practices and policies with trauma-informed discipline practices. Trauma-informed discipline focuses on understanding the root of student conduct and assigning discipline consequences to help students to learn from misbehaviors can promote school connectedness and improved academic achievement (Hardaway et al., 2014).

Regarding school discipline policy and practice, school administrators and legislative policymakers alike need to address the relationships between perspectives on zero tolerance practices, such as suspensions and preventative actions in addressing student misbehaviors (Skiba et al., 2002). When students receive in-school suspension consequences, then students are more likely to be assigned future severe consequences, such as out-of-school suspension (Finn & Servoss, 2014). When students are suspended, creating plans to address and prevent future negative behaviors may be an effective

approach to preventing or reducing suspension and thus the school-to-prison pipeline (Mizel et al., 2016). Addressing the ineffective and negative impact of zero-tolerance policies in schools may not be effective when it comes to trauma initiatives or any student misbehavior.

SMS TIC-PD was a part of the process to transform a school district's efforts to a trauma-informed district. During the first year of the change process, the district representatives were part of trauma-informed learning community, and utilized a trauma-informed organizational coach to develop a leadership steering committee to guide organizational change efforts. While beyond the scope of the present study, the district appeared to provide the necessary framework prior to the delivery of the TIC-PD.

However, results of the present study suggest a single TIC-PD is not effective in transforming a school to sufficiently practice a trauma-informed approach with integrity, intensity and fidelity. The current study outcomes suggest that one of the steps to developing a trauma-informed school includes an initial TIC-PD to develop trauma-informed knowledge, attitudes, dispositions (Good-win Glick, 2017). The findings of the present study point to the need for ongoing trauma-informed training to impact faculty behavior, such as providing additional TIC-PD to support faculty changing practices.

Ongoing PD would be expected to support further awareness and development of trauma-informed knowledge. In addition to a single basic TIC-PD, providing ongoing professional development is important to address gaps in knowledge, which includes integration of trauma-informed concepts into work settings. Furthermore, regarding PD, it is important to include time for participant interaction, case study, and multi-media content (Kenny, Vazquez, Long, Thompson, 2017).

Furthermore, other steps in the process include providing satisfactory financial support and investment in efforts. This includes adequately funding a trauma-informed initiative over several years and investing in professional development and time for faculty to have transparent discussions of the process, in addition to creating new staff positions to meet the barrier and demands of consistent implementation.

School leadership is a driving force in the trauma-informed development process. Due to the rigor of implementation, leadership duties and responsibilities may be redesigned. The redesign would afford staff adequate time to plan, organize and address change efforts. Preparation, consistent and ongoing efforts before and after TIC-PD is imperative to develop faculty, increase buy-in, address barriers and advance the sustainability of trauma-informed initiatives. Such administrative, school and support leadership plays an integral role in the development of a trauma-informed school culture (Rossen & Hull, 2013).

SMS was one of 13 schools to integrate trauma-informed care into school climate. At the school, a coach from a national organization worked with the district for a year to develop trauma-informed care throughout the district. However, a one-year time frame may not be enough to guide efforts. Ongoing organizational coaching may further support and guide the complex organization change process, such as guidance in the timing and delivery of next steps, such as professional development. Finally, data collection from various stakeholders such as student, staff and parent perspectives will provide information to evaluate trauma-informed outcome efforts in regard to developing a safe and positive school climate.

Recommendations for Future Research

The evaluation of trauma-informed change efforts are lacking in research literature. Furthermore, staff TIC-PD is a significant component to creating awareness of the impact of trauma on children in a state advocacy center for abused children (Kenney et al., 2017). The outcomes of the present study suggest that students did not perceive that SMS classified and certified staff had changed behaviors or practices after the single TIC-PD. Kenny et al., (2017) reported on the impact of child case workers TIC-PD overtime, including the hours of PD delivered. Future research is needed to develop a standardized assessment to measure student's perception of educator's practice of trauma-informed care to assess the interplay of the length and quality of TIC-PD, such as content, on subsequent educator behavior change. Moreover, research on the interplay of the impact of teacher collaboration and school leadership in regards to professional development outcomes is needed (Postholm, 2018).

Examining trauma-informed care impacts on school climate from a multi-level perspective may provide information in regard to student developmental stages, socio-cultural or community efforts. SMS TIC implementation was part of a community wide effort to respond to the impact of trauma exposure. Various agencies such as fire and police departments and social service agencies were also part of the effort. SMS findings suggested that the TIC-PD did not impact student perceptions of safety, positive school climate. However, quantitative and qualitative outcome data from community stakeholders may further develop local community trauma-informed care process including barriers to implementation, community buy-in, and consensus resulting in advancement of implementation processes. Areas to include may be the impact of socio-

cultural context, developmental levels/social economic status, the student and adult level of trauma-exposure and organization personal interactions with stakeholders. Furthermore, future work should examine various community agency practices to assess efficacy of the collective trauma-informed care efforts.

