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**Assessing Teacher Attitudes Related to Trauma-Informed Care in  
Three Urban High Schools**

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**Assessing Teacher Attitudes Related to Trauma-Informed Care in  
Three Urban High Schools**

**by**

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## **Dedication**

To my first family, who stood with me from the beginning. And to my chosen family,  
who stand with me now.

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# **Assessing Teacher Attitudes Related to Trauma-Informed Care in Three Urban High Schools**

by

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Increased awareness of the impact and prevalence of trauma among youth has fueled interest in trauma-informed service delivery in diverse settings, especially among schools and school-based mental health centers. Given the substantial mental health risks facing youth populations with high incidences of complex stress and trauma (Perfect et al., 2016), it is imperative to identify interventions that promote resilience, improve access to trauma-sensitive mental health services, and bolster academic outcomes. School personnel, including administrators, teachers, and staff, have frequent and regular contact with youth throughout the school year. The consistent relationship between school personnel and students in the school context makes for an ideal environment to engage in trauma-informed teaching and mental-health care modalities. Trauma-Informed Care (TIC) describes an approach to mental health service that integrates an understanding of the pervasive effects of trauma on youth, with an approach to intervention that addresses associated biopsychosocial factors.

TIC programming in schools is a method of intervening with traumatized youth, incorporating multiple systems that impact their lives. While the foundational research on the effectiveness of trauma-informed programs applied to other settings is promising, the evidence-base for trauma-informed programming in schools is in need of further development. More specifically, existing research has defined a direction for future inquiry: the exploration of both system- and individual-level variables as potential mediators of change throughout the TIC program implementation process.

Because teachers play a key role in school-based TIC programming, their level of engagement and degree of buy-in are critical to the implementation, efficacy, and sustainability of these programs. In order to better understand the process of implementation of TIC programs in schools, research on teacher beliefs and attitudes toward TIC is needed to inform future TIC programming and evaluation efforts. The purpose of the current study was to examine the attitudes of teachers toward TIC across three urban high schools that participate in a multi-tiered, trauma-informed mental health care intervention. Given the nascent literature base related to correlates and outcomes associated with TIC interventions, this study also aimed to assess the predictive value of teacher characteristics, including perceived self-efficacy and several demographic features, on their attitudes toward TIC.

The Attitudes Related to Trauma Informed Care (ARTIC) scale was used to determine whether there are meaningful differences in teacher attitudes within schools across different phases of implementation and tiers of intervention participation in a TIC model of school-based mental health care delivery. Qualitative methods were used to investigate specific contributors to observed differences in attitudes toward TIC among teachers with the relative highest and lowest composite scores on the ARTIC. Results from a series of hierarchical regression models evidenced a significant effect of tier of



participation in the intervention in predicting teacher attitudes related to TIC. Findings from the qualitative phase of this study showed that teachers with relatively more favorable attitudes differed from teachers with less favorable attitudes along several important characteristics related to trauma-informed care, including their conceptualizations of factors that influence student success at school, behavior management strategies, and approaches to the teacher-student relationship. Teachers also discussed their involvement with and perceptions of the TIC programming at their respective campuses.

The findings presented in this study support the development of an emerging body of evidence that sheds light on the design, implementation, and sustainability of trauma sensitive, school-based mental health care and programs for school-aged youth. The findings also propose important considerations for educators, administrators, and educational policy makers with regard to the practical application of trauma-informed systems of care in schools.

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## **Chapter 1: Introduction**

This chapter will provide an overview of current conceptualizations of trauma exposure in youth, including a delineation of acute and complex trauma, as well as prevalence rates of trauma exposure in children and adolescents. A developmental framework will be used as a theoretical basis to conceptualize how symptomology develops following trauma exposure, and persist through neurological, cognitive, and sociopolitical vulnerabilities and risk factors. Then, a review of school-based mental health services for youth impacted by trauma will be discussed within the context of current educational policy concerning mental health approaches in schools.

### **OVERVIEW OF TRAUMA**

Human development is dynamic. Progression through developmental stages from childhood to young adulthood are contingent on the successful completion of successive developmental tasks. There are many factors that influence a child's developmental trajectory, which can be considered across two broad categories: those that are internal to the child (e.g., temperament, resiliency resources), and those that are external, including environmental and systemic factors (Masten & Coatsworth, 1998). Chronic stress and traumatic experiences throughout development can tax children's internal resources to progress through developmental milestones, as well as their families and other systems that support them. Given the widespread impact of trauma on development, the promotion of healthy functioning for youth requires a systemic approach to the study of trauma and related outcomes among youth.

The nature of traumatic experience is conceptualized differently across theories and in practice. In the *Diagnostic and Statistical Manual of Mental Disorders*, 5<sup>th</sup> edition (DSM-V),

traumatic experiences are defined as direct or observed physical harm or threats to physical safety. Examples of traumatic events based on this definition include, but are not limited to, physical or sexual violence or abuse, chronic illness, disasters, emergencies or accidents, or the death of a family member. In order to compare the DSM-V definition of trauma with other conceptualizations, it is important to consider the historical context behind the development of the manual. DSM constructs were originally formed from observations of fixed psychopathology states in adulthood. These constructs were previously aimed at studying epidemiology, and generally referred to as research diagnostic criteria (Bremness & Polzin, 2014). By definition, these constructs do not encompass the developmental, progressive, strength-based, and resiliency contexts that are important for clinical and assessment work with youth. The DSM-V definition of childhood trauma is thus limited in that it does not address trauma that stems from overwhelming relational experiences that uniquely occur in childhood.

Prior to the publication of the 5<sup>th</sup> edition of the DSM in 2015, several experts in the field of childhood trauma provided a formal recommendation to add a diagnosis of developmental trauma disorder (van der Kolk, 2005). This recommendation was made with the intention to expand the definition to include traumatic experiences of childhood that occur within the attachment relationship, such as neglect, emotional maltreatment, separation from attachment figures, and disrupted caregiving or attachment systems. One important reason for this proposed change is that there have been substantial differences observed in outcomes among youth who experience acute or noninterpersonal traumas, such as car accidents and natural disasters, versus those who experience chronic, severe, interpersonal stressors (Cook et al., 2005). Thus, from a



diagnostic and treatment perspective, the distinction between relational and nonrelational trauma is critical.

Although the panel for the DSM-V ultimately rejected the proposal for adding developmental trauma disorder to the manual (Bremness & Polzin, 2014), alternative definitions have been outlined and expanded to address the limitations of the DSM-V's current conceptualization of childhood trauma. The National Child Traumatic Stress Network (NCTSN) defines trauma as acute or chronic life events that threaten one's physical or emotional well-being, which can be further conceptualized as a response to a negative event or repeated events that overtax the child's typical coping and defensive strategies. For the purpose of this literature review, the term *complex trauma* will be used to describe the dual problem of chronic exposure to adverse stressful events, and impairments in adaptation under extremely stressful circumstances. These exposures often occur within the child's caregiving system and include physical, emotional, and educational neglect and child maltreatment beginning in early childhood (Spinazzola et al., 2005). Complex trauma often results in immediate consequences, similar to those observed in cases of acute trauma, and also long-term outcomes in several domains of functioning, including attachment, biology, emotional and behavioral regulation, cognition, and self-concept (Cook et al., 2005).

Children who have experienced complex trauma often have several layers of chronic stress and adverse experiences. Many children with complex trauma have been exposed to experiences which meet the DSM-V criteria for a traumatic event, but often there are several additional aspects of their lived experiences that contribute to their trauma. For example, some children who are exposed to domestic violence have home lives that are also characterized by

inconsistent or unpredictable caregiving. The disrupted attachment relationships that result from these caregiving styles can ultimately serve to compound and exacerbate the outcomes associated with the exposure to domestic violence. The impact of these layers of traumatic experience exceed most youths' ability to effectively cope with one or more adverse events. Youth with complex trauma have experiences that effectively shape their understanding of themselves, their relationships, and what they come to expect from their world.

The experience of trauma is undeniably complex, as it can occur at different developmental stages and across different contexts, with varying degrees of access to both internal and external coping resources. The focus of this manuscript is on children who have experienced chronic stressors and ongoing adverse events within a caregiving system that is itself likely overtaxed. From this perspective comes the recognition that individual youths, their caregiving systems, and their access to treatment and providers will differ vastly. As such, no single intervention will work the same for all complexly traumatized youths. However, there is a solid foundation of research and consensus on the impact of trauma (Cook et al., 2005), as well as a strong research base that has identified factors which promote resilience and developmental competency in the face of complex trauma.

## **PREVALENCE OF TRAUMA**

Identifying prevalence rates of trauma in school-aged populations is challenging, given that prevalence rates of trauma vary drastically depending on several factors, including the research sample, setting, informant, assessment tool used to measure traumatic event exposure, and the way trauma is conceptualized. Further, there is some concern that PTSD may be underdiagnosed in children, as some of the diagnostic criteria are not easily measured in young

children, and developmental manifestations of the symptoms are not taken into account (Saywitz et al., 2000). Early estimates on the prevalence of exposure to traumatic events in childhood were described with the publication of the Adverse Childhood Experiences (ACE) study, in which roughly two-thirds of adults indicated that they had experienced at least one type of trauma during childhood, and more than one in five reported that they experienced three or more traumatic events (Felitti & Anda, 1997).

