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A DISSERTATION APPROVED FOR THE
GRADUATE COLLEGE

BY THE COMMITTEE CONSISTING OF

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Acknowledgments

This journey began at a meeting with the late Dr. Keith Ballard and Dr. Curt Adams who told me that every year that passed was a year that I could have been working toward my PhD. A few years later, Dr. Brenda Lloyd-Jones placed my name on a list of people of interest to discuss a new PhD program created by Dr. Jody Worley. Timing is crucial to one's success, and the persistent encouragement of an excellent group of instructors has led us to this moment.

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Weekends were sometimes study days, when in the past we would have been together at the park or engaging in another family activity. Our driving force during this challenge was at the end of this challenge we would be closer as a family, and the kids would see the benefits of the sacrifice of time and effort in order to attempt to make the world a better place.

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Dissertation Abstract

Since the mid 1990's, businesses around the world have implemented trauma informed practices into the fabric of their day to day operations. School districts across America have increased investments in trauma informed teaching programs to assist students experiencing trauma, and the administrative staff that interact with students on a daily basis. Although studies have sought to discover the effectiveness of trauma informed teaching, more research is needed to build proper parameters for success that are applicable throughout the many different forms of trauma implemented practices.

The purpose of this study is to discover the effectiveness of trauma informed teaching in an urban middle school. This mixed methods study acquired information over a three year span to analyze changes within the six following outcomes during the implementation of trauma informed teaching: Methods in which teachers are integrating trauma informed practices in their classrooms and how often are teachers using said practices, student safety, sense of belonging, suspension rates, behavioral referral rates, and Measures of Academic Progress (MAP) scores, which include reading and mathematics. Quantitative data from a second middle school is utilized to discover if the students learning environment, behavior, and grades are benefited by the implementation of trauma informed practices. In this study, it was discovered that teachers believe that trauma informed practices improve the learning environment for students. Over the three year time period, the student suspension rates and behavior referral rates fell, while sense of belonging and safety declined. Reading and mathematics test scores rose slightly.

This study adds to existing literature by documenting the assessment of the implementation and effectiveness of trauma informed teaching with documented, structural data

based evidence. Current data suggests that trauma informed teaching is successful upon implementation, but how success is measured is vague at best in current literature.

Keywords. trauma informed, urban schools, implementation, teaching

Introduction

More than 46 million adolescents in the United States have suffered trauma in their lifetime (McIntyre et al., 2019). As of 2022, greater than 66% of adolescents acknowledged at least one traumatic occurrence in their lives by 16 years of age (O'Neill et al., 2021). Additionally, 17% of children have experienced a minimum of four traumatic occurrences before 18 years of age (Merrick et al., 2019). Many studies have found that exposure to trauma in developmental years is associated with higher risk for cardiovascular episodes, depression, opioid use, food insecurity, and cancer (Parrish, 2023; O'Neill et al., 2021). And adults who have suffered traumatic occurrences tend to pass trauma onto their children (Merrick et al., 2019).

Research has also discovered that historical trauma, such as racism, or oppression towards minority groups affects children's learning, development, and engagement in school (Lea III et al., 2021). Daily trauma occurs through micro-aggressions that minority students experience in the classroom (Sellman et al., 2013). Students in urban schools have experienced trauma that can harm their engagement and performance in school (Jacobson, 2021).

To respond to these challenges, trauma informed teaching in schools has been a part of a country wide paradigm shift for reevaluating the methods in which schools teach and treat students who have experienced trauma in their lives (Stipp & Kilpatrick, 2021). The Crisis Prevention Institute (2023) defines trauma informed care as an approach that recognizes the impact of trauma on biological, social, neurological, and psychological levels. The institute emphasizes the students who have experienced adverse conditions need to feel safe with adults, they need supports that help them achieve high academic expectations, and they need to be taught about their emotions and how to regulate emotions. Trauma informed teaching is a strategy that aims to cultivate such conditions in schools. Trauma informed teaching seeks non-

punitive, relationship building, rehabilitation efforts to restore the student holistically. The mindset and practices associated with informed teaching build relationships that promotes healing and growth for students who struggle with the adverse effects of trauma (Sellman et al., 2013).

Research reveals that trauma informed teaching can have a positive impact on school environments. (Luthar & Mendes, 2020). A recent study based on Souers and Hall's (2019) key factors for encouraging students found that those who had experienced trauma scored higher on assignments and were less triggered in the classroom when the instructor provided safe spaces for learning and cultivated a constructive personal bond with students (Ellison & Fisette, 2022). Essential factors for positive school environments include a safe space for learning, trusting and supportive relationships between teachers and students, enhancing student self-responsibility, and leading students toward self-regulation (Souers & Hall 2019).

Trauma informed teaching can work well in public school systems for children from pre-kindergarten to high school (Luthar & Mendes, 2020). When developed effectively, children can gain the ability to control their temper and begin to feel safe in the classroom, which leads to increased academic comprehension (Herrenkohl et al., 2019).

There are many variations of trauma based education initiatives. The most utilized models consist of the multi-tiered model, the schoolwide approach, and the focus group. Multi-tiered models of trauma informed teaching have been successful in many schools (Bohnenkamp et al., 2023). The multi-tiered model focused on trauma training in Tier I, followed by Tier II and III partnerships between counselors, students, families, and specialists during the process (Diggins, 2021). The tiered approach gives step by step instructions of the processes required for proper implementation, while providing specific dates in which certain processes should be

implemented. Within the tiered practice models, the Bounce Back Resiliency Program and Cognitive Behavioral Intervention for Trauma in Schools (CBITS) have increased student engagement and lowered depression scores (Diggins, 2021).

The focus group approach relies on individual group sessions with students that explore a line of questioning concerning traumatic experiences (Crosby, 2015). Each session was facilitated by external researchers. A midwestern school applied the Heart of Learning and Teaching: Compassion, Resiliency, and Academic Success (HLT) as their principal implementation, which became a successful schoolwide approach which focused on psychology, education, and social learning (Crosby et al., 2015). Within this framework, six modules are discussed over a six to eight week period: defining trauma, compassion toward others, self-care, trauma strategies in curriculum, conflict resolution, and trauma related games and activities (Crosby et al., 2015).

Trauma informed practices do not always achieve their intended outcomes. Maynard et al. (2019) analyzed 7,173 studies that evaluated the processes and efficacy of trauma informed practices. The purpose of this study was to create a path for schools and policymakers to utilize for future implementation endeavors. Each selected study was excluded due to a lack of random or quasi-experimental design, and the sole focus of structural, employment, or protocol changes (Maynard et al. (2019). Rahimi et al. (2021) discovered when teachers felt they were given inadequate trauma informed training, they felt uncomfortable about their abilities to construct a trauma informed classroom, and did not fully comprehend the impact of trauma based learning. The emotional mind state of teachers that teach trauma involved students has been found to be a difficult task. When teachers do not know their exact role in the process, finding a balance

between the teacher and counselor role can be difficult (Alisic, 2012). The need for additional training is also a crucial element desired by teachers using trauma informed practices.

Out of the 32 trauma informed teaching peer reviewed articles examined by Thomas et al. (2019), 97% of the articles displayed positive increases in desired results such as test scores and attendance rates, but there were no known best practices of determining the efficacy of the implementation (Rahimi et al., 2021). Maynard et al. (2019) found that some studies analyzing trauma informed learning did not meet the Substance Abuse and Mental Health Services Administration (SAMHSA) criteria and therefore did not qualify as an implemented program of success. The inquiry problem this study proposes to address are the inconsistencies in verifying the impact of trauma informed practices.

Inquiry Problem

As stated previously, research shows that trauma informed practices have worked well for some teachers and schools (Douglass et al., 2021), whereas in other studies trauma informed practices have not resulted in improved outcomes (Alisic, 2012). Douglass et al. (2021) determined that trauma informed training at the organizational level helped teachers and administrative staff implement programs, as everyone in the company acquired the same knowledge about the process. For school leaders and schools, effective use of trauma informed practices depends on generating actionable knowledge on processes and outcomes emerging in their specific school. Each school has its own unique environment, culture and history, making it important to evaluate in local contexts how trauma informed practices are being implemented and if and to what degree intended outcomes are being realized.

The school evaluated in this study, Monroe Demonstration Academy, received a five year grant from the U.S. Department of Education to implement trauma informed practices. Monroe

Demonstration Academy is an urban middle school with a student enrollment of 684 sixth, seventh, and eighth grade students. The number of students doubled three years ago as other middle schools in the community were closed and consolidated into one school. The school is located in a state that ranks number one in childhood trauma and ACE scores (Ghandour et al., 2018). Monroe Demonstration Academy has been using the trauma informed practices for the last three academic years. To date, no systematic study or evaluation on the practices and outcomes has been conducted, leading to several unaddressed questions related to how the practices are being developed and how well the practices may be achieving their intended results. This study evaluated implementation of trauma informed practices, the extent to which social and psychological mechanisms behind program outcomes are improving, and the extent to which program outcomes are being achieved.

For trauma informed training, teachers are taught the effects of trauma through the four R's and six principles of SAMHSA's trauma informed care. They learn the effects of trauma on children and are then taught how to create a safe classroom environment in which the student is comfortable and conducive to learning. Teachers are also taught de-escalation techniques which assist a student going through a behavioral episode. The student can follow these steps and rejoin the class, compared to non-trauma informed classrooms in which the student may be sent to detention or expelled.

Proper implementation of the trauma informed program allows the administrative staff to enhance their understanding of why practices are achieving or not achieving desired outcomes. Such evidence can be compared with previous research discoveries and potentially strengthen the case for future evaluations of trauma informed teaching programs and practices. The implementation of trauma informed practices includes volunteers from outside of the school that

work with students concerning their day to day needs as well as specific tasks such as emotional balance, the importance of education, and work skills development.

For this study, the evaluation addressed the following objectives: (a) To discover how teachers are utilizing trauma informed practices in classrooms and how often do they apply these practices, (b) increased student safety and sense of belonging from the Panorama survey, (c) a decrease in student suspension and behavioral referral incidents, and (d) increased Measures of Academic Progress (MAP) scores, including mathematics and reading.

Proposed Purpose of Study

The purpose of the evaluation was to study the implementation and outcomes of trauma informed practices used at Monroe Demonstration Academy, an urban middle school in a southwestern state. The evaluation measured changes in the social psychological mechanisms targeted by the practices and improvement in behavioral and achievement outcomes. The following questions guided the evaluation:

1. How are teachers integrating trauma informed practices in their classrooms? How often are teachers using these practices?
2. Have there been changes in students' feelings of safety and belonging during the implementation of the practices?
3. Have student discipline referrals and suspension rates decreased during the implementation of the practices?
4. Has student academic achievement improved during the implementation of the practices?

Data Source

Quantitative data was provided by the local public school system's information technology department. Qualitative data was acquired by interviews with teachers, conversations with administrative staff, and unstructured observations during various school events and activities. Documents where provided that outlined the tier system for implementation and guidelines for trauma informed initiatives.

Data Analysis

Qualitative Data was gathered in an observational, longitudinal study. Descriptive documentation was used to determine if development in students is directly affected by experimental activities. This includes descriptive longitudinal trends in the mediating conditions and outcomes, comparing baseline and yearly acquired data. Conversations with staff members consisted of a line of questioning that followed the 10 phases derived from Mezirow's Transformative Learning Theory to identify their personal learning processes and adjustments to trauma informed teaching. For quantitative data, ANOVA was used to test differences at baseline and repeated time periods to identify statistical significance.

Limitations

For this study, the limitations are of the methodological nature. The grant received for the implementation of trauma informed training is for a five year time period. However, the current data was only for roughly three years. The quantity of time limits the number of years needed to discover if there are long term effects due to trauma informed teaching. During this short time period, there was a quality limitation; it was difficult to determine if other outside variables also have an effect on the results. Also, the ideal situation would include multiple schools from

different regions of the country, which would increase the diversity in results and implementation processes.

Reactivity was a threat to the validity of acquired qualitative data. With the entire staff and student body aware of the study, answers given in response to questions may have been skewed as they search for the correct response instead of providing an honest assessment.

In this study, researcher bias was possible because of the expectations for the implementation process. The relationship between the researcher and the students and staff of the middle school may have hindered the interviewees' ability to answer survey questions and other inquiries honestly and lead to social desirability bias. With a program meant to help those who have suffered from traumatic experiences and a study analyzing its validity, those involved in the implementation may have tended to be more positive when interacting or answering questions. There are also various social and political concerns experienced by students and the surrounding community that could affect the outcomes of this study, including poverty metrics and budget cuts at the Department of Education on a state and federal level.

Literature Review

First, research on Adverse Childhood Experiences (ACE) and trauma is described and used to illustrate harmful outcomes associated with childhood traumas. Secondly, the assessment of trauma informed practices within educational institutions will be detailed, and the attributes of various models will be examined. Lastly, the literature review concludes with a synthesis of evaluation evidence and what this evidence suggests about the implementation of trauma informed practices in schools.

Research on Adverse Childhood Experiences (ACE)

Adverse Childhood Experiences (ACE) are defined as traumatic occurrences in a child's life from birth to age 17 (McIntyre et al., 2019). Traumatic experiences consist of several harmful events as well as persistent social and psychological blight, such as suicide or attempt by a member of the household, violence in the living environment, substance abuse, and mental health issues (Felitti et al., 1998). More than 46 million adolescents in the United States have suffered trauma in their lifetime (McIntyre et al., 2019). As of 2022, 66% of adolescents have experienced at least one traumatic occurrence in their lives by 16 years of age (Black et al. 2023). Research data has determined that other factors can effect a child's well-being including socioeconomic factors such as poverty, lack of access to fresh foods and medical facilities, and limited transportation opportunities. ACEs are associated with health and addiction issues that persist into adulthood (Black et al. 2023).

The first study of adverse childhood events was conducted for two years by Dr. Vincent Felitti and Dr. Robert Anda at the Centers for Disease Control at Kaiser Permanente in 1995 (O'Neill et al., 2021). The ACE study was created when doctors noticed high occurrences of sexual abuse amongst people who were patients at a Kaiser Permanente obesity medical center

(O'Neill et al., 2021). The study gathered two instances of data from three trauma experience categories: challenges within the home, neglect, and abuse. O'Neill et al. (2021) defines trauma as a continuous emotional reaction that occurs from surviving a stressful event. The three categories of trauma are complex trauma, chronic trauma, and acute trauma. Complex trauma involves the experience of multiple diverse traumatic events, chronic trauma happens more than once over time, and acute trauma is the experience of one traumatic incident (Cai et al., 2022).

Evidence on the Effects of Trauma on Children

Research shows that two-thirds of United States children will experience a traumatic event before age 16 (Phung, 2022). There is a national acknowledgement that trauma damages brain development, disrupts school performance, and has harmful consequences for health in adulthood (O'Neill et al., 2021).

Felitti et al. (1998) found that there is a direct correlation between experiencing trauma as a child and premature death in those 21 years of age and older. The data disclosed that participants who scored four of higher on occurrences of ACEs in their childhood experienced obesity problems and sedentary lifestyle, more than 50 sexual cohorts, increased exposure to sexually transmitted diseases, poor opinions of their own health, and higher risk of suicide, depression, smoking, drug usage, and alcohol abuse (O'Neill et al., 2021).

