THE IMPACT OF TRAUMA-INFORMED ENVIRONMENT ON MIDDLE SCHOOL

TEACHERS' SELF-EFFICACY TOWARDS STUDENTS WITH DISRUPTIVE

BEHAVIORS: A CAUSAL-COMPARATIVE STUDY

by

Daniel Wayne McGraw

Liberty University

A Research Proposal Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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ABSTRACT

The purpose of this causal-comparative study was to examine whether there is a difference in teacher self-efficacy (TSE) for educators who participate in, receive training for, and work in a trauma-informed environment (TIC) versus teachers who do not. Trauma-informed education is a growing trend in K-12 academic settings. But, no known study has shown whether working in a trauma-informed environment has an impact on teacher behaviors and attitudes. The results of this study did not find any statistically significant difference in survey responses from middle school teachers. The researcher used the Teachers' Sense of Efficacy Scale (TSES) to collect data on efficacy scores from 178 teachers in rural, urban, and suburban districts across six schools. A one-way multivariate of analysis of variance (MANOVA) did not reveal any statistically significant difference in scores. The results may indicate that TIC training does not impact teacher efficacy or that such training helps educators build resiliency to endure traumatic environments. The investigator recommends more research on TIC and teacher behaviors. A conclusion from this causal-comparative study is that since results were similar across three school districts, there may be a state-wide control that accounts for the current condition of TSE for middle school educators. Conversely, people who stay in education may have higher resiliency skills than people in other professions, making the environment less likely to predict teacher behaviors and attitudes.

Keywords: behavior management, trauma-informed, teacher attitude, teacher behavior

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LIST OF ABBREVIATIONS

Achievement Gap in English (AGE)

Achievement Gap in Math (AGM)

Adverse Childhood Conditions (ACE)

American Psychological Association (APA)

Attitudes Related to Trauma-Informed Care (ARTIC)

Center on the Developing Child (CDC)

Child Welfare Information Gateway (CWIG)

Child-centered Play Therapy (CCPT)

Cognitive Behavioral Therapy (CBT)

Creative Expression Therapy (CET)

End of Year Course (EOC)

Et Alia, And the Others (et al.)

Exempli Gratia, for the Sake of Example (e.g.)

Free and Reduced Meals Eligibility (FRME)

Hypothesis (H_0)

Id Est, That Is (i.e.)

Individual Disability Education Act (IDEA)

In-school Suspension (ISS)

Intelligence Quotient (I.Q.)

Internal Review Board (IRB)

Multiple Analysis of Variance (MANOVA)

Non-Diem, No Date (n.d.)

Positive Behavioral Instruction and Supports (PBIS)

Post-traumatic Stress Disorder (PTSD)

Professional Learning Community (PLC)

Research and Development (RAND)

Research Question (RQ)

Response to Intervention (RTI)

Self-Efficacy Theory (SET)

Substance Abuse (SUB)

Substance Abuse and Mental Health Service Administration (SAMHSA)

Teacher Self-Efficacy (TSE)

Teachers' Sense of Efficacy Scale (TSES)

Texas Department of Family and Protective Services (TDFPS)

Theory of Planned Behavior (TPB)

Theory of Reasoned Action (TRA)

Tool to Measure Trauma-Informed Care in Organizations (TICOMETER)

Trauma-informed Care (TIC)

United States Department of Health and Human Services (USDHHS)

Virginia Department of Education (VDOE)

Virginia Tiered Systems of Supports (VTSS)

CHAPTER ONE: INTRODUCTION

Overview

Identifying traumatic situations can be a challenge for educators who have not received in-service or professional development on adverse childhood experiences (Blomberg, 2018). Sometimes children experience events that dramatically alter their brains and change how they respond to adversity without any noticeable scars or foreseeable circumstances (White-McMahon & Baker, 2016). The chapter contains information related to the background of the problem, the problem statement, and the purpose statement. Also, the researcher provides information related to an examination of trauma-informed environments through the lens of the theory of planned behavior, the significance of the study, the introduction of the research questions, and definitions of terms specific for the study.

Background

Adverse childhood experiences (ACEs) can create a traumatic experience like post-traumatic stress disorder among military soldiers (Boullier & Blair, 2018). Trauma is the result of experience, set of experiences, or the perception that causes a person to no longer trust that the environment is safe or even pleasant (Brunzell, Waters, & Stokes, 2015). Adverse childhood experiences (ACEs) can lead to trauma and significantly influence learning, especially if the educators are not aware of the stress that the student has or is experiencing (Brunzell et al., 2016). However, it is not enough for educators to know that students have experienced trauma. They must know how to respond to this knowledge. Therefore, educational leaders should seek to create a culture of understanding that is school-wide (Michael-Chadwell, 2011).

Positive behavioral interventions and supports (PBIS) is one of the behavior pieces of over-arching Virginia tiered systems of supports (VTSS), which frames decision making for the

well-being of all students (social, emotional, and academic) through a data-driven culture (Virginia Department of Education [VDOE], 2018). The goal of the VTSS and PBIS strategists is to create an environment that addresses behavioral problems without labeling the students as the problem. A trauma-informed practice may be able to address both the goals of the school system and the needs of the stakeholders. A trauma-informed environment may significantly affect teacher retention, student needs, and the emotional well-being of all stakeholders in the school community (Brunzell, Stokes, & Waters, 2018).

Before administering consequences for disruptive behaviors, school leaders should evaluate what triggers may have generated such disruptions (Martin et al., 2017; VDOE, 2018). It is possible that the educators unknowingly triggered a response from the student due to previous experiences of the child. For instance, turning off the light to watch a video clip may trigger an adverse reaction in a child who has suffered physical abuse in a dark room. The good news is that children can learn what their triggers are and how to cope with triggers once they identify them (Substance Abuse and Mental Health Services Administration [SAMHSA], 2019). They can learn coping strategies.

Although many teachers find value in educating students who have experienced multiple ACEs, few school systems have successfully developed school-wide positive behavior intervention strategies for students with disruptive behaviors (Sullivan et al., 2014). Teaching children how to respond appropriately in given situations is rewarding. However, the inability to effect change can initiate another set of stressors. Educators who consistently teach in stressful environments and lack the confidence to overcome difficulties may experience second-hand trauma symptoms (SAMHS, 2019). Educators need to show compassion for students. But it is even more critical for leaders to consider the teacher's well-being.

Treating students who have multiple ACEs can create a negative experience for the educator, causing burnout (Rojas-Flores et al., 2015) and loss of retention (Karsenti & Collins, 2013). Exhaustion occurs when teachers no longer believe in their ability to inspire students to change their behaviors (Rosas-Flores et al., 2015). These teachers still occupy positions in education, but effectively no longer teach. They observe and document, but do not attempt to change the environment. Karsenti and Collins (2013) decried that one in four highly qualified teachers claimed to have left the profession altogether because she or he did not know how to educate students with disruptive behaviors effectively.

Unfortunately, for the teachers to be able to adjust to the culture of educating children who have many ACEs, they risk becoming traumatized themselves (SAMHSA, 2019). Student trauma can lead to secondary trauma effects on teachers (Caringi et al., 2015; Hydon, Wong, Langley, Stein, & Kataoka, 2015). The reverse effect of empathy is that caregivers experience the trauma that they treat. When such responders are unaware of this, they can trigger a response that can be cyclical. Unknowingly, educators can create a hostile environment for the students and themselves by demanding participation that creates anxiety for the students, leading to more disruptive behavior.

By actively looking for the problems that student behaviors attempt to solve, teachers and administrators can identify the nature of the issues. If the problem began with ACEs or trauma, there are solutions. Educators can teach regulatory skills to students who have experienced trauma (Brunzell et al., 2015). They can also teach these skills to themselves and each other. A trauma-informed school has the potential to invigorate teachers by empowering them to believe that they have the authority and ability to complete their objectives well (SAMHSA, 2019; Sharp Donahoo, Siegrist, & Garrett-Wright, 2017). According to Ajzen (1985), the perception of

control of one's behavior has predictive capabilities of that person's intended behavior. In 1985, Ajzen developed the theory of planned behavior, which stipulated that people are more likely to perform a task over which they believe they have control.

The theory of planned behavior (TPB) is rooted in the theory of reasoned action (TRA), previously developed by Fishbein and Ajzen (1975). The theory of reasoned action postulated that people were more likely to complete a task or perform a behavior that they believed that their peers wanted them to achieve and that they wanted to complete. Perceptions of peers' beliefs (subjective norm) and positive perceptions about the behavior (attitude) combine to form creation (motivation). Ajzen and Fishbein (2005) theorized that higher motivation had a positive correlation to the completion of behaviors. Although several studies supported TRA, other research suggested that circumstances limited behavior even when the intentions were high. Therefore, Fishbein and Ajzen (2011) added the perception of behavioral control to the subjective norms and attitudes of TRA to test the power of behavioral control. The results indicated that Ajzen's (1985) previous theory of planned behavior (TPB) still has strong predictive abilities due to its reliance on behavioral control, combined with measures for attitude and subjective norms.

Perceived behavioral control (PBC) explains the extent to which people are confident that they can complete the expected behavior (Fishbein & Ajzen, 2011; Wang, Fan, Zhao, Yang, & Fu, 2016). A higher PBC suggests that controllability has a positive interaction with behavioral intent (Ajzen, 2001). To measure PBC, researchers must examine two zones: controllability and self-efficacy. According to Deacon and Harris (2013), controllability refers to whether people believe they have personal control over the outcome or whether they think external factors control the behavior. Self-efficacy refers to the ease with which people believe they can apply or

complete the action (Deacon & Harris, 2013). Ajzen (1985) wrote that his theory about

perceived behavioral control rested in Bandura's (1977) self-efficacy theory. Fishbein and

Cappella (2006) found that self-efficacy and perceived behavioral control are the same for

research purposes.

An offspring of social cognitive theory, self-efficacy theory (SET) hypothesized that

expectations and emotions combined with consistent failures have a significant relationship

towards behavioral reactions (Bandura, 1977). According to Bandura (1977), there are two parts

to expectations: outcome expectancy and self-efficacy. Bandura (1977) defined self-efficacy as

one's confidence that the person can complete the task and outcome expectancy as one's

confidence in expected outcomes after completing a behavior. In other words, self-efficacy is

trust in oneself. Outcome expectancy is the trust that the outcome is valuable (Bandura, 1977).

For Bandura (2002), self-efficacy is the most potent predictor of behavioral change.

Rooted in SET (Bandura, 1977) and TRA (Fishbein & Ajzen, 1975), the theory of

planned behavior (Ajzen, 1985; Ajzen, 1991; Fishbein & Ajzen, 2011) relies on three factors:

attitude, subjective norm, and behavioral control. However, the environment may also help

strengthen the predictability of TPB. In 2006, Ajzen suggested that attitude has a distinct

relationship with environmental behaviors. Studies in tourists' habits suggested similar findings

(Lee, Jan, & Huang, 2015; Miller, Merrilees, & Coghlan, 2015). The current study seeks to test

whether a trauma-informed environment has predictive indicators on teachers' sense of self-

efficacy.

According to the Substance Abuse and Mental Health Services Administration (2014), a

trauma-informed environment (TIC) in education refers to a school that has three unique

identities. First, many of the administrators have completed intense training in identifying and

addressing adverse childhood experiences (p. 12). They actively seek to mitigate these experiences through equitable actions, resiliency intervention, and restorative practices (p.12). All administrators receive annual training on the impact of unintended re-traumatization of children and the lifelong implications of untreated victims of trauma (p. 13). Second, all educators receive annual sensitivity training in disruptive behavior communication (p.13). They actively participate in routines to understand how to deescalate situations and to teach students to recognize problematic behaviors (p. 13). Third, the school openly provides opportunities for all stakeholders to learn the effects of ACEs and trauma, how to develop coping skills, and tips for building resiliency in oneself and other people (p. 14).

If teachers believe that they can complete the task of teaching students with disruptive behaviors how to cope with stress and how to build resiliency, they may be more likely to continue to apply the practices that support TIC theories (Ajzen, 1985). The theory of planned behavior rests in Bandura's (1977) theory of self-efficacy (SET). Fishbein and Cappella (2006) have found that self-efficacy tests can measure perceptions of behavioral control and aptitude for change. If administrators can predict teacher behaviors, then they can prepare teachers to address the needs of their students and colleagues effectively. Thus, the whole school system can genuinely become a learning environment that can adapt when necessary. No known study has explored the interaction between teacher self-efficacy and a trauma-informed environment.

Problem Statement

Even though school law mandates that educators teach students in the least restrictive environment, many teachers avoid the rules by referring students to the administration for discipline (Zirkel, 2018). These referrals are heavily skewed towards students who receive special education services. Student discipline referrals correlate with incarceration (Barnes &

Motz, 2018; Fitzgerald, Hunt, & Kerr, 2019; Owens, 2017). Current literature suggests that

efforts like positive behavior intervention and supports (PBIS) are only predicting when the jails

will reach capacity, not how to solve the "school to jail" epidemic (Camara, Bacigalupe, &

Padilla, 2014; Fitzgerald et al., 2019; US Department of Health and Human Services, 2018).

Responding to disruptive behavior by offering an administrative discipline referral does not

address the underlying causes of disruptive behavior (Owens, 2017). Responding to disruption

through disciplinary response can cause an adverse reaction from the child (Michael-Chadwell,

2011). Therefore, some educational leaders may see such actions as causing more problems than

they solve.

Teacher preparation programs spend much time analyzing subject-specific pedagogy

(Vroey, Struyf, & Petry, 2016). But little attention is afforded to students' emotional needs when

they have been adversely affected by trauma (SAMHSA, 2019). Even special education teachers

receive little to no training in response to traumatic events, ACEs, and other conditions that may

explain disruptive behavior (VDOE, 2019). Such a lack of attention in teacher preparation may

explain low self-efficacy perceptions about student engagement, behavior management, and

teacher instruction (Holzberger et al., 2014). This lack of knowledge may further explain why

educators tend to express lower perceptions of self-efficacy as they grow in their understanding

of the subject matter (Tschannen-Moran, & Hoy, 2007).

Although there is much research that suggests that teacher efficacy has a significant

impact on student achievement (Chetty, Friedman, & Rockoff, 2014; Hoy, 2000; Hattie, 2014;

Shahzad & Naureen, 2017), current literature indicates that many teachers still believe that

students with disruptive behaviors should be taught in unique education settings instead of in

general education classrooms (Sharp Donahoo et al., 2017; Tschannen-Moran, & Hoy, 2007).

Perception is a significant problem. Teacher efficacy and trauma-informed education are essential topics in a time when school leaders are concerned about student safety and teacher retention (Karsenti & Collins, 2013). Despite an in-depth review of the literature, no research is available about the interaction between a trauma-informed environment and teacher self-efficacy. The problem is that no known study has investigated what impact a trauma-informed environment may have on teacher efficacy towards students with disruptive behaviors.

Purpose Statement

The purpose of this causal-comparative study is to determine the impacts of a trauma-informed environment (TIC) on teacher efficacy towards students with disruptive behaviors. A trauma-informed environment in a school system in which much effort has occurred by teachers, staff, and school leaders to mitigate the negative impact of trauma (Greenberg et al., 2017). The school community identifies itself as trauma-informed through continuous professional development and utilization of current best practices for alleviating toxic stress (Center on the Developing Child [CDC], 2019). By employing a teacher self-efficacy survey to teachers in six middle schools (three TIC, three non-TIC) across three school districts in the Central and Shenandoah regions of Virginia, the researcher was able to determine whether a trauma-informed environment has a significant impact on perceptions of teacher self-efficacy in instructional strategies, student engagement, and classroom management.

The instrument for this study, Teachers' Sense of Efficacy Survey (TSES), which captures the dependent variables of teachers' sense of efficacy in student engagement, instructional strategies, and classroom management, was created by Tschannen-Moran and Hoy (2001). The researcher attributed a score of one to nine for each response item to determine differences in means. Since the current study sought to determine whether there is an interaction

between the independent variables of teacher environment and sense of self-efficacy, the researcher considered three schools that did not identify as trauma-informed environment (TIC) schools as the control group and three TIC schools as the treatment group.

Trauma-informed environments have administrators, educators, and stakeholders who actively seek ways to identify, develop coping skills in, and build resiliency skills for students who have experienced adverse childhood experiences or Trauma (SAMHSA, 2019). The target population includes all middle school teachers in the United States. A convenience sample of more than 63 teachers from the Shenandoah and Central Virginia regions allowed the researcher to determine a medium effect size of .7 with a significance level of alpha at .05 (Gall et al., 2007, p. 145). The researcher reviewed the data through a one-way multiple analysis of variance (MANOVA) and descriptive statistics. The findings of this study examined the differences of means between self-reported responses on efficacy between teachers who teach in trauma-informed environments and those who do not.

Significance of the Study

A primary practical significance of this study explains whether there is an interaction between teachers' sense of self-efficacy and a trauma-informed environment. Research on the topic of trauma has suggested that children can learn resiliency (SAMHSA, 2019; Vargas, 2017). They can learn skills that will improve their lives. However, there is mixed information about what impact exposure to traumatized victims has on caregivers such as teachers (Chapman, 2017; Evans et al., 2013; Finkelhor et al., 2013). There is not enough research on whether sensitivity training in a trauma-informed environment (TIC) creates or mitigates teacher stress while treating students with multiple adverse childhood experiences (ACEs). Stressful environments can be harmful (Witkin, 2018) and helpful (Ben-Avi, Toker, & Heller, 2018),

depending on how teachers internalize and respond to the environment. Stress heightens the senses, the growth of ideas, and the quickness in responses (Bassuk, Unick, Paquette, & Richard, 2016; Hydon et al., 2015). People who experience a healthy amount of stress produce novel ideas and creative expressions (Ben-Avi, Toker, & Heller, 2018; Herman et al., 2018). This study adds to the research about stress, stressful environments, and the effect they have on teacher self-efficacy.

A secondary practical significance of this study predicts teachers' effectiveness. Although teacher evaluations have been inconclusive in predicting the effectiveness of educators, self-efficacy measures do have strong relationships with student outcomes (Sezgin & Erdogan, 2016; Shahzad & Naureen, 2017; Tschannen-Moran, & Hoy, 2007; Yoo, 2017). Many researchers have found teacher self-efficacy (TSE) can evaluate teacher effectiveness Finkelhor, Turner, Shattuck, & Hamby, 2013). They also suggest that educational leaders should combine TSE with school culture and environment to evaluate educators and predict student achievement (Heim et al., 2018; Michael-Chadwell, 2011). A trauma-informed environment (TIC) has the potential of impacting TSE and, by extension, student learning (Brunzell et al., 2018; Zirkel, 2018; Peterson, & Zakrisson, 2016; Tschannen-Moran, & Hoy, 2007).