Since the ACE study, other researchers have attempted to estimate the prevalence of childhood trauma. McLaughlin, et al., 2013 identified a 61.8% lifetime prevalence rate of exposure to one or more traumatic events among school-aged youth between the ages of 13 – 17. This figure was consistent with other recent estimates, such as findings from Finkelhor, Turner, Shattuck & Hamby, 2015, who studied the prevalence of trauma resulting from violence, abuse, or crime among a nationally representative of youth ages 0-17. Results showed that more than one-third of the youth in the sample experienced a physical assault in the year of the study, one in ten experienced an injury resulting from a physical assault or abuse, and one in 20 girls between 14 and 17 years old experienced sexual assault or abuse.

In order to summarize the trauma prevalence literature in the U.S., Saunders & Adams, 2014 reviewed five empirical studies that used samples of youth between the ages of 0-17. Using nine traumatic event categories, the following prevalence rates were identified: sexual victimization (13-17% of girls; 3-5% of boys), physical abuse and assault (69-71%), witnessed violence (70%), traumatic death of a loved one via criminal or vehicular homicide (18%), internet-assisted victimization (9%), teasing or emotional bullying (29%), disasters (22%), motor vehicle accidents (10-21%), and polyvictimization (20-48%). This research collectively

indicates that approximately two out of three students in the US are likely to have experienced at least one or more traumatic events by age 17.

National prevalence rates and outcomes associated with trauma do not generalize equally to all youth, as and ethnic and cultural minority youths who live in urban environments disproportionately experience violence and academic failure (Thernstrom & Threnstrom, 2003; Adams, 2010; Neiman & Hill, 2011), as well as insufficient access to mental health care (Kataoka, Zhang, & Wells, 2002). A study conducted by the U.S. Department of Justice found that urban adolescents were particularly at risk for trauma exposure, with 98.5% reporting exposure to violent crimes, compared with 83.4% of suburban and 65.9% of rural adolescents (Snyder & Sickmund, 2006). The study also found that black youth were victimized at a rate 67% higher than their white peers. Urban youth from low-income families also experience higher rates of child maltreatment (Sabol, Coulton, & Polousky, 2004). Results from a national prevalence study showed that youth from families with an annual income of less than \$15,000 were 26.5 times more likely to experience maltreatment compared with youth from families earning over \$30,000 (Sedlak and Broadhurst 1996).

## **IMPACT OF TRAUMA ON YOUTH**

With such high rates of trauma among school-aged youth, it is imperative that school personnel understand the multitude of ways that youth can respond to traumatic events within the context of the school setting. The manifestation of symptoms following a traumatic event can be considered in the context of the transactional model of development, in that symptom presentation can differ widely based on a child's biological predisposition which influences their reactions to stress, cognitive appraisals of the stressful event, and environmental context.

Psychophysiological symptoms following a traumatic event can include intrusive thoughts, irritability, arousal, anxiety/fear, and difficulty concentrating. Other more severe traumatic stress symptoms include re-experiencing the traumatic event, which can include flashbacks, insomnia, irritability, and hypervigilance. When these symptoms persist, they can have a substantial and negative impact on psychosocial functioning. In the school context, these effects have strong implications for a child's ability to learn and socialize.

Although most children show remarkable resilience when faced with a traumatic event, or even several events, some children may show significant impairments, including social-emotional difficulties and significant barriers to learning (Burke, Hellman, Scott, Weems & Carrion, 2011; Copeland, Keeler, Angold, & Costello, 2007; McLaughlin et al., 2013). For example, exposure to a one-time event, such as an accident, domestic violence, or disaster can result in significant emotional and psychological trauma in some youth, but other youth may have a milder response, in both intensity and duration, to acute events. Traumatic reactions can also arise from exposure to ongoing, persistent stressful environments, such as living in a neighborhood with high levels of criminal activity, exposure to inconsistent or negligent parenting, substance abuse among family members, or living with a family member with a chronic disease.

The adverse effects of childhood trauma have been well documented. Several studies have linked childhood trauma with a host of emotional and behavioral problems, which themselves lead to significant psychosocial impairment. One study examined internalizing and externalizing symptoms in a large clinic-referred sample of youth (ages 1-18) with trauma exposure (Greeson, Briggs, Layne, et al., 2013). As measured on the *Child Behavior Checklist*

(CBCL), nearly 30% of the sample exhibited clinical levels of aggression (*Aggressive Behavior* subscale) and 23% clinical levels of depression (*Withdrawn/Depressed* subscale). In terms of externalizing behavior, 25% of the sample exhibited rule breaking and 20% significant social problems. A key finding of this study was of a dose-response relationship between the number of trauma types experienced and clinical symptoms on the CBCL (Greeson et al., 2013). As trauma exposure accumulates, youth are increasingly likely to experience clinically significant emotional and behavioral problems. A more comprehensive review of outcomes related to trauma exposure will be provided in the following chapter.

### **SCHOOL-BASED MENTAL HEALTH**

Not all traumatized children will suffer from the challenges described in the above section. As previously discussed, there are a multitude of different factors that affect individual responses to a traumatic event, and some youth have more severe reactions than others. For youth who do experience ongoing mental health complications related to trauma exposure, accessible treatment options may be hard to find. A 2005 report by the Substance Abuse and Mental Health Services Administration (SAMHSA) revealed that of 2.2 million adolescents who reported a major depressive episode in the past year, around 60% did not receive any treatment (2005a). One study found that as many as 80% of youth who qualified as needing mental health services did not receive them within the school year. Latino students, and those without insurance, demonstrated the highest rates of unmet need (Kataoka, Zhang, & Wells, 2002).

The burden of youth mental healthcare has fallen largely on the schools, which are considered major service providers across most U.S. states (Rones & Hoagwood, 2000). According to results from a 2002-2003 survey of U.S. school districts, one-fifth of

students were receiving some type of school-supported mental health service, and most schools reported having at least one staff member responsible for providing such services (often a school counselor, nurse, school psychologist, or social worker) (Foster, Rollefson, Doksum, Noonan, Robinson, & Teich, 2005). However, two thirds of the districts surveyed reported an increase in need for mental health services, while one third reported a decrease in funding for these services over the same period (Stephan, et al., 2007)

School-based mental health (SBMH) has existed since the middle of the 20th century and encompasses a wide variety of models, delivery mechanisms, and intervention targets. SBMH programming includes activities that range from mental health prevention to intervention, targeting individuals (i.e., students, educators, staff), as well as broader systems, such is the case in school-wide interventions. Direct services can include assessment, intervention (i.e., individual or group therapy), or consultation, while indirect services include and family or campus community collaboration. Given the large scope of services, a current priority for SBMH has been in efforts to organize and integrate existing services into multi-component, multi-tiered systems of support (Adelman & Taylor, 2010), much as academic services have been streamlined under the Response-to-Intervention (RTI) model.

In their book *Mental Health in Schools: Engaging Learners, Preventing Problems, and Improving Schools*, Adelman and Taylor survey the various research and practice agendas that operate within the domain of school-based mental health. They make distinctions among the following agendas: increasing *access* to services for youth; increasing *availability* of services to the school community; promoting *adoption* of programming by schools; *improving processes* and interventions (e.g., referral systems); highlighting *economic interests* of school-related

entities; and *re-conceptualizing student supports* entirely, such as through efforts to enhance multidisciplinary teamwork, improve service coordination, or develop multi-tiered systems of support (MTSS) (Adelman & Taylor, 2010). While such widespread agendas reflect the complexity of organizing and delivering mental health in schools, Adelman and Taylor point to an underlying fragmentation in the SBMH field, a state that has left it without a coherent framework or robust evidence base (2010).

A great deal of research has advocated for the integration of mental health services into school systems. The 2009 Surgeon General's report cited the important role that schools play in the identification and referral for mental health services (U.S. Department of Health and Human Services, 1999). Other findings have further emphasized the role of schools in mental health care, such as work by Slade, 2002, which demonstrated that adolescent students were more likely to seek help for a mental health issue in schools that offer on-campus counseling services (Slade, 2002). Schools with embedded mental health programming could be in an exceptional position for providing services to ethnic minority students, who were found to utilize community mental health services at substantially lower rates than their white counterparts. Health insurance was another factor affecting rates of treatment; students whose families were uninsured or enrolled in Medicaid used school-based services at higher rates than those from families with private insurance (Slade, 2002). These findings suggest that embedded mental health services have the potential to reach students who have limited access to mental health care in other settings.

The increasing awareness of the impact and prevalence of trauma among youth has fueled interest in trauma-informed service delivery, especially in SBMH settings. Given the substantial risks facing youth populations with high incidences of trauma, it is imperative to



identify interventions that promote resilience, improve access to trauma-sensitive mental health services, and bolster academic outcomes. School personnel, including administrators, teachers, and staff, have frequent and regular contact with youth throughout the school year. The consistent relationship between school personnel and students in the school context makes for an ideal environment to engage in trauma-informed teaching and mental-health care modalities. Trauma-informed care describes an approach to mental health service that integrates an understanding of the pervasive effects of trauma on youth, with an approach to intervention that addresses associated biopsychosocial factors (Substance Abuse and Mental Health Services Association [SAMHSA], 2014)

## **EDUCATIONAL AND MENTAL HEALTH POLICY CONTEXT**

Previous educational laws and federal legislations, such as the No Child Left Behind act (NCLB) of 2001 and the Individuals with Disabilities Education Improvement Act, 2004, have created opportunities to build upon national programs with mental-health initiative in schools. The Office of Safe and Drug Free Schools within the U.S. Department of Education sponsors a number of initiatives and grants that support the development of trauma-informed services in schools. Additionally, significant changes in the Individuals with Disabilities Education Act (2004) suggest that educators in special education are potential partners in developing trauma-informed assessments and interventions. From a national policy perspective, educational organizations are invaluable partners in the effort to develop trauma-informed programming.