Effects of Toxic Stress on Brain Development in Children

The effects of exposure to trauma as a child interrupts the brain's ability to develop and process simple processes. McEwen and McEwen (2017) define toxic stress as a focused means of the way social environments, familiarities, and interpersonal relationships mold and alter body and brain growth and development, with a focus on early childhood development, which leads to negative effects of future health and job stability.

Toxic stress occurs when children are exposed to recurrently stressful conditions which develops an ongoing response to stress, and leads to emotional problems, a negative effect on memory, attention span and control of one's actions depending on when in life the trauma is experienced (Shern et al., 2014). The long term effect of toxic stress depends on when the person experiences the stressful occurrences. Stress in early life or prenatal causes the most damage because it occurs at a time when the brain is growing and developing at a rapid pace (Shern et al., 2014). As a child ages, stress causes memory interruptions and difficulty learning, and into adolescence children will develop difficulty paying attention and struggle with impulse control (Shern et al., 2014).

Toxic stress negatively affects one's brain functioning and lessens a person's ability to develop and maintain interpersonal relationships (Felitti et al., 1998). Toxic stress can inhibit brain development, weaken the child's immune system, and disrupt the child's stress response channels (Johnson & Blum, 2012). Cai et al. (2022) found disturbed growth in the brain, including the insular cortex, temporal lobe, and parahippocampal gyrus. Other parts of the brain that control motor skills, listening abilities and verbal understanding are also negatively affected by trauma (O'Neill et al., 2021). Toxic stress can lead to future health issues such as cardiovascular problems, diabetes, and adult obesity (Johnson & Blum, 2012).

Effect of Trauma on School Performance

Several studies have examined the effects of trauma on school performance. According to Strom et al. (2016), after experiencing a traumatic event, student's grades were lower than the year previous, but the grades stabilized in two years. Students that have an ACE score of three and above find it difficult to complete classwork, lose focus, and are less engaged in the classroom (Kasehagen et al., 2017). Students with high ACE scores have a lifetime of difficulties

in the classroom. Iacbini et al. (2016) found that students that experience at least a score of one on the ACE test where more likely to drop out of high school than those that had a zero on the ACE test. These studies largely reveal that unresolved trauma has negative consequences for academic outcomes, student behavior, and learning processes.

Academic Outcomes

Students with ACE scores are three times more likely to fail academically compared to students with zero ACEs (Kaiser Permanente, 2024). In college, coping mechanisms can prove to be a barrier for learning for students with high ACE scores. High alcohol usage and drug abuse can inhibit a student's ability to function correctly in the classroom (Hinojosa et. al., 2018). Students with ACE scores are also more likely to have depression issues and other physical ailments that stall their academic success (Hinojosa et. al., 2018). Students with ACE scores are more likely to seek medical care to remedy a physical or mental health issues. This leads to time away from the classroom and lower grade point averages (Hinojosa, 2018).

As stress hormones disrupt natural cognitive development, an increase of behavioral and emotional complications and learning disorders is possible (Phung, 2022). Issues caused by traumatic experiences lead to a higher dropout rate. According to Iacbini et al., (2016), a main factor in the decision to drop out of school is the effect of childhood traumatic experiences.

Watt et al. (2021) found that ACE scores higher or equal to four are related to lower grade point averages for Black and Hispanic students, but not for non-Hispanic White students. The students of color may have less access to proper treatment and therefore affected by trauma differently (Watt et al., 2021). Also, personal experience with discrimination is not common when screening for ACE experiences. Discrimination by race is a traumatic experience that can

reoccur in various forms in a student's life and must be taken into consideration during ACE assessment (Hinojosa, 2018).

Student Behavior

Trauma can change a student's brain design by the continuous stimulation of the body's response to stress, which affects health, ability to learn, and behavior (Phung, 2022). Negative student behavior has been related to a variety of socioeconomic factors, but ACE scores are now being included in the research as a root cause of student behavior (Sanders et al., 2023). Other issues such as systemic discrimination, socioeconomic status, and racism are often not included in the overall ACE research or studies that explore school behavior issues (Sanders et al., 2023).

Gomis-Pomares and Villanueva (2022) found that experiencing physical abuse, gender, and socioeconomic status were the best predictors of deviant behavior. A male student that has been exposed to physical abuse and lived at a lower socioeconomic status were 37% more likely to engage in deviant behavior in school (Gomis-Pomares & Villanueva, 2022).

There are elements that assist with combatting deviant student behavior, but they have not been studied concurrently with ACEs. Nourishing relationships with parents, conflict resolution techniques, and a feeling of oneness with school environment are categories in which the effects on ACE related behavior of could be neutralized (Garduno, 2021).

Learning Processes

Students who have experienced ACEs have difficulties within the learning process such as attention and language inefficiencies, difficulty problem solving and acquiring new skills or taking in new information, and problems with deductive reasoning (Sciaraffa et al., 2017). However, Sheridan and McLaughlin (2016) found that the latest analysis of childhood adversity explains that delayed child cognitive development is the outcome of a lack of exposure to brain

stimulating experiences. Within the ACE model, stress is just one of many factors that can change or alter a child's learning process. The data shows that trauma causes stress which leads to higher ACE scores. Brain stimulating experiences are needed for a child to achieve normal brain function. However, traumatic occurrences cause more damage than lack of brain stimulating experiences (Sciaraffa et al., 2017).

Reoccurring trauma in a child's life disrupts their allostasis balance. Allostasis relies on the body's ability to identify external and internal changes, and to begin specific adaptive reactions (Danese & McEwen, 2012). If the sensory system is called upon too many times, or for sustained periods of time, allostatic overload can occur. This creates disfunction in various stress regions of the brain, which causes a plethora of brain disfunctions, including short attention span, devolution in emotional control, deficits in understanding context, and difficulty remembering location of objects making classroom learning virtually impossible (Danese & McEwen, 2012).

Effects of Trauma in On Mental and Physical Health

The harmful effects of traumatic encounters extend into adulthood (Felitti et al., 1998). These experiences lead to physical complications as an adult, including diabetes, heart attack, and obesity, as well as difficulties with mental health (Monnet & Chandler, 2015).

People who scored four or greater on the ACE test had four to 12 times the likelihood to experience alcoholism, depression, suicide attempt and drug abuse as adult (Felitti et al., 1998). Youth who were exposed to abuse are at a high risk of harmful health effects in adulthood, including poor mental health, chronic illnesses, limited brain function, and poor mental health (Monnat & Chandler, 2015). These maladies are associated with the effect of traumatic stress on bodily systems connected to homeostasis involving the hypothalamic-pituitary-adrenal (HPA) axis (Novais et al., 2021). Homeostasis is the process through which living organisms keep their

internal environment stable despite external fluctuations (Monnat & Chandler, 2015). When the HPA axis is overactive because of traumatic stress, results may include high blood pressure, acute myocardial infarction, atherosclerosis, stroke, and chronic obstructive pulmonary disease (Novais et al., 2021).

Mental health issues significantly affect individuals who have experienced traumatic stress. Stress hormones gather and disrupt ordinary mental development, creating emotional complications and learning difficulties (Phung, 2022). Children with two or more experiences with trauma are three times above the average student to be held back a grade and have a 10 times enhanced risk for experiencing a learning disorder in their future lives. Depression, unsafe sexual behavior, self-harm, deviant behaviors, and violence can develop within children with traumatic experiences (Novais et al., 2021).

Children who have experienced trauma need safe environments to avoid re-traumatization for their mental health well-being. Situations that can retraumatize children exposed to trauma include boundary violations of their personal space, screaming or yelling, pat downs at school, isolation, and physical restraints (Butler et al., 2011). Maintaining an environment that prevents re-traumatization can be difficult, as the experiences of trauma in students leads to bullying, post-traumatic stress disorder, and community violence (Trivedi et al., 2021). Other mental health diagnoses include specific phobia, conduct disorder, general anxiety, social phobia, and panic attacks (Trivedi et al., 2021).

Growth of Trauma Informed Practices in Schools

Trauma informed practices call for a paradigm shift in how schools teach and treat students who have experienced trauma (Stipp & Kilpatrick, 2021). The perception of trauma has evolved with the increased use of trauma informed care. Trauma informed care started in the

1960's as therapeutic strategies to assist soldiers who experienced trauma in war (Blanch, 2012). Increased awareness of post-traumatic stress disorder (PTSD) in the 1980's combined with the original ACE study conducted by Vincent Felitti in 1995 began to normalize trauma informed care for military personnel and veterans. New strategies to treat the increasing amount of diagnoses of mental health disorders were also created (Blanch, 2012).

Harris and Fallot (2001) describe trauma informed care as an entity with a new awareness of trauma and its effects on the lives of everyday people. Luthar and Mendes (2020) define trauma informed care as a framework of thinking and interventions directed by an understanding of the neurological, biological, psychological, and social effects trauma has on an individual, acknowledging that person's constant needs for safety, and methods to manage emotions.

Harris and Fallot (2001) describe five pillars of trauma informed care: safety, trustworthiness, choice, collaboration, and empowerment. There is a prerequisite that the students feel physically safe as well as there being clear, accessible information as well as well identified places of exit throughout the facility. Trustworthiness sets the boundaries between student and teacher and/or counselor and lays out expectations for the student and the program. Choice allows the family to inquire if the trauma informed care programs are specifically catered to their child, and what adjustments can be made throughout the process. Collaboration allows free flowing information from family to student, student to teacher and counselor. Empowerment seeks to maximize the programs positive effect on the participating child, enhancing self-control skills (Harris & Fallot, 2001).

In the early 2010's trauma informed care began to manifest into the workplace. Trauma informed policies were in place at 35 governmental agencies and educational entities, working to assist those who suffer from trauma related mental and physical health issues (Blanch, 2012).

Trauma informed care has become interwoven into the rules, regulations, and practices of schools throughout the United States (Choitz & Wagner, 2021; Stipp & Kilpatrick, 2021). There are a myriad of programs, resources, and practices that address student trauma (Choitz & Wagner, 2021) of which schools can adopt for daily use. A review of three progressive programs follow: schoolwide approaches, focus group based programs, and multi-tiered model of trauma informed practices.

Schoolwide Model of Trauma Informed Practices

The purpose of trauma informed schoolwide methodology is to lessen the effect of trauma and encourage healing by including all participants involved in the process. Schoolwide methodologies include every entity involved in a student's well-being, including parents, administrative staff, and rules and regulations that create safe learning surroundings to support the progress of all students and counselors (Avery, 2020). The Healthy Environments and Response to Trauma in Schools (HEARTS) Model, and The Heart of Teaching and Learning (HTL): Compassion, Resiliency, and Academic Success model are two examples of schoolwide approaches.

The Healthy Environments and Response to Trauma in Schools (HEARTS) Model has primary ideologies that include encouraging a comprehension of stress and trauma, requiring a safe and predictable environment, while maintaining trustworthy relationships (Avery, 2020). This model is based on preliminary and continuous training with in-house training for staff and learning student's requirements for a safe environment. Staff is also taught about behaviors that may be displayed because of traumatic experiences, and how to deescalate said behaviors.

The Heart of Teaching and Learning (HTL): Compassion, Resiliency, and Academic Success Model places emphasis on two theories: attachment and ecological. This model is used

as a psychological focused curriculum that focuses on interventions from a trauma based education lens (Avery, 2020). The model focuses on creating an environment of raising self-esteem, interpersonal trust between each student and with administrative staff (Avery, 2020).

Focus Group Model of Trauma Informed Practices

School based focus group research seeks to understand and document the trauma that students have faced and how trauma effects learning at school (West et al., 2014). Usage of focus groups allows researchers to identify shared experiences of the students, discover new experiences, and creating an interpretation of findings within the group (Bradbury-Jones et al., 2009). Students are asked open ended questions, and answers are delivered to those who are creating the curriculum to promote strategies to improve the learning environment (West et al., 2014). Focus group programs have found to be beneficial for the relationship between the student and the focus group, including more empathy and understanding (Herrenkohl et al., 2019). Focus group sessions begin at the start of the school year, ending within the last week of school.

Two prominent school based focus group programs were conducted by K. A. Ehntholt and Tamar Mendelson. Ehntholt's (2005) focus group based on 6 meetings of Cognitive Behavioral Therapy (CBT), which covers relaxation, sleep hygiene, and coping mechanisms and other trauma related symptoms. The results showed a decrease in PTSD symptoms and improvement in behavioral activities. Mendelson (2015) created the RAP Club, which met twice a week for 12 weeks. Each session included CBT and mindfulness techniques, provided by mental health professionals. The results displayed an increase of ability to control behavior, and social academic awareness.

Multi-Tiered Model of Trauma Informed Practices

Multi-tiered models are multiple level programs that are implemented one tier at a time, starting with trauma based teaching in tier one, with collaboration with students, staff and counselors in tier two and three. Multi-tiered models identify and combat issues in behavior and education that prevent student achievement (Collins, 2020). The Berry Street Education Model is a common tiered program that assists student progression in behavior control, interpersonal relationships, student focus, and academic improvement (Diggins, 2021). This model is based on five areas of achievement:

1. Body – Efforts to teach deescalation of triggering situations
2. Relationship – Keeping students on track and focused in the classroom
3. Stamina – Creates an environment of excellence through student empowerment and self-assessment
4. Engagement – Techniques that encourage students to desire more knowledge in the classroom.
5. Character – Knowledge of self that promotes future pathways and development.

The BounceBack Resiliency Program increased student engagement and post-traumatic stress disorder (PTSD) scores (Diggins, 2021). The BounceBack Resiliency Program consists of five pillars of focus (McGrath, 2000):

1. Coping skills
2. Programs that supports social skills
3. A SCARF classroom group (built on the ideals of Support, Cooperation, Acceptance, Respect, and Friendliness)

4. Coping procedures for bullying/anti-bullying

5. A "Think for Success" plan

Evidence on Trauma Informed Teaching Practices

The evidence of the outcomes of trauma informed teaching practices varies by study. Existing data states trauma informed teaching is often confusing to teachers and does not work and provides little to no difference in the classroom, but most studies believe trauma informed teaching is a positive program for schools.

Positive Outcomes

As researchers have found, trauma informed teaching has been promoted as a positive factor in the classroom (Douglass et al., 2021). Dorado et al. (2016) found a rise in student competence in the classroom by 28%, increased in time in class by 36%, and increased presence in school by 34% while the entire school experienced an 87% drop in deviant behavioral occurrences. Kim et al. (2021) discovered a decrease in emotional burnout and increase in academic accomplishment after teachers implemented MindUP, a program which teaches de-escalation strategies, and proper classroom behavior.

There is existing data that claims trauma informed programs are effective, but exact outcomes are not mentioned in the results. Diggins (2021) trauma informed model, Reframing Learning and Teaching Environments (ReLate) utilizes the sanctuary model, which identifies the discrepancies of underserved communities in comparison to the general public and their exposure to trauma (Diggins, 2021). Diggins' ReLate created a learning environment with less behavioral problems, an increase in social skills, less emotional outbursts, and better peer to peer relationships in students four to 12 years old (Newton et al., 2024).