A tertiary significance of this study identifies what resilience, if any, teachers have based on the environment in which they teach. Peer support through a culture of trauma sensitivity in a TIC may ameliorate the effects of trauma (Chapman, 2017). The presence of social support can lead to positive behavioral and attitude outcomes (Fontanella, 2008; Morton, 2018).   Camara, Bacigalupe, and Padila (2014) recognized that cultures that support the social and emotional needs of young people create environments that are accepting and supportive for all stakeholders, including teachers. According to Chapman (2017), teachers and caregivers can develop and

grow resiliency in themselves and the youth. A culture of sensitivity to victims of trauma, even after long histories of maltreatment, may build a school climate of resiliency (Evans et al., 2013; Lamis et al., 2014). This research adds to studies about how caregivers survive secondary trauma.

Research Questions

RQ1: Is there a difference between middle school teachers' self-reported personal efficacy of *instructional strategies* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments?

RQ2: Is there a difference between middle school teachers' self-reported personal efficacy of *student engagement* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments?

RQ3: Is there a difference between middle school teachers' self-reported personal efficacy of *classroom management* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments?

RQ4: Is there a difference between middle school teachers' *overall self-reported personal efficacy* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments?

Definitions

Adverse Childhood Experiences (ACEs). Any abuse, neglect, illness, violence, or extreme experience that has a negative effect on a child's worldview (SAMHSA, 2019).

Classroom Management. The researcher measured this dependent variable by attributing scores of 1-9 on eight Likert responses using the instrument, Teachers' Sense of Efficacy Scale. Higher scores indicate a greater sense of efficacy. Classroom management includes techniques

that educators use to engage students in the learning objectives with minimal disruption and maximum time on task during the physical time in the classroom (Tschannen-Moran & Hoy, 2001).

Exhaustion. When teachers no longer believe in their abilities or when they do not trust that the teaching environment is safe for the educators nor the students, they are likely experiencing burnout or exhaustion (Kim, Dar-Nimrod, & MacCann, 2018).

Inclusion. An education environment that does not differentiate instruction based on behavioral, emotional, social, or learning abilities (Han & Moinolnolki, 2017).

Intention. A measure of persistence grounded in subjective norms, perceived behavioral control, and attitude towards a particular behavior (Ajzen, 1991).

Regular Teaching Environment. This independent variable serves as the control group for the study. General teaching environments do not include educational leaders actively looking to identify and remediate students whom they believe have encountered adverse childhood experiences. Many educators in regular environments may see behavior as an expression of attitude, but not as a communication of need (Brunzell et al., 2016).

Self-Efficacy. The perception that people can effect change in their environment is self-efficacy (Bandura, 1977).

Student Engagement. The researcher measured this dependent variable by attributing scores of 1-9 on eight Likert responses using the instrument, Teachers' Sense of Efficacy Scale. Higher scores indicate a greater sense of efficacy towards student engagement, which measures the perception that educators have about the level of motivation, enthusiasm, and confidence in learning outcomes that students have in the educational process (Fontanella, 2008; Tschannen-Moran, Hoy, 2001).

Instructional strategies. The researcher measured this dependent variable by attributing scores of 1-9 on eight Likert responses using the instrument, Teachers' Sense of Efficacy Scale. Higher scores indicate a greater sense of efficacy. Teacher Instruction analyzes the degree to which educators believe that they have authority over how to deliver information in the classroom to impact learning (Tschannen-Moran & Hoy, 2001).

Trauma. Toxic stress, trauma experience, and multiple ACEs can contribute to injury. For the sake of this study, trauma is any adverse condition or experience (real or perceived) that links to triggers that can enact an emotional response that is atypical of the expected norm (SAMHSA, 2019).

Trauma-informed Environment. The independent variable of the trauma-informed environment (TIC) that acts as the treatment group. Researchers interchange a TIC with trauma-informed care. For this paper, a trauma-informed environment is the same as TIC and other brain-based research and school-wide intervention for behavioral change. Such an environment encourages educators first to ask what disruptive behaviors are solving before attempting to correct their actions. Such a situation invites students and educators to learn what triggers unusual behavioral responses (Brunzell et al., 2016). These schools involve the entire school community to teach stakeholders how to build coping and resiliency skills (SAMHSA, 2019).

CHAPTER TWO: LITERATURE REVIEW

Overview

According to a longitudinal study conducted by members of Google®, social and empathetic skills are critical for leaders (Strauss, 2017). This study directly contradicts what some educators believe about the importance of science, math, reading, writing, and technology. How people behave and how they feel are more significant predictors of success, even in highly stressful (Herman et al. 2018) situations. The current study seeks to understand whether a trauma-informed environment (which focuses on emotion and behavior) affects teachers' self-efficacy towards students with disruptive behaviors. This chapter begins by connecting the current study to previous research. Next, the researcher briefly explains the theory of planned behavior and how researchers can use it to study teachers' self-efficacy in a trauma-informed environment. The researcher evaluates stress, adverse childhood experiences, and trauma to explain how a trauma-informed environment may promote positive student behaviors. However, this environment may also have an impact on the teachers. For this reason, the researcher evaluates impacts on and of teacher self-efficacy. This chapter concludes with the acknowledgment that no known study has researched the interaction between a trauma-informed environment and teachers' self-efficacy towards students with disruptive behaviors.

Conceptual or Theoretical Framework

No known literature combines student behavior, intervention strategy, teacher training, and retention in learning through the lens of trauma-informed instruction.   Much research is available about challenging behaviors and the potential of long-term trajectory for these children (Campbell, 2010; Feldman et al., 2000; Fitzgerald et al., 2019; Gerstein et al., 2011; Hagan-Burke et al., 2011; Huffman et al., 2001; Tremblay et al., 2004). There is also a body of literature

demonstrating intervention strategies, amelioration pedagogy, and practices that educators may use (Bradshaw & Pas, 2011; Carlson et al., 2012; Splett & Hawks, 2011), but those are typically only used in a therapeutic setting. Additionally, in a report in the American Journal of Psychiatry, Kataoka, Zhang, and Wells (2002) stated that mental health services are rarely accessed for preschool-age children. Since schools are where students spend a significant part of their lives, it makes sense that schools should be a place where the entire child receives development, not just academically, but socio-emotionally as well (Greenberg et al., 2017). Educational leaders should encourage teachers to develop the entire child. However, educators need to understand what motivates their behaviors before being able to promote change in other people.

Theory of Planned Behavior

Ajzen (1985) hypothesized that the theory of planned behavior (TPB) has predictive powers grounded in a person's perception of behavioral control. The theory of planned behavior assumes that attitude, subjective norms, and perceived control towards a particular behavior combine to predict whether a specific reaction will occur (Ajzen, 1985). Attitude refers to a person's belief that a specific action has definite benefits. Subjective norms are perceptions that essential or influential people want someone to perform a specific task. Perceived control rests in the belief that the person believes that she or he can complete the objective. The underlying logic of TPB began with the theory of reasoned action (TRA), which has been able to show a strong relationship among behavior, attitude, and intent (Fishbein & Ajzen, 1975). But the actual practice did not always result from behavior intent (Ajzen, 2002; Albarracin, Johnson, Fishbein, & Muellerleile, 2001; Campbell, 2010; Chuang, Chen, & Chen, 2018; Fishbein & Ajzen, 2005; Fishbein & Ajzen, 2011). Therefore, Ajzen (1985) added the element of perceived control over a

particular action. By adding perceived control over behavior to TRA, researchers have theorized that actual practice is predictable (Ajzen, 1991; Bandura, 1977; Bandura, 2002; Fishbein & Ajzen, 2011).

Supporters of TRA believe that behavioral predictability increases when people have a positive attitude toward a behavior, a belief in a subjective norm, and ease of control to perform the act (Ajzen, 2002; Albarracin, Johnson, Fishbein, & Muellerleile, 2001; Bandura, 2002). A positive attitude refers to the belief that a specific behavior adds benefit to the participant (Ajzen, 2002). The subjective norm refers to the degree to which participants believe that people of significance to them want them to act (Albarracin et al., 2001). Finally, the controllability of behavior relates to the ease to which a person can produce the response (Fishbein & Ajzen, 2011).

Bandura (1977) proposed the idea that perceived control of behavior can predict outcomes through the theory of self-efficacy (SET). Self-efficacy is an offspring of social cognitive theory (Bandura, 1977). According to Bandura (1977), failure had the potential to limit one's feelings and motivations. Therefore, he developed two types of expectations: self-efficacy and outcome expectancy. He explained self-efficacy as the conviction for performing a behavior. Outcome expectancy is one's evaluation of the outcomes of a particular practice(Bandura, 1977). Self-efficacy contains a person's ability to cope with change (Bandura, 1977). Bandura, Adams, Hardy, and Howells (1980) believed that it was the most predictive in understanding the preconditions for changes in behavior.

According to Fishbein and Cappella (2006), self-efficacy can measure perceived behavioral control as well as beliefs about a person's ability and likelihood to change one's behavior. Self-efficacy is a significant component of TPB (Fishbein & Ajzen, 2011). The theory

of planned behavior suggests that behavior is proportional to a person's subjective belief in the positive and negative outcomes of a particular behavior (Azjen, 2002; Fishbein & Ajzen, 2011). In addition to perceptions about controllability and intention, the perception of subjective norms also influences behavior (Ajzen, 2002). Self-efficacy tests are well suited to analyze these beliefs about attitude, control, and subjective norms (Tschannen-Moran & Hoy, 2007).

Many researchers have applied TPB to understand the relationships among intentions, attitudes, and beliefs towards predictive behavior in advertising (Lamm, Holt, Rumble, & Telg, 2018; Muralidharan & Sheehan, 2016), public relations (Freberg, 2013; Howell, Shaw, & Alvarez, 2015; Lertpratchya, Besley, Zwickle, Takahashi, & Whitley, 2017), political campaigns (Olson, 2016), healthcare (Rich, Brandes, Mullan, & Haggar, 2015; Ryan, 2017), sports management (Rigby, Vela, & Housman, 2013), and sustainability (Chuang, Chen, & Chen, 2018; Paul, Modi, & Patel, 2016). In recent studies, educators have reviewed the perceptions of teachers towards inclusion through the lens of TPB (Florian, 2008; Jake, Boyle, & Anderson, 2015; Kuyini & Desai, 2007; Lüke & Grosche, 2018; Phillip, 2015; Sidhu & Taylor, 2012; Sin, Tsang, Poo, & Lai, 2010; Subban, Pearl, & Dikeldi, 2016; Sullivan & Simonson, 2016; Vaz et al., 2015; Vroey et al., 2016). They have analyzed teachers' behaviors and attitudes towards students with special needs, students with disabilities, and students with emotional concerns (Rastegar & Moradi, 2016). However, no known study has addressed teacher perceptions of self-efficacy in an inclusive classroom for students with disruptive behaviors in a trauma-informed environment. The current study analyzed whether teacher attitudes toward inclusion of students with disruptive behaviors can change when the educators teach in a trauma-informed environment.

Related Literature

Stress

Stress is a confusing term to define for both psychologists and physiologists (Peterson & Zakrisson, 2016). On one hand, it activates a natural response in the physical body to promote healthy outcomes (Peterson & Zakrisson, 2016). On the other hand, it is a mental response that sometimes is uncontrollable, even dangerous (Peterson & Zakrisson, 2016). Doctors have found that stress in the body produces life-saving reactions that can also be harmful (Witkin, 2018). In other words, without the mental capacity to understand healthy and detrimental levels of stress, the body can react in unhealthy ways even when it is trying to save itself. In a recent study, Ben-Avi, Toker, and Heller (2018) added research to the understanding that stress can be healthy and can be controlled by individual actions and social interactions. Stress elevates the senses, allowing for a massive flow of information and quick reflexes (Ben-Avi et al., 2018). People who experience a healthy amount of stress produce novel ideas and creative expressions (Ben-Avi et al., 2018). Unhealthy stress has an adverse effect (Bassuk et al., 2016; Ben-Avi et al., 2018; Herman et al., 2018; Hydon et al., 2015).

Adverse Childhood Experiences

Some stress, especially stress that is repetitive and uncontrolled, can create toxic stress (CDC, 2019; Witkin, 2008). If not treated timely and adequately, stress can lead to problems that are not identified until later in life (CDC, 2019). For example, obesity can be a result of untreated stress (CDC, 2019). To understand the nature of obesity in its clients, CDC-Kaiser published findings from its participants in a two-year study (Rottnek, 2016). Since the researchers had noticed a correlation between obese clients and reported sexual abuse, they wanted to understand whether any other conditions happened in childhood that had implications

in adulthood (Rottnek, 2016). For this study, childhood was defined as under 18 (p. 49). The researchers determined adverse experiences to be stressful events that lead to toxic stress (p. 50). That stress had a lasting negative impression on the child into adult life (p. 52). In other words, the number of adverse childhood experiences (ACEs) could predict health, emotional, and behavior problems in later adulthood (Boulier & Blair, 2018; CDC, 2019).

According to Finkelhor et al. (2013), roughly 40% of today's youth experience maltreatment (Vargas, 2017; Wildeman, Emanuel, Punam-Hornstein, Woldfogel, & Lee, 2014). Luthar, Cicchetti, & Becker (2013) found that many children who suffer maltreatment have lower academic and social-emotional outcomes. However, children with resilience have better outcomes of both (Fontanella, 2008). Resilience is the dynamic ability of a person who has received significant adversity but can make a positive adjustment (American Psychological Association [APA], 2019). There are many factors related to resilience. Two of the most important elements are self-confidence and confidence in caregivers (APA, 2019). Most children overcome ACEs because of peer or caregiver support (Lamis, Wilson, King, & Kaslow, 2014; Ungar, Ghazinour, & Richter, 2013).

There is some research on resilience and child development (Chapman, 2017; Luthar et al., 2013; McGuire & Jackson, 2018). This resilience may explain why most children can overcome ACEs with little adverse effects if they have strong family support (Kumpfer & Summerhays, 2006). In a dissertation study about the resiliency of Latino and Latina immigrants, Vargas (2017) found that social supports held strong relationships with resiliency. However, if the family is the source of the stress, then the child may need alternate supports (Monn, Zhang, & Gewirtz, 2018; White-McMahon & Baker, 2016). For children who live in

constantly stressful environments (CDC, 2019), the school may be the most critical place for them to learn coping skills.

Types of Trauma

In 2012, The National Survey of Children's Health (NSCH) estimated that nearly one in three children experience at least one ACE before the age of six (p. 10). The study suggested that more resiliency training and trauma coping activities need to occur during the period of youth to help children overcome adverse conditions that lead to toxic stress, which becomes traumatic throughout childhood and into adulthood (NSCH, 2012). Trauma is the result of a life-changing experience that is real or perceived (Boullier & Blair, 2018; Children's Defense Fund-Ohio, 2015(Boullier & Blair, 2018). The experience is not the event itself but the physical and emotional response to the experience (SAMHSA, 2019). Traumatic experiences impact health, academics, and behavior (Craig, 2016). According to Craig (2016), these events can be single-case (e.g., school shooting, sexual assault, gang violence) or repeated (e.g., continual physical abuse, domestic violence, severe bullying). The result of trauma is that the victim experiences overwhelming dread, panic, or helplessness (Boullier & Blair, 2018).

Attachment trauma can occur through repeated exclusion from the caregiver, resulting in the underdevelopment of empathy and self-regulation (Boullier & Blair, 2018). Children who are exposed to constant hostile conflict and violent language have reported higher levels of depression and anxiety (Newberg & Waldman, 2012). The traumatized child can continue to experience the effects of the exposure long after the event (SAMHSA, 2019). Complex trauma, which is associated with perceptions of abuse, can reimage the brain, making it difficult for the victim to build meaningful relationships (Keysers, 2011).

Inadvertent trauma can occur when leaders attribute their decision-making strategies to what they believe is best for the child, without accounting for the child's basic needs (Walker & Wilson, 2018). In a dramatic study, Walker and Wilson (2018) conducted a theatrical performance for medical professionals. In this study, the participants watched a play performance of a real-life story of a medical patient who was treated by professionals for a perceived mental disorder (Walker & Wilson, 2018, p. 29). The result was that medical professionals realized that they might have caused inadvertent trauma by removing the autonomy of the patient, marginalizing the patient's emotions, stigmatizing the patient's mental health, or overreacting to services (Walker & Wilson, 2018, p. 32). The experiences resulted in the patient perceiving suicide as one of the few things within the patient's control (Walker & Wilson, 2018). The same results may apply to education. All decisions impact a student's perception of emotional validation and self-worth. Failure to recognize this can result in destructive tendencies (CDC, 2019; Woodridge et al., 2016)).

While educators may not know which students have experienced trauma, they must prepare to educate themselves and their students on coping strategies (Craig, 2016). They can learn these strategies through school-wide trauma-informed education models (CDC, 2019; SAMHSA, 2019). There is no one panacea for coping with trauma. Just as every student is different, so too is every traumatic situation (SAMHSA, 2019). The effects of trauma depend on how the children respond to the event or set of circumstances, and how the social environment reacts to the children's responses (CDC, 2019). Unhealthy interactions can lead to circular activity of trauma responses reinforcing trauma responses (SAMHSA, 2019). Relationships can empower children to overcome trauma, or they may trigger the traumatic event (CDC, 2019; SAMHSA, 2019).

Trauma and Health

Bezo and Maggi (2018) interviewed 45 participants who experienced trauma related to the 1930s. The researchers noticed that there were generational consequences of severe trauma. Survivors of military trauma reported many years of adverse health conditions (p. 90). In addition to the immediate concerns of the traumatic events, second and third-generation descendants of trauma victims reported psycho-social and biological health concerns (p. 91). Trauma has the potential to significantly impact the lives of family descendants many decades after the first occurrence (Bezo & Maggi, 2018). This study is consistent with reports about how adverse childhood experiences affect caregivers, educators, and family members (Monn et al., 2018; Texas Department of Family and Protective Services [TDFPS], 2018; White-McMahon & Baker, 2016). Adverse childhood experiences (ACEs) associated with neglect and child abuse are equally as distressing as soldiers and family members of soldiers who have post-traumatic stress disorder (Dervishi, 2015; Blomberg, 2018).

In 2013, the U.S. Department of Health and Human Services (USDHHS) shared the number of alleged child abuse cases (USDHHS, 2013, p. 34). Among these allegations, 47% of the alleged victims were five years of age or younger, 79.5% suffered neglect, 18% endured physical abuse, 9% experienced sexual abuse, and 18% were maltreated either physically or psychologically (USDHHS, 2013, p. 36). These risks to ACEs increase the chance of children being exposed to trauma.