Recent policy updates, such as the Every Student Succeeds Act (ESSA, 2016) have been developed to replace NCLB. ESSA will contribute to the advancement and sustainability of school-based mental health programming, and promotes accountability measures that

demonstrate outcomes based on a school's unique culture and educational philosophy, rather than relying solely on national standards-based accountability measures. There are many provisions in the new law that qualify as trauma-informed, such as those that call for a reduction in testing and excessive use of exclusionary disciplinary practices, as well as those that recognize the importance of early learning. There are other important provisions that delineate a specific role for trauma-informed practices. One example is a new grant program called Student Support and Academic Enrichment grants (SSAE) that provide funding to support students and schools in high-needs districts. These grants include funding for comprehensive school-based mental health services and supports for staff development across school and community personnel that are based in trauma-informed practices (US Government Publishing Office, 2015).

## **PURPOSE OF STUDY**

The prevalence of traumatic events in the lives of children and adolescents in the United States is staggering, and the adverse effects of trauma on youth have been widely documented. Trauma-informed programming in schools is a new approach to intervening with traumatized youth, and while the foundational research on the effectiveness of trauma-informed programs applied to other settings is promising, the evidence-base for trauma-informed programming in schools is in need of further development. More specifically, existing research has defined a direction for future inquiry: the exploration of both system and individual level variables as potential mediators of change throughout the trauma-informed care (TIC) program implementation process.

Teachers play a key role in school-based TIC programming, and their level of engagement and degree of buy-in are critical to the implementation and sustainability of these

programs. In order to better understand the process of implementation of TIC programs in schools, research on teacher beliefs and attitudes toward TIC is needed to inform future TIC programming and evaluation efforts. The purpose of the current study is to examine the attitudes of teachers toward TIC across three urban high schools that participate in a multi-tiered, trauma-informed mental health care intervention. Given the nascent literature base related to correlates and outcomes associated with TIC interventions, this study also aims to assess the predictive value of teacher characteristics, including perceived self-efficacy and several demographic features, on their attitudes toward TIC.

The Attitudes Related to Trauma Informed Care (ARTIC) scale will be used to determine whether there are meaningful differences in teacher attitudes within schools across different stages of implementation and levels of intervention of a TIC model of school-based mental health care delivery. Qualitative methods will be used to investigate specific contributors to observed differences in attitudes toward TIC among teachers with the relative highest and lowest composite scores on the ARTIC. Expected findings will contribute to an emerging body of evidence that sheds light on the design, implementation, and sustainability of trauma-sensitive, school-based mental health care and programs for school-aged youth.

## **Chapter 2: Literature Review**

This review is situated within Bronfenbrenner's Ecological Systems Theory, which offers a framework to understand socio-ecological, familial, and individual risk and resilience variables that impact the adjustment of traumatized youths. This chapter will provide a summary of the literature on outcomes associated with trauma exposure in youth, and a discussion of factors that mediate the development of symptoms associated with trauma exposure will be provided. Additionally, an overview of contemporary approaches to the treatment of acute and complex trauma will be provided. This discussion will include descriptions and comparisons between approaches from Cognitive-Behavioral Theory, and multi-tiered interventions from the Attachment, Regulation, and Competency (ARC) framework for trauma-informed, systems-oriented mental health service delivery. Considerations for the implementation of ARC programming, including factors which facilitate or undermine implementation and sustainability, will also be discussed. Finally, a description of current gaps in the literature and study rationale will be provided.

### **OUTCOMES ASSOCIATED WITH TRAUMA EXPOSURE**

Given the marked degree of biopsychosocial impairment associated with exposure to acute and complex trauma, it is no surprise that school performance is negatively impacted for traumatized youth. Success at school is contingent on several areas of functioning, including neurological, cognitive, academic, socioemotional, and behavioral. Each of these areas of competency are important for not only academic success, but also for overall school engagement including building and maintaining relationships with teachers and peers. The specific

impairments associated with trauma exposure will be discussed across each domain of functioning.

### **Neuropsychological Outcomes**

Traumatic experiences have an undeniable impact on brain development, which effect student functioning inside and outside of the classroom. Physiological reactions to traumatic events can lead to impairments in executive functioning processes, interpersonal functioning, and impulse control (van der Kolk et al., 2005; De Bellis, 2005). These findings have implications for important markers of classroom social adjustment, including emotional regulation, school liking, peer competence, engagement with the school environment, and self-control, which have been empirically linked to children's success in school (Birch & Ladd, 1997; Kochenderfer & Ladd, 1996). Other early research on the neurobiological effects of trauma shows that the ability of youth to apply language to their experience can be severely impeded by trauma. In a 1996 study, researchers performed a functional magnetic resonance imaging (fMRI) scan after exposing their participants to stimuli that triggered memories of their traumatic experiences. The scans showed that the limbic and paralimbic systems, brain structures associated with fear and anxiety, were activated when the participants' traumatic experiences were invoked. This increase in activity in the limbic system corresponded with decreased activation in Broca's area, the portion of the brain associated with language production (Rauch, et al., 1996)

Traumatic experiences in childhood may lead to changes in brain structure, developmental pathways, and gene expression, suggesting that a multitude of psychological and physical health conditions in adolescence and adulthood can originate in traumatic childhood experiences. Recent research has shown differences in structure and functioning in several brain

structures (i.e., the amygdala, hippocampus, cerebral cortex, prefrontal cortex, and sympathetic nervous system) in children who have been exposed to trauma (Davis et al. 2015; Teicher & Sampson, 2013; Anacker et al., 2014). Interestingly, the psychopathology demonstrated in traumatized children may be neurobiologically distinct from untraumatized youth with the same diagnoses and similar symptomology. More specifically, traumatized children with depression, anxiety, and substance use disorders have an earlier age of onset, greater symptom severity, higher rates of comorbidity, are at greater risk for suicide, and are less responsive to treatment than nontraumatized youth with the same diagnoses (Teicher & Samson, 2013).

Other recent research has shown deficits in functions that correspond to these brain structures. For example, impairment of the ability to regulate emotional responses to trauma triggers may be related to changes in the amygdala resulting from prolonged exposure to traumatic stress, while memory deficits may be associated with changes in the hippocampus (Van der Kolk et al, 2005; Davis et al., 2015). Recent research in epigenetics has identified compelling links between early environmental exposure, (i.e., social and physical environment) to differences in genetic expression through altered DNA methylation (Szyf, 2011). These altered genetic pathways have strong implications for health trajectories later in life.

### **Cognitive Functioning**

Foundational research on impact of trauma on cognitive functioning show overwhelming support for the negative relationship between cognitive ability and exposure to traumatic events (Armsworth & Holaday, 1993; De Bellis & Thomas, 2003; Joshi & O'Donnell, 2003; Margolin & Gordis, 2000; Murray & Son, 1998). A startling finding from 2002 showed that exposure to violence was significantly related to IQ, in that children experiencing violence exposure and

related distress would be expected to have as much as a 7.5-point reduction in IQ. Saltzman, et al. (2006) found a dramatic reduction in IQ scores in children with post-traumatic stress symptoms who had been exposed to interpersonal violence. In a recent review by Perfect et al., 2016, a small number of studies did not identify any significant differences in cognitive functioning among youth who experienced traumatic events. However, the majority of identified studies mirrored previous findings, in which youth who have experienced trauma show significant deficits in overall intelligence and the subdomains of memory, language and verbal ability, and attention, as compared to peers who have not been exposed to traumatic or adverse experiences.

Children who have experienced trauma can suffer from attentional problems at higher rates than their peers with otherwise normal attentional capacities. Although attentional problems have several potential origins, traumatized youth have difficulty distinguishing between relevant and irrelevant information. This is because they can have the tendency to interpret otherwise innocuous stimuli as threatening or potentially retraumatizing. Stimuli that are not interpreted as threatening have a greater likelihood to be ignored, which is problematic in a classroom setting where students are constantly required to appraise various sources of sensory input, and attend to or disregard irrelevant information (van der Kolk & Ducey, 1989; McFarlane, Weber & Clark, 1993). Students who have difficulty attending to the “correct” information can struggle with comprehending and completing classroom tasks.

An area of the brain that is primarily responsible for executive functions, the prefrontal cortex, has been shown to be adversely affected by traumatic experiences. One study found significant deficits in executive function and abstract reasoning among maltreated children with

post-traumatic stress symptoms, as compared to children with no history of trauma (De Bellis, 2005). In another study, boys with severe trauma histories had difficulty with cognitive tasks that required them to inhibit their behavioral responses that would knowingly lead to negative consequences (Mezzacappa et al., 2001). This research on the impairment in executive functioning by youth with trauma histories suggests that these children have more difficulty understanding the consequences of their behavior and making decisions accordingly.

### **Academic Performance**

This area of functioning is an important predictor of educational success and future learning. Several reviews have identified that youth who have been exposed to trauma often demonstrate poor academic performance (Armstrong & Holaday, 1993; Margolin & Gordis, 2000; Overstreet & Mathews, 2011). One study showed roughly a 10-point reduction in reading achievement on a test of standardized reading performance (Delaney-Black, Covington, and Ondersma et al., 2002). Other specific impacts on school functioning have also been found, such as the negative association between exposure to community violence and academic performance as measured by Grade Point Average (GPA) and scores on the *Scholastic Achievement Test* (SAT) (Schwartz & Gorman, 2003). According to their model, this relationship was mediated by symptoms of depression and disruptive behavior. Other research has demonstrated over lower grade-point average, increased days of school absence (Hurt, Malmud, Brodsky, & Giannetta, 2001), and decreased rates of high school graduation (Grogger, 1997).