The Schimke et al., (2022) trauma informed model, the Trauma Informed Behavior Support (TIBS) Program uses a culturally aware lens while focusing on the social learning and systems theory. Social Learning Theory places emphasis on how people learn from peers and the conditions in which they live, and the Systems Theory concentrates on a holistic perspective of people and their communities, and how they interrelate (Schimke et al., 2022). The TIBS program's positive results included increased awareness of the effects of trauma on themselves as well as classmates, improved interpersonal relationships between student and teacher, and an increase in self-care in students ages four to 12 years old (Newton et al., 2024).

Stokes (2022) Trauma Informed Positive Education (TIPE) program included 7th through 12th grade students. TIPE uses a strengths based approach with a positive outlook while acknowledging the effects of trauma. Results included less classroom disruptions, increased peer to peer trust, and a more relaxed learning environment (Stokes, 2022).

Mixed Results

In other studies, data concerning trauma based training had mixed results. When using a trauma informed approach, Kim et al., (2021) discovered that teacher reported less exhaustion and burnout. However, Alisic (2012) found that teachers often found it difficult to set boundaries with trauma experienced children after training, including defining the role of a teacher and the need for more in depth preparation. The teachers feared that their jobs were accruing too much social work, and the role of teacher and program success was becoming harder to define (Alisic, 2012).

There is no consensus to determine a universal protocol to measure success for trauma informed teaching. Out of thirty two Trauma Informed Teaching peer reviewed articles examined by Thomas et al., (2019), 97% of the articles displayed positive increases in desired

results, but there was no set method of determining the efficacy of the implementation (Rahimi et al., 2021). Newton et al. (2024) discovered through comparison and analysis of multiple trauma based learning implementations that out of 10 who found trauma informed teaching to be positive for students, only one program asked for the opinion of the students.

No Difference Made by Trauma Informed Teaching

In some cases, trauma informed practices do not have a positive effect on the school. Trauma informed practices often ignore past trauma within the history of schooling and overlook some communities' unique involvements with trauma and the public school system as a whole (Petrone & Stanton, 2021). The trauma informed curriculum sometimes ignores the history and sociocultural relationships of complex trauma and often doesn't include oppressive systems such as school systems, racism, or researcher bias (Petrone & Stanton, 2021).

Researchers who do not consider culture and unique experiences in trauma informed methods may develop an approach that treats people from different backgrounds as having similar life experiences. This point of view places students from underserved communities at a disadvantage and creates an additional layer of inequity. Future research will also include cultural humility, the process of learning to understand a person's cultural identity while understanding the barriers of comprehending their life events (Pickens, 2020) and its potential effects on trauma informed teaching techniques. There is also a tendency to use quantitative methods for trauma informed research, when qualitative research will provide in depth data that can cover historical trauma differences through the line of questioning by the researcher (Francis & Munson, 2017).

The original ACE study conducted by Felliti also had imperfections. The study was conducted with primarily white participants, and the line of questioning did not include systemic

factors that are known to cause trauma such as religious persecution and racism, which left a gap in the acquired data (Petrone & Stanton, 2021). This omission caused participants identify trauma as it was caused by solely by other people, while excluding the systematic injustices that have also caused the participants trauma (Golden & Petrone, 2021).

Teacher confidence in the program is essential for trauma informed teaching to positively impact schools. Walkley and Cox (2013) discussed the frustration of teachers who teach children daily and the students who are not prepared to acknowledge the deep feelings that come from experiencing trauma. Alsic (2012) found that teachers struggled with their roles as a teacher, with a lack of understanding the line between psychologist and instructor. The teachers had difficulty establishing parameters concerning negotiation with students and found were emotionally drained after teaching a classroom filled with high ACE score students (Alsic, 2012).

Luthar and Mendes (2020) refer to these emotional feelings as compassion fatigue, whereas the ability of teachers to remain positive after learning about a student's trauma becomes increasingly difficult. Teachers feel as they are now the psychologist for the student instead of a teacher of curriculum (Luther & Mendes, 2020). Rahimi et al., (2021) found three consistent issues in trauma informed studies concerning teachers:

- Teachers did not acquire the knowledge explaining the depths of trauma and trauma informed teaching.
- Teachers were not prepared to manage a trauma informed classroom.
- Teachers agreed that more trauma informed training was needed.

These feelings lead to lower effectiveness of trauma informed practices (Walkley & Cox, 2013).

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Implementation Is Important

Implementation is a process in which a group of actions is performed to place a paradigm into a regular routine (Fixsen et al., 2019). As the foundation for the implementation of trauma informed learning is constructed, the socio-economic and socio-emotional needs of the student must be understood by all participating in the process (Blodgett, 2012). For the implementation process to be successful, the system must comprehend the massive impact of trauma and its multiple avenues to recovery, acknowledges the causes and effects of trauma from a systemic lens, and combine the knowledge of trauma with the rules and regulations of the system to avoid re-traumatization (Perry & Daniels, 2016).

An effective implementation relies on the features of trauma informed policies, including a clear understanding of what modifications need to be implemented considering rules and regulations to create a trauma informed learning environment (Fleuren et al., 2014). Implementation requires a relationship between the school, the public school system, administrative staff, councilors, and parents. All partners must be willing to work together, and it must be assumed the implementation will achieve the desired outcomes outlined by the implementation logic model (Perry & Daniels, 2016). Together these participants create a positive environment for trauma informed program implementation, which allows a quicker response to students in need of care during school hours and a holistic understanding of what each student needs (Jaycox et al., 2009; Kruczek & Salsman, 2006).

Amongst the partners, there must be an understanding that schools change over time, and systemic transformation is difficult in an ever fluctuating environment (Perry & Daniels, 2016). In year one, community and administrative staff are trained in trauma aware techniques to

recognize and assist students in need, implement trauma informed processes, and help students cope with trauma (Metz et al., 2015).

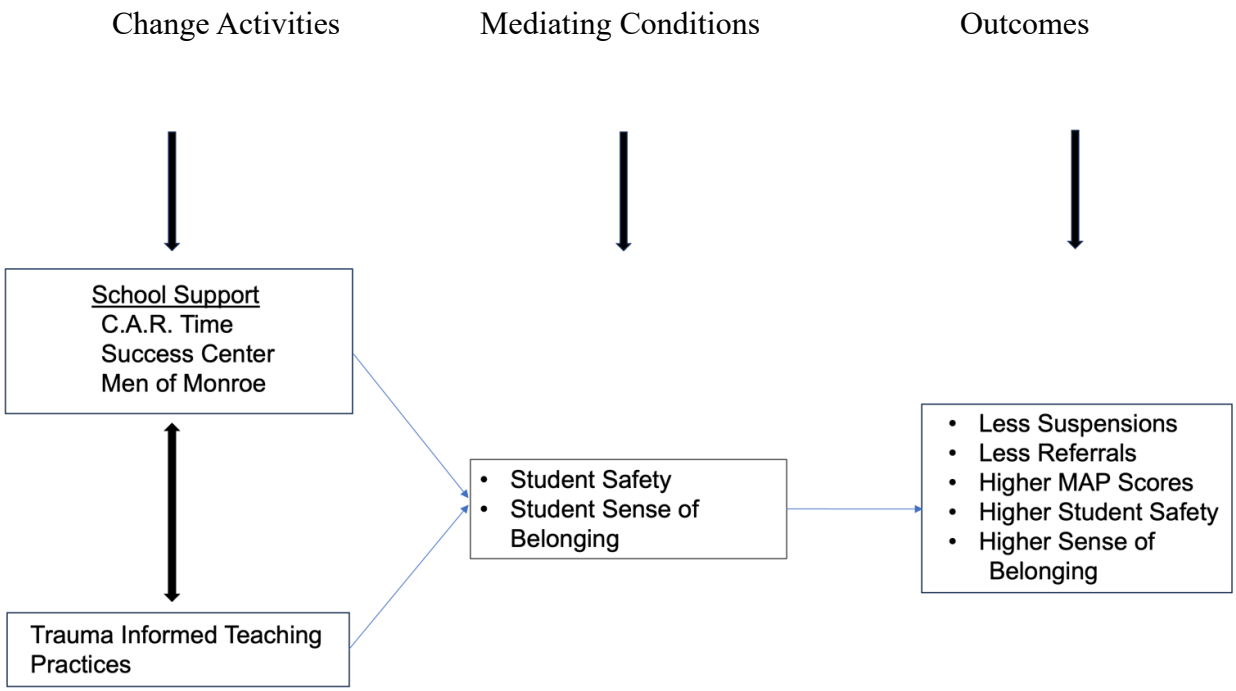
Theoretical Framework

For this study, the Theory of Change for trauma informed practices used at Monroe Demonstration Academy. A theory of change (ToC) is a technique that describes how an intervention is relied upon to create change, based on a cause and effect evaluation grounded in evidence (Breuer et al., 2016). Carol Weiss (1995), the creator of the theory described ToC as a theory of by what means and why the initiative functions properly. When creating a theory of change, a backward mapping plan is utilized, starting with the creation of outcomes first, followed by the creation of change activities and mediating conditions. The long-term objectives of the intervention are noted, and group works in reverse order to detect the desired outcomes and pathways needed for the long-term changes to occur (Tsantila et al., 2023). The theory of Change discovers specific reasons in which certain implementations will create the change and can discover the missing factors in the implementation process that can lead to preferred change (Tsantila et al., 2023).

As seen in figure one, reduced discipline problems and increased academic achievement are the intended outcomes of this trauma informed intervention. To achieve these outcomes, students need to feel a sense of safety and belonging in school. These mediating conditions and outcomes are theorized to be achieved through the change activities, which includes C.A.R. Time, Success Center, Men of Monroe, and trauma informed teaching practices.

Figure 1

Theory of Change for Trauma Informed Teaching



Outcomes

The two primary outcomes are reduced discipline problems and increased academic achievement. Reduced discipline problems refer to decreasing the amount of disruptive behavior in the classroom and deescalating situations when a student is increasingly uncomfortable, and conflicts emerge leading to referrals or suspensions.

Existing literature discusses the process of controlling one's anger in the classroom with trauma informed practices, and how it promotes students toward a path of healing and increased academic achievement. Trauma informed teaching leads the student toward evaluation of self-choices and the consequences for personal behavioral choices (MacLochlainn et al., 2022). When

disruptive behavior is reduced in the classroom, the environment in the classroom as a whole improves (O'Neill et al., 2021).

Behavior issues such as self-harm, lack of impulse control, and extreme reactions leads to present and future physical issues such as physical injuries, fluctuations in immune system operations, and overall poor health (Sciaraffa et al., 2018). To combat disruptive behavior caused by trauma experiences, researchers have found three crucial relationships: a strong connection with caregiver and/or teacher, a sense of belonging with people who care and have a solid knowledge of trauma informed practices, and a caring community in which they live (Sciaraffa et al., 2018).

Increased academic achievement refers to the improvement of grades and test scores as the result of the implementation of change activities. An increase in academic achievement can be a result of improved behavior in the classroom amongst students. Students who are placed in a learning environment that is safe and promotes healing can lead to greater academic achievement (O'Neill et al., 2021). Payton et al., (2008) found that students participating in trauma informed programs displayed less behavior issues and emotional anguish and increased academic output.

Improved academic achievement is also coupled with other benefits to the student, including increased social-emotional techniques, positive attitudes and social conduct, less emotional distress, and improved academic achievement (Payton et al., 2008). Students are more likely to take interest in workforce development programs that focus on their specific skills, which raises interest in learning and makes burnout less likely (Maynard et al., 2017). Interest in post-secondary learning opportunities such as college or technical school, will give the students options in the future for employment, leading to a healthier adult life (Maynard et al., 2017).

Mediating Conditions

Mediating conditions include student safety and student sense of belonging in their relationship with the school. These conditions were identified for their relationships to the outcomes.

Student safety is defined by the comfort level the student has while attending school, and their belief they will remain safe throughout the day (Bohnenkamp et al., 2023). Ellison and Fisette (2022) found that a students' negative behavior can be traced to feelings of a lack of safety. If a student does not feel safe, they will possibly suffer socially and academically. Also, undiagnosed mental health can display itself as physically intimidating behavior, ignoring the rules of the school and overall aggressive tendencies (Bohnenkamp et al., 2023). Students who do not receive care for mental health remain can experience adverse social, behavioral, and academic results (Powers et al., 2016), which can limit the desired outcomes of academic achievement and reduction in disciplinary behavior.

Factors that contribute to student safety include a schools ability to prevent threats to safety, not only act in response to these events, but also confront daily situations that involve bullying and other physical behaviors, address the mental health state of its student body, and avoid punitive actions that could lead to unsafe outcomes (Bohnenkamp et al., 2023).

Student sense of belonging refers to students' emotional state of feeling embraced and emboldened by staff and students within the school, feeling as if they are a vital element of the group work in the classroom (McInerney, 2022). A student is found to have a high sense of belonging if they have the following five elements in their lives and school environment: support networks, participation opportunities, language, recognition, and safety (McInerney, 2022).

Support networks include family and community outside of school and teachers, administrative staff, and peers in school. Participation opportunities include various after school programs, such as sports, academic clubs, and musical bands. These groups give the student a feeling of togetherness and belonging with their peers (Bohnenkamp et al., 2023). Language refers to the most common language spoken in the student's household in reference to the languages spoken at school. Students will feel a higher sense of belonging if their peers also speak their language. Recognition refers to the student being celebrated for their hard work, special project, or other school based acheivement. Lastly, feeling safe at school leads to a higher sense of belonging (McInerney, 2022).

There is a strong relationship between a student's sense of belonging and engagement (Kuh et al., 2005). Academic and social engagement are important factors which lead to appropriate behavior and higher academic achievement (Ahn & Davis, 2020). Thomas (2012) found that academic engagement is articulated within school course and extracurricular activities, as social engagement implies relationships in a social environment with other students and their joined participation in academic, sports, music, and other programs outside of required curriculum. Data shows that engagement is closely related to students' academic attainment, sense of belonging, and retention rates (Ahn & Davis, 2020).

Activities

There are two types of trauma informed practices – instructional and school practices. Instructional practices consist of the implementation of trauma informed learning and melding its curriculum into the schools current teaching protocol. Trauma informed practices are important elements that increase feelings of student safety and promote a true sense a belonging (Bohnenkamp et al., 2023, Kuh et al. 2005). Teachers are taught the effects of trauma on

children, classroom strategies to deescalate potential behavioral outbursts, and the four R's of trauma / six principals of safety created by the Substance Abuse and Mental Health Services administration.

Trauma informed teaching skills help teachers learn what trauma is, and how trauma affects students (Kasehagen, et al., 2017). The question for a child "What's wrong with you?" has experienced a paradigm shift to the holistic approach "What happened to you?" (Harper & Cromby, 2022). Trauma informed teaching training expounds upon methods that help deescalate situations the classroom in which a student's behavior is disturbing or threatening the teacher and/or classmates (Douglass et al., 2021).