The implications of ACEs and trauma related to the brain and its healthy development can potentially cause lasting damage. In a typically healthy environment, the brain reacts to injury or overstimulation by releasing vital hormones into the bloodstream (e.g., adrenaline and cortisol), which aid in the trigger of flight or fight response, but create damaging consequences if

the situations are chronic due to the overuse of these hormones that can destroy or severely damage brain cells (Hertzel & Johnson, 2013). According to Perry (2001), the brain develops through specific arrangements and controlled patterns from infancy, through adolescence, into adulthood. Disruptions have positive and negative consequences because as the brain reshapes itself, it does so in response to experiences (Perry, 2001). Adverse traumatic experiences (whether real or perceived) have the potential of remapping the brain in a condition that does not support a healthy lifestyle (Keysers, 2011; White-McMahon & Baker, 2016).

Trauma and Academics

As much as disruptive events can disturb the brain, this disturbance can also produce beneficial qualities (Perry, 2001). As the brain experiences unexpectedly positive interactions, increased motivation, and higher IQ can develop (White-McMahon & Baker, 2016). This growth is a normal part of human development. People who interact positively with the environment experience healthy gains in unexpected ways (Perry, 2001). However, children who suffer maltreatment, digress negatively in their development, even if the experience is positive (Walker & Wilson, 2018). After conducting a longitudinal study aimed at understanding why children of foster care have a disproportionally higher than standard college dropout rate, Morton (2018) found that many students from foster care systems reported significant maltreatment from their youth experiences (p. 74). These ACEs created emotional barriers that many students were not able to overcome while away from their hometowns in college (p. 75). In their local high schools, these same students reported success academically because they were familiar with their counselors, and they knew where to find help (p.76). However, while at college, these same students reported that they could not control their emotional state, and they did not know how to find help (Morton, 2018). As a coping

mechanism, these students often skipped class to avoid their emotional distress, which created a cyclical downward spiral of academic failure until the only logical conclusion these students could accept was to drop out of school (Morton, 2018, p. 78).

Brain-based education can lead to more significant gains in academic achievement for students who have experienced trauma. A study performed by Crozier and Barth (2005) reported that maltreated students were two times more likely to score one standard deviation below the mean in academic tests than all other students (p. 200). Recent studies have found similar results in language processing (Lum, Powell, Timms, & Snow, 2015), vocabulary retention (Viezel, Freer, Lowell, & Castillo, 2015), and school readiness (Bell, Bayliss, Glauert, & Ohan, 2018). Maltreated children are in danger of academic decline that lasts into the adult years (Holmes, Yoon, Berg, Cage, & Perzynski, 2018). In a multi-tiered examination of 32 studies, McGuire and Jackson (2018) found that, in each study, maltreated youth consistently earn half to a full standard deviation on academic tests less than students who do not experience maltreatment (p. 462). As the number of adverse conditions increased, academic achievement decreased (p. 463). But, these gaps in performance are not permanent. Studies have shown that maltreated students who later receive proper shelter, love, and safety have improved their IQ scores by as much as 60 points (Holmes et al., 2018; Lum et al., 2015; Perry, 2001). The amount of time the child was exposed to trauma and the damage done to the brain determines the length of time it takes the youth to recover (Holmes et al., 2018; Lum et al., 2015.

Trauma and Behavior

Trauma affects mood, behavior, and attitude (Ajzen, 2001; Bandura, 1977; Vaz et al., 2015). Negative emotions such as anxiety, toxic stress, and fear have the potential to activate the amygdala in such a way that the brain's senses malfunction (Willis, 2006). In moments like this,

the brain can emit the same response to emotional trauma as it does to physical injury. Pain and fear, for example, activate the same parts of the brain (SAMHSA, 2018). In the same, but opposite way, triggering the amygdala at low levels increase positive behaviors, problem-solving, and emotion (Perry, 2001; Willis, 2006). Regulating triggers and educating students on how to regulate triggers has the potential of improving the academic and emotional well-fare of the students and teachers (Morton, 2018).

In a longitudinal study, (Loth, Drabick, Leibenluft, & Hulvershorn, 2014) found that repeated maltreatment predicted externalizing behavior problems (Ungar et al., 2013). The consistency of abuse can anticipate significant behavior problems (Ungar et al., 2013). Maltreated children exhibit more externalizing behaviors than other youth (Ungar et al., 2013). This suggests that misbehavior may be a communication mechanism for expressing maltreatment (Snyder & Smith, 2015). They may also communicate an inability to self-regulate (Snyder & Smith, 2015). Continued disciplinary actions for maltreated students who have not learned how to cope with traumatic triggers positively will likely result in more disciplinary actions than changed behaviors (Barnes & Motz, 2018; Camara et al., 2014; Fitzgerald et al., 2019; Owens, 2017; U.S. Department of Health and Human Services [USDHHS], 2018). However, not all children learn to adjust their behaviors through negative reinforcement.

Over time, even negative words or phrases have the potential to launch brain-altering changes to the parts of the brain that affect emotions, sleep, memory, health, and feelings (Newberg & Waldman, 2012). For example, a negative school culture could cause a child to decrease in perceived intelligence over time (p. 124). This decrease in perception can eventually develop violent actions (p. 126)). Furthermore, educators may misdiagnose the causation of violent behaviors and increase the potential for mental instability by treating the behavior and not

the cause of the behavior (p. 208). Orally exchanging in negative conversation increases the anxiety for both the teacher and student. Such miscommunication reduces trust, empathy, and cooperation among traumatized students and caring educators (Hydon et al., 2015).

Traumatized children do not necessarily recognize their behaviors (Boullier & Blair, 2018). Their actions may be a coping mechanism that is a reflex to an emotional or physical trigger (East & Roll, 2015). Educators should attempt to learn what obstacles the behaviors are addressing (Bartlett, Ghaffar-Kucher, & Mendenhall, 2016), rather than react to the behavior (White-McMahon & Baker, 2016). The behavior responds to a need. Educational leaders must learn what the student needs before speaking to the behaviors (Hallinger, Heck, & Murphy, 2014). Failure to correctly diagnose the situation can lead to increased perceptions of trauma (Walker & Wilson, 2018).

Trauma and Poverty

Although poverty is not a form of trauma, there is a link between poverty and trauma (Hallinger et al., 2014. Exposure to traumatic events, like a lack of food and unsafe or violent conditions, significantly increase for a child who lives in poverty (Boullier & Blair, 2018). Trauma can manifest itself regardless of socio-economic conditions (Blitz, Anderson, & Saastamoinen, 2016). Similarly, although all genders, races, and cultures have the same chance of experiencing a traumatic event, Woodridge et al. (2016) found that Black and Latino males experienced statistically significant higher rates of reporting trauma than did White or Asian females (p. 90). Additionally, the study found that when men were separated from their caregivers, they were twice more likely to report extreme traumatic events than women (p. 91).

According to the U.S. Department of Health and Human Services ([USDHHS], 2018), there is a disproportionate number of Black and Latinx children living in poverty (p.3). Black

male children are more likely than any demographic group to live with one or fewer caregivers (USDHHS, 2018).   Much research suggests that the prison system also detains a disproportional number of minorities (Barnes & Motz, 2018; Fitzgerald et al., 2019; Owens, 2017). It is possible that untreated trauma, due to poverty implications, is part of the school to prison dilemma.

In 2016, Hudson published an autoethnography study about the scars of poverty and its lasting implications. Hudson (2016) experienced alienation from her neighborhood friends and humiliation at school (p. 121). Children living in poverty usually eat alone and wear the same clothes multiple times during the same week (p. 122). Like many families who attempt to hide their poverty, Hudson lived in a stereotypical middle-class White neighborhood where most of the families were intact (p. 124). It was through social interaction at school and play that Hudson realized that members of the same neighborhood lived different lifestyles; for instance, one child was the product of a single parent who could not afford to provide the luxuries that many peers took for granted (p. 130). This created a feeling of dread within the researcher (p. 131).   The dread lasted well into adulthood and continued to haunt the researcher for decades after becoming an adult (p. 131). Hudson's experiences of falling back into poverty immediately after achieving marginal degrees of financial success are consistent with the results of other studies on the traumatic, lasting effects of poverty (Blitz et al., 2016; Juvonen, Espinoza, & Knifsend, 2012.

Trauma Prevalence

According to Huecker and Smock (2019), the effects of child maltreatment, trauma, and poverty negatively impact the national economy by as much as $14 billion annually (p.4). The negative impacts are not slowing, especially since abuse and child maltreatment continues to rise. In the United States, there is at least one child abuse case reported every ten seconds (CDC,

2019). Children who face adverse childhood experiences (ACEs) like maltreatment and poverty

are 59% more likely to receive a jail sentence (Huecker & Smock, 2019, p. 6). More than half of

incarcerated youth are likely to become repeat offenders, leading to more poverty and more

ACEs for their children and grandchildren (SAMHSA, 2019).   More than two-thirds of the

people seeking treatment for substance abuse are trauma survivors (SAMHSA, 2019). The

growth of ACEs for youth and the understanding of the impact of ACEs and trauma have

prompted organizations like Voices for Virginia's Children (VVC, 2019) to lobby for bills that

support mental health awareness and training for educators and students (p. 1). One of the

missions of the group is to make Virginia a trauma-informed state (VVC, 2019, p. 2). Other

states (California, Maryland, and Washington) have also experienced statewide initiatives to

address trauma because many leaders believe that it has a strong relationship with mental health

(SAMHSA, 2019).

      The state of Texas recently recognized that the effects of trauma could be generational

due to a culture of trauma and a history of it (TDFPS, 2018). The culture of trauma can affect

how the family communicates (TDFPS, 2018). Feeling shame or denial because of

discrimination or poverty can develop a feeling of dread among groups of people who are

victims of stereotyping (Sugarman, Morris-Lange, & McHugh, 2016; Zirkel, 2018). This may

account for a disproportionate number of African Americans experiencing symptoms of trauma.

The history of slavery still has strong roots in pocket communities. Although slavery occurred

many decades ago, it may still pose residual effects on traumatized members of society (Lamis et

al., 2014; TDFPS, 2018).

Overcoming Trauma

Untreated trauma can cause the student to suffer from post-traumatic stress disorder (PTSD), creating a potential for a lifelong trigger of emotions (Ajzen, 2002; Black, 2015). Simple actions like sleeping, hyperactivity, and impulsivity may appear to be symptoms of other disorders, which professionals may misdiagnose if they do not understand the context (Perry, 2001; Michael-Chadwell, 2011). Even doctors can mistake the symptoms for the causes (Walker & Wilson, 2018). Therefore, teachers must pay close attention to changes in behaviors, attitudes, and inclusiveness.

Peer social support may alleviate the primary effects of trauma (Chapman, 2017). The presence of social support can lead to positive social and academic outcomes (Fontanella, 2008; Morton, 2018). Young people are willing to accept and look for emotional support from people whom they trust, have familiarity with, act in good faith, and approve of them (Camara, Bacigalupe, & Padilla, 2014). According to Chapman (2017), teachers can develop and grow resiliency in students by building strong bonds to help them overcome trauma because they perceive adult support of children with a history of maltreatment as protective (Evans et al., 2013; Lamis et al., 2014). However, this can be problematic when children begin to experience PTSD while also experimenting with substance abuse (Simmons & Suárez, 2016).

According to Simmons and Suárez (2016), a bidirectional correlation exists with substance abuse (SUB) and PTSD (p. 730). Adults who have PTSD often rely on substance abuse to cope with their feelings of dread (p. 732). Unfortunately, SUB can create a sense of post-traumatic stress (p. 732). Adults and children who believe that SUB is the best way to cope with PTSD may feel that adults have an adverse judgment on their abuse of substances (Simmon

& Suárez, 2016). In these situations, peer perception and pressure can be valuable resources for helping traumatized individuals cope with distress (p. 734).

Educational leaders, teachers, and other school professionals may find it challenging to identify maltreated or traumatized students who have learned coping skills that mask the abuse (Fortuin et al., 2015). Fortuin et al. (2015) found that young adults, who have not been identified as suffering from trauma (but are), have reported that they prefer to socialize with peers who appear to suffer from similar externalizing problems (p. 875). These same youths become more similar to their peer groups over time (Fortuin et al., 2015). Schools that develop a culture of inclusion (Finkelhor et al., 2013; Michael-Chadwell, 2011) invite untreated students to intervene for themselves by socializing with other students who may help them overcome the burden.

Trauma Triggers

Treatment for the behaviors may trigger the trauma, causing PTSD to be more likely (Dervishi, 2015). For example, if an abused student begins to perform poorly in school and the teacher reports the performance, there is a chance that the child will experience increased abuse (from caregivers) in response to the low performance (Dervishi, 2015). This cycle of abuse causes children to further isolate themselves from the people who have the authority to help (Hrubes, Ajzen, & Daigle, 2001).

On 21 July 2015, a college professor learned something about her education that she never had before experienced or understood (Wolfsdorf, Scot, & Herzog, 2019). In a study of the dramatic discovery, the educator exposed the students to an emotional scene, a car crash with a mother and daughter in a tear-jerking scene of dread and despair. The professor had taught for nearly 18 years and completely believed that exposure to surprise and emotional shock was a motivational part of reading quality literature and knew for sure that college-level students could

handle distressing videos and literature without prior warning. However, on that day in July, the professor witnessed the effects of unintended retraumatization in an adult (Wolfsdorf et al., p. 10). One of her students stopped attending class. After three days of not seeing the student, the professor inquired about what was the situation. She discovered that the student had entered the hospital for the treatment of an aneurysm. The heart condition was a direct result of the student watching the dramatic video in the class. Upon reflection, the professor suggested that educators should scaffold dramatic literature and videos for their students so that the learners can prepare for the effects of emotional literature or scenes (Wolfsdorf et al., p. 16).

Other ways of triggering the trauma occur through behavioral reaction to normal activities (Etem, Abdulhak, & Durgdagi, 2016). Sometimes, turning off the light to see the video on the screen may trigger an impulse within a child who has experienced sexual abuse in the dark. Loud voices and laughter can trigger these emotions as well. The adrenaline within children is an emotional response that has developed over time (Etem et al., 2016. With extensive training and practice, educators and educational leaders can learn to identify the abnormalities and create ways to solve the problem that these reactive behaviors are attempting to fix (SAMHSA, 2019. Furthermore, educators can help teach children to identify and cope with triggers to emotional disturbance.

Trauma-Informed Actions

School systems in the United States continue to grow through the inclusion of refugees (less than one percent) and other migrants from impoverished or war-torn countries (Sugarman et al., 2016). Many of these students do not speak English nor even understand American culture (Michael-Chadwell, 2011). Leaders expect school systems to meet the growing needs of all learners, especially low-income and minority students (Colby & Ortman, 2015). But few

teachers understand the ethnic diversity that is shaping the educational system (Fontanella, 2008; Michael-Chadwell, 2011). Teachers may be lacking knowledge of how to serve this new student population (Sugarman et al., 2016). Therefore, programs that solve the most challenging behavior problems, but are generalizable to the entire population, offer teachers the most excellent chance for implementation and success (Anderson, 2016).

Many programs attempt to address brain-informed care in the classroom. The following examples do not express every possible intervention. But, they do examine a few ways that teachers and administrators have attempted to address trauma in the classroom.

Response to Intervention. Response to Intervention (RTI) utilizes tiered responses to meet student needs (Zirkel, 2018). Treatments vary by school and rarely are as systematic as they claim to be because the responses are based on teaching input, not necessarily from environmental investigations (Anderson, 2016). Sullivan and Simonson (2016) conducted a study of three intervention strategies to test the resiliency of war-traumatized youth. In particular, they reviewed three intervention strategies: cognitive behavioral therapy (CBT), multimodal, and creative expression (Sullivan & Simonson, p. 515). The researchers examined 13 intervention studies across several countries: These included the United Kingdom (4), Canada (3), United States (3), Australia (1), India (1), and Iran (1) (p. 517).

Cognitive Behavior Intervention. Cognitive Behavior Intervention or therapy (CBT) relies on the triangulation of feelings, thoughts, and behaviors (Sullivan & Simonson, 2016). Cary and McMillen (2012) noted that CBT is particularly helpful in mitigating PTSD symptoms, but only mildly decreases problematic behaviors (p. 52). The intensity of CBT programs ranges from six to 12 hours per week (p. 53). Some researchers who used this strategy also incorporated manualized child-centered play therapy (CCPT) in addition to the CBT

(Schottelkorb, Doumas, & Garcia, 2012). The combination allowed the educators to make predictions based on past traumatic experiences and current desires of play (p. 54). This strategy has shown to reduce the stress level and slightly improve academic functioning, including self-awareness and critical thinking (p. 54).

  Multimodal or Multitiered Intervention. Treatment in multimodal or multitiered intervention models depends on the individual needs of the student (Sullivan & Simonson, 2016). Therefore, the intensity is entirely individualized. Intervention strategies include teacher consultation, family therapy, and in-home visitation (Sullivan & Simonson, 2016). In strategies such as this, leaders entrust educators to make at least one family contact each week to establish trust and investigate the perceived need for treatment or intervention (Sullivan & Simonson, 2016). A referral process allows for teachers and other professional staff members to integrate therapy and intervention practices using seamless or interwoven methods (Hartlep & Ellis, 2012. The teachers act on a Tier 1 level, while Tier 2 includes an education specialist, while tiers 3 and 4 incorporate the counselor and behavior therapist, respectively (Hartlep & Ellis, 2012). The challenge in this strategy for educators includes measures of the effectiveness of the combination of the tiers (Hartlep & Ellis, 2012; Vaz et al., 2015). While educators perceive that growth occurs within each tier, the need to increase intervention is counter-intuitive to that suggestion (Hartlep & Ellis, 2012. Therefore, teacher buy-in is challenging to achieve (Hattie, 2014).

  Creative Expression Therapy. Schools that use CET seek to provide the arts as an intervention for developing coping strategies (Sullivan & Simonson, 2016). Art includes, but is not limited to, dramatic, musical, visual, and physical expression (Sullivan & Simonson, 2016). The degree of intensity varies from weekly to monthly interventions, depending on the severity of or demand for the intervention (Sullivan & Simonson, 2016). Although there is a significant

connection between artistic expression and academic performance, CET does not appear to significantly affect social-emotional symptoms in youth (Rousseau et al., 2012).