Eckenrode, et al. (1993, 1995) found that maltreated youth performed worse than those who had not been maltreated on state standardized math and English tests. Similarly, another study found that students who developed traumatic stress symptoms in response to a traumatic



event had lower scores on measures of vocabulary, reading, math, spelling, language, and science (Saigh et al., 1997). De Bellis, Woolley, and Hooper (2013) found that maltreated youth performed worse on math and reading achievement measures, regardless of whether the students developed PTSD. Further, several studies demonstrated that the severity and duration of traumatic stress are inversely related to academic performance (Perfect et al., 2016).

### **Socioemotional Functioning**

Socioemotional functioning, including affect regulation and interpersonal relationship management, play a critical role in both learning and classroom performance. Youth who are exposed to complex trauma often fail to meet developmental competencies on par with their same-aged peers, and are more likely to respond to stressful situations with limited or underdeveloped coping strategies, such as aggression, dissociation, and avoidance (Kinniburgh, Blaustein, & Spinnazola, 2005). These developmental delays can lead to problems in cultivating healthy relationships. When these children lack access to the mental health resources needed to attain developmental competencies, impaired functioning in ongoing socioemotional functioning can result. Masten and Coatsworth (1998) contend that the ability to self-regulate emotions is a key predictor of academic and social success. Disruptions in the ability to modulate emotions are among the most prevalent features among children with complex, chronic trauma (Toth & Cicchetti, 1998). Difficulty with regulating emotions can contribute to debilitating problems in and out of the classroom, including impaired ability to interpret emotional content, chronic distrust in interpersonal relationships, and lack of a cohesive sense of self (Brenner & Salovey, 1997). It is postulated that hypervigilance, a common result of trauma exposure, may play a debilitating role in the development of healthy emotional self-regulation, in that a hypervigilant

child or adolescent has difficulty shifting their attention away from distressing stimuli or triggers, and thus emotional regulation suffers (Shields & Cicchetti, 1997).

Other researchers have reviewed studies that suggested that symptoms related to traumatic stress were related to internalizing symptoms, such as depression, anxiety and suicidal ideation (Linares et al., 2012; Olofsson, Bunketorp, & Andersson, 2009, Overstreet & Mathews, 2011; Saunders, 2003). Perfect et al.'s 2016 review identified several studies which used various types of teacher report measures to determine the impact of trauma exposure on youth socioemotional functioning. These studies overwhelmingly identified a positive association between trauma exposure and both internalizing and externalizing symptoms. Trauma can also interfere with a child's capacity for creative play, which is one important developmental task that contributes to the development of social problem solving (Streeck-Fischer & van der Kolk, 2000), which can impact the youth's ability to maintain healthy and fulfilling relationships in adolescence and adulthood (De Bellis, 2005)

Many traumatized youths have difficulty with tasks that require them to take perspective of another person, a skill known as Theory of Mind (ToM). If stress from traumatic event exposure interferes with a youth's opportunity to practice perspective taking during explorative play time, then the youth's potential to develop appropriate ToM skills is limited. Difficulty with ToM can make it particularly challenging to solve problems from alternative perspectives, engage in social communication, and to develop the empathy necessary to maintain successful relationships. Similarly, Dodge et al., 1990 found that traumatized youth are less attentive to social cues, are more likely to misattribute the intentions of others' intentions, and were less likely to successfully generate and apply solutions to interpersonal problems.

## **Behavioral Functioning**

For traumatized youth, school can be difficult to navigate amidst their perceptions of situations and people as threatening, and their behavior can often be difficult to interpret. Many traumatized youth display unpredictable, aggressive, or withdrawal behaviors at schools, which is typically difficult, if not impossible, for the youth or their teachers to understand or explain. In the hope of developing and sustaining a successful working relationship, it is of critical importance for educators to understand that many traumatized youth with challenging behaviors have problems rooted in a deep sense of lack of safety and vulnerability.

In order to cope with feelings of vulnerability, or triggering of their trauma, many youth may adopt maladaptive strategies to cope. The research literature has consistently linked various types of both acute and chronic trauma exposure with higher levels of aggression, defiant and disruptive behavior, hyperactivity, impulsivity, sexual promiscuity, sleep dysfunction, and substance abuse and dependence (Armsworth & Holaday, 1993; Bronstein & Montgomery, 2011; Brown, 2003; De Bellis & Thomas, 2003; De Bellis & Zisk, 2014; Dimitry, 2012; Gilbert et al., 2009; Joshi & O'Donnell, 2003; Nooner et al., 2012; Lubit, Rovine, DeFrancisci, & Eth, 2003; Overstreet & Mathews, 2011; Paolucci et al., 2001; Saunders, 2003; Shaw, 2003; Wang, Chan, & Ho, 2013). Aggressive behavior can be a way of counteracting feelings of powerlessness and intense vulnerability, or as a reaction to hyperarousal in the midst of trauma triggers or situations, people, or contexts that are perceived as threatening (Lubit et al., 2003; Dodge, Bates, & Pettit, 1990). Another way that traumatized youth may regain a sense of control or cope with perceived powerlessness is through defiance. In the classroom, youth may either actively or passively resist demands from teachers. Regardless of the unique presentation,

children who are not responsive to teacher directives can be exceptionally frustrating for teachers, who might perceive that the child is in control of their behavior and being willfully defiant. For youth who become passively defiant, a teacher's persistent directives can provoke additional anxiety, rather than increase compliance (Perry et al., 1995)

Withdrawal is also a significant concern for traumatized youth at school. For example, the chronic experience of vulnerability may inhibit a child's engagement in both academic and social conversation in the classroom (Pynoos et al., 1996). Some children who present as behaviorally withdrawn may dissociate, which can be difficult to detect for educators who are untrained in the effects of trauma on youth.

#### **SCHOOL-BASED RESILIENCY: THE TEACHER-STUDENT RELATIONSHIP**

Teachers play an important role in shaping children's experience in school. Beyond the role of teaching academic skills, teachers are responsible for helping students to regulate behavior, communication, and contact with peers (Doll, 1996; Pianta, 1999). Once children enter school, relationships with non-parental adults, specifically child-teacher relationships, become increasingly important to classroom adjustment (Birch & Ladd, 1997; Greenberg, Speltz, & Deklyen, 1993; Howes, Hamilton, & Matheson, 1994). Perhaps one of the most important roles that educators can adopt in the lives of their traumatized students is to provide consistent and responsive emotional support, as well as a model for healthy relationships with adults. From a child's perspective, positive relationships with teachers may protect against the poor school performance associated with an unsupportive home environment.

In a sample of maltreated and non-maltreated children, Lynch and Cicchetti (1992) concluded that as a result of their experience with parents, maltreated children may express a

greater desire for closeness to non-parental adults compared with non-maltreated children. Just as teachers are likely to put more effort into children with whom they have a positive relationship, children who trust and like their teachers may be more motivated to succeed. The teacher-student relationship may be an especially important focus for intervention in trauma-informed programming for students in high school, as there is some evidence to suggest that youth feel their relationships with teachers become less positive as they get older (Lynch & Cicchetti, 1997). Data from a large national survey show that, even in adolescence, relationships with teachers are one of the single most common resources for children and may be a protective factor against risk for a range of negative outcomes (Resnick et al., 1998). Thus, from both teachers' and children's perspectives, the emotional connection between adults and children in schools is an important factor in children's school performance.

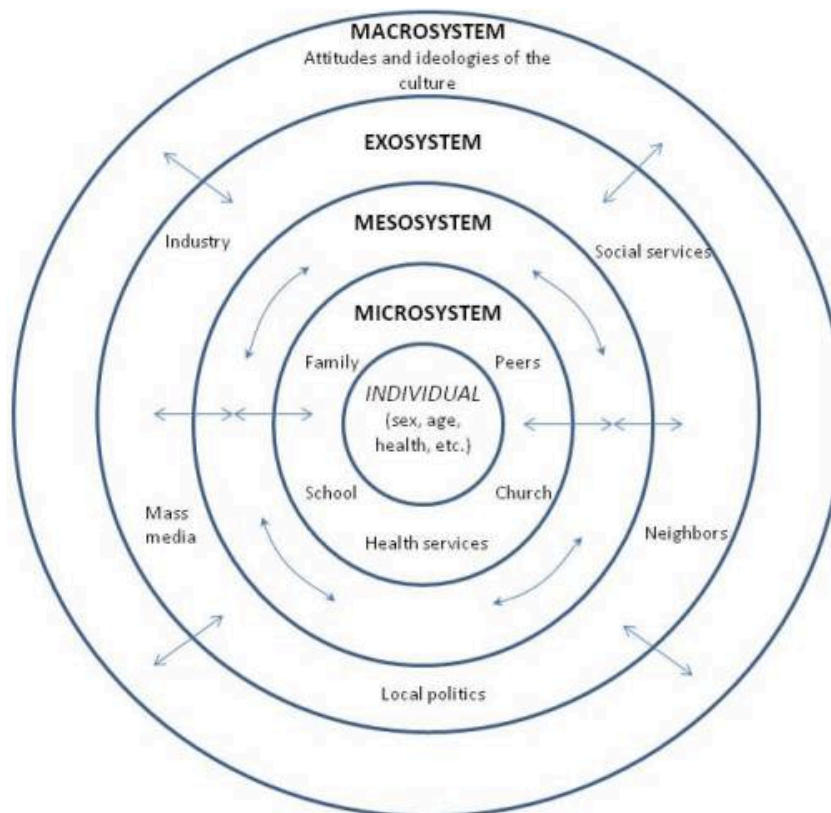
In addition to social adjustment factors, other research has identified a relationship between academic achievement and the teacher-student relationship. Hamre & Pianta (2005) found that academic achievement for elementary school children with a combination of behavioral, social, and/or academic problems was highest for those in classroom with teachers who provided strong emotional support. Teachers in these classrooms were more aware of and responsive to individual students' needs, offered proactive behavior management, and fostered a positive classroom culture. Conversely, students in classrooms with low or moderate emotional support showed significantly lower levels of academic achievement. Based on their findings, the authors hypothesized that prolonged teacher stress can impact classroom climate and the quality of teacher-student relationships, both of which are critical components of effective teaching and student achievement.