Classroom strategies are divided into four categories: prevention of an outburst by creating a comfortable classroom setting, awareness of escalation of the situation, knowing when the situation has reached crisis mode, and the recovery of the student's well-being so he or she can return to the classroom (Douglass et al., 2021). Self-reflection allows a student to contemplate their actions and use coping mechanisms such as breathing techniques to refocus on the task at hand. Diggins (2021) found that trauma informed teaching led to less conduct issues, peer problems, increased academic achievement, and prosocial skills improved tremendously during the first six months of implementation.

Teachers are also taught the four R's of the Substance Abuse and Mental Health Services Administration's trauma informed care protocol: Realize the effects of trauma, recognize the symptoms of trauma, implementing a program that responds to trauma, and resists re-traumatization by creating a safe environment that does not trigger the student (Blanch, 2012). The four R's work in unison with the Substance Abuse and Mental Health Services Administration's six principles of safety, trust and transparency, peer support, collaboration,

empowerment, and choice, and cultural, historical and gender issues (Houry & Mercy, 2023). The purpose of this training is to raise teacher understanding of the role of trauma in their place of employment (Houry & Mercy, 2023). Teachers learn to identify trauma as a potential cause of disruptive behavior. They will be properly equipped to deliver appropriate care to combat behavioral issues and increase student feelings of safety (Luthar & Mendes, 2020).

School practices consist of C.A.R. Time, Success Center, Men of Monroe, and an on-site counselor program to provide certified mental health assistance. Three mental health counselors are available to provide guidance to a student if their behavior requires them to be removed from the classroom. With parental permission, the on-site counselor has access to the student's history of trauma, medicine subscriptions, and knowledge of diagnosis and treatment. This allows a child to be counseled by a certified counselor at school without the threat of expulsion and creates a safer environment for all students.

C.A.R. Time provides teachers at stations throughout the school where they would be available for students to have a restorative conversation if they desire a mental health break or had a behavioral issue during class. With this program, the school allocates more resources to the well-being of students, creating a safer and more welcoming schoolwide environment. Students are able to connect and heal relationships with the team more frequently with dedicated time throughout the day to do so.

The Success Center is the alternative to student suspensions. Student suspensions often harm the student because the root cause of their behavior is never addressed. The success center serves as a minimum five day in-school session that will be used to ensure that students are working on their mental health, receiving the therapeutic support that they need.

The Men of Monroe is a volunteer group of men who mentor the students within the

school. Each volunteer assists with one of the following tasks: bulletin board maintenance, lunch duty, morning duty, dismissal/bus duty, hallway monitoring, athletic coaching, and office assignments. These interactions can lead to an increased feeling of belonging (McInerney, 2022).

Methods

This study evaluated the trauma informed practices implemented in an urban middle school with a convergent parallel mixed methods design (Creswell & Plano Clark, 2018). This design involves collecting both quantitative and qualitative data simultaneously, analyzing them separately, and then integrating the findings to create a more comprehensive understanding of the phenomenon under study (Creswell & Plano Clark, 2018). There were three purposes of the evaluation: (1) to describe the implementation of trauma informed practices through the lens of transformative learning theory; (2) to measure the extent to which student reported sense of belonging and safety changed during three years of the intervention; (3) to determine if the desired outcomes of the intervention were achieved. The following evaluations questions were addressed:

1. How are teachers integrating trauma informed practices in their classrooms? How often are teachers using these practices?
2. Have there been changes in students' feelings of safety during the implementation of the practices?
3. Have there been changes in students' feelings of belonging during the implementation of the practices?
4. Have student discipline suspension rates decreased during the implementation of the practices?
5. Have student referral rates decreased during the implementation of the practices?
6. Has student academic achievement improved during the implementation of the practices?

The author of this study, a long-standing member of the community surrounding Monroe Demonstration Academy, is committed to addressing the socioeconomic challenges experienced by local residents. The author has an extensive history of community service, mentorship within the neighborhood, and experience with trauma informed practices. The author is aware that previous experiences with the school and its associates has the potential to create bias during the research process. To prevent bias during interviews and the observance of the implementation of trauma informed practices, the author's preconceived notions concerning the school, teachers, and students were acknowledged in an effort to bracket existing beliefs and/or expectations. Bracketing consists of the impermanent shelving of the outside world and all personal preconceived notions (Creswell, 2007). The author maintained a bracketing journal and used memoing to document and set aside personal perspectives regarding trauma informed practices. Peer debriefing and reflecting notes were utilized to reduce bias in both qualitative and quantitative analysis. These methods, based on transcendental phenomenology, aimed to keep participant input as the focus of the study.

During qualitative data analysis, the author bracketed the aspirations for trauma informed practices to be used successfully by teachers in the classroom. With the knowledge that assistance was greatly needed at the school to improve student behavior and academic acheivement, there was a need to bracket personal support for the implementation of trauma informed practices. Quantitative analysis required a need to bracket assumptions that trauma informed practices automatically solved student concerns of sense of safety and belonging as well as increasing academic output.

Data Sources

Implementation Data

Data concerning the implementation of trauma informed practices came from multiple sources, including documents, informal conversations with school staff, and formal interviews

with selected teachers. Documents were provided by administrative staff which explained the tier system structure for the implementation process, as well as the guidelines for other trauma informed initiatives, such as the Success Center, Men of Monroe, on site counseling, and C.A.R. Time. Grant documents remained available for review throughout the study, and trauma informed training power points and binders were also available for review.

The second source of data was informal conversations, observations during the school day, and participant observations at various school events. These conversations were unstructured and informal, organized by questions aligned with the phases of the Transformative Learning Theory. Approximately ten conversations were held, spanning a time period of one and a half years. Most conversations lasted for five to 20 minutes. In school observations transpired during lunch, in hallways between classes, and at school assemblies. Observations occurred on average every 30-60 days for one and a half years. Participant observations consisted of after school activities, such as Men of Monroe tutoring sessions and sporting events. Participant observations were held approximately every two months during the school year for two years. The duration of observations lasted between ten minutes to two hours.

Semi-structured interviews, lasting 45-55 minutes each, were conducted on-site at the school and recorded via iPhone. The interview questions were derived from Jack Mezirow's Transformative Learning Theory, a ten-phase process describing how individuals change their perspectives when encountering new information. This theory aligns with transcendental phenomenology by concentrating on the impact of new experiences on individuals' understanding. The open-ended questions allowed participants to elaborate on their experiences with trauma informed practices, including changes in teacher-student relationships and the integration of trauma informed principles into the curriculum. Probes explored how staff

perceptions of student behavior changed after trauma informed training. Emergent codes were identified during each interview and contributed to the development of themes. Post-interview revisions were not permitted. The interview questionnaire is available in the Appendix.

Participants

Table 1

Participant Demographics

Race	Gender	Years in Education	Tenure at School	Title
Black	Female	4	4	Teacher #1
Black	Male	16	3	Teacher #2
White	Male	9	2	Teacher #3

Data on Mediating Conditions and Outcomes

The local public school system's information technology department provided quantitative data for Monroe Demonstration Academy and Central Middle School. The data included student Measures of Academic Progress (MAP) scores in mathematics and reading, behavioral referrals, suspension numbers, and Panorama survey results including sense of belonging and safety for the 2022, 2023, and 2024 school year. Data provided for MAP scores included student identification numbers, grade level, attending school, year of testing, test scores, and test score percentiles. In this study, MAP scores ranged from 140-300. The average middle school scores in the United States range from 215-230. Behavior referrals and suspensions data included school identification numbers, and total referrals and suspensions for each school. Panorama survey data provided safety and belonging test scores per student, with student identification numbers and date of survey. Panorama survey consisted of a Likert scale, with 0 being the lowest score and one being the highest score possible. Any score of .5 and above was

considered a good score. Data involving student referrals and suspensions were calculated to provide a per student average.

Data Analysis

Qualitative Data Analysis

Qualitative data analysis followed the procedures outlined by Moustakas (1994) for transcendental phenomenology. This involved: (a) horizontalization: identifying significant statements related to the phenomenon from interview transcripts; (b) clustering of meaning: grouping these statements into units of meaning; (c) theme development: forming broader themes that capture the essence of the participants' experiences; (d) textural description: describing the participants' experiences with the phenomenon; (e) imaginative variation: exploring the contextual factors that influenced the experience; and (f) essence: articulating the core meaning of the phenomenon based on the shared experiences.

The analysis began with 45 *a priori* codes derived from the literature and Mezirow's 10 phases of transformative learning, which includes disorienting dilemma, self-examination, critical assessment, recognition, exploration, action planning, knowledge acquisition, trying new roles, building confidence, and reintegration (Mezirow, 1997). These codes were initially organized into five broader themes: trauma informed training, changes in teaching strategies and staffing, perception of trauma, changes in student behavior and academic achievement, and self-evaluation. Ten emergent codes were also identified during the interview analysis and were integrated into these themes. Data acquired through conversations with teachers, administrative staff, and unstructured observations were also analyzed and included in the results findings.

Quantitative Data Analysis: Repeated measures analysis of variance (ANOVA) was used to analyze MAP scores in math and reading across three time points (school years 2022,

2023, and 2024). Behavioral referrals and suspension numbers were plotted in line graphs. ANOVAs were conducted for the Panorama survey results (sense of belonging and safety) for year one and year three, and mean scores were plotted for comparison.

Results

The results chapter provides evidence used to address the evaluation questions. This chapter begins with descriptive accounts from teachers about the implementation of trauma informed practices. Implementation evidence is reported through Mezirow's Transformative Learning Theory. Next, data are presented that display changes in student behavior and experiences during the implementation of trauma informed practices. These data include student suspensions, discipline referrals, student safety, and student belonging. Data are also presented for changes in mathematics and reading acheivement. The chapter concludes with a summary of results.

Table two displays the teacher's experiences during the implementation of Trauma Informed Teaching through the lense of Mezirow's Transformative Leaning Theory. Five larger clusters of meaning were created from Mezirow's 10 phase theory, which includes trauma informed training, change in teaching strategies and staffing, perception of trauma, changes in student behavior and academic acheivement, and self-evaluation. Table two also describes effective and ineffective implementation results of each cluster based on the purpose of each implementation strategy.

Implementation Results

Table 2

Qualitative Findings

Transformative Learning Theory ➡ New information acquired ➡ Paradigm shift in thought

Implementation of Trauma Informed Practices

Themes	Teacher Perceptions: Trauma Informed Training	Teachers Perceptions of Trauma	Changes in Teaching Strategies and Staffing	Changes in Discipline Referrals, Suspensions, and Math/Reading Acheivement	Self-Evaluation
Effective Implementation	Well organized Classrooms. Enhanced awareness of trauma. Restorative behavior practices.	Paradigm Shift from "what's wrong with you? to "What happened to you?"	Reliance on outside counseling, after school programs. Implementation of Socio-emotional learning tools.	Student Self-Regulation. Acknowledge consequences for actions. Usage of deescalation methods. Less punishment. Higher test scores.	Acknowledges own Trauma. Realizes personal changes needed for proper communication with students.
Incomplete Implementation	Lack of continuous learning for teachers. Punish based correction methods.	Student behavior not linked to traumatic experiences	Punitive responses to behavior outbursts. Lack of Motivation.	Student has no deescalation skills. Status Quo behavior.	Rigid classroom guidelines. Stagnant classroom environment.
Mezirow Phases	Knowledge acquisition, Trying new roles, and Reintegration	Disorienting Dilemma, Building Confidence	Exploration and Action	Trying new roles, Building confidence reintegration	Self-examination, Critical assessment Recognition

Teacher Perceptions of Trauma Informed Training Practices Implementation

As defined beforehand, trauma informed practices are a structure for understanding and helping those who have experienced damaging results after experiencing traumatic occurrences (Luthar & Mendes, 2020). The first theme, trauma informed training, encompasses three of Mezirow's ten phases of transformative learning: knowledge acquisition, trying new roles, and reintegration. The emphasis of this theme is to discover teacher experience with training on trauma informed practices, and the degree to which training experiences achieved their intended objective for effective implementation.

Knowledge acquisition covers the research needed in the process of gaining a new perspective on the newly acquired information, trying new roles include envisioning this new

information with a fresh perspective, and reintegration involves the application of new thought processes in contemporary situations (Mezirow, 1997). In this study, teachers undergo the knowledge acquisition process of trauma informed teaching, and a greater comprehension of trauma and its effects on student behavior. Trying new roles is a phase that allows administrative staff to see student behavior as a cause and effect of traumatic experiences, and reintegration applies this knowledge to day to day interactions with students. There is now an understanding that students behavior is possibly influenced by traumatic experiences which requires treatment and awareness, as opposed to punitive measures..

The staff was provided trauma based learning materials and had access to online materials and in person training opportunities. Teachers learned the four R's of trauma informed care and the six principals of safety created by the Substance Abuse and Mental Health Services Administration (SAMHSA). The Substance Abuse and Mental Health Services Administration (2014) lists four R's that are assumptions related to trauma informed care. These assumptions are comprised of:

- Realize the effects of trauma.
- Recognize the symptoms of trauma.
- Create a program that responds to trauma.
- Create a classroom environment that resists re-traumatization.

These assumptions are the foundation of SAMHSA's six principles of safety, which include:

- Principle 1: Safety.
- Principle 2: Trustworthiness and Transparency.
- Principle 3: Peer Support.
- Principle 4: Collaboration and Mutuality.

- Principle 5: Empowerment, Voice, and Choice.
- Principle 6: Cultural, Historical, and Gender Issues.

Teachers were taught both arms of trauma informed methods, which include instructional and school practices. Instructional practices merge the school's current curriculum with trauma informed techniques, such as de-escalation, predictable schedule in the classroom, and the teaching of socio-emotional learning skills. School practices consist of schoolwide discipline changes, trauma testing for each student, and the addition of safe spaces for students to decompress.

There was time allotted to observe students in class to determine which trauma informed techniques would work best for each student. Teachers would then meet weekly to discuss their findings to ensure each teacher knew the appropriate trauma informed techniques to apply to each student. A specific group of teachers were selected as trauma informed leaders, which were sent to trauma informed teaching sessions at the state level. These teachers would then bring information on national trends in trauma based learning techniques and share with the administrative staff. Teachers were also instructed on the traumatic effects of COVID-19, and the need for additional wraparound services such as the Men of Monroe program, C.A.R. Time, and after school activities.

For proper implementation of trauma informed practices, this study utilizes a multi-tiered system method that provides a step-by-step process designed to be straightforward for staff to understand and execute. Tier one places emphasis on trauma informed teaching practices, while tier two and three describes proper interactions with students and counselors. Each tier comes with a timeline, so goals are set and accomplished by its specific due date. Incomplete limitations of trauma informed implementation involve missing due dates for certain projects to be

completed and missing mandatory trauma informed training sessions. In some cases, teachers did not agree with the need for trauma informed practices, which also lead to incomplete limitations of the program.

Each teacher interviewed agreed that training in the trauma informed processes provided an enhanced understanding of trauma. Also, teachers were taught the importance of a structured schedule in each classroom. This gives a sense of routine for each student, which is important in trauma based practices. Teacher two described the process of building a trauma informed team through training and additional staff:

> "So part of that was getting staff in place that could help bring the trauma informed. So I know we had a group of teachers that started going to trauma informed practices at the state level, and also when I came in, we shifted to having a dean and a counselor in every grade level. "

Teacher one described her experiences with training:

> "We just went to conferences, right? Then also, like it just my curiosity kind of trigger. That's the most important piece of any training is to trigger the curiosity. Because I, being interested, being introduced to ACEs and then taking it for myself realize that I was one of those students".