Middle school students' subjective perceptions of the school environment may be influenced by each individual student's sociocultural context (Bronfenbrenner & Morris, 1998). Yu et al. (2018) reported differences in adolescent perceptions of equivalent situations based on individual experiences and backgrounds regarding student-teacher relationships. While SMS students completed the student perception survey, the students may have responded differently based on sociocultural context or developmental and individual backgrounds. Qualitative data collection would have better supported the student perspective inquiry of safety and school climate. Yu et al. (2018) suggested that qualitative evaluation a student's perspective of the context of the situation due to their adolescent's unique perception of the student-teacher relationships. Moreover, completing mixed methods or qualitative research may more adequately measure the idiosyncratic constructs, and researchers would be keen to meet this need.

Because of the subjective nature of safety and positive school climate, the constructs are difficult to separate and to quantify. For example, the present research examined positive school climate and safety as separate constructs to more closely examine safety. Safety is a cornerstone of trauma-informed schools (Bath, 2008; Bloom & Farragher, 2013). However, safety is one of the multidimensional constructs of school climate (National School Climate Center, 2018; Kitsantas et al, 2004; Thapa et al., 2013).

Examining safety and school climate outcomes by way of a qualitative research design may more adequately measure outcomes.

Schools are the aggregate of students, teachers, parents, and other staff (Lenzi et al., 2017). Therefore, employing a multi-layer approach to various stakeholder perspectives on the impact of TIC-PD on safety and school climate is essential. For example, Wentzel et al. (2013) suggested examining student perceptions of classmate relationships to understand the impact on school climate. Furthermore, teachers play a pivotal role in school climate, but there is limited research on how teachers perceive their role in creating a positive school climate (Sampermans, Isac, Claes, 2018). Furthermore, Anderson, Blitz, and Saastamoinen (2015) reported minimal research has been reported on classified staff trauma-informed care implementation.

Circumstances beyond the author's control prohibited flexibility with selecting the sample and its groups in the present study. The cohort comparison design was perhaps not the strongest research design, given student changes over time. Moreover, the study did not allow the results to be generalized to the population at large. To strengthen the research outcomes, further studies could assess student perceptions of school climate and safety in a controlled study or from multiple schools which report similar populations and demographics. Such a design would allow more generalizability of study results.

In the above-mentioned design, each school would participate in a pre-test of student perception survey data collection. A TIC-PD would be delivered to two schools' certified and classified staff while two schools' staff would not receive TIC-PD. Post-test student perception data would then be collected to capture student responses. The pre-post data collection would reduce confounding effects. The above mentioned study

design would offer research opportunities in regards to the phases of implementation, such as faculty buy-in, consensus and application of concepts and stakeholder perceptions and assess quality of the TIC-PD. Furthermore, the design could determine outcomes on students' academic performance, such as grade point average, attendance, behaviors Oehlberg (2008).

The outcomes of the present study may suggest further study is needed in the area of faculty buy-in and integrating TIC concepts into practices at a level that would impact student's perceptions of safety and positive school climate after the PD. TIC implementation process is complex and time-consuming. The finding may point to the need for further study of the implementation of trauma-informed care with implementation science to determine gaps and efficiency of the process. Implementation science is the study of the integration of evidence-based practices into settings which enrich the value and efficiency of the implementation efforts (Eccles & Martin, 2006). Further research is needed to provide guidance regarding process of developing a framework for TIC implementation, logic model adoption, and relationship of implementation stages and sustainability in schools (Metz et al., 2015).

Lastly, future studies to determine if staff develops consensus and competence after TIC-PD may aid in the development of TIC-PD. Such an outcome could be measured with a psychometric tool to determine if trauma training develops positive attitudes towards trauma-informed approaches, and as a result provides strategies which promote classroom engagement (Chafouleas et al., 2016).

TIC-PD was delivered to most of SMS staff to develop staff consensus. Goodwin-Glick (2017) reported increases in trauma-informed knowledge, attitudes and dispositions

after the same TIC-PD as the present study. However, there was a gap between the staff perception findings and the student perception findings reported in the present study. Implementation Science suggests that school staff agreement is necessary for effective buy-in and application of content to practices, such as trauma-informed care approaches (Metz, Naoom, Halle, Bartley, 2015). Further research is needed to examine early stages of implementation, such as acceptance of the approach, timing of skillset development and ability of schools to develop trauma-informed care within a complex system of services (Chafealous, et al., 2016). Furthermore, the SMS TIC-PD did not include comprehensive interventions or strategies to address trauma exposure. By examining stages of the process of implementation, further research may determine the optimal time to include intervention and strategies training to the staff.