As a way of coping with inconsistent or unpredictable caregivers, many traumatized children may try hard to appear in control even though they may be feeling out of control. Researchers have postulated that when a teacher believes their student has control over his or her behavior, the teacher is more likely to become angry and use harsh punitive measures when that behavior is disruptive or inappropriate (Weiner, 1993). As a result, they are more likely to be harshly criticized or punished by stressed teachers, despite that they are among the students most in need of empathy. These types of negative teacher-student interactions can be especially damaging for traumatized children who lack a healthy attachment system at home. Taken collectively, this research suggests that meaningful relationships with caring adults, including teachers, are an important resiliency factor for traumatized youth. Accomplishing this goal in a school setting necessitates a school-wide culture that facilitates positive relationships to develop between students and educators.

### **BRONFENBRENNER'S ECOLOGICAL SYSTEMS THEORY**

This review is grounded in Bronfenbrenner's Ecological Systems Theory, which will be discussed as a framework for understanding the socio-ecological, familial, and individual risk and resilience variables that impact the adjustment of traumatized youths. Ecological systems theory was first proposed by Bronfenbrenner (1979) and describes the complex interactions between influential factors in a child's developmental process. This developmental model can be depicted in a series of concentric circles surrounding a core (i.e., individual child). Ecological factors directly surrounding the core, or the microsystem, include people in direct contact with an individual child, such as peers, parents, and educators. The mesosystem describes the interactions between the individual and factors within the microsystem, such as home-school

partnerships. Factors which indirectly affect the individual, such as educational and mental health policy, are situated at the level of the exosystem, while even broader societal influences (e.g., social norms and values) operate at the level of the macrosystem. Bronfenbrenner's later model shifted the focus on the role of the person in their own development, in what is known as the Process-Person-Context-Time, or PPCT model (Bronfenbrenner, 1992). This updated model reflects the reciprocal and complex interactions between the person, other people, and the influence of environmental contexts (Figure 1).



*Figure 1: Bronfenbrenner's Ecological Transactional Model*

## **TREATMENT FOR TRAUMA EXPOSURE**

Historically, the majority of existing evidence-based and empirically-supported interventions designed to remediate the negative outcomes associated with trauma exposure among youth have been designed to address acute forms of trauma. The psychological intervention that has the strongest and most consistent empirical base for use with individuals with acute trauma exposure with resultant PTSD is exposure-based cognitive-behavioral treatment (CBT) (Shirk & Karver, 2006). In exposure-based CBT for anxiety disorders, the client is exposed to feared stimuli through imaginal or in-vivo processes, and dysfunctional beliefs associated with the feared stimuli are targeted. The goal of this therapy is twofold: (1) to provide information that is incompatible with the pathological elements that underlie the fear structure, and (2) exposure to memories of a traumatic event is thought to promote habituation via targeting stimulus–response associations and by correcting distorted cognitions. Of the relatively small number of randomized clinical trials on the efficacy of exposure-based CBT for youth with PTSD, most have focused on treating child sexual abuse (Feeny, Foa, Treadwell, & March, 2004). Far fewer studies evaluate exposure-based CBT interventions for youth who suffered from PTSD that was not due to sexual abuse.

Although treatment research for TF-CBT has grown substantially in the past decade, several limitations to the literature base have been identified. For example, inclusion criteria for many of the studies is relatively narrow in reference to complexly traumatized youth. For example, the majority of TF-CBT studies adhere to DSM diagnostic criteria, requiring participants to meet between three and five criteria for PTSD (Cohen, 2004). Given that the DSM does not account for the relational or developmental impairments that result from complex



trauma exposure, this calls into question the generalizability of the findings to complexly traumatized youth. Additionally, majority of youth who are exposed to trauma do not develop PTSD, so the requirement of DSM-based diagnoses overlooks a broad swath of youth who have been exposed to trauma but have not developed PTSD.

Additional limitations of studies in the TF-CBT literature include small sample sizes, disallowing participants with active substance use disorders, the requirement for a consistent and stable caregiver to participate regularly in treatment (Cohen, 2004; Leenarts & Diehle, 2013). Further, these methodological qualities make it challenging to effectively examine the potential moderating effects of background characteristics, such as co-occurring psychiatric conditions, disrupted attachment relationships, and substance use. In addition, few studies have documented a sufficiently high rate of other types of traumatic experiences to be considered representative of complexly traumatized children in typical community mental health and school settings (Saunders, 2003). Finally, TF-CBT is contraindicated for youth who have: (a) current self-harm or suicidal behaviors (a common problem for youth with complex trauma), (b) lack a family system that can provide empathic support during trauma processing (complex trauma often includes the absence of a health and stable attachment system), and/or (c) are at risk for further trauma exposure (complex or multiply traumatized youth are at a much higher risk for retraumatization than those with single, acute trauma (Hodgdon, Kinniburgh, Gabowitz, et al., 2013).

Trauma treatments from the cognitive-behavioral approach target symptomology that is closely aligned with the DSM epidemiological conceptualization of trauma, and tend to view trauma sequelae as sharing common biological and psychological substrates with anxiety (i.e.,

post-traumatic stress disorder). While these interventions have proven effective for a subset of the trauma-exposed populations, these interventions rarely define the client's attachment system outside of their immediate family as a focal point of case conceptualization and intervention. Research that investigates outcomes related to complex trauma has pointed to the healthy attachment systems as important resiliency factors for youth exposed to multiple traumas or ongoing and severe stress. This research points to a critical disconnect between the research on attachment and complex trauma, and the way the field has historically approached the treatment of trauma.

### **Multi-Tiered Systems of Support for Traumatized Youth**

From an ecological perspective, exposure to trauma and the subsequent effects on youth are highly contingent on both intrapersonal and broader contextual factors. Student reactions to traumatic events are influenced by not only intrapersonal factors, but by the interpersonal, cultural and sociopolitical contexts of their lives. Multi-tiered models of trauma intervention can be clearly situated within ecological systems theory, as this approach to service delivery emphasizes an approach to intervention in the context of multiple, interconnected environmental systems. This treatment framework applied to schools capitalizes on the integration of system-wide resources and can facilitate interdisciplinary collaboration, such as that between teachers and school-based mental health professionals, with the ultimate goal of supporting student success (Averill & Rinalidi, 2009).

Viewing trauma from an ecological perspective would suggest that intervention must take place at both individual and environmental levels. In schools, embedded mental health programs can utilize multi-tiered frameworks to identify and address the academic, social-emotional,

and behavioral effects of trauma by working with students directly, as well as optimizing their environments by promoting a trauma-sensitive school culture. The model includes universal programs for all students and school staff (Tier 1), early and targeted group interventions for students and staff (Tier 2), and more intensive, individualized interventions for students and staff (Tier 3).

### **Trauma-Informed Systems of Care in Schools**

Youth who have been exposed to complex trauma often have challenging social, emotional, and behavioral reactions related to their traumas that require specialized and ongoing supports. This observation points to a need to integrate trauma-informed approaches in the schools that go beyond individual or group therapy offered in a campus-based counseling center, because teachers and administrators are often on the “front lines” in helping students to manage extreme emotional and behavioral dysregulation that lead to defiance, aggression or even self-harm. Treatment of trauma-impacted youth in schools from this perspective requires a flexible, accessible, wrap-around treatment approach that can be taught to a variety of school-based professionals, including teachers, administrators, and support staff. Creating a trauma-informed school environment that extends beyond the individual or group therapy hour is critical for traumatized youth who require ongoing support in their daily interactions (Hodgdon, Kinniburgh, Gabowitz, et al., 2013).

TIC describes a system of service delivery that integrates an understanding of the pervasive impact of trauma on the biopsychosocial functioning of youth, with the primary goal being the reduction of symptoms associated with trauma (Substance Abuse and Mental Health Administration [SAMHSA], 2015). Trauma-informed systems abide by the following guiding

principles and practices: (1) trauma occurs frequently and in all populations, (2) trauma is recognized quickly and efficiently in those involved in that system, (3) policies, procedures, and practices have fully integrated knowledge of trauma, and (4) system participants actively seek to avoid re-traumatization (SAMHSA, 2015). Regardless of the type of setting, the goal of each of these levels of care is to respond to individuals who have experienced varying degrees of trauma in a holistic and multidisciplinary way (Raja et al. 2015). These goals fit with a multi-tiered framework for mental health service delivery, in that the broader goal supports all students through fostering a positive, trauma-informed school culture while recognizing that some students will require more intensive supports (Chafouleas, Johnson, & Overstreet, 2015). In order to accomplish these goals, trauma-informed Intervention efforts should focus on not only supporting students, but also on supporting adults in their environment to foster a safe and supportive school culture.