Trauma-Informed Implementation Barriers

Teacher attitudes are a barrier to learning strategies (Ajzen, 2001; Vaz et al., 2015). The most significant impact on learning and behavior that schools have is the teacher (Hattie, 2014). However, low pay, limited resources, and strict testing guidelines affect teacher satisfaction (Rastegar & Moradi, 2016; Strauss, 2015). If any program, even an effective one, appears to be more work with less pay, then teachers may ignore the program regardless of the outcome (Ioanide, 2015). However, if the program enables teachers to problem-solve challenging behaviors, teachers may feel a greater connectedness to the school and the students (Anderson, 2016 Garcia, Lawton, Diniz de Figueiredo, 2012; Ioanide, 2015.

Trauma-informed Environment (TIC)

According to SAMHSA (2019), the earliest known terms for trauma identification were "nostalgia," post-American Civil War, and "shell shock," post-World War I (p. 1). The Industrial Revolution saw civilians suffering from dramatic stress (SAMHSA, 2019). However, during and post-World War II, researchers identified this stress as "battle fatigue" or "moral weakness" (SAMHSA, 2019, p. 2). Finally, after the Korean and Vietnam Wars, the U.S. Department of Veteran Affairs began to recognize post-traumatic stress disorder (PTSD) as a health condition that required treatment and started the first round of treatments with individual interventions (p. 3). But researchers learned that there was a social component towards recovery. Current literature suggests that a trauma-informed environment (TIC) that is therapeutic and interactive is the best way to treat survivors of trauma (Cicchetti, & Banny, 2014; Levenson, 2014; Levenson, 2017).

Trauma-informed environments (TIC) are unique to other schools because one of the primary goals of educators, leaders, and support personnel in TIC schools is the understanding that behavior communicates a need (SAMHSA, 2019). All stakeholders in TIC communities strive toward addressing the needs that behavior conveys, without labeling people based on their behaviors (Levenson, 2017). Since medical and educational leaders recognize that all individuals are susceptible to the effects of trauma, TIC schools are beginning to appear as a way to compensate for the socio-emotional needs of victimized youth (Boullier & Blair, 2018). The Substance Abuse and Mental Health Services Administration website (2019) recognizes five principles of a TIC school: safety, trust, choice, collaboration, and empowerment (p. 4).

Safety

TIC school personnel understand that trauma survivors are vulnerable to triggers, both seen and unseen (Morrison et al., 2015). Calm, welcoming places are readily available to students and faculty. Educators model safe practices of respect for self, others, and property. Thus, destructive behavior is viewed through the lens of survival (Levenson, 2014). Leaders set boundaries that are consistent and inspire predictability without being oppressive (SAMHSA, 2019).

Trust

Social workers learn to navigate around perceived social norms by recognizing that trauma, poverty, and oppression intertwine to explain socio-emotional expression (Levenson, 2017). Educational leaders can learn from social workers on how to develop meaningful and impactful relations that foster equality and equity. Trust grows when all parties believe that they understand the needs of other people and that those people understand their needs. Trust is a type of mutual respect through the removal of ambiguity.

Choice

As children who have experienced trauma grow in their sense of self-worth, they safely explore the consequences of their decisions, both positive and negative (Boullier & Blair, 2018). With caring adults as supervisors and mediators, young adults can learn to question the environment without demanding that the world change. School employees consistently monitor student, peer, and self-readiness through the use of tools like ARTIC (Baker, Brown, Wilcox, Overstreet, & Arora, 2016) and TICOMETER (Unick, Paquette, & Richard, 2016) which measure the need for and the readiness for change at appropriate levels. Either people need to change their behaviors, or they must change their perception of the world to cope with obstacles.

Collaboration

When adults work with traumatized children, there is always the threat of re-traumatization because often, the broken trust of a previous caregiver limits the tolerance of the victim (Chapman, 2017). Equity, especially for the most vulnerable, is a critical value for social workers (National Association of Social Workers, 2015). Any child, regardless of demographics, can experience ACEs. However, the prevalence of ACEs increases among children who live in disadvantaged or at-risk settings (Eckenrode, Smith, McCarthy, & Dineen, 2014; Larkin, Felitti, & Anda, 2014; Levenson, Willis, & Prescott, 2016). Adverse childhood experiences hurt the overall health of society and yield consequences on social equity (Larkin et al., 2014). Children who do not experience intact homes, combined with maltreatment, tend to suffer from attachment issues long into their adult life (Cicchetti & Banny, 2014). Furthermore, there is a perceived imbalance of power between victims of trauma and their caregivers (Chapman, 2017). Through the mutual sharing of lived experiences, educators can build strong relationships that enable the survivors of trauma to feel validated in their emotional responses.

Empowerment

Schools that operate under the TIC model recognize the importance of empowering trauma survivors to regain the hope of trust, connection, and autonomy (Levenson, 2017). Instead of identifying behavior as a problem, educators must begin to see behavior as a solution. For caring educators in a TIC school, what the child experienced is more important than how the child responded. The trauma-informed approach is not a one size fits all model. It is a process that enables all people affected by trauma to learn to reshape the world around them so that they can cope and recover (SAMHSA, 2015). The goal is to convert victims of ACEs into survivors of trauma so that the child feels empowered to experience success and failure without allowing the experiences to label the child.

Although there are many strategies and tools for implementing trauma-informed care, the most significant challenge rests with the social environment of the general education teachers (Brunzell et al., 2018; Luke & Groshe, 2018). Teacher attitudes change based on their feeling of efficacy and general location. Studies have shown that negative teacher attitudes can be a significant barrier for inclusive practices and professional development (Hu et al. 2016; Vaz et al. 2015; Vroey, Struyf, & Petry 2016). Although the Individuals with Disabilities Act (IDEA) does not specify what the least restrictive environment is, many educational leaders interpret it to mean that educators should include all students in general education as much as possible (Morin, n.d.).

Teacher Effectiveness

For schools to be impactful, they need effective educators. There are no known studies that successfully link teacher evaluations with positive student outcomes. RAND Corporation attempted to field a study that improved teacher evaluations and student outcomes (Stecher et al.,

2019). The study failed to link the two. Although the study found that teachers were more effective (98%), student test scores declined (Stecher et al., 2019, p. 7). The study included three public school districts and four charter school systems from the east coast to the west coast of the United States. The researchers categorized teacher compensation, educational levels, and the potential to evaluate teacher effectiveness. Administrator evaluations included measurable observations and evidence-based practices (Campbell, 2010. However, despite reports of improved teacher effectiveness, student graduation rates and test scores declined (Stecher et al., 2019). Researchers in the study theorized that leaders in the study might not have implemented the new policies with fidelity, that state and local budgets may have put a strain on validity, and that using teacher evaluations for high stakes promotions created conflicts. In other words, there is no known link between administrator evaluation of teacher effectiveness and student success.

On the contrary, educational leaders do know that effective teachers have a significant impact on learning (Chetty et al., 2014; Kim et al., 2018; Zee & Koomen, 2016). Student test scores and progress are clear indicators for teacher effectiveness (Gul, 2014; Shaukat & Iqbal, 2012; Tai, Hu, Wang, & Chen, 2012). Teachers have argued that using student data to evaluate the effectiveness of teachers is unfair because of the starting point of the students, which these teachers educate (Tai, Hu, Wang, & Chen, 2012). Some students may make significant gains, but their starting point was so low that the increases do not equate to the artificial standards set by the state or locality. Other teachers argue that some students enter the course with such a high ability that the gain in achievement appears statistically insignificant (Shaukat & Iqbal, 2012). By contrast, there is research that points to the consequences of ineffective teaching (Chetty et al., 2014).

One of the ways to evaluate or predict teacher effectiveness is to use tests that assess teachers' self-efficacy (TSE) and student outcomes (Sezgin & Erdogan, 2016; Shahzad & Naureen, 2017; Tschannen-Moran & Hoy, 2007; Yoo, 2017). At its most basic level, TSE has a positive correlation with attitude, behavior, and test scores (Tschannen-Moran & Hoy, 2007). On a deeper level, TSE may even predict student outcomes. Rather than evaluate educators, which can be problematic, school systems should evaluate cultures and climates to predict student achievement (Finkelhor, Turner, Shattuck, & Hamby, 2013; Heim, Ajzen, Schmidt, & Seddig, 2018; Michael-Chadwell, 2011). The current study evaluates what impact if any, a climate of trauma-informed care (TIC) has on efficacy. Since TSE is closely linked to student outcomes, TIC may have a significant impact (Brunzell et al., 2018; Luke & Groshe, 2018; Tschannen-Moran & Hoy, 2007; Zirkel, 2018; Peterson, & Zakrisson, 2016).

Teacher Self-Efficacy

Student outcomes bear close links to teachers' sense of self-efficacy (Bandura, 1977). Teachers who report high levels of self-efficacy, typically report positive experiences in all areas of education, including special education (Bandura, 2002; Gul, 2014; Kuyini & Desai, 2007; Sharp Donahoo, Siegrist, & Garrett-Wright, 2017). These efficacy scores may predict teachers' intentions and actions (Ajzen, 2002; Bandura, 2002). Low self-efficacy scores show potential for not engaging in an activity, even if a person perceives it as beneficial; however, high scores indicate that the person will likely engage in a behavior, regardless of the challenges associated with the task (Heim, Ajzen, Schmidt, & Seddig, 2018). Even with the challenges implied by the Individual's Disability Education Act (IDEA) of 1990, many teachers are willing to educate students whom they have not been prepared to teach (Heim et al., 2018).

An unintended consequence of the IDEA is that for teachers to be highly qualified, they must have specialized education and behavior certification/ licensure to educate students identified with emotional and social disabilities (VDOE, 2018). Educators no longer must teach their curriculum; they must satisfy the basic, social, emotional, and academic needs of all students (Gul, 2014). Each school has a limited number of specially certified educators in the behavioral, social, and emotional needs of students. According to the Virginia Department of Education (2018), there is a disproportionate number of suspensions due to behavior by students with special needs versus the general population (p. 4). Either teachers of students with disruptive behaviors are not able to control the actions of students, or they believe that they do not have the power to control the behavior (Hallinger, Heck, & Murphy, 2014). Such perceptions may be a result of teacher exhaustion. According to Evers, Tomic, and Brouwers (2004), educators who regularly perceive student behaviors as disruptive often experience high-stress levels themselves (p. 70). Educators may feel a lack of accomplishment or exhaustion, in which they no longer believe they have authority (efficacy) over the learning environment (CDC, 2019; Chetty et al., 2014; Hattie, 2014).

Exhaustion is problematic because efficacy and teacher effectiveness are intimately connected (Hattie, 2014; Tschannen-Moran & Hoy, 2007). Highly competent educators consistently produce students who earn 15-20% more than their peers (Chetty et al., 2014; Kim et al., 2018; Zee & Koomen, 2016). If educators continue to teach in environments where they no longer feel effective, the results may be devastating. In a longevity study completed in 2014, Chetty, Friedman, and Rockoff (2014) discovered that students who learned in classrooms with ineffective teachers for two consecutive years were never able to recover from the setbacks

caused by those two ineffectual years (p. 2603). Thus, constant monitoring of teacher effectiveness or efficacy is imperative to student success (Kim et al., 2018).

The costs of ongoing professional development may limit some districts' ability to offer opportunities for professional growth (Darling-Hammond, 2015). Even for the regions that do provide many opportunities to grow and learn, research suggests that educational levels and experiences are not reliable predictors of student achievement (Goldhaber et al., 2017). Some researchers agree with Hattie (2014) on the impact of teacher self-efficacy (TSE). They believe that one of the most impactful factors in student achievement is teacher self-efficacy (Sezgin & Erdogan, 2016; Shahzad & Naureen, 2017; Tschannen-Moran, & Hoy, 2007; Yoo, 2017).

Teacher Self-Efficacy and Classroom Management

Zee and Koomen (2016) found that there is a lack of literature that binds quality practices in the classroom with teacher self-efficacy (TSE) (p. 984). Although there is a lack of connected research, there is a need for educators to understand how their perceptions impact their teaching style (Kim et al., 2018; Tschannen-Moran & Hoy, 2007). Many researchers agree that the learning environment impacts student-teacher relationships (CDC, 2019; Chuang, Chen, & Chen, 2018; Paul, Modi, & Patel, 2016; SAMHSA, 2019; Tschannen-Moran, & Hoy, 2007; Yoo, 2016). However, understanding the role that TSE plays in relationship building is still worthy of exploration. Teachers who are young or in the middle years of teaching tend to build stronger relationships and develop better classroom management strategies than teachers who are in the last decade of teaching (Poulou, Reddy, & Dudek, 2019). But this is not absolute. According to Poulou, Reddy, and Dudek (2019), teachers of all generations can enhance their educational practices and classroom effectiveness if they are provided the professional development needs at the appropriate time.

Due to increasing reports of low teacher self-efficacy, Shahzad and Naureen (2017) sought to understand the implications of TSE. Using the Teachers' Sense of Efficacy Scale (TSES), developed by Tschannen-Moran and Hoy (2001), the researchers compared teacher efficacy results with tenth-grade student outcomes on a test based on an English textbook (p. 786). The results were consistent with previous studies (Armor et al., 1976; Shaukat & Iqbal, 2012; Tai, Hu, Wang, & Chen, 2012; Gul, 2014) and current studies (Huang, Yin, & Ly, 2019; Poulou, Reddy, Dudek, 2019) on teacher efficacy and student outcomes. There is a significantly positive relationship between TSE and student achievement (Shahzad & Naureen, 2017).

Teacher Self-Efficacy and Student Outcomes

Although many teachers report working in a stressful environment, their ability to cope with stress appears to be more predictive of student outcomes (Herman, Hickmon-Rosa, & Reinke, 2018). Teaching coping skills is possible. Educators can learn these skills through self-reflection and regular monitoring by coworkers and supervisors (Morrison et al., 2015). Strategies that are explored through trauma-informed care interventions may affect teachers' sense of personal ability (Peterson, & Zakrisson, 2016; Tschannen-Moran & Hoy, 2007; Zirkel, 2018). The connection between TSE and student behaviors, attitudes, and achievement is strong (Zee & Koomen, 2016). However, like Zee and Koomen (2016) found, there are not enough studies in the field of efficacy that link student outcomes with teacher perceptions. This could lead to research bias unless more researchers complete studies that affirm or deny the current trend in education philosophy that TSE and student outcomes are intrinsically linked (Zee & Koomen, 2016, p. 989).

Teacher Self-Efficacy and Teacher Psychology

In 2019, Huang, Yin, and Ly published research that suggested that emotional demands and higher job expectations have a positive relationship with teacher self-efficacy (p. 4). The research provided the opportunity to explore whether professional learning environments (PLCs) like TIC schools provide the balance of self-reflection and employee responsibilities to improve TSE, while also meeting the emotional needs of all students (CDC, 2019; Chuang et al., 2018; Morton, 2018; Paul, Modi, & Patel, 2016; Tschannen-Moran, & Hoy, 2007). According to Zee and Koomen (2016), a great deal of literature is available about low morale and low TSE perceptions (p. 986). These studies focus too narrowly on the negative evidence that TSE implies (p. 987). By contrast, more studies like the one conducted by Huang, Yin, and Ly (2019), which focuses on the positive connections to TSE, may provide a greater understanding of what factors affect the psychological well-being of educators (p. 5). Teacher self-efficacy scores can predict teacher happiness, confidence, and retention (Brunzell et al., 2018; Karsenti & Collins, 2013; Zee & Koomen, 2016).

Teacher Self-Efficacy and Intention

Hoy (2000) found a positive relationship between teachers' perception of self-efficacy and the teachers' confidence and willingness to use innovative approaches to learning (Gavora, 2010, p. 19). Teachers who report high self-efficacy scores are more likely to remain in the field of teaching and prepare to improve their teaching (Tschannen-Moran & Hoy, 2001). In a recent study, Joo, Park, and Lim (2014) affirmed that teacher self-efficacy scores, combined with the perception of ease of use and perceived value, have a positive relationship with teachers' intention to implement professional development and training (p. 145). Conversely, low self-efficacy scores, regardless of the perception of ease of use and perceived value, have a negative

relationship with teachers' motivation to implement new and innovative strategies (Bandura, 2002; Brouwers & Tomic, 2003; Hattie, 2014; Hodge et al., 2018). In terms of what teachers may intend to do, the perception of self-efficacy is very important for predicting behaviors (Bandura, 1977; Chuang, Chen, & Chen, 2018; Paul, Modi, & Patel, 2016; Tschannen-Moran, & Hoy, 2007).

In an earlier study about physical education teachers' attitudes towards instructing students with disabilities, Hodge et al. (2018) sought to understand the motivating factors of inclusion education (p. 410). The researchers found three common themes; perception of students, perception of self, and perception of motivation (Hodge et al., 2018, p. 416). The first theme suggested that teachers perceived students with severe disabilities or disruptive tendencies to require more teacher time (p. 417). Second, teachers with broad educational experience reported higher efficacy scores and perceived themselves as highly capable of addressing the needs of all students (p. 419). Third, many teachers were not extrinsically motivated to comply with standards, laws, or policies when working with students with disabilities (p. 421). However, these educators did report that their intrinsic motivations were linked to positive professional development experiences (p. 422).

Summary

Separate settings that isolate learners weaken the education of all students (Chuang et al., 2018; Garcia, 2012). The challenge in school is to provide an educational experience that promotes learning by all stakeholders, including the educators (Downs-Karkos, Shriberg, & Weisberg, 2012). The Special Education label no longer applies to students and teachers. It recognizes practices. Everyone can learn with the correct amount of time and support (Campbell, 2010). Attitude, confidence, and intentions affect the behaviors that shape learning

settings (Downs-Karkos et al., 2012). Even disruptive actions can lead to positive outcomes. Educational administrators want to learn more about how to encourage teachers to be more effective in the classroom (Personal communication, 2018). This causal-comparative study evaluated the impact that trauma-informed environments (TIC) on teacher self-efficacy (TSE), and its ability to predict the behaviors of teachers. If there is a difference among scores, this study can add to the knowledge of teacher attitudes, academic outcomes, and student behaviors. No known study has investigated teacher efficacy for educators who work in a trauma-informed environment. This study examined and analyzed the complexities of the thoroughly explained model. Since teacher efficacy is one of the significant impacts that schools can control (Hattie, 2014), it is a valuable study for both understanding the implications of trauma-informed training and teacher attitudes towards professional development and disruptive students (Personal communication, 2019).

CHAPTER THREE: METHODS

Overview

The recent literature suggests that many educators recognize a need for trauma-informed treatment (Brunzell et al., 2018; SAMHSA, 2019; Schottelkorb et al., 2012). Researchers have suggestions for how to incorporate trauma-informed decisions in education (Caringi et al., 2015; Chapman, 2017; Martin et al., 2017; Sullivan, & Simonson, 2016) to prevent the effects of untreated childhood trauma into adulthood (Evans et al., 2013) and secondary traumatic stress (Hydon et al., 2015; Rojas-Flores et al., 2015). However, there is a gap in the literature on how a trauma-informed environment affects the educators, specifically its influence, if any, on teacher efficacy (Hattie, 2014). Through the lens of the theory of planned behavior (Ajzen, 1985), this causal-comparative study compared the self-reported responses on the Teacher's Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2001) to determine whether there was an interaction or cause-effect relationship (Yoo, 2016) between teacher self-efficacy and a trauma-informed environment (SAMHSA, 2019). This chapter summarizes the specific design, research questions, hypotheses, participants and setting, instrumentation, procedures, and data analyses of this study.