Finally, further study on the impact of minority and non-minority educators is necessary to explore the impact of cultural bias on school climate, student behavior grades and attendance. Non-minority or White teachers make up the majority of educators in the United States of America. It is not to say that the said population cannot gain the cultural competence skills for successful teaching and learning for minority students.

In a literature review of White teachers in urban schools aimed at addressing cultural capital and minority students, Goldenberg (2014) suggested three steps to engage minority students. First teachers need to "self-reflect and recognize that their race plays a problematic role in their teacher-student relationships and overall effectiveness" (p. 49). Second, "White teachers must realize that regardless of their benign intentions, student portray them as part of the dominant school structure that many students resist' (p. 49).

As a result, teachers learn to recognize that the cultural issues are not seen as reluctance to learn. Third, educators need to turn theory into practice, embracing minority student cultural capital by developing teaching and relationship methods to better engage and address minority student disparity in the classroom. Attracting male and minority educators may help address the disparity.

Conclusion

> *"We have learned that trauma is not just an event that took place sometime in the past; it is also the imprint left by that experience on mind, brain, and body. This imprint has ongoing consequences for how the human organism manages to survive in the present. Trauma results in a fundamental reorganization of the way mind and brain manage perceptions. It changes not only how we think and what we think about, but also our very capacity to think."*
>
> Bessel van der Kolk, 2014

Students who experience trauma enter school buildings every day. Despite the effects of trauma exposure on students' development, teachers are expected to teach, and students are expected to learn and to behave appropriately. Trauma theory is creating a swell of change in schools at which educators garner an understanding to address the impact of trauma exposure on learning and behavior. As a result of organizational efforts to change educational practices through TIC-PD, teachers and staff develop an understanding of the impact of trauma exposure on students, and ideally create a safe and positive school climate, potentially positively impacting academic achievement and resiliency. The proposed change process is complex, time intensive, and requires efforts from various levels of leadership. The outcomes of the current research study suggest that a single TIC-PD is not sufficient and that the time it takes to create a trauma sensitive school could take more than two years.

It is important to recognize that transformational trauma-informed care initiatives require time for educators to adjust mindsets and values. A mindset is the staff member's understanding of the impact of trauma on student's educational experience and attitude toward the approach (Craig, 2103; Phifer & Hull, 2016). Additionally, legislative and school leaders need to be cognizant of the financial investment as well as time and energy needed prior to and after TIC-PD to fully integrate the knowledge, skills, and mindsets into certified and classified staff practices as well address cultural and community issues. Allowing TIC initiatives to be woven into practice as educators grapple with the trauma-informed concepts allows a for maturation of concepts to occur. Ongoing TIC-PD and trauma-informed leadership and coaching, along with collegial faculty buy-in and dialog, may nurture, deepen, and fully integrate a trauma-informed approach in schools, resulting in improved school climate, safety, academic success, positive caring relationships, and ultimately, resiliency that lead to strong academic success.

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APPENDIX A. SEVEN DOMAINS OF TRAUMA SENSITIVE SCHOOLS

1. Student Assessment
2. Student, Family and Guardian Involvement
3. Trauma-Sensitive Educated and Responsive District and School Staff
4. Trauma-Informed, Evidence Based and Emerging Best Practices
5. Safe and Secure Environments
6. Community and Outreach and Partnership Building
7. Ongoing Performance Improvement and Evaluation

APPENDIX B. STUDENT SURVEY 2014 AND 2015

(In order to keep the school district anonymous the individual names of schools as been changed to (School A, School B etc.)

I attend

School A (grades 3-5)

School B (grades 3-5)

School C (grades K-2)

School D (grades K-2)

School E (grades K-5)

School F (grades K-2)

School G (grade PK)

School H (grades 3-5)

School I (grades 3-5)

South School (grades 6-8)

North School (grades 6-8)

High School (grades 9-12)

Vocational School (grades 9-12)

2. Select the response that best fits your feelings about the statement:

Strongly Agree Agree Disagree Strongly Disagree

Teachers in my school care about me.

My teachers are available when I need extra help.

The teachers in my school treat me with respect.

I feel physically safe in my classrooms.

I feel emotionally safe in my classrooms.

I feel physically safe outside the classroom while at school (cafeteria, restrooms, hallways, lockers, playground etc.)

My teachers give helpful feedback and encouragement.

My teachers work well together.