Teacher three also discussed an on-site training module used to assist teachers with trauma informed practices:

> "We call our toolkit, Monroe teacher toolkit, and so a lot of which is essentially the way it's a like a way to develop teachers around, like a schoolwide practice, so aligning that schoolwide, so for example, how it connects to trauma informed our strong start

procedure. For example, it is all about in every classroom, creating the same predictable, focused, calm way to start class. Kids know what to expect."

In this study, limitations to trauma informed implementation were found in the difficulty of attending continuous learning opportunities for staff. When asked about opportunities for additional training, Teacher two proclaimed:

"I think that there is there's opportunities, but my workload is so heavy, I'm not always able to attend those."

Teacher three also discussed the difficulty of time restraints:

"Teachers are aware of it and understand for the most part what it means to be trauma informed. I think, however, being trauma informed requires consistent reflection on your own actions and behaviors, and you know, to interrogate our own systems around that, and I think it is kind of an afterthought with a lot of things. And I think part of is we don't, we just don't have time. That's an excuse, but we don't have time to."

With the knowledge that each student is an individual learning and behaving at different levels of acheivement, Teacher #1 began to evaluate academic acheivement successes per child, not as a class as a whole:

"I'm beginning to see students where they are even it's like, even if the behavior is fine, but even that, like it applies to the academic side of it as well. Because now I see that, okay, this student is able to write two paragraphs. This student, student can barely write one sentence, right? But is when I give the students an assignment, is that student, student willing to write that one sentence and be enthusiastic about it, right? And then I'm kind of, I'm grading. I think I'm now just meeting students where they are."

When discussing the outcomes of this study teacher #3 anticipated a potential drop in

MAP scores, which tests students on mathematics and reading skills. The reasoning behind the potential change in test score acheivement stems from a pivot in focus from MAP scores to the Oklahoma School Testing Program (OSTP). The change occurred because of the State Department of Education's decision to discontinue the partnership with the school. Teacher three detailed:

> "We really didn't put any time or investment in MAP test last year. We put a lot of that time in OSTP, okay, and I think you'll, you'll see that you can see the results in OSTP. But the following year, MAP scores were kind of stagnant. So if you look at it in that lens, you would say, Oh, well, trauma. If you look at the MAP scores that are one year old, the year that we had the partnership with the state, the math scores were great. And then when the partnership the state was removed, the following year, the math scores weren't as good."

With the loss of support at the state level, Teacher #3 believes that it will be difficult tying in Trauma Informed Teaching with the observed state testing outcomes. Overall, the participants believe that trauma informed practices can be an asset to the classroom, but time limits make continuous learning difficult.

Changes in Teacher Perception of Trauma

In the field of trauma informed practices, there has been a concentrated effort to recognize that trauma can effect students' behavior, leading to disruptions in the classroom. When experiencing disruptive behavior, the thought process for teachers changed from "What's wrong with you" to "What happened to you" (Harper & Cromby, 2022). Trauma informed training focused on seeking the diagnoses of each child through meetings with mental health specialists, and the distribution of information to parents and teachers. This sharing of

information helped instill the concept of trauma being the source of behavioral issues, which in some cases is not controllable by the student themselves without proper care. Teachers also received an adverse childhood experiences (ACE) score for each student, which gave teachers a sense of the various levels of trauma experienced on an individual level. In conversations with the principal, it was mentioned that some teachers believed that students were sometimes displaying disruptive behavior in class to receive attention from classmates. During a monthly meeting, the principal mentioned:

> "There was a time when teachers saw disruptive behavior as a daily obstruction that slowed the learning process for the entire class. The quickest way to solve the problem was to remove the child from the classroom. Now that we have undergone trauma informed training, teachers have now shifted to a variety of techniques to help students avoid emotional triggers and also teach students self-regulating processes. Teachers have acquired a sense of patience with students who have traumatic upbringings."

However, since the implementation of trauma informed practices, some teachers do not believe that all disruptive behavior is a byproduct of trauma. Teacher two said:

> "We sometimes are skeptical when a child acts out because he or she is aware of the usage of trauma informed practices. They may just this as an excuse to misbehave when they, in fact, have not been triggered in any form or fashion. So, the implementation process is not always cut and dry; there are some moments when the teacher has to go with a gut feeling or previous behavior patterns to make the best decision in terms of discipline."

Teacher one began her teaching career unaware of the depth of the relationship between trauma and disruptive behavior in students. She now believes that trauma is a direct cause for

disruptive behavior in some students, and trauma informed practices can assist in healing those wounds:

> "And so now I think of trauma not as a disability, but just it's a function. It just happens. It's life, right? We're all going to, like, I guess, acquire some wounds. And I think of trauma as a wound, right? And as long as you care for it." The combination of trauma informed teaching and personal experiences assisted teachers in changing their perception of trauma.

Change in Teaching Strategies and Staffing

The change in teaching strategies and staffing theme is closely related to the exploration and action planning phases of Mezirow's Transformative Learning Theory. Exploration covers the life changing modification of mindset, while action planning covers the present adjustments we will make to fit within the new way of thinking (Mezirow, 1997). The purpose of this theme is to identify new teaching techniques that derive from trauma informed practices, while identifying difficulties with maintaining changes while enduring the loss of administrative staff.

Wraparound services are an important element of trauma informed implementation. Wraparound services consist of various support entitles that assist people facing difficult challenges. These services work in unison with the existing services provided by the school to serve every student in need. With teachers relying more on wraparound services and after school programs to assist with the increase of demand, the introduction of two programs within the school, Men of Monroe and C.A.R. Time provided additional layers of trauma informed care. Men of Monroe consists of male volunteers who serve as mentors to students are present in the school two times a week. They assist students with emotional needs, tutoring, and high school preparatory guidance, and serve as an extension of trauma informed teaching practices. C.A.R.

Time is the strategic placement of teachers at stations throughout the school hallways who are available to assist if an emotional crisis occurs in between classes. This allows a student to receive trauma informed advice when outside of the classroom. Teacher two expressed the need for such programs:

> "I think that since COVID-19, I feel like the need has been greater for trauma informed practice, because it was a lot of isolation. Kids weren't developing as much socially. There was more of a need for trauma informed practice and us leveraging our wraparound services, as far as like counseling different agencies that come in such as Men of Monroe, C.A.R. Time, after school clubs, it all plays a part of the puzzle."

In an attempt to maintain a sense of normalcy, teachers began to look to diverse teaching strategies in the classroom. With less resources than the previous two years, teachers throughout the school began taking a deeper look at classroom protocol. Teacher #1 changed to a classroom that focused on the usage of socio-emotional learning tools, a technique that was utilized in classrooms within the school. Socio-emotional learning tools enhance interaction, collaboration, and knowledge sharing among learners, promoting engagement (Kamei & Harriott, 2020). Teacher one utilized two SEL tools: peer learning programs, where experienced students share knowledge with newer students and communities of practice: creating groups around certain skill sets, learning tools, or themes to create an exchange of knowledge problem-solving skills. SEL tools have been found to improve academic performance, create stronger relationships and social skills, decrease behavior issues, create long term successful relationships, and assist with mental health (Kamei & Harriott, 2020). Teacher one described implementing SEL tools into the classroom:

> "I was sixth grade teacher, and I just noticed, my relationships with my students were not as good as they were with my fourth grade class or my City Year students, and that's because I was focused so heavily on academics, and I was kind of forgetting, like the human being behind the student. Second semester I started implementing different SEL (social-emotional learning) tools and that actually helped. My students weren't arguing as much. They were happy to be in the classroom." The principal added:
>
> "Teachers who have who, in the past, paid little attention to a structured classroom, now keep a predictable itinerary for each class. They have seen a dramatic change in behavior and focus amongst students. Grades are up too."

In a conversation with the deans of the sixth, seventh and eighth grade students, they discussed how teachers in every grade were using a similar trauma informed approach in the classroom:

> "SEL tools used throughout the school, as well as the implementation of a strict, timely itinerary for every class. Students are also encouraged to utilize working with wraparound services for an extra layer of trauma informed practices. Classes seem quieter, calmer. The addition of SEL tools in the classroom led to improved behavior, student wellness and communication skills."

Changes in Discipline Referrals, Suspensions, and Mathematics/Reading Acheivement

Students have acquired knowledge in deescalation techniques which are used in the classroom and during other student activities. The students are given permission to access their own personal state of mind and can leave the room to gather their thoughts if needed. There are five consequence levels posted in every class to remind students to use their de-escalation skills when a situation occurs. Levels one and two consist of a stern warning by the teacher. The third involves a warning and in class consequences, while the fourth warning will earn the student a

seat change and call home. If the student reaches level five, they will be removed from the classroom and moved to Restore, a place where they can attempt to calm themselves before reentering the classroom. Teacher two said this about the consequence levels process:

> "I think that through this work, we have given them tools to learn how to navigate a school day. For instance, there was a kid who was about to blow up on a teacher. He recognized, hey, I should probably do this instead of this. He just dismissed itself before there was this big blow up. We don't want him leaving class, but I want you to leave class, so there's not this big blow up, right? But he knows, like there's going to be a consequence for that. We told him, if you need a moment, just let the teacher know. He just didn't do a good job of letting her know."

The principal interjected after hearing the story above:

> "There was a seventh grade student who began to feel his emotions begin to rise after receiving his test scores from a quiz. Instead of taking that energy to the next class, he took a "pit stop" with a C.A.R. Time teacher. They were able to discuss his situation, and he was able to proceed to the next class without difficulty. In the past, you know, without these wraparound services his situation may have ended with a referral or suspension."

With students more likely to remain in the classroom instead of detention or suspension, they are more likely to keep up with classwork and achieve better grades. Teacher #2 commented:

> "We have learned if students can remain in the classroom, they will be able to maintain a decent grade in class. With suspensions, sometimes students are home by themselves so there's no one to make sure homework gets done. On the other hand, when that child is present, grades remain stable".

Self-Evaluation

Each interviewee unveiled a sense of self evaluation and personal reflection due to new thoughts and ideas while looking through a trauma informed lense. Under self-evaluation, three of Mezirow's transformative learning phases are essential: self-examination, critical assessment, and recognition. These steps are where one questions the new belief system, assesses the differences between their old and new ways of understanding the new information, and recognizing that other people have gone through similar transitions in thought (Hoggan & Finnegan, 2023).

With the implementation of trauma informed policies, the teachers began the process of self-evaluating their own actions and beliefs. They began to understand that personal changes were needed within themselves to be able to communicate properly with students. Within the process of trauma informed teaching enactment, the teachers also discovered a need to acknowledge and deal with their own personal trauma. Teacher three expressed the importance of how trauma informed practices have helped him adjust his previous methods of communication with unruly students' before deciding on how to apply appropriate discipline:

> "I think it's [trauma informed practices] definitely helped me more effectively communicate, right? And it's also helped me think about, like, if we're thinking about cause and effect, okay, this is the behavior, right? What was the cause of that? Or could it be related to this experience, the effect the behavior, could be the effect of this or, you know, whatever? Yeah, I think it's helped me think of that".

Teacher one began to reevaluate her process of judging a student's actions. She began to search for the root cause for the behavior, instead of labeling the student as ill-mannered:

> "And this year, I found myself to be more inquisitive, more than like, what would you say in previous years. For example, [last year] he's a problem child. Now I found myself just watching him and curious about what's going on in his mind. Now I'm looking at students more from a point of, where are they right now, and how can I help them grow and reach or get to a certain point?"

Teacher two experienced a moment of self-reflection when discussing the importance of on-site counseling provided by the trauma informed initiative:

> "It's made me realize that when I'm going through stuff, maybe I need to go talk to somebody, right? Because these kids hold in all this stuff, and they come here and act out, whereas, in my situation, I can't hold this stuff in and go act out because I have a mortgage."

The understanding of their own personal trauma led to a new sense of understanding when interacting with an upset student. The principal mentioned:

> "Now understanding my personal trauma, and how I am triggered in certain situations which creates a natural response, I take that into consideration in interactions with students."

Evidence on Mediating Conditions and Outcomes

Quantitative data are used to report on changes in the mediating conditions and intended outcomes. Mediating conditions include student perception of safety and belonging. Outcomes address student behavior and academic acheivement. Data are reported for students from Monroe Demonstration Academy and for students from a comparable school that did not implement trauma informed practices.

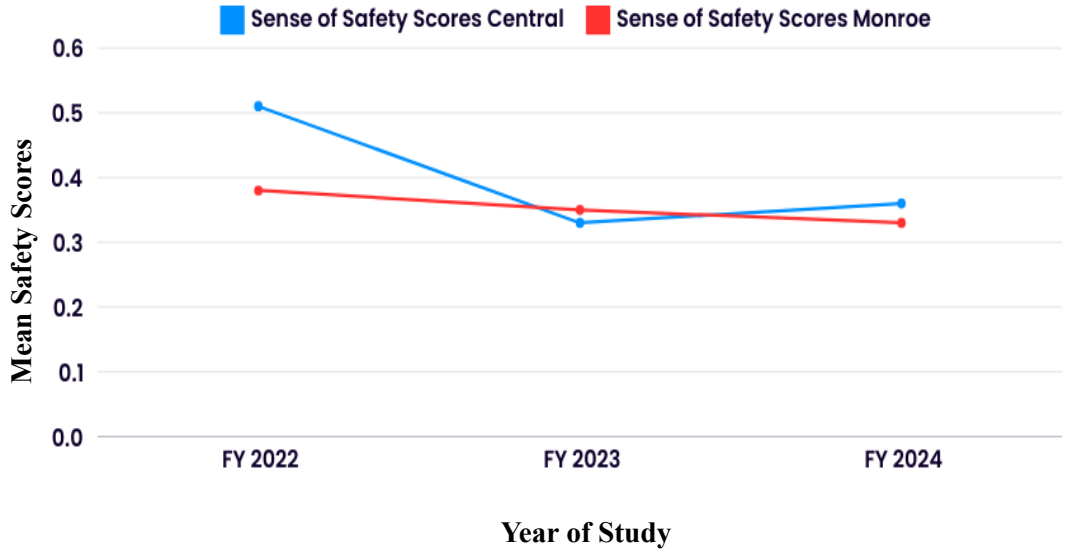
Changes in Student Sense of Safety and Belonging

Increased feeling of safety and belonging were two mediating conditions of the trauma informed practices intervention. Figure two presents mean scores of sense of safety for Monroe and Central through questions from the Panorama survey during the three years of the intervention. The survey uses the Likert scale format where questions range from "strongly disagree" to "strongly agree". Panorama survey scores range from 0-1, with the scoring scale being 0, .33, .5, .83, and 1. A score of zero indicates the worst feeling of safety and belonging, while a score of one indicates the best. Any score 0.5 and above is considered a good score, while scores below .5 are labeled as a concern to be addressed.