Design

The current study is a non-experimental, causal-comparative design to identify the difference in means between teachers' efficacy in trauma-informed environments versus traditional educational settings. The purpose of causal-comparative designs is to analyze interactions between variables that are independent and dependent (Gall et al., 2007). A causal-comparative study is appropriate for this study because the researcher wishes to compare two groups that differ in their teaching environment (Creswell, 2015), but otherwise have similar

qualities (e.g., same county, curriculum, socio-economics). Creswell (2015) suggested that this type of design is well-suited for education because "researchers cannot often manipulate different conditions" like pedagogy or professional development (p. 295). This research involved a self-report survey to understand teachers' perceptions of self-efficacy. Self-report measures are valid and reliable in research, especially regarding participants' attitudes (Gall et al., 2007). The researcher compared the independent variable of a trauma-informed environment against the dependent variables of perceptions of self-efficacy in instructional strategies, student engagement, and classroom management.

Research Questions

The problem related to this study is that the current literature shows that many teachers still believe that students with disruptive behaviors should be taught in special education classes instead of in general education environments. The purpose of this quantitative study was to determine whether educators who teach in a trauma-informed environment have higher or lower perceptions of efficacy towards students with disruptive behaviors. The research questions are:

RQ1: Is there a difference between middle school teachers' self-reported personal efficacy of *instructional strategies* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments?

RQ2: Is there a difference between middle school teachers' self-reported personal efficacy of *student engagement* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments?

RQ3: Is there a difference between middle school teachers' self-reported personal efficacy of *classroom management* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments?

RQ4: Is there a difference between middle school teachers' overall *self-reported personal efficacy* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments?

Hypotheses

The null hypotheses for this study are:

$H_0 1$: There is no statistically significant difference between middle school teachers' self-reported personal efficacy of *instructional strategies* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments, by evaluating differences of scores on the Teachers' Sense of Efficacy Scale.

$H_0 2$: There is no statistically significant difference between middle school teachers' self-reported personal efficacy of *student engagement* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments, by evaluating differences of scores on the Teachers' Sense of Efficacy Scale.

$H_0 3$: There is no statistically significant difference between middle school teachers' self-reported personal efficacy of *classroom management* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments, by evaluating differences of scores on the Teachers' Sense of Efficacy Scale.

$H_0 4$: There is no statistically significant difference between middle school teachers' overall *self-reported personal efficacy* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments, by evaluating differences of scores on the Teachers' Sense of Efficacy Scale.

Participants and Setting

The target population in this study included 400 teachers drawn from a convenience sample of six middle schools located in three different rural/suburban/urban school districts in Central Virginia and the Shenandoah Valley during the 2019-2020 school year. The sampling included two middle schools from each district, one that was identified as a trauma-informed environment and one that was not. The researcher obtained demographic and statistical data from the Virginia Department of Education (2019). To protect the anonymity of the schools and the districts, each district was labeled with a Greek alphabetic name, and each school was given a pseudonym from the Virginia official seal (see Table 1). Teachers in the schools identified as Virtus, Libertas, and Phoenix received the treatment of the trauma-informed environment.

Table 1

2017-2018 School Demographics

District	School	Enrollment	White	Black	Hispanic	Asian	AGE	AGM	FRME
Alpha		17,272	82.20%	9.70%	5.70%	2.10%			18.30%
	Virtus	1088	74.30%	13.50%	10.70%	1.40%	level 3	level 2	
	Aeternitas	1045	82.70%	10.00%	4.70%	2.10%	level 1	level 1	
Beta		6440	37.70%	10.30%	49.70%	2.90%			29.40%
	Libertas	666	41.60%	7.90%	48.10%	2.20%	level 2	level 2	
	Ceres	707	30.60%	54.60%	11.60%	3.00%	level 2	level 2	
Gamma		6034	80.50%	3.30%	15.40%	0.00%			42.50%
	Amazon	363	81.30%	8.00%	17.60%		level 1	level 1	
	Phoenix	574	76.20%	3.80%	19.50%	.50%	level 2	level 2	

Note: Demographic and achievement data were obtained from the Virginia Department of Education website (2019). AGE= achievement gap in English, AGM= achievement gap in Math and FRME= free and reduced meals eligibility.

For the purpose of this study, a trauma-informed environment included an administrative staff that has attended three trauma-informed training sessions or more (each consisting of five hours of instruction), teachers who have all received at least one trauma-informed training

session of five hours, a dedicated staff member who oversees restorative practices, and monthly

encouragement from the principal for all staff members to consider how educators' actions,

school settings, and previous situations may impact student behavior.

The researcher conducted a convenience sample using six middle schools. Every middle

school teacher from the sample was invited to participate. A total of 178 participants completed

the survey. This number is greater than the minimum number required at α=.05 to achieve "a

medium effect size with a statistical power of .7" (Gall et al., 2007, p. 145). The majority of the

participants reported being female (70.2%). More participants taught in a suburban environment

(N=84) than in an urban environment (N=32). Seventy-three (41%) of the participants taught in

a non-trauma-informed environment, while 105 (59%) did.

The names of each school are pseudonyms derived from the Virginia state seal. In

addition to the general demographics for the schools published by the Virginia Department of

Education (2019), the researcher collected demographic data from the participants in the research

and included those data in the reporting of the findings. To protect anonymity, the researcher

aggregated the responses from the treatment schools into one data set and aggregated the scores

from the control schools into another data set. Results were not delineated by schools because

there was not a statistically significant difference in scores, and keeping the results aggregated

further protected anonymity.

The Alpha district located in Central Virginia had a total student population of 17,272 in

2018. Around 18% of the student population is eligible for free or reduced meals. Thirteen

percent of the student body has disabilities, almost 19% are economically disadvantaged, and

around two percent are English language learners (see Figure 1). Within this school district are

Virtus and Aeternitas.

Students with disabilities (SWD), economic disadvantage (EconDisad), English lanaguage learning (ELL)
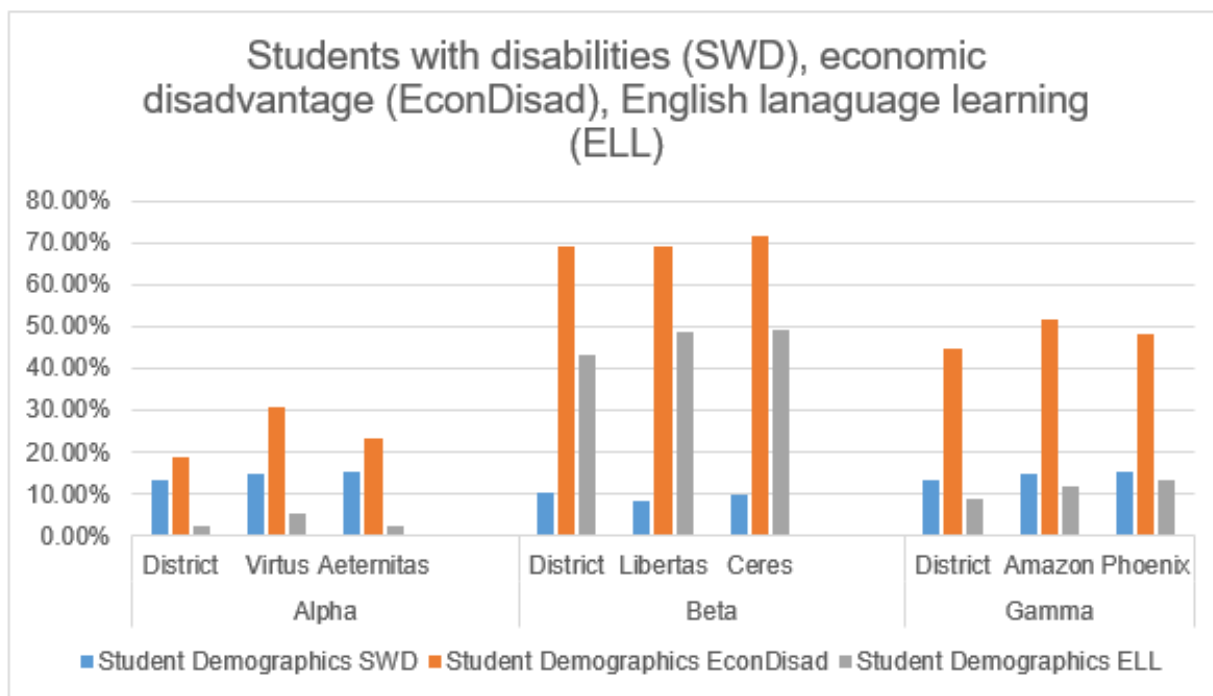
Figure 1. The percentage of students in each district and each school who have disabilities, are economically disadvantaged and are English language learners.

Virtus has a student population of 1088 with 82.2% White, 9.7% Black, 5.7% Hispanic, and 2.1% Asian. Fifty-nine percent of the teachers have a master's degree, 38% hold a Bachelor's, 1% have a doctoral degree, and 2% are listed as provisional or other. Virtus is identified as a Level 3 school in the achievement gap in English (AGE) and as a Level 2 school in the achievement gap in Math (AGM), according to the Virginia Department of Education (2009). Aeternitas has a student population of 1045 with 82.7% White, 10.0% Black, 4.7% Hispanic, and 2.1% Asian. Fifty-two percent of the teachers have a master's degree, and 47% hold a bachelor's (see Table 2). Aeternitas is identified as a Level 1 school in AGE and AGM.

Table 2

Teacher Education and Environment

District	School	Masters	Bachelors	Doctoral	Other	TIC
Alpha		59%	38%	1%	2%	
	Virtus	57%	39%			Yes
	Aeternitas	52%	47%			No
Beta		53%	44%		4%	
	Libertas	50%	46%			Yes
	Ceres	57%	38%	1%		No
Gamma		48%	48%		4%	
	Amazon	63%	38%		-1%	Yes
	Phoenix	54%	44%	2%		No

Note. TIC= trauma-informed environment. The table includes a "yes" in the TIC column for schools that are identified as trauma-informed environments. The degree attainment (Masters, Bachelors, Doctoral, other) are data obtained from the Virginia Department of Education website (VDOE, 2019).

The Beta district, located in Shenandoah, had a total student population of 6,440 in 2018. Around 29% of the student population is eligible for free or reduced meals. Ten percent of the student body has disabilities, almost 69% are economically disadvantaged, and around 43% are English language learners. Within this school district are Libertas and Ceres. Libertas has a student population of 666 with 41.6% White, 7.9% Black, 48.1% Hispanic, and 2.2% Asian (Figure 2). Fifty percent of the teachers at Libertas has a master's degree, 46% hold a bachelor's, and 4% are listed as provisional or other. Libertas is identified as Level 2 in the achievement gap in English (AGE) and the achievement gap in Math (AGM).

Ceres has a student population of 707 with 30.6% White, 54.6% Black, 11.6% Hispanic, and 3.0% Asian. Fifty-seven percent of the teachers have a master's degree, 38% hold a bachelor's, and 1% obtained a doctoral degree. Ceres is identified as a Level 3 school in AGE

and a Level 2 school in AGM. Table 3 shows the achievement gaps for Ceres and Libertas in

Math and English.

Table 3

*Level Rating of Achievement Gaps in Math and English by School*

District	School	AGE	AGM
Alpha	Virtus	level 3	level 2
	Aeternitas	level 1	level 1
Beta	Libertas	level 2	level 2
	Ceres	level 3	level 2
Gamma	Amazon	level 1	level 1
	Phoenix	level 2	level 2

Note. The achievement gap in English (AGE) and the achievement gap in mathematics (AGM)

refer to the Virginia Department of Education's assessment of differences in average mean

scores among total students, students with disabilities, English language learners, and minority

students (VDOE, 2019). Level 1 indicates that the gap is within an acceptable range, Level 2

indicates one area of concern, and Level 3 indicates two or more areas of concern (VDOE,

2019).

The Gamma district, located in Shenandoah, had a total student population of 6,034 in

2018. Around 42.5% of the student population is eligible for free or reduced meals. Thirteen and

one-half percent of the student body has disabilities, almost 45% are economically

disadvantaged, and around 9% are English language learners. Within this school district are

Amazon and Phoenix. Amazon has a student population of 363 with 81.3% White, 0.8% Black,

and 17.6% Hispanic (see Figure 2). Sixty-three percent of the teachers have a master's degree,

38% hold a bachelor's, and -1% are listed as other. Amazon is identified as Level 1 School in

AGE and AGM. Phoenix has a student population of 574 with 76.2% White, 3.8% Black, 19.5%

Hispanic, and 0.5% Asian (see Figure 2). Fifty-four percent of the teachers have a master's

degree, 44% hold a bachelor's, and 2% obtained a doctoral degree. Phoenix is identified as a

Level 2 school in achievement gaps in Math and English.
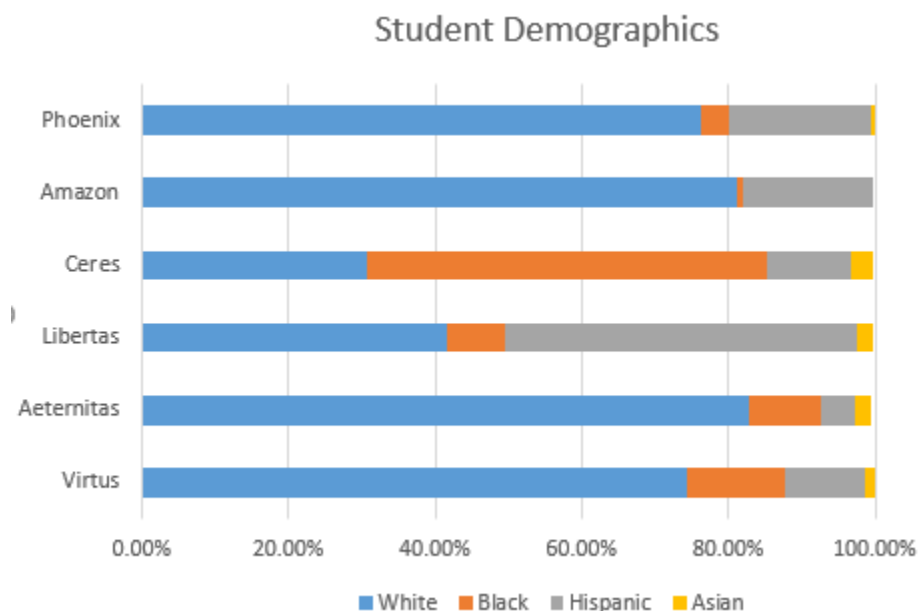
Figure 2. This figure illustrates the demographic populations by ethnicities. In Ceres, the

majority of the students are Black. In Libertas, the majority of the students are Hispanic. In other

schools, the majority of the students are White.

The setting of this study included school districts that support students who live in rural,

suburban, and urban service areas. All the schools serve students who live in each of the

aforementioned areas, but the school districts have strong skews to one of the specific regions.

Veritas and Aeternitas mostly serve students in an urban setting. The average population density

is 2999 per square mile. Amazon and Phoenix have an average population density of 1367 per

square mile and are considered to be suburban schools, according to the 2010 US Census (Data

USA, 2018). Since Libertas and Ceres have a population density of 221 per square mile and

have considerable distances (5-20 miles) to urban amenities, they are identified as rural schools. Only two schools, Amazon (N=5) and Ceres (N=9), had single-digit participation.

Instrumentation

The instrument for this study, Teachers' Sense of Efficacy Scale (TSES), was designed and tested by Tschannen-Moran and Hoy (2001). This tool was developed after conducting research on previous measures and conducting three independent studies to improve its effectiveness. The validity and reliability standards for this instrument are available in this section. The researcher focused on three factors of efficacy. They are instructional strategies, classroom management, and student engagement. This tool directly relates to the null hypothesis, which questions whether the implementation of a trauma-informed environment intervention plan impacts or correlates to teacher self-efficacy. With permission from the developer, the researcher gathered data from a Likert-scale of questions ranging from one to nine. This type of data collection relates to the binomial statistic class (normal theory), potentially limiting the strength and type of procedures in the analysis (Fontanella, 2008). In some psychometric literature, Likert scales appear to fall into various classifications.

Researchers debate whether Likert scales, such as the one in this study, are interval or ordinal (Ferrando, 1999). Newman (2003) contended that well developed Likert scales are interval because the distances between each scale are equal to the next (p. 1). Researchers regularly use Likert scales in interval procedures, but they attempt to ensure that the number of points on the scale is five or greater since smaller scales typically depart from the assumption of normalcy (Fontanella, 2008). There is evidence in the literature that the distance between the intervals is equal, normal, and so commonly tested that many researchers no longer include the findings in studies (Ferrando, 1999; Mircioiu & Atkinson, 2017; Padilla & Divers, 2013).

Newman (2003) suggested that researchers identify dependent variables with levels greater than three as "continuous" (p. 2) and the rest as "categorical (p. 3)." However, a departure from the assumption of normalcy, even if severe, may not have a significant impact on Type I and Type II errors (Jaccard & Wan, 1996).

Therefore, the researcher can safely assume that Likert scales, like the one in this study, have equal spacing between intervals and warrant the use of normal theory statistics (Fontanella, 2008). The Teachers' Sense of Efficacy Scale (TSES) is suited for this study because the results are valid (Cronbach's alphas of .84, instruction, .79, management, and .85, engagement) and the scores are reliable (.94, long test, and .90, short test). The researcher used the long version of the TSES because it offers opportunities to study the education setting deeper than the short version.

This instrument consists of three-factor headings that are subdivided into eight questions for 24 questions. The teachers responded to a Likert-like scale with responses ranging from 1 (none at all) to 9 (a great deal). Also, there were additional anchors placed at 3 (very little), 5 (some degree), and 7(quite a bit). The range of scores possible for this study is 24 (lowest) and 231 (highest). A higher score indicates greater teacher efficacy. Thus, a score of 24 to 93 (an average score of 3.9 or less) was considered low, and a score of 162 to 231 was regarded as high (an average score of 6.75 or more).