The alignment of school-based TIC interventions with the educational ‘mission’ of schools promotes successful implementation and sustainability of such mental health programs. Historically, there has been an uneasy alliance between mental health and education, with each paradigm having pursued its knowledge base in significant isolation (Hoagwood, et al., 2007). A lack of collaboration and false sense of division has created barriers for the development and implementation of mental health programs in the schools, much to the detriment of students’ social, emotional, and academic functioning especially those with access barriers to mental health services. One proposed solution to the disjointed relationship between mental health and schools is found in the ARC approach. This framework can be adapted to the needs of any school, regardless of the structure or educational philosophy of the organization. The framework

provides guidelines for establishing a trauma-sensitive institutional structure, with school-wide practices and supports for both staff and students. The use of a flexible framework is critical for the successful implementation of trauma-informed approaches in schools because it helps align trauma-informed approaches with existing educational practices, which can ease the tension that can arise when schools attempt to integrate mental health programs into the educational environment (Cole et al., 2013; Evans, Stephan, & Sugai, 2014).

Previous research has shown that innovative educational practices are more likely to take hold when the practice or program has been built around the unique context of an organization, rather than being imposed on it (Kennedy & Kennedy, 1996). The assumption that follows is that programs designed to support teachers in the use of trauma-sensitive approaches in the classroom should be designed and implemented with contextually appropriate methods and materials, rather than dramatic and rigid changes to teachers' existing approaches. Training methods and materials should change over time, in alignment with an organization's culture and climate. Individuals who are leading implementation processes should prepare themselves to flexibly set their pace to that of the organization they are serving, rather than follow their own predetermined implementation schedule (McInerney, 2013).

In the past five years, there has been an accelerated interest among within the client service industry to integrate trauma-informed care programs into their systems of service delivery. With the increased understanding of the prevalence and impact of trauma on youth, public health systems are increasingly invested in discovering and utilizing appropriate methods to addressing trauma in their clients. Trauma-informed systems can support individuals who have been exposed to trauma by increasing their sense of safety, aiding in their recovery from

trauma, and to reset their developmental trajectories that were otherwise disrupted by traumatic experiences (SAMHSA, 2015). TIC has been demonstrated to lead to many positive outcomes in public service settings, such as psychiatric hospitals, juvenile detention centers, and residential treatment settings. For example, TIC has been shown to build knowledge, change attitudes, and develop practices that are conducive to TIC, including reduced use of restraint and seclusion (Azeem, Aujla, Rammerth, Binsfeld, & Jones, 2011; Chandler, 2008; Hodgdon, Kinniburgh, Gabowitz, Blaustein, & Spinazzola, 2013; Ford & Hawk, 2012; Ford & Blaustein, 2013). Additionally, clients in TIC systems have shown greater symptom reduction, reduced time in treatment prior to discharge, improved rates of discharge to a lower level of care, and improved mental health and substance abuse outcomes (Greenwald et al., 2012; Hodgdon et al., 2013; Morrissey et al., 2005).

Despite the support for the use of TIC programs in public service agencies, there has been a paucity of research on the development, implementation, and evaluation of these programs in schools. TIC has only recently started to appear in schools (Dorado et al., 2016; Cole et al., 2005; Cole, Eisner, Gregory & Ristuccia, 2013). There is little empirical evidence to support the effectiveness of multi-tiered TIC programs in schools, as most of the published literature that exists is limited to case studies and program evaluations. Further, very few documented organizations have fully implemented TIC programming that is aligned with the Trauma and Learning Policy Initiative's flexible framework, which currently includes programs in Massachusetts, Wisconsin, Washington, and California (Cole, Eisner, Gregory, & Ristuccia, 2013; Dorado et al., 2016). Within the limited empirical work on TIC, outcomes have typically been restricted to individual-level outcomes such as symptom indices (Morrissey et al. 2005),

organization level measures such as suspension and expulsion rates (Stevens, 2012), system characteristics such as treatment environment (Rivard et al., 2005; Dorado et al., 2016). The Collaborative Learning for Educational Achievement and Resiliency (CLEAR) program has recent empirical data suggestive of program effectiveness, though the results have not been published (Dorado, et al, 2016). Although student and organizational level variables are important target outcomes for TIC research, they are relatively distal metrics, in that they do not capture the relationship between TIC interventions and teacher characteristics or outcomes. Because teachers are a primary target group for intervention in school-based TIC programs, teacher level outcomes are critical, though largely overlooked in TIC research thus far.

### **Attachment, Regulation, and Competency (ARC) Framework**

The theoretical framework for the intervention described in this study is situated within the Attachment, Regulation, and Competency (ARC) framework, which is based on theory and research in the attachment, trauma, and developmental theories literature (Blaustein & Kinniburgh, 2010; Kinniburgh & Blaustein, 2005; Kinniburgh., Blaustein, & Spinazzola, 2005). Interventions developed out of this framework emphasize the attachment system as a foundation on which to base clinical intervention. Trauma literature consistently points to an important relationship between trauma and attachment, in that secure attachment in childhood is linked to several beneficial developmental outcomes (Ontai & Thompson, 2008; Rice, 1990), whereas disrupted attachment is associated with negative outcomes which impact areas of neurobiological, psychological, and social functioning (Fernandez, 2008; Wakschlag, L., Hans, S., 1999; Schneider, B., Atkinson, L., Tardif, C., 2001; Schuengel, Oosterman, & Sterkenburg, 2009). The development of the ARC framework for TIC intervention was informed by the

available research evidence and clinical expertise in defining the core components of complex childhood trauma, thereby qualifying it as an EBP as defined by the APA task force on evidence-based practice (Levant, 2005), and is recognized as such by SAMHSA.

The ARC model provides not only a guiding theoretical framework for this study, but also describes core principles of intervention, and a guiding structure for TIC service providers in schools. The ARC framework (figure 2) is grounded in attachment, trauma, and developmental theories and conceptualizes trauma across three domains: (a) attachment (e.g., building consistent relationships with caregivers and emotional attunement skills), (b) self-regulation (defined as affect/emotion identification, expression and modulation) and (c) competency (e.g. executive functioning, self-development, and identify). School-based interventions can be framed by each of the core domains within the ARC theory, making the ARC framework ideal for developing, implementing, evaluating, and sustaining TIC interventions in schools.

The **attachment** domain of the ARC framework describes the child's system of caretakers, which can include parents, extended relatives, school personnel, and clinicians. The attachment system is a foundational component in a child's developmental process. Four components of intervention are recognized within the theoretical domain of attachment:

- (1) *Affect management by caregivers*: This component addresses caregiver ability to support the child in learning to regulate their emotions. The caregiver is taught to identify typical responses to trauma and is educated about adaptive coping skills for youth. Further, clinicians operating within the ARC framework might focus on depersonalizing the



traumatized child's behavior, validating caregiver approaches, and helping the caregiver develop their ability to manage a child's affective responses.

(2) *Attunement*: Focuses on the connection between caregivers and children and their ability to accurately interpret and respond to each other effectively. Facilitating positive engagement between caregiver and child is the focus of this level of the ARC framework. Intervention would focus on bolstering the caregiver's ability to recognize and respond to the child's emotional needs underlying a behavioral manifestation, including psychoeducation regarding trauma triggers and responses.

(3) *Consistent response*: This component describes a caregiver's ability to consistently respond to a child's behavior in a way that reflects their understanding of the child's emotional needs. If caregivers have difficulty with affect management and attunement, this component will likely suffer. Interventions targeting this component will focus on developing and implementing effective behavior management skills.

(4) *Routines and rituals*: This component focuses on the ability of caregivers to establish predictable routines and relational patterns in order to increase a child's perception of safety in their environment.

The self-regulation component describes a child's ability to identify, moderate, and express their internal experience. Difficulties with self-regulation is a consequence of exposure to complex traumatic stress, which compromises a child's ability to utilize coping resources (Alink, Cicchetti, Kim, & Rogosch, 2009). In the absence of a healthy attachment figure or system, a child who lacks self-regulation skills cannot benefit from a source of external

regulation, which can lead to emotional disconnection or the use of maladaptive coping skills.

When working within with self-regulation domain, three areas are targeted:

- (1) *Affect identification*: Intervention efforts in this domain focus on building vocabulary for emotional expression, and helping a child understand the connection between emotions and precipitating events. Children learn to tune into the internal and external cues of their emotions and subsequent behaviors.
- (2) *Modulation*: This element focuses on children's ability to recognize, tolerate, and maintain a connection to their internal experience. Youth who have experienced trauma often have a limited ability to regulate their arousal states. Interventions would focus on supporting youth in developing and utilizing concrete strategies to effectively regulate their bodies and emotions.
- (3) *Affect expression*: Focuses on increasing a youths' ability to identify and utilize safe resources and communicate their emotional experience. The inability to effectively communicate disrupts the formation of healthy attachment systems.

Competency is the third domain of the ARC framework, which described a youth's ability to develop age-appropriate, developmental competencies. Children with complex trauma histories can experience delays in several domains of biopsychosocial development (Perfect, et al., 2015). The competency domain conceptualizes two main components for intervention:

- (1) *Executive functioning*: This component aims to support the youth's development of skills associated with executive functioning, including problem solving, planning, and anticipation. Youth are taught to understand the association between their behavior and consequences, and to evaluate alternative options when faced with a decision to act.

(2) *Self-development and identity*: The goal of this component is to support the youth in developing a strong sense of self. In this stage of intervention, youth are encouraged to develop a life narrative, come to know their personal strengths and limitations, and develop goals for the future.

*Trauma Experience Integration*. The final ARC component integrates the network of skills within the attachment, self-regulation, and competency domains, to support youth in building an integrated understanding of the self in increase engagement in the context of their lives. This building block emphasizes developmentally appropriate strategies for responding to the sequelae of exposure to traumatic events that continue to sabotage a student's progression through their developmental process. Specific symptomology targeted in this building block include traumatic memories and reminders, triggered arousal and freeze states, and trauma-related self-attributions and cognitions.