Monroe safety scores dropped throughout the three years of the implementation trauma informed practices. Monroe exhibited a mean score of .38 for sense of safety in year one, followed by an average score of .35 and .33 in year two and three. Central scored at .51 in year one, followed by a drop to .33 in year two and small rise in mean score of .36 in year three.

Figure 2

Panorama mean scores: Sense of safety



Since there was an insignificant amount of students who tested all three years of the study, two one-way ANOVAs were executed to evaluate the effect of trauma informed teaching during the first and last time point of the study, spring of 2022 and 2024. The means and standard deviations for Panorama safety scores are presented in Table three.

Table 3

Descriptive Statistics for Monroe / Central Safety

Testing Year	Site	M	SD	N
School safety 2022	Central	.51	.24	74
	Monroe	.38	.34	274
School safety 2023	Central	.33	.23	179
	Monroe	.35	.34	417
School safety 2024	Central	.36	.24	265
	Monroe	.33	.34	433

There was a statistically significant difference in school safety in year one of the study ($F_{1,346} = 9.88$, $p < .05$). The eta-squared (η^2) was .03, indicating that 3% of the variance in test score was explained by the average perceived safety score. This is considered a small effect according to Cohen's guidelines. The perceived average safety mean score for Monroe was .38, while the average mean score for Central was .51. The score for Monroe would be considered a concern to be addressed, while Central's score is considered a positive score.

There was no statistically significant difference in year three (2024) , where ($F_{1,586} = 1.27$, $p > .05$). The eta-squared (η^2) was .002, indicating that less than 1% of the variance in test score was explained by the average perceived safety score. This is considered a negligible effect according to Cohen's guidelines. There was a decrease in scores over time, suggesting that the implementation of trauma informed teaching did not improve students feelings of safety. See table five for ANOVA results. In year three the average perceived safety mean score for Monroe

was .33, while Central's mean score was .36. Both scores would be considered a concern to be addressed. The mean scores reveal that the mean difference in safety scores was statistically significant in year one of the implementation of trauma informed practices.

Table 4

One - Way ANOVA Sense of Safety

		Sum of Squares	df	Mean Square	F	Sig.
School Safety 2022	Between Groups	1.033	1	1.033	9.881	.002
	Within Groups	36.169	346	.105		
	Total	37.202	347			
School Safety 2024	Between Groups	.073	1	.073	1.218	.270
	Within Groups	35.307	586	.060		
	Total	35.380	587			

Figure 3

Panorama mean scores: Sense of Belonging

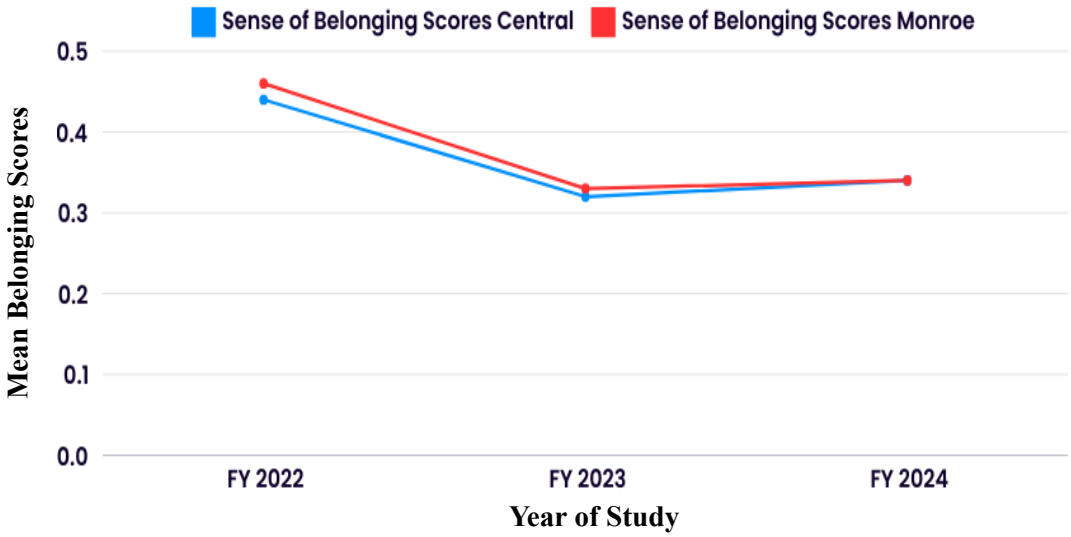


Table 5

Descriptive Statistics for Monroe / Central Sense of Belonging

Testing Year	Site	M	SD	N
Sense of belonging 2022	Central	.44	.32	74
	Monroe	.46	.21	274
Sense of belonging 2023	Central	.32	.32	179
	Monroe	.33	.24	417
Sense of belonging 2024	Central	.34	.30	265
	Monroe	.34	.25	433

There was no statistically significant difference in sense of belonging in year one of the study, where ($F_{1,346}$ = .34, p > .05). Eta-squared (η^2) was .001, indicating that less than 1% of the variance in test score was explained by the average perceived belonging score. This is considered a negligible effect according to Cohen's guidelines. Sense of belonging scores were .46 for Monroe and .44 for Central in year one. See figure three for the sense of belonging mean scores.

There was no statistically significant difference in sense of belonging in year three, where ($F_{1,586}$ = .07, p > .05). Eta-squared (η^2) was .00, indicating that less than 1% of the variance in test score was explained by the average perceived belonging score. This is considered a negligible effect according to Cohen's guidelines. In year three, both school's scores slightly rebounded to .34, suggesting that the implementation of trauma informed teaching did not improve students feelings of belonging at school. See table six for ANOVA results.

Table 6

One - Way ANOVA Sense of Belonging

		Sum of Squares	df	Mean Square	F	Sig.
Sense of Belonging 2022	Between Groups	.019	1	.019	.340	.560
	Within Groups	19.795	346	.057		
	Total	19.814	347			
Sense of Belonging 2024	Between Groups	.007	1	.007	.071	.790
	Within Groups	61.616	586	.105		
	Total	61.624	587			

Changes in Suspension Rates and Discipline Referrals

Reduced suspension rates and discipline referrals were two behavioral outcomes of the Trauma Informed Practices Intervention. Figure four presents per-student average suspensions for Monroe and Central during the three years of the intervention. As seen in figure 4, averages for student suspensions for Monroe Demonstration Academy in year one was .67 suspensions per student. Year two also scored .67 suspensions per student. However, suspension rates were cut in half between year two and three, dropping to .36 per student. In comparison, Central Middle School suspensions rose between year one and two of the study from .40 to .54 suspensions per student and dropped to .50 from years 2 to 3. Figure two provides additional information concerning suspension rates.

Figure 4

Suspension Rates for students Per Capita

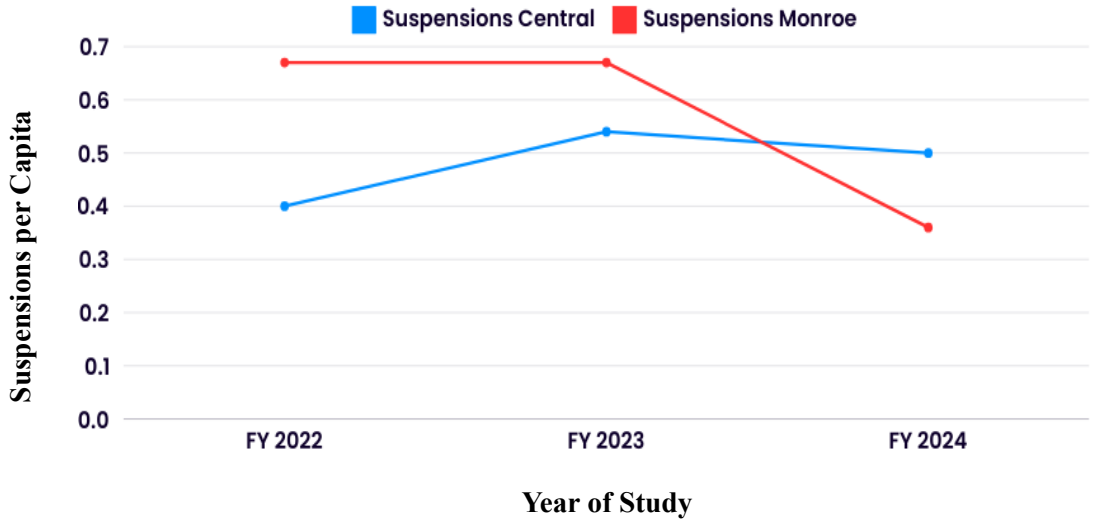
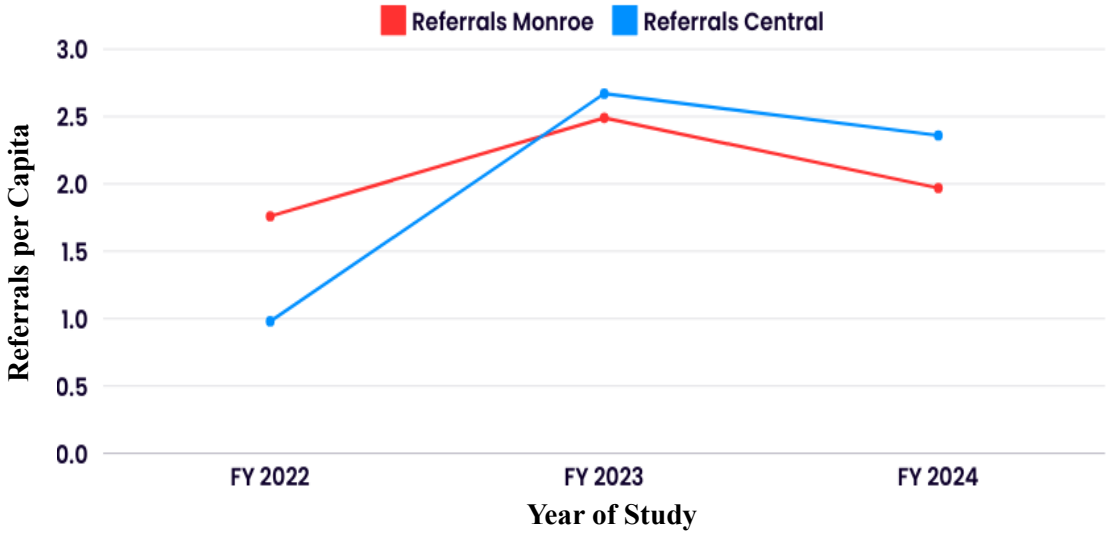


Figure five presents per-student average referrals for Monroe and Central during the three years of the intervention. The average behavior referrals at Monroe Demonstration Academy rose dramatically from year one to year two, from 1.76 to 2.49 referrals per student. Referral rates fell close to year one numbers from year two to three, ending at 1.97 referrals per student. For Central Middle School, behavior referrals grew significantly from year one to year two from .98 suspensions per student to 2.67. Between year two and three, Central experienced a slight drop in referrals, landing at 2.36 referrals per student.

Figure 5

Behavior referral rates for students per capita



The data shows during the first three years of implementation of Trauma Informed Teaching, Monroe Demonstration Academy saw a decrease of suspensions between years two and three, after an initial increase from year one to year two. Central Middle School, without trauma informed practices, experienced a steep increase in suspensions from year one to year two, and a drop in referrals from year two to year three.

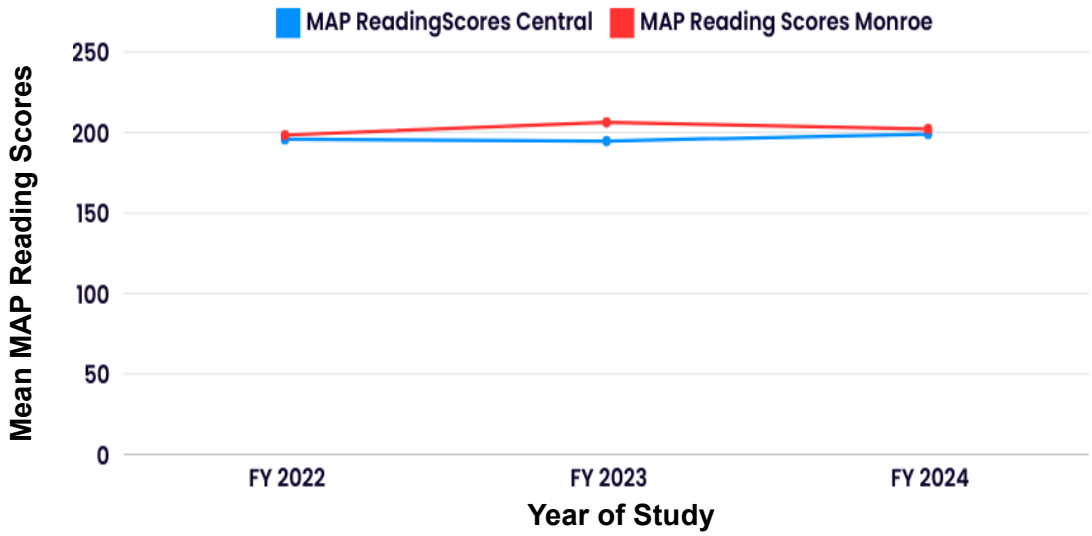
Changes in Academic Acheivement

Academic outcomes consist of mathematics and reading scores from national MAP testing scores. Nationally, the average MAP score for middle school students is in the 215-230 range, with 220 labeled as average (Lewis & Kuhfeld, 2024). The sixth grade national median score for reading is 210. The 7th grade national reading score for reading is 214. The eighth grade nation median score for reading is 218 (Lewis & Kuhfeld, 2024). See figure six which displays MAP reading scores for Monroe Demonstration Academy and Central High School for the 2022, 2023, and 2024 school year. Monroe's mean scores in reading were 198 for FY 2022, 206 for FY 2023, and 202 for FY 2024. Central's mean scores in reading were 196 for

FY 2022, 195 for FY 2023 and 199 for FY 2024. Mean reading scores for Monroe and Central during the three years of this study fall under the national median average of 210-218 for middle school students. The means and standard deviations for MAP reading scores are presented in Table six.

Figure 6

MAP Reading Scores 2022-2024 Monroe and Central Middle School



In mathematics, Monroe's mean scores for FY 2022 were 202, in 208 in FY 2023 and 2024. Central scored 202 in FY 2022 and dropped to 198 for FY 2023 and 2024. The sixth grade nation median score for mathematics is 215. The 7th grade national median score for mathematics is 220. The eighth grade nation median score for mathematics is 225 (Lewis & Kuhfeld, 2024). See figure 7. Monroe and Central's mean mathematics scores of fall below the national average of 215-225 for middle school students. The means and standard deviations for MAP mathematics scores are presented in Table seven.