To reduce bias from peer pressure, the researcher administered the instrument through the district/school email server. The instructions encouraged the teachers not to discuss the questions with their peers. The survey took place near the end of the first quarter. At this point in the year, teachers have had enough time to determine whether any of their beliefs about effective teaching are correct (e.g., "If I do this, then the students will…"). It also gave the teachers enough time to get into a groove of teaching before expressing their opinions about their

abilities. The window for participation in the online survey was from Sunday through Sunday

from three weeks. The researcher invited the teachers to participate through three emails and a

weekly bulletin (that began one week before the questionnaire). Based on previous reading of

questionnaires like this, the researcher believed that the test would take about 5-10 minutes

(Tschannen-Moran & Hoy, 2001). In reality, the average per completed survey was four minutes

per participant or 3-5 minutes.

Procedures

After securing district and school approvals, the researcher applied for the Internal

Review Board (IRB) approval (see Appendices A & B). Following the IRB approval, and with

district approval (see Appendices C & D), the researcher obtained permissions from the

principals in the schools and actively recruited participation by sending a recruitment email to

the principal, who shared it with the teachers (see Appendix E).

The researcher provided a digital letter outlining the purpose of the research and asked

the school principals to distribute the letter to the teachers either in print or digital before the start

of collecting data (see Appendix F). The letter explained that the research has no known adverse

consequences and that all information is confidential. All responses were anonymous. The letter

informed the teachers that they could elect to stop participating at any time. The instrument was

available online and in print, but none of the participants elected to complete the print version.

The researcher called each principal and offered to administer the survey in person, but all of the

principals chose to conduct the survey through school-wide email (see Appendix G). The email

included the instructions, the link to the survey, and the informed consent agreement (see

Appendices H & I). The teachers who agreed to participate read the consent agreement and

completed the survey (instrument). Since this was an anonymous survey, the researcher did not need to collect signed consent agreements.

The researcher stored the data in a digital spreadsheet that allowed the researcher to code, organize, and analyze the data easily. Upon receiving the data, the researcher immediately coded the results to protect anonymity so that no published work would make the schools or their teachers identifiable. The study did not include any personally identifiable information. The researcher stored all digital records on a personal password-protected laptop and kept all data private. The laptop is always in the researcher's possession or securely locked away.

The online survey did not ask for or collect personal information. To ensure the integrity of the study, the researcher will maintain the records for three years after the publishing of the results on a password protected laptop. The researcher immediately deleted or otherwise destroyed all data that was not pertinent so that there was no way to identify any school or school employee. Three years after the results are published, the researcher will permanently delete all digital data (U.S. Department of Health & Human Services, 2018).

The data in the study included demographic information as well as Likert-scaled responses. Therefore, each respondent had a number that uniquely identified the cases of responses but not the respondent in any identifiable way. Each school had a unique pseudonym. The researcher coded the nominal data numerically to easily organize, arrange, and rearrange groups and subgroups to analyze the data. The Likert-scale survey results were coded low to high with the number 1 representing responses of "not at all" and number 9 representing "a great deal." Since the composite variables are greater than five (nine for this survey), the scores are reliable (Gay & Airasian, 2003). The researcher compiled all the data in tables and graphs to use for interpretation in the study.

Each school received a thank you note upon the completion of the survey. The principals and the school board members received emails, thanking them for their acceptance of the research. After the study, the researcher emailed a typed thank-you note to the superintendents. Furthermore, the researcher will provide copies of the research (without any personally identifiable information) to the participating school divisions through their assigned designees. No researcher will not publish the data in a way that makes school districts, schools, or school employees identifiable.

The treatment groups in this study are school environments that recognize that trauma has an impact on behavior and that such behavior is changeable. These treatment groups have an administrator that oversees trauma-informed best practices and a behavioral specialist who offers routine interventions. The school administrators have organized at least three trauma-informed training sessions for the teaching staff and have attended specialized training and intervention activities themselves. The schools offer behavior intervention during in-school suspension (ISS) and proactive recognition of trauma-based behaviors and treatment plans through classroom behavior routines and activities. The schools also provide special literature in the library that addresses suicide, maltreatment, and stress. Trauma-informed environments provide awareness to the entire school community about the impact and effects of trauma, trauma triggers, and behavior modification.

Data Analysis

The null hypotheses for this study are:

$H_0 1$: There is no statistically significant difference between middle school teachers' self-reported personal efficacy of *instructional strategies* for educators who teach in a trauma-

informed environment versus educators who do not teach in trauma-informed environments, by evaluating differences of scores on the Teachers' Sense of Efficacy Scale.

$H_0 2$: There is no statistically significant difference between middle school teachers' self-reported personal efficacy of *student engagement* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments, by evaluating differences of scores on the Teachers' Sense of Efficacy Scale.

$H_0 3$: There is no statistically significant difference between middle school teachers' self-reported personal efficacy of *classroom management* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments, by evaluating differences of scores on the Teachers' Sense of Efficacy Scale.

$H_0 4$: There is no statistically significant difference between middle school teachers' overall *self-reported personal efficacy* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments, by evaluating differences of scores on the Teachers' Sense of Efficacy Scale.

Descriptive statistics of years of teaching, gender, subject matter, education level, and certification show that this data has generalizability to the target population. These descriptive analyses aid researchers in understanding the overview of the data and its context or setting (Gall et al., 2007). The researcher analyzed the data using a one-way multiple analysis of variance (MANOVA). The MANOVA is appropriate because there are three dependent variables of self-efficacy and one independent variable with two groups: a trauma-informed environment and the non-trauma-informed environment. The researcher did not find any statistical significance. Therefore, no further analysis took place. To control for any Type 1 error, the researcher conducted a Bonferroni correction for multiple comparisons and an *F* test (Gall et al., 2007).

The MANOVA helped to speed up the research analysis (since there are so many sub-variables) and was appropriate because it is a robust tool for causal-comparative designs (Gall et al., 2007).

The researcher conducted a box and whiskers plot to examine if outliers were present. The researcher conducted Kolmogorov-Smirnov tests to examine the assumption of univariate normality. The researcher examined the assumption of multivariate normality and the presence of multivariate outliers using Mahalanobis distance. The assumption of linearity, which assumes that the relationships among pairs of the dependent variables are linear, was examined with scatter plots. Pearson correlation coefficients between the pairs of dependent variables were also calculated to ensure no multicollinearity. The researcher conducted the Levene's test to test for the assumption of homogeneity of variance. Finally, the researcher assessed the assumption of the homogeneity of variance-covariances using Box's test of equality of covariance matrices. In this study, there are three dependent sub-variables of self-efficacy. Overall, the researcher wanted to know whether a trauma-informed environment causes a change in the perception of self-efficacy among middle school teachers, but deep analysis may prove to aid other researchers. Since nonrespondents represent limitations (Fontanella, 2008), the researcher made every effort to collect demographic data from respondents and non-respondents.

CHAPTER FOUR: FINDINGS

Overview

The purpose of this causal-comparative study was to determine whether a trauma-informed environment had an impact on the self-reported self-efficacy of middle school teachers in instructional strategies, student engagement, and classroom management. Using one-way multivariate analysis of variance (MANOVA), this study investigated the independent variable of the teaching environment and considered its relationship to middle school teachers' sense of self-efficacy. The researcher collected data from the Teachers' Sense of Efficacy Scale (TSES), in which 178 teachers participated. In this chapter, the researcher lists the research questions and null hypotheses, explains the demographic statistics, discusses the assumption tests, and describes the results of the analyses.

Research Questions

RQ1: Is there a difference between middle school teachers' self-reported personal efficacy of *instructional strategies* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments?

RQ2: Is there a difference between middle school teachers' self-reported personal efficacy of *student engagement* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments?

RQ3: Is there a difference between middle school teachers' self-reported personal efficacy of *classroom management* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments?

RQ4: Is there a difference between middle school teachers' overall *self-reported personal efficacy* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments?

Null Hypotheses

$H_0 1$: There is no statistically significant difference between middle school teachers' self-reported personal efficacy of *instructional strategies* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments, by evaluating differences of scores on the Teachers' Sense of Efficacy Scale.

$H_0 2$: There is no statistically significant difference between middle school teachers' self-reported personal efficacy of *student engagement* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments, by evaluating differences of scores on the Teachers' Sense of Efficacy Scale.

$H_0 3$: There is no statistically significant difference between middle school teachers' self-reported personal efficacy of *classroom management* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments, by evaluating differences of scores on the Teachers' Sense of Efficacy Scale.

$H_0 4$: There is no statistically significant difference between middle school teachers' overall *self-reported personal efficacy* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments, by evaluating differences of scores on the Teachers' Sense of Efficacy Scale.

Descriptive Statistics

One hundred and seventy-eight teachers completed the survey. Among the teachers' reports, 105 (59 %) taught in a trauma-informed environment, and 73 (41%) did not. Table 4

shows the distribution of participants by school location. One-hundred and twenty-five (70.2%)

participating teachers were female, and 41 (23%) were male, while 12 (6.7%) chose not to

identify their gender. The participants were almost even in years of experience 6-15 (N=70) and

more than 16 (N=73) with less than 19% (N=34) reporting less than five years of experience, and

one not responding to this question. The majority of the participants were fully licensed (*n*=165,

92.7%). Table 5 displays the descriptive statistics for the dependent variables of instruction,

engagement, and management disaggregated by the two groups of the independent variable of

the trauma-informed environment (TIC) and non-TIC.

Table 4

Participants by Location

Location	Participants	Percent
Suburban	84	47.20%
Rural	62	34.80%
Urban	32	18.00%
Total	178	100.00%

Table 5

Average Score per Factor

Factor	School	Mean	SD	N
Student	Trauma-Informed	6.2964	0.98047	105
Engagement	Non Trauma-Informed	6.4007	0.94211	73
	Total	6.3392	0.9636	178
Instructional	Trauma-Informed	7.0595	0.99338	105
Strategies	Non Trauma-Informed	7.1644	0.927	73
	Total	7.1025	0.96543	178
Classroom	Trauma-Informed	6.6595	1.0909	105
Management	Non Trauma-Informed	6.863	1.12233	73
	Total	6.743	1.10531	178

Note. The total range for each factor is one (not at all) to nine (a great deal) in terms of efficacy.

The researcher calculated reliability analyses for each scale used to measure self-efficacy for the current data set. For this analysis, the researcher chose to use the Cronbach's alpha coefficient because this research relies on responses to a survey which are like a test and the "Cronbach's alpha is a widely used method for computing test score reliability" (Gall et al., 2007, p. 202). The reliability score ranges from 0.00 (not reliable) to 1.00 (completely reliable). The Reliability predicts the likelihood that the results in the research reflect the actual intentional responses of the participants. In general, an alpha score of .70 is the minimal needed for the research to be considered reliable, and scores between .8 and .9 are considered to have strong reliability (Gall et al., 2007 Warner, 2013). Reliability scores between .9 and 1 are not desirable because they may be measuring the same phenomenon and, therefore, could be considered redundant (Hair et al., 2017). The student engagement scale demonstrated excellent reliability with a Cronbach's alpha coefficient of .84. The results for the classroom management scale indicated excellent reliability with a coefficient of .88. The reliability for the instructional strategies scale was strong, with a Cronbach's alpha coefficient of .83.

Results

The researcher used a one-way multiple analysis of variance (MANOVA) to test whether there was a statistically significant difference between self-reported self-efficacy scale scores of teachers who teach in trauma-informed environments and teachers who do not teach in trauma-informed environments. The independent variable of a trauma-informed environment was compared against the dependent variables of perceptions of self-efficacy in instructional strategies, student engagement, and classroom management. This section represents the analyses conducted to test the assumptions in this research and the analyses of the research hypotheses.

Assumption Tests

    Assumption #1: Outliers. To test for any univariate outliers, the researcher used a box and whisker plot (Figure 3). The assumption is that the data for the dependent variables are normally distributed (Warner, 2013). Outliers can threaten this assumption by weakening the power of the test if the distribution is thick-tailed or skewed too much in one direction (Green & Salkind, 2014). When researchers find outliers, they can ignore them (if they believe that the outliers do not significantly impact the test), remove them, or transform the outliers to conform with the normally distributed data. Weisberg (2014) and Warner (2013) suggested that for some analyses, researchers may report the results of both approaches (i.e., with and without the outlier and with or without transformations). There were three outliers (case 1 for student engagement and classroom management and case 2 for instructional strategies). After conducting tests with and without the outliers, the researcher did not see any significant difference. Therefore, the researcher continued the research with the outliers unchanged.
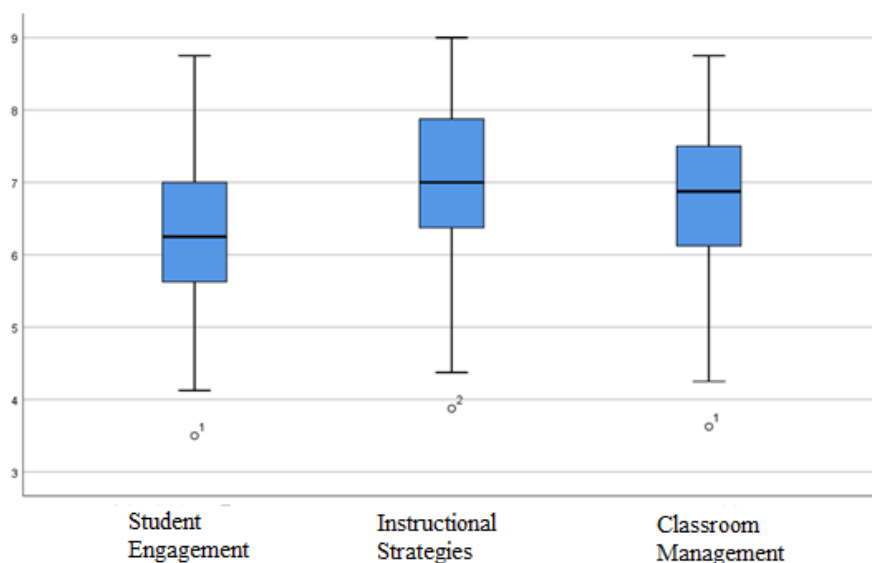
Figure 3. Box and whiskers graph of self-efficacy scores in student engagement, instructional strategies, and classroom management. Exactly one outlier occurs in each of these factors.

The researcher examined the assumption of multivariate normality and extreme outliers using Mahalanobis distance. In addition to univariate outliers, researchers must test the one-way MANOVA for multivariate outliers to determine whether there are any unusual combinations of scores among the dependent variables. Researchers can use the Mahalanobis distance to determine whether there are violations to this assumption. To test whether the value of a calculated Mahalanobis is of concern, the researcher compared the value against a chi-square distribution with degrees of freedom equal to the number of dependent variables (Warner, 2013). In this study, a Mahalanobis distance cut-off score must not exceed 16.27 because there are three dependent variables (IS, CM, SE). The highest Mahalanobis distance value is 11.209, which does not exceed the critical value of 16.27 (Tabachnick & Fidell, 2007). This assumption was tenable.

Assumption #2: Normality. Student engagement and classroom management scores were not normally distributed for the middle school teachers who were not teaching in a trauma-informed environment, as assessed by Kolmogorov-Smirnov test ($p > .05$; see Table 6). All other scores across each group were normally distributed. Via inspection of the boxplots (see Figure 3), there were two univariate outliers in the data with values higher than 1.5 box-lengths from the box (case 1 and 2). As Weisberg (2014) and Warner (2013) suggested, some analyses are robust against minor violations in normality, and results may be similar with and without the outliers. That was the case with this data set.

Table 6

Significant Tests of Normality

Factor	School	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	Df	Sig.
Student Engagement	Trauma-Informed	0.078	105	0.12	0.99	105	0.627
	Non Trauma-Informed	0.109	73	0.032	0.971	73	0.094
Instructional Strategies	Trauma-Informed	0.072	105	.200[*]	0.986	105	0.352
	Non Trauma-Informed	0.069	73	.200[*]	0.971	73	0.088
Classroom Management	Trauma-Informed	0.078	105	0.125	0.984	105	0.249
	Non Trauma-Informed	0.113	73	0.022	0.954	73	0.009

Note. *This is a lower bound of the true significance.

Results were similar with and without the outliers, and with and without transformations. Lund and Lund (2019) noted that the one-way MANOVA is a robust test which can withstand minor normality violations and tolerate non-normal (kurtotic or skewed) data with minimal effect to a Type I error, but when the group sizes are small, "platykurtosis can have a profound effect" (p. 3). Platykurtosis is a situation in which the standard bell curve is flatter at the top than expected (p. 3). It is important to note that the MANOVA is reasonably robust to modest violations of normality when the sample size is at least 20 in each cell (Tabacknick & Fidell, 2007, p.251). Thus, the researcher decided to include the outliers in the results and continue with the MANOVA. The minor violations in normality did not significantly affect the results.

Assumption #3: No Multicollinearity. Pearson correlation coefficients were calculated and demonstrated that each pair of the dependent variables were positively, significantly associated (see Table 7). Dependent variables must moderately correlate with each other in a MANOVA. If the correlations are too low or not significant, the researcher should conduct

separate one-way ANOVAs for each dependent variable. In this study, the researcher did not

find a reason to conduct ANOVAs and decided to perform the one-way MANOVA to test for

overall significance.

Table 7

Correlation Matrix

Factor	Correlation	Student Engagement	Instructional Strategies	Classroom Management
Student Engagement	Pearson Correlation	1	.613**	.693**
	Sig. (2-tailed)		0	0
	N	178	178	178
Instructional Strategies	Pearson Correlation	.613**	1	.572**
	Sig. (2-tailed)	0		0
	N	178	178	178
Classroom Management	Pearson Correlation	.693**	.572**	1
	Sig. (2-tailed)	0	0	
	N	178	178	178

Note. **Correlation is significant at the 0.01 level (2-tailed).

Multicollinearity is an issue when correlation coefficient values are above significant and

high, .9 (Tabachnick & Fidell, 2007). When multicollinearity exists, it is usually preferable to

collapse the variables into a single measure. Ideally, researchers want the dependent variables to

correlate with each other moderately. The researcher calculated Pearson correlation coefficients

between the dependent variables to determine if any relationships were too strongly correlated.

The researcher noted that each pair of dependent variables were moderately to highly, positively

associated (.572 to .693). However, no correlation coefficients exceeded the critical value of .9

(Tabachnick & Fidell, 2007). Therefore, there was no multicollinearity.