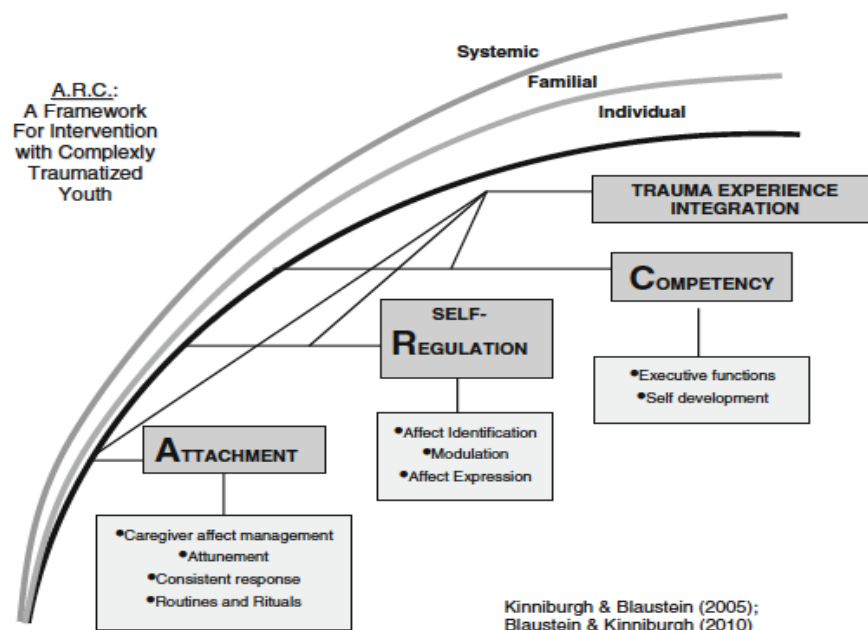


Figure 2: The ARC Framework for Trauma Intervention

The ARC framework focuses on engagement with children and caregivers to recognize danger signals, differentiate current and past dangers, build skills in managing these responses, and lay the foundation for development of competencies across domains, while supporting caregivers in providing a safe context in which their children may do so (Blaustein & Kinniburgh, 2010). It is inherently flexible to accommodate a range of different treatment settings, and emphasizes whole-systems change in the development of youth socioemotional competencies and caregiver responsiveness. This framework represents one emergent model out of the National Child Traumatic Stress Network (NCTSN) for interventions with children and adolescents impacted by complex trauma (Cook et al., 2005).

TIC interventions which utilize the ARC framework have demonstrated initial empirical support through program evaluation efforts as well as some clinical outcome data among diverse samples of trauma-impacted children and families. For example, a cross-site evaluation of the NCTSN Core Data Set (CDS) identified ARC as the second most frequently utilized treatment among a national clinical sample of children across several treatment settings who had experienced a wide range of traumatic experiences such as emotional, physical and sexual abuse, traumatic grief, exposure to domestic and community violence, and neglect (ICF International 2010). The authors evaluated the use of TIC over a 6-month intervention period with children ages 6 to 18. Findings linked the use of the intervention to significant reductions in PTSD symptoms, as well as on overall scores on the Child Behavior Checklist (CBCL). Another program evaluation included a sample of complexly traumatized children ages 3 to 12 years who were involved in the child welfare and foster system. The findings indicated that 92% of children involved in a TIC intervention from an ARC framework achieved home placement permanency

compared with a less than 40% annual permanency rate for the state overall (Arvidson et al. 2011). Further, ARC treatment completers exhibited a 17.2-point drop in CBCL Total Concerns scores, with a marked reduction from 85th to 49th percentile in Behavioral Concerns.

## **STAGES OF IMPLEMENTATION OF TRAUMA-INFORMED SYSTEMS**

In addition to an evidence-based framework for service delivery, the use of TIC interventions also require a detailed, but flexible, plan for implementation and sustainability. The process of implementation is a non-linear, dynamic process that can range from two to four years, depending on the institution (Fixsen et al., 2001). Six distinct stages of implementation have been identified in the literature on implementation science, and have been used to guide the implementation of the program described in this study, including exploration, installation, initial implementation, full implementation, innovation and sustainability.

The stages of this model represented in the present study span initial exploration (Phase 1) to full implementation (Phase 4). During the exploration phase (Stage 1), match between the needs of the system and the proposed practice or program is assessed, and support for the program is established within the system. During program installation (Stage 2), activities needed to establish the intervention within the system, including creating structural supports for the interventions, are solidified. During initial implementation (Stage 3), the new programming begins within the system and adjustments are made in order to manage inertia or resistance to change encountered within the system. During full operation (Stage 4), new learning of the practice is integrated across the system, including practices, policies, and procedures. These stages are dynamic and have complex relationships with one another. For example, the exploration stage can be highly related to the sustainability stage, in that the extensiveness of the

needs assessment process that takes place in the former stage can impact the relative success and longevity of a program in the latter stage.

## **FACILITATORS AND BARRIERS TO IMPLEMENTATION AND SUSTAINABILITY**

Previous findings have pointed to several factors that support implementation and sustainment efforts of school-based trauma-informed programming, including school personnel stability, administrative support, fit with the school's culture, operational structure, and priorities, and teachers' psychological experiences and perceptions of programming (Ransford, et al., 2009; Friend et al., 2014; Palinkas et al., 2013; Tibbits et al., 2010). Other facilitators of sustainability include ability to run programming successfully during the previous school year, school personnel perceiving the benefits of the intervention, and positive pre- to posttest outcomes for students (Nadeem et al., 2016). Collectively, these studies have shown that sustainability in schools is supported by the overall culture and climate that was set in previous school years. Specific strategies for involving administration and other school personnel may have also contributed to the sustainability of trauma-informed mental-health care programming (Nadeem et al., 2016).

### **Impact of Professional Development Training**

One common finding in implementation science is that important stakeholders within a system or institution need to understand the goals and perceive the benefit of a program in order to promote both implementation and sustainability efforts. In the school context, the findings from this body of research shifts the focus onto teachers, who need ongoing support and training to achieve buy-in for TIC practices (Baweja et al., 2015). Further, it is critical that teachers feel supported by colleagues and administrators as they move their school's culture toward being

trauma-informed through their daily professional activities. Nadeem and Ringle (2016) found that de-adoption of CBITS in a school settings was associated with district-level leadership changes, financial and workforce instability, and shifting priorities at the school- and district-level. These problems are common to those observed with other school-based mental health programs (Forman, Olin, Hoagwood, Crowe, & Saka, 2009; Stirman et al., 2012). Researchers have theorized that the comprehensive integration of trauma-sensitive culture into broader school context may help overcome sustainment barriers (Overstreet & Chafouleous, 2016).

Professional development for teachers is an especially important component to implementation and sustainability of trauma-informed approaches, as most educational professionals have not received formal training in topics related to youth mental health, including the effects of youth trauma or trauma-informed responses to youth with trauma (Splett, Fowler, Weist, McDaniel, & Dvorsky, 2013). Professional development in trauma-informed approaches is necessary to support educators' knowledge about the effects of trauma in their students, and their capacity to respond effectively. For example, untrained school staff may misinterpret a student's behavioral reaction to a trauma trigger as defiance or oppositionality, and mistakenly respond to the student in a way that escalates the students' trigger reaction and subsequent behavior. As previously mentioned, researchers have postulated that when a teacher believes their student has control over his or her behavior, the teacher is more likely to become angry and use harsh punitive measures when that behavior is disruptive or inappropriate. However, if teachers are able to recognize the factors that shape a child's behavior and compromise self-control, such as those related to trauma, teachers are more likely to attempt to respond

empathically (Weiner, 1993). One way to alleviate this type of misattribution of student behavior by students is through continued professional development efforts.

Contributing to teachers' knowledge base related to the effects of trauma also supports their sense of professional self-efficacy, thereby supporting the adoption and sustainment of TIC initiatives. Recent findings from the field of implementation science point to the importance of school-wide consensus regarding the need and importance of mental-health care practices, including trauma-informed approaches (Metz, Naoom, Halle, & Bartley, 2015). Therefore, a crucial component of TIC in schools is professional development training which aims to educate school personnel on the impact of trauma on students, as well as promote individual and system-level intervention strategies to promote learning and healthy social-emotional development.

The goal of most professional training efforts is to impact behavior change in recipients of the training and, ultimately, impact the outcomes for clients. However, the processes by which knowledge change and shifts in beliefs and attitudes impact the behavior of trainees and client outcomes are highly complex and varied, especially across different systems of service delivery. One widely recognized model for the evaluation of professional training was developed by Kirkpatrick (1967), which includes four levels of assessment: trainee satisfaction, knowledge and attitude change, behavior change, and change in client wellness status (Bates, 2004). This model has proven useful as a foundational reference for measuring change following professional development training, though other researchers have recently proposed a more nuanced alternative to this evaluation approach. Fixsen, Blase, Naoom, & Wallace (2009) in particular suggest a theoretical model of training and supporting practitioners that highlights several "core implementation components" conceptualized within an ecological or systems model, including



staff selection, didactic training, consultation and coaching, staff-level performance evaluation, organization-level assessment of implementation success and continuous quality improvement, administrative support, and supportive interactions with external systems (Glisson et al., 2008).

Promising outcomes associated with the use of professional development training in TIC have been documented (Brown, Baker & Wilcox, 2012; Green, et al., 2015), including increased trauma knowledge base, more favorable attitudes toward TIC, and the development of TIC practices in clinical settings. However, the impact of these types of trainings in educational environments has yet to be fully evaluated (Overstreet & Chafouleous, 2016). Findings from Nadeem & Ringle's study (2016) suggest that the development of techniques and interventions which support teacher engagement and buy-in with trauma-informed culture in schools is critical for implementation and sustainability of these programs.