I enjoy coming to school.

I have a positive relationship with at least one teacher in my school.

APPENDIX C. STUDENT SURVEY 2016

I attend;

School A (grades 3-5)

School B (grades 3-5)

School C (grades K-2)

School D (grades K-2)

School E (grades K-5)

School F (grades K-2)

School G (grade PK)

School H (grades 3-5

School I (grades 3-5)

South School (grades 6-8)

North School (grades 6-8)

High School (grades 9-12)

Vocational School (grades 9-12)

2. Select the response that best fits your feelings about the statement:

Strongly Agree Agree Disagree Strongly Disagree

Teachers in my school care about me.

My teachers are available when I need extra help.

The teachers in my school treat me with respect.

I feel physically safe in my classrooms.

I feel emotionally safe in my classrooms.

I feel physically safe outside the classroom while at school (cafeteria, restrooms, hallways, lockers, playground etc.)

My teachers give helpful feedback and encouragement.

My teachers work well together.

I enjoy coming to school.

I have a positive relationship with at least one adult in my school.

I trust a majority of the teachers in my school.

I trust a majority of the adults, other than teachers, in my school.

I feel like I learn when I am at school.

I like going to school events, such as sports, dances, etc.

I participate in activities at my school such as teams, clubs, etc.

My classmates treat me with respect.

APPENDIX D. STUDENT SURVEY 2017 AND 2018

I attend:

School A (grades 3-5)

School B (grades 3-5)

School C (grades K-2)

School D (grades K-2)

School E (grades K-5)

School F (grades K-2)

School G (grade PK)

School H (grades 3-5

School I (grades 3-5)

South School (grades 6-8)

North School (grades 6-8)

High School (grades 9-12)

Digital Learning Center (all grades)

2. Choose your grade level

Grade 1

Grade 2

Grade 3

Grade 4

Grade 5

Grade 6

Grade 7

Grade 8

Grade 9

Grade 10

Grade 11

Grade 12

3. Gender

Boy

Girl

Rather not say

4. Are you new to your school

5. Select the response that best fits your feelings about the statement:
Strongly Agree Agree Disagree Strongly Disagree

Teachers in my school care about me.

My teachers are available when I need extra help.

The teachers in my school treat me with respect.

I feel physically safe in my classrooms.

I feel emotionally safe in my classrooms.

I feel physically safe outside the classroom while at school (cafeteria, restrooms,

hallways, lockers, playground etc.)

My teachers give helpful feedback and encouragement.

My teachers work well together.

I enjoy coming to school.

I have a positive relationship with at least one adult in my school.

I trust a majority of the teachers in my school.

I trust a majority of the adults, other than teachers, in my school.

I feel like I learn when I am at school.

I like going to school events, such as sports, dances, etc.

I participate in activities at my school such as teams, clubs, etc.

My classmates treat me with respect

APPENDIX E. DISTRICT STRATEGIC PLAN

Strategy 1 –100% of students will graduate on time.

Strategy 2 – 100% of graduates will be enrolled in post-secondary or in the workforce within 6 months of their program.

Strategy 3 – The city school district will provide safe educational facilities that foster positive learning environments.

Strategy 4 – The city school district will develop and implement plans to ensure sufficient funding for current and future operations, programs and facilities.

Strategy 5 – The city school district will create learning environments in which all students, staff and families feel physically and emotionally safe, valued and engaged.

Strategy 6 – The city school district will serve as a partner in addressing root issues in county of residence through collaborative efforts.

APPENDIX F. OHIO IMPROVEMENT PLAN GOALS/DISTRICT FOCUS

Goal 1 – Close the Gap

The student subgroups of students with disabilities and economic disadvantages will increase student achievement rates in order to meet the yearly AMO (Annual Measurable Objectives).

Goal 2 – Teacher Performance with a focus on Domain 1 in iObservation

All teachers will demonstrate "Applying" or above level of implementation of the Marzano's Art and Science of Teaching Framework.

DQ 1: Communicating Learning Goals and Feedback

DQ 3: Helping Students Practice and Deepen New Knowledge

DQ 5: Engaging Students

DQ 9: Communicating High Expectations for all Students

Domain 2: Planning and Preparing for the Needs of Students Receiving Special Education and Students Who Lack Support for Schooling.

Domain 4: Promoting a Positive Environment

Goal 3 – Learning Environment

FCS will provide 21st century learning environments that are safe and inviting, promote parent involvement, and set high expectations in order to increase student engagement and attendance, graduation rate, and parent satisfaction**.**

Goal 4 – Community Partnerships

FCS will serve as a partner in addressing root issues in Hancock County through collaborative efforts.

*Subject to changes