Assumption #4: Linearity. The assumption of linearity assumes that the relationship among variables is linear. That is, the data has a pattern of predictability. Deviation from the linear relationship compromises the statistical power of the research data (Warner, 2013). The researcher used scatter plots to test this linear relationship between the dependent variables. The presence of a straight line indicates linearity. A curvilinear line would suggest that the assumption is not tenable. The scatter plots show cigar-like (linear) shapes, meaning that there was a linear relationship between the pairs of dependent variable scores in each group (see Figure 4). The scatter plots also indicate that the relationship among the dependent variables is positive and weak since lines progress upward from left to right. Many of the data points are far from one another. The assumption of linearity is tenable.
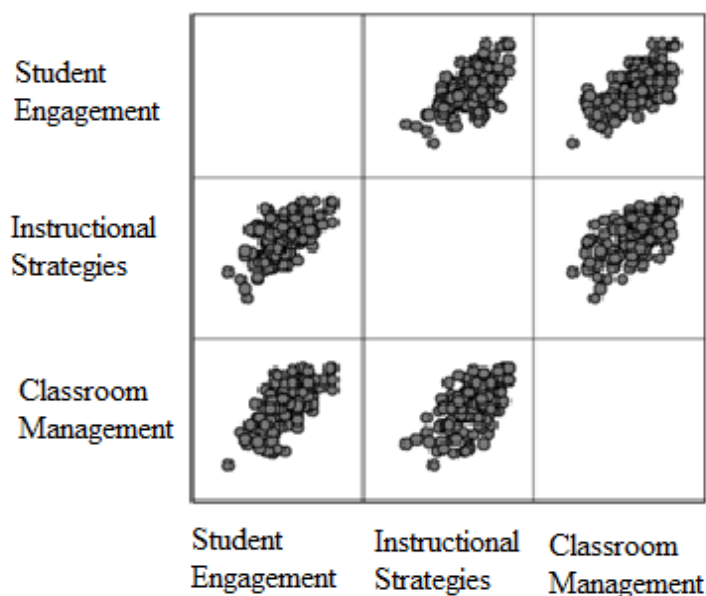
Figure 4. The scatterplots indicate a positive, weak linear relationship among the dependent variables of student engagement, instructional strategies, and classroom management.

Assumption #5: Homogeneity of Variance. The one-way MANOVA assumes that there are equal variances between the groups of the independent variable for each dependent variable

or that the population distributions have the same variances (Warner, 2013). Levene's Test of

Equality of Error of Variances tests the assumption of homogeneity of variances. If the test

showed a violation of this assumption, the researcher would use modified statistical procedures

(e.g., Welsh or Brown-Forsythe). When evaluating the variance using Levene's Test for Equality

of Variance, a significance level larger than .05 indicates that equal variance can be assumed. A

significance level less than .05 means that variance cannot be assumed; that is, the assumption is

not tenable. Assessed by Levene's Test of Homogeneity of Variance, the homogeneity of

variances assumption was tenable for all the dependent variables (Student Engagement, p = .904,

Instructional Strategies, p = .486, and Classroom Management, p = .978). Table 8 illustrates the

Levene's Test.

Table 8

Levene's Test of Homogeneity of Variance

Factor	Based on	Levene Statistic	df1	df2	Sig.
Student Engagement	Mean	0.015	1	176	0.904
	Median	0.062	1	176	0.803
	Median and with Adjusted df	0.062	1	175.762	0.803
	Trimmed Mean	0.024	1	176	0.877
Instructional Strategies	Mean	0.488	1	176	0.486
	Median	0.484	1	176	0.488
	Median and with Adjusted df	0.484	1	175.555	0.488
	Trimmed Mean	0.522	1	176	0.471
Classroom Management	Mean	0.001	1	176	0.978
	Median	0	1	176	0.992
	Median and with Adjusted df	0	1	174.957	0.992
	Trimmed Mean	0.001	1	176	0.976

Note. This assumption tests the null hypothesis that the error variance of the dependent variable

is equal across groups.

Assumption #6: Homogeneity of Variance-covariance. The researcher assessed the assumption of the homogeneity of variance-covariances using Box's test of equality of covariance matrices. This test assumes that all dependent variables have an equal level of variability among all data sets. An equal distribution means that the data reflects what researchers would normally expect in standard research, and that one or more data sets do not significantly skew the results. A significance level larger than .05 indicates that equal variance can be assumed. A significance level less than .05 means that variance-covariance cannot be assumed; that is, the assumption is not tenable. The important value is the "Sig." row, which represents the significance level (p-value) of the test. If this test is statistically significant (i.e., p < .05), the data has violated the assumption of homogeneity of variance-covariance. In such an instance, the researcher would weight the data points with the reciprocal of the variance so that the data sets with large variances would have a similar impact as instances with small variances. If the test is not statistically significant (i.e., p > .05), then the research has homogeneity of variance-covariance matrices and has not violated this assumption. The "Sig." value in this study is greater than .05 (p = .259), which indicates that the variance-covariances matrices are equal. The assumption is not violated and was found to be tenable, Box's test M = 7.876, F (6, 163252.208) = 1.287, p = .259.

Hypotheses

Null Hypothesis 4. There is no statistically significant difference between middle school teachers' overall self-reported personal efficacy for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments, by evaluating differences of scores on the Teachers' Sense of Efficacy Scale.

Since the Null Hypothesis 4 represents the overarching MANOVA of the study (overall

self-reported efficacy), the researcher reported the test of this hypothesis first. If this null

hypothesis expressed a statistically significant difference in scores, the researcher would follow

up with an analysis of variance (ANOVA) tests and post hoc analyses. No statistically

significant difference existed between middle school teachers' self-reported personal self-

efficacy, or the combined student engagement, instructional strategies, and classroom

management scores, based on their teaching environment (trauma-informed environment or not

teaching in the trauma-informed environment), Pillai's Trace = .008, $F(3,174)$ = .496, p =.686;

partial η2 =. 008 (see Table 9). While the most commonly recommended multivariate statistic to

use is Wilks' Lambda (Λ) when conducting a MANOVA, the researcher reported Pillai's Trace

because it is more robust and Warner (2013) recommends it when unequal participation is

present across groups. The researcher failed to reject this hypothesis.

Table 9

Multivariate Tests

Effect	Test	Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	0.984	3537	3	174	0
	Wilks' Lambda	0.016	3537	3	174	0
	Hotelling's Trace	60.982	3537	3	174	0
	Roy's Largest Root	60.982	3537	3	174	0
Trauma-Informed	Pillai's Trace	0.008	0.496	3	174	0.686
	Wilks' Lambda	0.992	0.496	3	174	0.686
	Hotelling's Trace	0.009	0.496	3	174	0.686
	Roy's Largest Root	0.009	0.496	3	174	0.686

Null Hypothesis 1. There is no statistically significant difference between middle school

teachers' self-reported personal efficacy of *instructional strategies* for educators who teach in a

trauma-informed environment versus educators who do not teach in trauma-informed environments, by evaluating differences of scores on the Teachers' Sense of Efficacy Scale.

There was no statistically significant difference in instructional strategies scores between the middle school teachers based on the type of school environment in which they teach. The MANOVA did not produce statistically significant results, Pillai's Trace = .008, $F(3,174)$ = .496, p =.686; partial η2 =. 008. Therefore, the research did not warrant a follow-up ANOVA. The researcher failed to reject this hypothesis.

Null Hypothesis 2. There is no statistically significant difference between middle school teachers' self-reported personal efficacy of *student engagement* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments, by evaluating differences of scores on the Teachers' Sense of Efficacy Scale.

There was no statistically significant difference in student engagement scores between the middle school teachers based on the type of school environment in which they teach. The MANOVA did not produce statistically significant results, Pillai's Trace = .008, $F(3,174)$ = .496, p =.686; partial η2 =. 008. Therefore, the research did not warrant a follow-up ANOVA. The researcher failed to reject this hypothesis.

Null Hypothesis 3. There is no statistically significant difference between middle school teachers' self-reported personal efficacy of *classroom management* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments, by evaluating differences of scores on the Teachers' Sense of Efficacy Scale.

There was no statistically significant difference in classroom management scores between the middle school teachers based on the type of school environment in which they teach. The MANOVA did not produce statistically significant results, Pillai's Trace = .008, $F(3,174)$ = .496,

p =.686; partial η2 =. 008. Therefore, the research did not warrant a follow-up ANOVA. The researcher failed to reject this hypothesis.

Post Hoc Tests

One of the ways Warner (2013) suggested following up one-way MANOVAs with separate one-way ANOVAs to determine which variables have a statistically significant effect. One-way ANOVAs are a compilation of test statistics and do not specify which groups are statistically significantly different from other groups (Gall et al., 2007; Green & Salkind, 2014; Warner, 2013). Researchers typically complete post hoc tests to understand the results. These tests indicate to the researcher which groups differ. Since the data in this study met the assumption of homogeneity of variances, the research considered conducting a Tukey's honestly significant difference (HSD) post hoc test. However, the researcher failed to reject the null hypotheses in this study. Therefore, the researcher did not conduct separate one-way ANOVAs, and post hoc tests were not warranted. The researcher did not conduct any further tests.

Final Analysis

To avoid a Type II error due to intercorrelation among the dependent variables, the researcher would have used a Bonferroni correction, which sets the acceptable statistical significance at p<.017(.05/3) instead of the typical p<.05 (Tabachnick & Fidell, 2007; Rovai et al., 2013; Warner, 2013). Since the results for the MANOVA were not statistically significant, the researcher did not conduct separate ANOVAs. There was no statistically significant difference between the mean scores of student engagement, instructional strategies, or classroom management based on the type of school environment in which middle school teachers were teaching. The strength of the relationship between the kind of environment and each of the dependent variable scores was low; type of environment only accounted for .008% (partial η^2) of

the variance of the dependent variable (Cohen, 1969, pp. 278-280). Inspection of the descriptive statistics (see Figure 5) demonstrated that middle school teachers had similar levels of self-efficacy in the areas of student engagement, instructional strategies, and classroom management, irrespective of the environment.
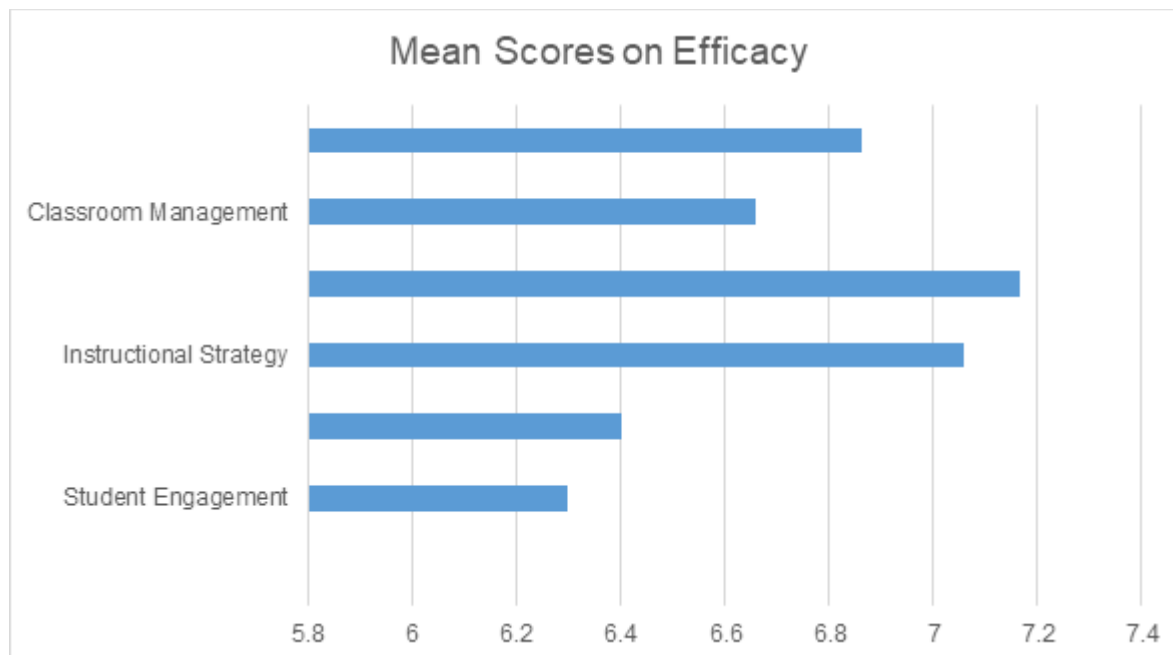
Figure 5. This bar graph shows the results from the Teachers' Sense of Efficacy Scale with the subsections of classroom management, instructional strategies, and student engagement. The top bars in each subsection represent scores from educators who do not teach in trauma-informed environments. The bottom bars in each subsection represent the scores from educators who do teach in trauma-informed environments.

CHAPTER FIVE: CONCLUSIONS

Overview

In this section, the researcher discusses the results of the study, including implications and limitations. Although this study failed to reject the null hypotheses, this research offers value to studies in teacher efficacy and trauma-informed environments, especially since there is little known research on this topic. The final section provides potential future research suggestions.

Discussion

The purpose of this causal-comparative study was to determine the impacts of a trauma-informed environment (TIC) on teacher efficacy towards students with disruptive behaviors. According to Hattie (2014), school leaders can control teacher efficacy. Furthermore, teacher efficacy (TSE) has a positive relationship with student outcomes. Although this study did not report any statistically significant difference in efficacy scores, it does add to the vast knowledge of TIC. The trauma-informed environment did not impact teachers' sense of control in instructional strategies, student engagement, and classroom management when working with students with disruptive behaviors.

RQ1: Is there a difference between middle school teachers' self-reported personal efficacy of *instructional strategies* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments? A one-way MANOVA indicated that a trauma-informed environment has no statistically significant impact on efficacy scores for instructional strategies. This finding supports the findings of Holzberger et al. (2014), who suggested that teacher preparation courses effectively prepare teachers to deliver content. Well-trained educators enter the instructional environment prepared to communicate effectively

with students and create a positive teaching environment (Koura & Zahran, 2017). By comparison, just like it is difficult for educators to show significant gains for high achieving students (Shaukat & Iqbal, 2012), it may also be difficult for researchers to show substantial differences in efficacy scores on instruction for educators since the majority of them receive extensive training on educational delivery (VDOE, 2019)

RQ2: Is there a difference between middle school teachers' self-reported personal efficacy of *student engagement* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments? A one-way MANOVA indicated that a trauma-informed environment has no statistically significant impact on efficacy scores for student engagement. Although teacher efficacy scores can predict student outcomes, many educational leaders rely on student test results to measure teacher effectiveness (Huang, Yin, & Ly, 2019). Such a criterion may influence the teachers' efficacy scores on student engagement. Ajzen and Fishbein (2005) theorized that higher motivation and a sense of behavioral control lead to more behavior completion (Ajzen & Fishbein, 2011). Since the current trend in education is to observe more student engagement instead of student compliance, teacher efficacy scores may remain unchanged because more teachers are focused on student engagement (Dal Santo, 2018).

RQ3: Is there a difference between middle school teachers' self-reported personal efficacy of *classroom management* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments? A one-way MANOVA indicated that a trauma-informed environment has no statistically significant impact on efficacy scores for classroom management. The results of TSE measurements have a strong and positive relationship with classroom management (Huang, Yin, & Ly, 2019; Poulou, Reddy, Dudek,

2019; Tai, Hu, Wang, & Chen, 2012) and student outcomes (Shahzad & Naureen, 2017). The results of this study are consistent with Poulou, Reddy, and Dudek (2019). The number of years as a teacher and the environment of the education setting is not the most significant factor in efficacy scores on classroom management. Regular professional development is a stronger predictor than many other factors (Poulou et al., 2019). Statewide trends in individualized professional development opportunities may have a stronger impact than the setting in which an educator teaches.

RQ4: Is there a difference between middle school teachers' overall *self-reported personal efficacy* for educators who teach in a trauma-informed environment versus educators who do not teach in trauma-informed environments? A one-way MANOVA revealed no statistically significant differences in teacher efficacy between TIC and non-TIC school environments. Mental health leads to considerable discussion in the field of education (VVC, 2019). The results of this study add to that discussion (Monn, Zhang, & Gewirtz, 2018; TDFPS, 2018; White-McMahon & Baker, 2016). Although caregivers for children with many ACEs often experience trauma themselves (White-McMahon & Baker, 2016), some researchers have theorized that educators are fundamentally resilient and will not experience secondary trauma the way other professionals may (Monn et al., 2018). This study showed no statistically significant difference in teacher efficacy scores across three school districts in rural, suburban, and urban settings. Thus, it may indicate that teachers are resilient (TDFPS, 2018), and when teaching students of trauma and multiple ACE scores, educators remain unaffected. Further research about adverse childhood experiences and resilience to trauma may better inform teacher efficacy and the quality of education. Qualitative studies on teacher attitudes towards trauma-informed environments, quantitative studies on what practices teachers implement that are trauma-

informed, and mixed-methods studies on how teacher resiliency scores interact with student achievement will enhance educational leaders' understanding of teacher behaviors and attitudes towards students with disruptive behaviors.

Implications

Results from this study add to the discussion on trauma-informed best practices. Many studies have shown the impact that untreated trauma can have on the adult life of traumatized children (Brunzell et al., 2018; Luke & Groshe, 2018; Peterson, & Zakrisson, 2016; Zirkel, 2018). There are no known studies that research the impact that trauma-informed practices may have on educators in the school community. This study implies that trauma-informed practices and trauma-informed environments do not necessarily have an adverse effect on teachers (Heim et al., 2018). Thus, educational leaders may infer that trauma-informed practices, while significantly positively impacting student life, have no known negative impact on teachers' attitudes and behaviors. Chapman (2017) suggested that teachers have strong resiliency and can tolerate challenging environments.

Another implication of this study is that the trauma-informed environment does not predict teacher behaviors. Since there is no statistically significant difference in scores between environments, the educators may continue behaviors that they believe are valuable regardless of what training they have experienced (Luke & Groshe, 2018; Zirkel, 2018; Peterson, & Zakrisson, 2016; Tschannen-Moran, & Hoy, 2007). In other words, the results of this study may suggest that teachers practice education in their method. Although the administration has deemed the TIC strategies to be valuable and the school district leaders have spent considerable resources on TIC (personal communication, 2019), teachers may continue "business as usual" instead of following recommended "best practices" (Brunzell et al., 2018).

A final implication of this study is that teacher attitudes and behaviors are not unique to individual schools. Instead, statewide mandates may have a much more significant impact on teacher behaviors. If a sample of teachers, like in this study, across a broad region, express similar efficacy scores, it suggests that the area is experiencing the same conditions. Changes in state and national policy may have a more significant impact on teacher burnout, teacher shortage, or teacher attitudes. But, trauma-informed practices have neither positive nor negative effects on teacher behaviors. Trauma-informed environments (TIC), methods, and responses may not be impactful enough on their own to change the teachers' behaviors and attitudes. More research on this topic is necessary for educators to understand the implications of TIC and teacher efficacy fully.