Figure 7

MAP Mathematics Scores 2022-2024 Monroe and Central Middle School

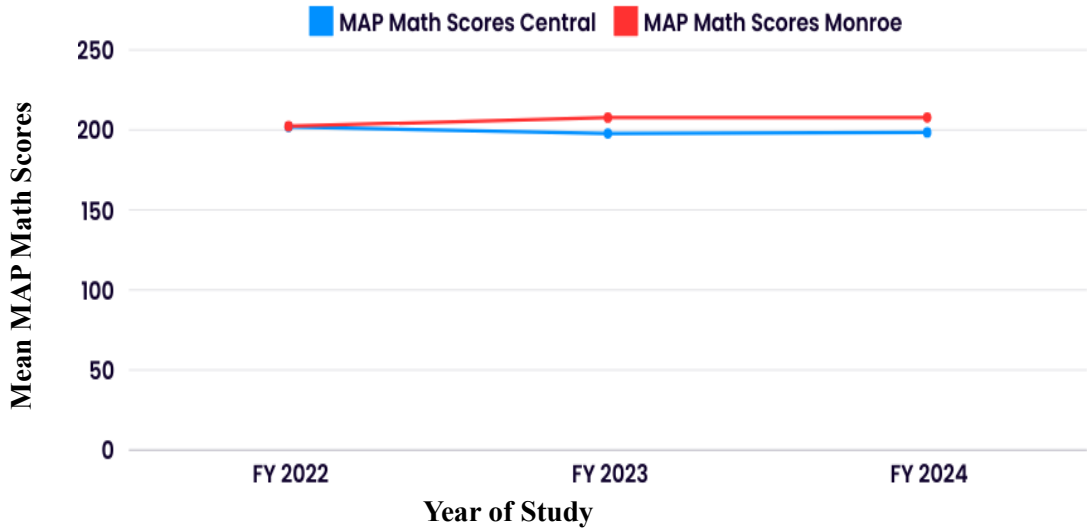


Table 6

Descriptive Statistics for Monroe/Central MAP Reading Scores

Testing Year	Site	M	SD	N
Reading Scores 2022	Central	195.78	18.25	32
	Monroe	198.37	14.07	60
Reading Scores 2023	Central	194.63	14.46	32
	Monroe	206.28	11.87	60
Reading Scores 2024	Central	199.09	18.30	32
	Monroe	202.07	17.54	60

Table 7

Descriptive Statistics for Monroe/Central MAP Math Scores

Testing Year	Site	M	SD	N
Math Scores 2022	Central	201.91	12.00	32
	Monroe	202.37	12.58	60
Math Scores 2023	Central	197.84	15.88	32
	Monroe	207.68	12.27	60
Math Scores 2024	Central	198.41	15.41	32
	Monroe	207.77	13.45	60

A repeated measured analysis of variance (ANOVA) was conducted to evaluate the null hypothesis that there is no change in participants' mathematics scores when measured in the years 2022, 2023 and 2024 by school location (N = 60, 32 respectively). Students' scores were included only if they completed MAP testing all three years of the study.

The results of the ANOVA indicated a statistically significant in year and school effect, where Wilks' lambda = .84, $F(2, 98) = 9.40$, $p < 0.05$, $\eta^2 = 0.16$. Wilks' Lambda is .84, which implies that the average test scores of participating students across subjects is comparable at both schools. The eta-squared (η^2) was .16, indicating that 16% of the variance in mathematics test scores was explained by the average perceived mathematics score. This is considered a large effect according to Cohen's guidelines. School year effect shows the outcome of mathematics test scores by school year, whereas the school year site effect displays outcome of scores for Monroe and Central. There is significant evidence to reject the null hypothesis. Table eight provides additional information for this test.

Table 8

Multivariate Tests[a] MAP Mathematics Scores

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
School Year	Pillai's Trace	.012	.604[b]	2.000	98.000	.549	.012
	Wilks' Lambda	.988	.604[b]	2.000	98.000	.549	.012
	Hotelling's Trace	.012	.604[b]	2.000	98.000	.549	.012
	Roy's Largest Root	.012	.604[b]	2.000	98.000	.549	.012
School Year * Site	Pillai's Trace	.161	9.376[b]	2.000	98.000	<.001	.161
	Wilks' Lambda	.839	9.376[b]	2.000	98.000	<.001	.161
	Hotelling's Trace	.191	9.376[b]	2.000	98.000	<.001	.161
	Roy's Largest Root	.191	9.376[b]	2.000	98.000	<.001	.161

a. Design: Intercept + Site
Within Subjects Design: School Year

b. Exact statistic

c. Computed using alpha = .05

A second repeated measured analysis of variance (ANOVA) was conducted to evaluate the null hypothesis that there is no change in participants' reading scores when measured in the years 2022, 2023 and 2024 by school location (N = 60, 32 respectively). The results of the ANOVA indicated a statistically significant year and school effect, where Wilks' lambda = .89, $F(2, 101) = 6.01$, $p < 0.05$, $\eta^2 = 0.11$. Wilks' Lambda is .89, which implies that the average test scores of participating students across subjects is comparable at both schools. The eta-squared (η^2) was .11, indicating that 11% of the variance in reading test scores was explained by the average perceived reading score. This is considered a medium effect according to Cohen's guidelines. School year effect shows the outcome of reading test scores by school year, whereas

the school year site effect displays outcome of scores for Monroe and Central. There is significant evidence to reject the null hypothesis. See table 9.

Table 9

Multivariate Tests[a] MAP Reading Scores

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
School Year	Pillai's Trace	.034	1.765[b]	2.000	101.000	.177	.034
	Wilks' Lambda	.966	1.765[b]	2.000	101.000	.177	.034
	Hotelling's Trace	.035	1.765[b]	2.000	101.000	.177	.034
	Roy's Largest Root	.035	1.765[b]	2.000	101.000	.177	.034
School Year * Site	Pillai's Trace	.106	6.007[b]	2.000	101.000	.003	.106
	Wilks' Lambda	.894	6.007[b]	2.000	101.000	.003	.106
	Hotelling's Trace	.119	6.007[b]	2.000	101.000	.003	.106
	Roy's Largest Root	.119	6.007[b]	2.000	101.000	.003	.106

a. Design: Intercept + Site
Within Subjects Design: School Year

b. Exact statistic

In summary, qualitative data results revealed a preference for trauma informed teaching compared to conventional classroom philosophies. Teachers are integrating trauma informed practices such as predictable daily schedules and social-emotional learning tools into their daily routine. Trauma informed practices combined with school support programs did not create the desired effect on mediating conditions. Quantitative data indicated that behavioral outcomes showed the most positive change, while reading and mathematics scores showed small rises in mean scores, while sense of safety and belonging scores fell during the study. The discussion will

further examine these findings, including implications for trauma informed teaching and potential limitations of the study.

Discussion

This study investigated the implementation and outcomes of trauma informed teaching at an urban middle school in the United States. Results revealed that implementation of trauma informed practices by teachers was mixed, with some teachers embracing practices responsive to students' trauma and other teachers not fully understanding how to use practices or outright resisting use of the practices. Results of changes in mediating conditions and outcomes were also mixed. Evidence showed that student perceived safety and belonging declined during three years of implementation. School suspensions and referral rates had a drop by year three. Reading and math test scores remained relatively unchanged. The purpose of this discussion chapter is to make sense of the results through the theoretical and conceptual lenses behind the evaluation.

Implementation of Trauma Informed Teaching in the Classroom

For this study, the implementation of trauma informed initiatives was analyzed under the lense of Jack Mezirow's Transformative Learning Theory. The Transformative Learning theory is a ten phase theoretical framework in which individuals are able to alter their viewpoints and perspectives on the world through the assimilation of new information (Mezirow, 1991). In this study, the Transformative Learning Theory encompasses four critical phases essential for implementation analysis: disorienting dilemma, exploration, action, and reintegration.

Teacher Changes in Perceptions of Trauma

Through the framework of Mezirow's Transformational Learning Theory, educators experienced the first phase known as a disorienting dilemma. This occurs when an individual is presented with new information that challenges their traditional beliefs (Mezirow, 1997). In this study, the disorienting dilemma occurred when teachers where presented trauma informed concepts that suggested student disruptive behavior is a possible byproduct of traumatic

experiences. When addressing student behavior, trauma informed practices has led to the paradigm shift from“ What’s wrong with you?” to “What happened to you?” (Harper & Cromby, 2022). The cause and effect relationship involving trauma and student behavior was a dominant factor of trauma informed implementation. Previously, most teachers did not attribute disruptive student behavior specifically to trauma, but they believed the socioeconomic conditions of the community could be a factor when assessing student behavior.

During the experience of the disorienting dilemma, those who embraced trauma informed practices where able to comprehend the relationship between trauma and student behavior. Teachers empathized more with students during behavioral episodes, understanding some actions were beyond their control. Teachers were equipped with the proper tools to deescalate the situation before more stringent measures were needed. They experienced a rise in academic acheivement and less behavioral outbursts in the classroom.

Teachers who did not embrace the disorienting dilemma also shunned trauma informed practices as a whole. They failed to consider the relationship between trauma and student behavior and believed that trauma informed practices in its entirety were not effective. In some cases, teachers believed that students were using past traumatic experiences as an excuse for disruptive behavior. A few teachers mentioned that other students with similar traumatic backgrounds do not display unruly behavior, which proves that each student’s actions and reactions in the classroom are a personal choice and not an uncontrollable byproduct of trauma.

Lastly, there were teachers that believed disruptive behavior derives from the conditions of the surrounding community. They assumed disruptive behavior was a result of socioeconomic disparities in which behavior could not be change unless the conditions of the surrounding community improved. Overall, the teachers who failed to participate in the Transformational

Learning Theory process experienced little to no growth in student academic acheivement, and in some cases, disruptive classroom behavior increased.

Teachers who did not embrace the new knowledge acquired during the disorienting dilemma phase felt ill equipped to serve a dual role as teacher and counselor. Alisic (2012) found that teachers often found it difficult to set boundaries with trauma experienced children after training, including defining the role between teacher and counselor. The blurred responsibilities of the teacher-counselor role led to exhaustion and frustration. Those who did not adapt to the disorienting dilemma sought transfers to other schools within the district or secured employment in other districts.

For trauma informed practices to be successful, it is essential that new information is integrated by the learner into a flexible mental framework through the Transformative Learning Theory lense (Mezirow, 1997). The teachers who welcomed the implementation process were willing to integrate new ideas into their teaching protocols. Teachers who were unable to do so found the process tedious and unnecessary.

Educators also experienced the Transformative Learning Theory phases of exploration and action. The exploration phase involves reassessing an individual's prior beliefs and considering alternative perspectives (Mezirow, 1996). Through conversations with people who have varying views on trauma informed practices, teachers were able to compare and contrast newly acquired knowledge with previous thought processes. During the implementation of trauma informed teaching, teachers gathered to debrief about training classes, and the relevance of trauma informed policies in the classroom. Qualitative data indicated that discussions among teachers regarding trauma informed practices were considered equally as vital as participating in instructional sessions.

The action phase takes newly acquired knowledge and creates measurable adjustments in personal conduct and procedures (Mezirow, 1996). The Theory of Change is designed during this phase, along with desired outcomes, mediating conditions, and change activities. Through this process, educators were able to gain experience in the implementation of trauma informed practices through a collaborative think tank with other teachers.

Finally, educators reached the concluding stage of Transformative Learning Theory, known as reintegration. Reintegration explores the comprehension of newly acquired knowledge as a person uses the new information toward current or future experiences (Mezirow, 1997). Educators developed a new understanding of trauma and how traumatic experience may effect a student's behavior. Teachers applied newly acquired trauma informed practices tools into the classroom, with the knowledge of desired outcomes and change activities in place.

Changes in Student Feelings of Safety and Belonging

The Theory of Change was utilized in this study, an intervention plan for achieving specific desired outcomes in which outcomes are identified before the implementation process is created. Outcomes for trauma informed teaching were identified before the infrastructure plan was created. In theory, trauma informed practices improve student behavior and acheivement by strengthening student safety and belonging (Harris & Fallot, 2001). The theory of change for this study is comprised of two change activities, school support and trauma informed practices. School support contains the following trauma informed programs implemented onsite by Monroe Demonstration Academy: C.A.R. Time, the Success Center, and Men of Monroe. The mediating conditions for the theory of change include student safety and sense of belonging. The assumption is if there is a positive feeling of safety and understanding amongst students, the process will be more likely to achieve desired outcomes. Outcomes consist of less student

suspensions and behavior referrals, a higher sense of student safety and belonging, and higher mathematics and reading MAP scores.

Safety is a pillar of trauma informed care; students must feel safe for the implementation to be effective (Harris & Fallot, 2001). SAMHSA (2014) defines safety as the provision of both physical and psychological security for individuals and their surroundings. Physical safety is defined as an environment with no threat of bodily harm, whereas psychological safety is the idea that people can share their beliefs with no ridicule or derision (NeuroLeadership Institute, 2024).

Within a trauma informed school, it is essential that students feel physically and mentally safe. Conditions that nurture feelings of safety include positive student and teacher interpersonal relationships, and a secure learning environment in the classroom. When students feel safe, they are more likely to express themselves on an individual and group level. Students are more likely to participate in after school activities and community service. In a safe environment, students are more likely to experience higher academic acheivement, less behavior outbursts, and less anxiety (Bohnenkamp et al., 2023).

In this study, trauma informed practices were utilized as change activities to create a higher sense of safety amongst students. The purpose of trauma informed practices is to help students build better relationships with their classmates and teachers, which can also lead to augmented perceptions of safety. Existing data shows trauma informed practices increase student feelings of safety at school (Bohnenkamp et al., 2023).

Implemented trauma informed practices used structured itineraries for each class to lessen student anxiety. With less anxiety in the classroom, there is less opportunity for a student to be triggered and display disruptive behavior. Less disruptive behavior would theoretically lead

to improved perceptions of safety. Socioemotional tools were introduced to the classroom, which fostered positive peer to peer and student to teacher relationships.

Quantitative data indicated a decline in students' perceived safety over the first three years of trauma informed implementation, which could indicate that trauma informed practices did not improve feelings physical and psychological safety and was unsuccessful in improving pedagogical and peer to peer relationships.

A strong sense of safety leads to increased sense of belonging in a school setting (McInerney, 2022). Belonging refers to the sense of security and support that comes from acceptance, inclusion, and identity within a group (McInerney, 2022). Belonging involves an environment that allows individuals to present their genuine self. Thomas (2012) explained that participation in extracurricular school activities increased students' sense of belonging. McInerney (2022) examined strategies needed for students to feel a sense of belonging, including establishing peer support networks, preparing students for post-secondary education, and ensuring linguistic, emotional, and physical safety. Engagement in social activities leads to better behavior and higher sense of belonging and academic performance (Ahn & Davis, 2020).

In this study, the trauma informed change activity titled Men of Monroe created an environment that gave students a place of comfort in which they were respected and accepted as their genuine selves by members of the community. The Men of Monroe provided tutoring and after school activities, which in the theory of trauma informed practices would assist in raising students sense of belonging. However, quantitative data revealed that there was little change in sense of belonging scores of the three year study.

One of the outcomes of implementing trauma informed practices is the assumed positive effect on the relational dynamics within the school. According to Hickey and Riddle (2023),

relational dynamics are defined as the intricate patterns of communication, emotions, and behaviors that determine interpersonal interactions. Within a school setting, these relationships include teacher to student relationships and peer to peer relations. Teacher to student relationships are detrimental to feelings of safety and belonging within the school.