Limitations

There are several limitations to this study. For one, this is not a true experimental study. There was no pretest and posttest to account for differences among means. The researcher is not aware of the conditions in which the teachers completed the survey. There is no way to account for whether the teachers were experiencing a distressful moment or a pleasant moment when completing the survey. Indeed, on any given day, teachers may feel differently about their zone of control. Furthermore, the researcher is not able to determine the adverse childhood conditions of the students in each school or the number of traumatized students. Such knowledge would provide a more thorough understanding of the efficacy scores.

The researcher sent many reminder announcements. A teacher may have responded to the survey more than once. To limit this threat to reliability, the researcher used Survey Monkey, which recognizes whether a specific machine (e.g., phone or computer) has completed the survey and prevents multiple responses from the same unit. It is possible that the participants

(being people of specific habits) used the same device for checking email and responding to surveys, and this threat was abated. However, it is also possible that teachers used more than one device to respond, leaving room for certain limits of validity.

The limited number of responses from some schools may have skewed the results. The researcher did look closely at the differences in scores among the demographic data and specific schools to determine whether there were any significant differences, however small. Yet, the scores appeared consistent among small groups of participants and large groups. However, the sample of participants is not large enough to generalize about the state and national population of middle school teachers. Broadening the pool of participants by including more schools may have improved this limitation.

There is no way to know the motivation of the respondents. It is possible that a more significant portion of highly motivated and confident teachers participated in the survey, excluding the responses of their counterparts. Furthermore, this study does not account for how the students and administrators view the teachers' behaviors. A combination of student, teacher, and administer surveys may give a better context for what the teachers' efficacy scores mean.

Some internal threats include trust and rapport between the researcher and participants. Although the researcher offered to appear in person and explain the study during a staff meeting, all school leaders chose to present the information through electronic mail. Some people do not believe that digital communication, even a survey, is anonymous. Therefore, it is likely that the number of participants is limited to the people who thought that their responses were anonymous or that they would not have received any retaliation from their responses. The opportunity to appear in person and offer a paper option would not have eliminated this threat of trust. Still, it would have provided another avenue for the respondents and offered the researcher a chance to

build rapport. Using digital communication is a challenge. The researcher must use written words to convey trust, and the researcher must trust that the responses are accurate.

Some external threats include requests for participation, discussions among participants, and timing of the study. There is no way for the researcher to know how the invitation to participants was delivered or discussed among the teachers. Staff members may have spoken about this survey and, thereby, encouraged individual educators to participate. Participants who completed the study may have influenced more or less participation by discussing the survey among colleagues. In consideration of this possibility, the researcher included a statement in instructions encouraging participants not to discuss the survey. Timing is another critical element. At some schools, there may have been multiple surveys being sent by many doctoral candidates and research enthusiasts. Considering that there are many colleges and universities between Richmond to Roanoke to Washington, D.C. (the area of study for this research), and the relative closeness to the state capitol and the national capital, it is likely that many schools were inundated with research requests. One school leader did mention this in an electronic mail exchange with the researcher (personal communication, 2019). This external threat could have led to a rushed completion of the survey or participation in the survey limited to educators who believed they had enough time to complete it.

A set of questions or statements (8) that measured the participants' efficacy about how the environment impacted their teaching skills may have enhanced the measurements in this study. For example, sentences like "the professional development at this school have informed my instructional delivery" could have been used to determine whether the school environment impacted teacher efficacy. Another statement may have read, "I can deliver quality instruction because I have worked with students who struggle with discipline." A comment that allowed for

measurement over time may have also benefited this study. A statement that the researcher may have included is, "I am a better instructor this year than I was last year." For the sake of this dissertation, there was not enough time allotted to develop an instrument unique to this study. Therefore, the researcher used an instrument that is already valid and reliable. Although the researcher believes that this instrument is valid and reliable, more research will need to take place to determine whether the Teachers' Sense of Efficacy Scale is a robust instrument for studying the efficacy of teachers who educate traumatized students.

Finally, this study does not have a national, state, or regional comparison for the results. The researcher is not able to determine whether the regional average score is statistically significant over time. Although there was no statistically significant difference in means scores in this study, a greater picture of the region would enhance the results of the current study. Without having a context for what the scores mean for the region, there is no way to confidently determine whether the scores are statistically significant for the field of education. The researcher attempted to find regional efficacy scale results, but none were available. Therefore, there is no way of knowing whether the efficacy of the teachers has changed over time.

Recommendations for Future Research

The researcher recommends that more studies on this topic take place. Since there is no other known study on TIC and teacher efficacy, it would be valuable to know whether further research would yield similar results. Future research on student attitudes and teacher attitudes before and after trauma-informed practices would also benefit the discussion of trauma-informed care. The researcher explains more topics in the following paragraphs.

A longitudinal study of the mental health of traumatized students from childhood to adulthood through quantitative research or qualitative study may show change over time. On the

quantitative side, researchers may measure the rate of students with high adverse childhood experience (ACE) scores and on-time graduation rates or college acceptance. On the qualitative side, researchers may gather data on relationships among educators who received trauma-informed training and students who have experienced trauma or who have high ACE scores.

Statewide causal-comparative studies using methods like the processes in the current research can support or refute the findings of the present study. The researchers could follow through with standard procedures for permission and recruitment. That is, they could seek the Internal Review Board approval, obtain district and site approval, and communicate through electronic mail. A different approach may be to gather information from social media participants. With the new advancements in ads through social media like Facebook, Instagram, and Twitter, the researchers could change the demographics questions from school name to a school setting (rural, suburban, urban) and add an item stating whether the teacher works in a trauma-informed environment. Another option is to work closely with the state board of education to disseminate invitations for participation.

Researchers may want to conduct a qualitative study that investigates the attitudes of teachers towards trauma-informed practices and training. Teachers may be willing to share how knowledge of trauma affects them. Researchers could limit such a study to a few educators through phenomenological study or open it up to more extensive exploration. A case study of how one school implemented a trauma-informed environment would offer new insight into how all of the stakeholders experienced knowledge about trauma's impact on education. Quantitative and qualitative surveys of parental attitudes about trauma-informed practices may show how the community perceives trauma-informed practices.

A correlational study of adverse childhood experiences and college admission may explain or identify people who will be successful in the humanities, like education. Teacher turnover, student success, and efficacy are a few of the items to study. It may prove to be valuable if researchers can predict which college students will be successful teachers based on their adverse childhood experiences. In other words, if a student with high adverse childhood experience scores earns acceptance into a post-secondary educational institution, the student likely has strong resiliency towards trauma. Does that correlate to the student becoming a successful educator?

A final consideration is a study on resiliency scores: How do educational leaders know that students have built enough resilience to progress through significant challenges? Using instruments that measure resiliency, researchers may conduct quantitative studies to determine whether there are correlations among resiliency, test scores, on-time graduation, grade promotion, attitude, and career earning. Many times, teachers measure comprehension or memorization. However, students may be successful K-12 but not successful in college. Resiliency scores may account for that success.

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APPENDIX A: IRB CONSENT FORUM

CONSENT FORM

The Impact of Trauma-Informed Environment on Middle School Teachers' Self-Efficacy
Towards Students with Disruptive Behaviors: A Causal-Comparative Study
Daniel McGraw
Liberty University
School of Education

You are invited to be in a research study of the impact a trauma-informed school environment (TIC) has on the perception of teacher self-efficacy by middle school teachers. You were selected as a possible participant because you are a middle school teacher. Please read this form and ask any questions you may have before agreeing to be in the study.

Daniel McGraw, a student in the School of Education at Liberty University, is conducting this study.

Background Information: The purpose of this study is to understand whether trauma-informed care (TIC) schools affect teachers' sense of self-efficacy. Teachers' attitudes toward their own abilities can impact their attitudes toward students with disruptive behaviors. How well teachers manage disruption can affect their sense of job satisfaction and behavior toward students and each other. This study will analyze teacher attitudes toward their abilities to control instruction, engagement, and classroom management.

Procedures: If you agree to be in this study, I would ask you to do the following things:
1. Complete an anonymous survey that should take 5-10 minutes.

Risks: The risks involved in this study are minimal, which means they are no greater than what you may expect in normal daily life.

Benefits: There is no direct benefit to participants who take part in this survey. Benefits to society include learning more about what impacts teachers' sense of self-efficacy, which can affect designs and implementation for professional development and programs to meet the needs of educators. In addition, schools and school districts may be able to use this information to make predictions about how teachers will respond to trauma-informed professional development.

Compensation: Participants will not be compensated for participating in this study.

Confidentiality: The records of this study will be kept private. Research records will be stored securely, and only the researcher and the research specialist will have access to the records. Participant survey responses will remain anonymous. Pseudonyms will be used to describe schools. The researcher will store all data on a password protected computer in a password protected file or in a locked cabinet. The data may be used for presentations concerning the current study. After three years, the researcher will delete all electronic data and shred any paper data.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time, prior to submitting the survey, without affecting those relationships.

How to Withdraw from the Study: If you choose to withdraw from the study, please exit the survey and close your internet browser. Your responses will not be recorded or included in the study.

Contacts and Questions: The researcher conducting this study is Daniel McGraw. You may ask any questions you have now. If you have questions later, you are encouraged to contact him at

APPENDIX B: IRB EXEMPTION

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

September 30, 2019

Daniel Wayne McGraw
IRB Exemption 3865.093019: The Impact of Trauma-Informed Environment on Middle School
Teachers' Self-Efficacy Towards Students with Disruptive Behaviors: A Causal-Comparative
Study

Dear Daniel Wayne McGraw,

The Liberty University Institutional Review Board has reviewed your application in accordance
with the Office for Human Research Protections (OHRP) and Food and Drug Administration
(FDA) regulations and finds your study to be exempt from further IRB review. This means you
may begin your research with the data safeguarding methods mentioned in your approved
application, and no further IRB oversight is required.

Your study falls under exemption category 46.101(b)(2), which identifies specific situations in
which human participants research is exempt from the policy set forth in 45 CFR 46:101(b):

> (2) Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude,
> achievement), survey procedures, interview procedures, or observation of public behavior (including visual
> or auditory recording) if at least one of the following criteria is met:
>
>> (i) The information obtained is recorded by the investigator in such a manner that the identity of
>> the human subjects cannot readily be ascertained, directly or through identifiers linked to the
>> subjects;

Please note that this exemption only applies to your current research application, and any
changes to your protocol must be reported to the Liberty IRB for verification of continued
exemption status. You may report these changes by submitting a change in protocol form or a
new application to the IRB and referencing the above IRB Exemption number.

If you have any questions about this exemption or need assistance in determining whether
possible changes to your protocol would change your exemption status, please email us at

APPENDIX C: REQUEST FOR DISTRICT PERMISSION

███████

████

Superintendent

████████████████

██████████

██████████████

Dear ██████

As a graduate student in the Department of Education at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The title of my research project is The Impact of Trauma-informed Environment on Middle School Teachers' Self-Efficacy Towards Students with Disruptive Behaviors and the purpose of my research is to determine the impacts of a trauma-informed environment on teacher efficacy towards students with disruptive behaviors.

I am writing to request your permission to conduct my research at ██████ and ███████████ Middle Schools.

Participants will be asked to complete the attached survey. Participants will be presented with informed consent information prior to participating. Taking part in this study is completely voluntary, and participants are welcome to discontinue participation at any time.

Thank you for considering my request. If you choose to grant permission, please provide a signed statement on official letterhead indicating your approval. I am in the process of seeking IRB approval through Liberty University.

Sincerely,

Daniel McGraw

Doctoral Candidate, LU

APPENDIX D: DISTRICT APPROVAL

McGraw, Daniel W

This is great news! Can you email me a signed letter on official letterhead indicating your per...   Sun 9/22/2019 9:09 PM

Fri 9/20/2019 3:12 PM

McGraw, Daniel W ⌄

[EXTERNAL EMAIL: Do not click any links or open attachments unless you know the sender and trust the content.]

Your research has been approved.

Ed.S.
Director of Accreditation and Accountability

Mr. McGraw,

Attached please find the requested letter from our superintendent authorizing you to work with middle school building principals (copied on this email) to solicit teacher responses to your study on Teacher Self-Efficacy in Trauma-Informed Care Schools. You may correspond directly with them if you have additional details or questions.

and   the details of this study are attached. The survey instrument should not take long to complete and doesn't disclose any sensitive information about individual students. As always, whether or not your school or any individual teachers participate is completely voluntary! Thanks.

--

Director of Teaching and Learning

Mr. McGraw,
Both   Middle School and   Middle School are happy to participate in your research. I have cc'd both principals on this email so that you may coordinate the administration of the survey in each school with them during an agreed upon time frame. As I mentioned earlier, electronic communication and delivery of the survey will likely suit their schedules best rather than an in-person meeting with staff. However,   and   can certainly coordinate with you in regard to what works best for their schools. Please let me know if I can be of further assistance.

Assistant Superintendent for Teaching, Learning & Innovation

APPENDIX E: REQUEST FOR SCHOOL SITE APPROVAL

30 September 2019

███████████████

Principal

████████

██████████

████████████

Dear ████████

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The title of my research project is The Impact of Trauma-informed Environment on Middle School Teachers' Self-Efficacy Towards Students with Disruptive Behaviors, and the purpose of my research is to determine the impacts of a trauma-informed environment on teacher efficacy towards students with disruptive behaviors.

I am writing to request your permission to conduct my research at your school.

Participants will be asked to follow this link (████████████████) to complete the attached, anonymous survey. Participants will be presented with informed consent information prior to participating. Taking part in this study is completely voluntary, and participants are welcome to discontinue participation at any time.

Thank you for considering my request. If you choose to grant permission, please provide a signed statement on official letterhead indicating your approval. I am in the process of seeking IRB approval through Liberty University.

Sincerely,

Daniel McGraw

Doctoral Candidate

Liberty University

APPENDIX F: INFORMED CONSENT LETTER

The Impact of Trauma-Informed Environment on Middle School Teachers' Self-Efficacy

towards Students with Disruptive Behaviors: A Causal-Comparative Study

Daniel McGraw

Liberty University

School of Education

You are invited to be in a research study of the impact a trauma-informed school environment (TIC) has on the perception of teacher self-efficacy by middle school teachers. You were selected as a possible participant because you are a middle school teacher. Please read this form and ask any questions you may have before agreeing to be in the study.

Daniel McGraw, a student in the School of Education at Liberty University, is conducting this study.

Background Information: The purpose of this study is to understand whether trauma-informed care (TIC) schools affect teachers' sense of self-efficacy. Teachers' attitudes toward their own abilities can impact their attitudes toward students with disruptive behaviors. How well teachers manage disruption can affect their sense of job satisfaction and behavior toward students and each other. This study will analyze teacher attitudes toward their abilities to control instruction, engagement, and classroom management.

Procedures: If you agree to be in this study, I would ask you to do the following things:

1. Complete an anonymous survey that should take 5-10 minutes.

Risks: The risks involved in this study are minimal, which means they are no greater than what you may expect in normal daily life.

Benefits: There is no direct benefit to participants who take part in this survey. Benefits to society include learning more about what impacts teachers' sense of self-efficacy, which can affect designs and implementation for professional development and programs to meet the needs of educators. In addition, schools and school districts may be able to use this information to make predictions about how teachers will respond to trauma-informed professional development.

Compensation: Participants will not be compensated for participating in this study.

Confidentiality: The records of this study will be kept private. Research records will be stored securely, and only the researcher and the research specialist will have access to the records. Participant survey responses will remain anonymous. Pseudonyms will be used to describe schools. The researcher will store all data on a password protected computer in a password protected file or in a locked cabinet. The data may be used for presentations concerning the current study. After three years, the researcher will delete all electronic data and shred any paper data.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University. If you

decide to participate, you are free to not answer any question or withdraw at any time, prior to submitting the survey, without affecting those relationships.

How to Withdraw from the Study: If you choose to withdraw from the study, please exit the survey and close your internet browser. Your responses will not be recorded or included in the study.

Contacts and Questions: The researcher conducting this study is Daniel McGraw. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact him at ████████████████. You may also contact the researcher's faculty chair, Dr. ████████ at ████████████████████.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, ████ ██.

Please notify the researcher if you would like a copy of this information for your records.

APPENDIX G: EMAIL TO POINT OF CONTACT

Three days prior

Dear Principal or Principal Designee,

Thank you for allowing me to explain my research to your staff. I promise to keep the process brief. Please share with your staff that my research is about teachers' sense of self-efficacy. The instrument consists of 24 questions and is completely anonymous. I look forward to seeing you in a few days. I have attached the recruitment letter that thoroughly explains my research. Please share it with the teachers at your school. Thank you for all that you do.

Daniel McGraw

Liberty University

1-3 days later

Dear Principal or Principal Designee,

Thank you for allowing me to present my research and recruit participants. A total of XX teachers participated. I would like to recruit more participants. Please share with your teachers that they can participate in the survey anonymously by following this link XXXXXXXXXX. The window for participating in the online survey is from XX to XX. This research informs what we know about teacher retention, behavior, and attitudes. Participation by your teachers is important to me and to the research. Thank you for all of your support.

Daniel McGraw

Liberty University

APPENDIX H: TEACHER RECRUITMENT

Dear Teachers:

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The purpose of my research is to determine the impacts of a trauma-informed environment on teacher efficacy regarding students with disruptive behaviors, and I am writing to invite you to participate in my study.

If you are a middle school teacher and are willing to participate, you will be asked to complete a demographic survey and a survey on teachers' sense of self-efficacy. It should take approximately 5-10 minutes for you to complete the procedures listed. Your participation will be completely anonymous, and no personal, identifying information will be collected.

To participate, go to ███████████████, read the consent document, and complete the surveys.

A link to the consent document is provided on the first page after you click on the survey link (above). The consent document contains additional information about my research, but you will not need to sign and return it.

Sincerely,

Daniel McGraw

Doctoral Candidate, LU

APPENDIX I: FOLLOW UP RECRUITMENT EMAIL

Dear Educators:

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a doctoral degree. Two weeks ago, an email was sent to you inviting you to participate in a research study. This follow-up email is being sent to remind you to complete the survey if you would like to participate and have not already done so. The deadline for participation is [Date].

If you are a middle school teacher and are willing to participate, you will be asked to complete a demographic survey and a survey on teachers' sense of self-efficacy. It should take approximately 5-10 minutes for you to complete the procedures listed. Your participation will be completely anonymous, and no personal, identifying information will be collected.

To participate, go to ▮▮▮▮▮▮▮▮▮▮, read the consent document, and complete the surveys.

A link to the consent document is provided on the first page after you click on the survey link (above). The consent document contains additional information about my research, but you will not need to sign and return it.

Sincerely,

Daniel McGraw

Doctoral Candidate, LU