Qualitative data stated that teacher to student relationships and peer to peer relations improved during the implementation of trauma informed practices. However, in some cases the pedagogical interactions described may not have been as robust in reality in the classroom setting (Hickey & Riddle 2023). The usage of trauma informed practices in the classroom did not guarantee the strengthening of teacher to student relationships or peer to peer relations. To determine the improvement of both teacher to student relationships and peer to peer interactions under the implementation of trauma informed practices, student safety and belonging scores should be considered as indicators of success.

Trauma Informed Practices Outcomes: Suspensions and Referral Rates

Within the process of the Theory of Change outcomes are created first, followed by the formulation of the implementation process. For this study, changes in student suspensions and referral rates were chosen as two of the outcomes associated with the implementation of trauma informed teaching. Current theory indicates that trauma informed practices can lead to fewer behavior outbursts and a more peaceful school environment (Harper & Cromby, 2022).

Behavior referrals are submitted to a student when they have been warned five or more times about disruptive behavior. If a student's behavior continues to escalate or if they violate specific non-negotiable rules, the student may be subject to a suspension from school. Suspensions range from one day to an entire school year.

The decrease in suspensions and referrals distributed in year three of the study could be due to the student buy-in of trauma informed practices. Students who have learned under a trauma informed lense over multiple school years have access to the tools needed to maintain an appropriate disposition for the classroom (Kim et al., 2021). Qualitative data revealed that students and teachers became more trauma aware during the study and began to use deescalation techniques appropriately. The acquisition and application of trauma informed skills led to less behavioral outbursts and classroom disturbances (Diggins, 2021). Teachers also began to distribute more behavioral referrals instead of suspensions, which also showed a significant drop between year two and year three. Qualitative data indicates that the increase in referrals between the first and second year can be attributed to the school's emphasis on reducing suspensions. This suggests that administrative staff opted to issue referrals in situations that previously would have led to suspensions prior to the implementation of trauma informed teaching.

Existing data indicates that the implementation of trauma informed teaching lessens the number of suspensions when implemented correctly (Somers & Wheeler, 2021). Within trauma informed practices, less suspensions lead to higher school attendance, better grades, and increased test scores (Crosby et al., 2015). Crosby et al. (2018) found that students participation within in-school trauma informed classes in lieu of suspensions led to higher student classroom engagement and less suspensions. Monroe uses the Success Center as an in-school, out of the classroom learning center in which students are allowed to continue learning under a trauma informed focus without facing suspension. Although suspension and referral rates dropped in year three of the implementation of trauma informed practices, the per student average is still high enough to warrant additional research for these behavior outcomes.

Social researcher Binh Phung selected four trauma informed models chosen to review to examine each programs' effect on behavior, including the HEARTS program in California, the TBRI program in Texas, the HTL program in Michigan, and the NHTC program in Connecticut. Each showed positive results in improving childhood trauma symptoms, self-esteem, behavioral changes, and staff awareness of childhood trauma (Phung, 2022). However, the evaluation of the overall impact was limited because of insufficient details regarding data collection methods and the small sample size of participants (Phung, 2022). Only two out of the four programs continued beyond one year. The research suggests that trauma informed practices led to almost instantaneous behavior improvements, but quantitative data was not provided to specify to what extent behavioral changes occurred.

Crosby (2018) led a 12 month analysis of a school's suspension rates and usage of the Monarch Room, a trauma informed entity similar to Monroe's Success Center. The Monarch room is used as a suspension alternative for students displaying disruptive behavior. Crosby found that out of 71 student participants, nine students were suspended from school in the observed year. Two suspended students used the Monarch Room, while 62 students utilized the Monarch Room and avoided suspension. In comparison, Monroe's suspension numbers remained the same from year one to year two, while falling drastically in year three. Exact numbers for Monroe's enrollment within the Success Center were not available.

Trauma Informed Practices Outcomes: Academic Achievement

Within the theory of change framework of this study, the final two outcomes for analysis during the implemention of trauma informed teaching are the potential improvement of mathematics and reading scores on MAP standardized tests. In previous studies, data shows that trauma informed teaching has been found to augment academic acheivement in schools. Stokes

(2022) found that trauma informed teaching created increased curriculum comprehension, enhanced interpersonal relationships between students and teachers, and created a structured classroom. The implementation of trauma informed practices lessens exhaustion and increases student academic output (Kim et al., 2021). Dorado et al. (2016) determined that trauma informed practices increase classroom competency by 28%, leading to improved grade point averages.

Quantitative data analysis revealed the mathematics and reading scores for Monroe Demonstration Academy remained static throughout the three year study. As with student safety and belonging, trauma informed teaching is tasked with creating an environment that increases academic acheivement through improving teacher to student relationships. However, the implementation appeared to concentrate on techniques to improve behavior outcomes, with academic growth being a byproduct of better behavior.

Time was allotted in the classroom toward mathematics and reading MAP testing in year one and two of the study. In year three, teachers dedicated that time to a different standardized test due to change at the state Department of Education. To align with students' specific instructional needs, some were given individual learning plans (ILP). However, mathematics and reading scores remained stagnant over the course of the study, suggesting that the students' relationship toward mathematics and reading remained unchanged.

There is an assumption by the administrative staff that teacher to student relationships improved during the implementation of trauma informed teaching. Teachers were given instructional support from trauma informed classes and learning materials to apply in the classroom, and they believed that the techniques learned from trauma informed training enhanced their teaching abilities. However, academic acheivement should be taken into

consideration when analyzing improvement of teacher to student relationships, and the effectiveness of trauma informed practices on teaching skills. There was a concentrated effort to improve pedagogical relationships and student behavior during the implementation of trauma informed teaching, but less focus on an increase of mathematics and reading abilities of students.

Qualitative data records discussed the difficulty of teaching students who have not been properly prepared academically to enter middle school. Students often struggle with basic reading and writing skills upon entry into middle school, which makes judging their progress within the implementation of trauma informed teaching difficult. Some teachers felt that students could make daily progress in reading and mathematics, but the progress may not show on standardized tests scores. With MAP scores selected as an outcome in this study, there was a concern that growth in academic acheivement in the form of daily assignments and tests would not be taken into consideration as a positive effect of trauma informed practices.

Teacher trust in trauma informed practices is essential for successful improving academic acheivement. At the start of implementation, there were teachers who did not believe in the efficacy of the program and felt that students were not prepared to utilize trauma informed techniques for deescalation. Walkley and Cox (2013) addressed the challenges faced by teachers, particularly highlighting the difficulty when students are unprepared to recognize and process the profound emotions stemming from traumatic events. Teachers also felt overwhelmed by what they considered working two jobs with teaching and new counseling duties (Alsic, 2012). The reluctance of certain teachers to embrace trauma informed practices may have contributed to the limited academic progress observed during the study. They were less likely to integrate trauma informed practices into their current teaching methods.

Implications for Schools Developing Trauma Informed Practices

Effective implementation of trauma informed teaching can be an integral part of the acheivement of desired student outcomes. Trauma informed practices enable educators to understand and address the needs of students who have experienced trauma, which helps on the path to achieve desired outcomes. However, Improper implementation of trauma informed policies can lead to stagnant growth in behavior, morale, and student acheivement (Luthar & Mendes, 2020). This section will discuss two implications for schools implementing trauma informed practices.

Trauma Informed Teaching: A Layered Approach

Trauma informed teaching practices within schools is only one factor to be utilized when evaluating student outcomes. Kataoka et al. (2018) discussed the need for district level support for trauma informed teaching, proper financing for continued learning, engagement of students and families, and a cross-section collaboration with other programs that share common outcomes.

In this study, qualitative analysis revealed that there was a loss of funding for teachers and initiatives involved in trauma informed implementation, which could have contributed to stagnant academic growth, and lower scores of safety and belonging. Qualitative data indicated that some families were resistant to counseling or mental health assessment, leading to challenges in family engagement. Counseling is often viewed negatively in some communities, causing reluctance to use trauma informed school services (Petrone & Stanton, 2021). An outreach program for the community is desired to ensure the safety of mental health counseling. Additional research is needed to evaluate districtwide support of trauma informed practices and existing partnerships with existing programs.

Theory of Change for Trauma Informed Practices Implementation

Within this mixed methods study, it was important to observe the implementation of trauma informed teaching as it occurred. The ability to observe the real time adjustments made to accommodate the needs of both students and teachers provided valuable insights. As within the Theory of Change, once outcomes are established, pathways to achieving outcomes remain flexible and are continually adjusted to ensure focus and relevance towards the desired results (Tsantila et al., 2023).

Qualitative data revealed the addition of socio-emotional tools in the classroom after other trauma informed techniques were not achieving desired results. Following an exclusive focus on academic results, a teacher incorporated socio-emotional tools to facilitate both group and individual emotional development among students. This real time adjustment in the classroom led to student improvement in classroom behavior and academic acheivement.

Limitations

Researcher bias is a possibility because of the examiner's familiarly with the school and surrounding community, and desire for positive change at Monroe Demonstration Academy. There is the possibility of bias with the usage of snowball and purposive sampling in this study. The snowball sampling technique included conversations with the principal of the middle school and his suggestion of participants that may all have similar views about the implementation of trauma based practices. Participants were selected due to their participation in the hands one implementation of trauma in formed teaching. These participants are more likely to have a positive view of the implementation, and its results on achieving selected outcomes.

The existing relationship between the researcher and middle school staff may affect the interviewees' responses, potentially causing social desirability bias where participants answer questions in a way they believe is preferred by the interviewer.

With only three interviews (N=3) there was a limited number of participants to gather qualitative data. Also, all three participants are from the same school, city, and state. Attempts to locate additional middle school trauma based learning grant recipients were unsuccessful. Also, the grant provided by the Department of Education did not provide specific desired academic results but focuses on student behavior and wellbeing.

Political Influences on Outcomes

A nationwide revision of protocols has been implemented across federal and local entities affiliated with the Department of Education. On the federal level, the United States Department of Education has undergone layoffs of approximately 1400 employees (Sherman, 2025, July 14). There is a focus of disassembling the federal Education Department and transferring duties to state departments to operate on a local level. Locally, the Oklahoma State Department of Education has documented over 80 employees leaving since January (Cochran, 2025, March 3).

Due to changes at the Oklahoma State Department of Education, funding has been reduced for the implementation of trauma informed practices at Monroe Demonstration Academy. Funding reductions led to the layoffs of teachers and administrative staff. There was also a change in strategy concerning the switch from mandatory standardized MAP testing to a focus on the Oklahoma School Testing Program. Qualitative data analysis revealed that this change occurred in between years two and three of the study. There was a sense of concern from teachers that MAP test scores would fall because teachings were not concentrated on MAP, which was selected as an outcome for this study.

Quantitative data revealed reading scores fell from year two to year three, after an initial rise in year one. After mathematics scores rose from year one to year two, they remained static between year two and year three. It is possible that the academic outcomes of this study were directly effected by changes at the Department of Education.

Social Influences on Outcomes

There are multiple factors that affect the well-being of students and their communities. These factors are examined through the five determinants of health, specific factors that influence a person's mental and physical wellness, which include genetics, medical care, social circumstances, environment, and individual behavior (Magnan, 2017). Monroe Demonstration Academy operates within a community that scores low on many categories within the five determinants of health. These inequalities within the community can possibly have a negative effect on student's behavior, sense of belonging and safety, and academic acheivement.

Throughout the process of gathering qualitative data, teachers mentioned the possible influence of COVID-19 on student behavior, sense of safety and belonging, and academic outcomes. COVID-19 can be considered a world-wide catastrophe because of its potential physical harm to people, interruption of day-to-day processes, and other various mental and physical maladies experienced by those infected (Barros-Lane et al., 2021).

During interviews and conversations concerning trauma informed teaching, many individual from staff of Monroe Demonstration Academy believed that COVID-19 was the worst traumatic occurrence experienced by all students. Some students were slow to interact in a classroom setting after months of isolation, while others fell behind their previous levels of academic achievement. There was an overall sense that COVID-19 could have a negative effect on desired outcomes in this study.

Future Recommendations

As Trauma Informed Teaching becomes more popular, more data is needed that discusses teacher needs for success in the classroom (Berger et al., 2020). Future research will expand the number of participating schools and participants to ensure a variety of unique experiences. The sampling process will be overhauled to limit bias. With more participants, a random selection of participants will give more diverse answers during the interview. Future research will also include cultural humility, learning to understand a person's cultural identity while understanding the barriers of comprehending their life events (Pickens, 2020) and its potential effects on trauma informed practices.

As previous data has shown, trauma effects various parts of the brain depending on the age in which the adverse childhood experiences were endured. Further research is needed to assess whether trauma informed practices alone can heal middle school children with lifelong trauma or if more intensive treatments are necessary.

There is a possibility that trauma informed policies are too generic and do not take into consideration outside factors that may affect its efficacy. Petrone and Stanton (2021) contend that trauma informed curricula occasionally overlook the historical and sociocultural contexts of complex trauma and frequently omit consideration of oppressive systems such as racism or observer prejudice. Trauma informed biases sometimes assume all students have similar traumatic experiences from adverse childhood events, neglecting individual differences (Pickens, 2020). More research is needed to explore historical socioeconomic context within the implementation of trauma informed teaching, and its relationship with academic acheivement.

Lastly, future research shall explore the effect of trauma informed practices on teachers and their own personal traumatic life events. Studies are needed to explore the mental and physical

effects of teachers' daily task of teaching and mentoring students in a trauma informed environment. The implementation of trauma informed practices creates a need for teachers to act as a life coach for students and consultant with counselors and mental health professionals. On-site counseling for teachers could lessen the number of sick days utilized, boost morale, and stabilize mental health.

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Appendix A

Qualitative Data Interview Questions

1. What is your specific role concerning the implementation of Trauma Informed Teaching?
    a. Can you tell me more about the process?
    b. How were you introduced to Trauma Informed Teaching?
    c. When did the implementation start?
    d. How has Trauma Informed Teaching changed the way you perceive student behavior?
    e. How has Trauma Informed Teaching affected the way you measure success?
    f. Do you believe the implementation has been successful thus far? Why/Why Not?
2. How has the implementation of Trauma Informed Teaching changed your opinions on trauma?
    a. Are you satisfied with the Trauma informed training you received? Why/Why Not?
    b. Can you describe the training you received concerning trauma?
    c. Do you have access to continuous training throughout the school year?
    d. Are you able to provide better solutions for students who are experiencing behavioral issues because of past/present experiences with trauma?

e. From your perspective, now that you know the effects the trauma can have on a student's behavior, have you adopted the paradigm shift from "What's wrong with you? To "What happened to you?"

3. Do you feel that learning new techniques to assist students with trauma effects behavior can help the community as a whole?

a. Has trauma related education given you a deeper level of self-understanding?

b. Did you have any biases toward students from poverty-stricken neighborhoods? If yes, has the trauma based learning you have experienced changed these perceptions?

c. Which best describes the learning process you've improved in following the Trauma Informed Teaching thus far:

i. Instrumental – individuals are tasked with identifying the cause or effect of certain events or situations.

ii. Communicative – individuals gain communicative skills and learn how to express their wishes, feelings, and emotions.

d. Has the implementation process caused you to self-reflect about your opinions concerning trauma and/or poverty?

i. If yes, have you found your previous assumptions to be incorrect?

ii. How do you feel about that?