### **Healthy Teachers for Healthy Students**

Given the importance of the student-teacher relationship for traumatized youth, teacher well-being has clear implications for student success at school. Previous research has shown that teachers who experience significant stress are more likely to criticize their students, lose their temper, and use punitive disciplinary strategies as compared to their less stressed counterparts (Lens & Neves de Jesus, 1999). These types of disciplinary strategies are not only less effective at managing disruptive behaviors, but they can also be triggering for complexly traumatized youth. Therefore, stressed and overtaxed teachers who resort to more punitive measures may unintentionally escalate their students' emotional and behavioral reactivity in stressful interpersonal situations. Other research has shown that teachers who experience high levels of stress in the classroom may respond to students with anger and hostility, fostering an overall

negative teacher-student relationship, which further increases teacher stress levels (Yoon, 2002). This research suggests that teacher stress likely has a negative impact on the quality of their relationships with students, with a reciprocal influence on stress levels.

Stress also impacts teachers' ability to deliver instruction and respond to student behavioral problems effectively, which has implications for student learning and achievement. One study found that teacher stress was negatively associated with a social-emotional learning curriculum (Ransford et al., 2009). Pas, Bradshaw, Hersfeldt & Leaf (2010) found that teachers who experience significant occupational stress struggled the most to implement new educational or behavior management practices and were the least likely to refer students for schools-based support services. These findings point to the importance of gaining teacher support and buy-in for TIC programming in schools. Based on this research, TIC interventions that define teacher stress as a target for intervention will theoretically encourage teachers to utilize campus-based student mental health services, which will directly and indirectly promote teacher buy-in for the TIC model of care.

Several themes have been used to describe the vast majority of occupational stress experience for teachers, all of which emphasize the role of school environment, and the chronicity of the stressors (Maslach & Goldberg, 1998). Other research has confirmed this finding, with significant sources of stress and frustration more often reflected work-setting and job characteristics (e.g., Charter school versus private school; level of work-life balance), more so than individual factors (e.g., early career status, grade level taught) (Hakanen et al., 2006 & Kyriacou, 2001). In a qualitative study by Shernoff, et al. (2011), teachers in an urban setting identified a major sources of stress to be a persistent imbalance between the demands of teaching

(e.g., work overload, intense behavioral and learning needs among students, and accountability pressures) and available resources. These findings are concerning, given the importance of school culture in predicting teacher retention and long-term commitment to teaching and suggest that enhancing teachers' individual skills are necessary, though not sufficient unless workplace conditions and organizational sources of stress are targeted as well.

Teachers in this study also indicated that a leadership team which supported teachers' emotional and mental health and enhanced collegial relationships, both personally and professionally, would reduce occupational stress. Furthermore, teachers reported wanting more contact with their colleagues both professionally and personally and that enhanced relationships with principals and other school leaders would also contribute to stress reduction.

Fostering positive relationships between teachers, staff, and students is deeply embedded in the treatment model of TIC approaches in schools. Given the undeniable impact of teacher stress on well-being, and the deleterious effect of teacher stress on the teacher-student relationship, school-based mental health care approaches would do well to incorporate methods that target teacher stress and bolster well-being in order to support the mental health of students. In terms of efforts to remediate teacher stress, prior research has largely focused on individual factors, such as age, gender, years of experience, and prior mental health functioning. Although organizational factors have more consistently predicted stress (Burke & Greenglass, 1995; Dorman, 2003; Hakanen et al. 2006 & Kyriacou, 2001), the majority of interventions designed to remediate teacher stress target individual factors, including stress management training, progressive relaxation training, and mindfulness techniques. Although individual-level interventions have proven effective in short-term outcomes, such as decreased stress and

improved coping, evidence suggests that individual-level programs are often unsuccessful because they ignore the broader school context and characteristics of school culture, which teachers report to be the most impactful, and often detrimental, to their job performance (Burke & Greenglass, 1995; Kyriacou, 2001).

Overall, the above findings suggest that both individual and organizational factors are related to teacher stress and wellness, important considerations in the design and implementation of whole-school, TIC approaches. Research on interventions targeting teacher stress suggests that the most effective approach for targeting teacher stress and ultimately, the promotion of positive teacher-student relationships, would be to intervene at the organizational level in addition to the individual level. As an example, a systems-level TIC intervention following this theoretical model might focus on shifting the context and the culture of the school, rather than focusing solely on individual skill development for teachers and staff. This theoretical approach is wholly aligned with the philosophy of trauma-informed systems of care in schools.

### **Teacher Perceived Professional Self-Efficacy**

Teachers beliefs about their professional self-efficacy have been theorized to play a central role in a their cognitive and emotional experience as they progress through change, such as the process of program implementation in schools (Michie et al. 2005). A great deal of research has suggested a positive effect of high teacher self-efficacy on student outcomes (Tschannen-Moran & Johnson, 2011; Ertmer, 2005; Roberts & et al., 2001; Ross, 1992; Ashton & Webb, 1986; Rosenshine, 1979; Berman & McLaughlin, 1977; Armor, Conroy-Oseguera, Cox, King, McDonnell, Pascal, et al. 1976). Other research has found that teacher self-efficacy is positively associated with implementation of social-emotional learning curricula, and that

teachers who perceived their school administration as more supportive reported higher implementation quality (Ransford et al., 2009). Taken collectively, these studies suggest that when teachers believe in their ability to improve student learning, manage a classroom, or engage students, they are more skilled and effective teachers.

Woolfolk, Rosoff, and Hoy (1990) found that teachers with high self-efficacy were better at managing their classrooms, facilitating independence among students, and relied on internal motivation strategies as opposed to extrinsic rewards. Contemporary research suggests that teachers with high self-efficacy put forth more effort and remain more persistent in their classroom (Brouwers & Tomic, 2000). Additionally, Chan (2002) found that high self-efficacy was associated with better strategies for managing stress, which has strong implications for how teachers respond to their students who are emotionally or behavioral dysregulated as a result of complex trauma.

Teachers' high or low efficacy may influence levels of change implementation for different reasons. A recent study surveyed 700 elementary school teachers in a Southwestern school district and found a relationship between self-efficacy and attitudes toward change (Brenner, 2013). In general, teachers with higher self-efficacy were more open to the idea of changing their practice. Additionally, teachers who taught fewer than 5 years or more than 10 years had higher self-efficacy and were more likely to be open to change than teachers who taught 6-10 years (Brenner, 2013). Brenner proposed that this relationship may be due, in part, to teachers' time and energy to dedicate to the profession as they progress through transitions in their personal lives. Brenner offered the possible explanation that newer teachers begin with a higher sense of efficacy and more positive cognitions regarding their ability to manage a

classroom. However, Brenner noted that the sixth and tenth years of teaching coincided with changes in many teachers' personal lives, such as getting married and dealing with personal transitions that may affect their sense of professional efficacy until they surpass the transition.

Other researchers have hypothesized that low teacher efficacy could lead to greater motivation to learn and practice new skills related to new programming due to a "learning disequilibrium", which is characterized by uncertainty and doubt about previous ways of doing one's work and a motivation to change (Wheatley, 2002, p. 5). Alternatively, teachers with high perceived self-efficacy may be more likely to feel efficacious at implementing the pre-innovation approaches and therefore may be more concerned with management of the reform and the consequences for their students (Charalambous & Philippou, 2010).

Many factors both within the school and in a teacher's personal life may impact their sense of self-efficacy in the classroom. There also seems to be a complex and nuanced interplay between self-efficacy and shifts in school practice or culture. In sum, less efficacious teachers may be more motivated to implement a reform if their personal and task-oriented concerns are addressed early on and if they have continued support in order to advance to higher levels of use. More efficacious teachers may need multiple exposures and opportunities to experiment with a new approach to teaching in order for them to change their beliefs and attitudes toward the new programming, and to see it as useful for their students.

### **Teacher Attitudes**

The extent to which a school is trauma-informed is contingent on behavior of its teachers (Metz, Blasé, & Bowie, 2007), and attitudes toward TIC are considered to be an important driver

of this behavior. The inclusion of children with social-emotional and behavioral difficulties in the mainstream classroom has been reported to be problematic for teachers, and is accompanied by negative teacher attitudes (Cook, 2001; Cook, Cameron & Tankersley, 2007; Hastings & Oakford, 2003; Shapiro, Miller, Sawka, Gardill, & Handler, 1999). Often, these types of children are impacted by complex trauma, and are struggling to manage their interpersonal relationships and emotions. Teacher attitudes toward the inclusion of children with these types of difficulties is thus an important factor to consider in the implementation of a school-wide TIC program.

For the purpose of this review, attitudes are defined as an enduring disposition to respond in a particular manner to various aspects of the world, including persons, events, and objects (Ajzen, 2005). Attitudes and self-efficacy are highly related, in that the extent to which a person believes they have the capacity to effectively manage their environment within an organization (e.g., teachers within a school), and the behavioral autonomy to do so by their own accord, influences their attitudes toward a given program or practice (e.g., TIC initiatives). Ajzen outlines three main components of attitude: (1) Affective: consists of an individuals' emotional valence toward an object, (2) Cognitive: Encompasses one's awareness of and knowledge about the object, and (3) Behavioral: Reflects actionable intentions and expectations for behavior around the object.

When planning for the implementation and sustainability of a system-wide intervention or program in a school, it is crucial to consider the readiness of stakeholders to adopt the intervention, and how they might respond to the change over time. One way to approach the question of stakeholder readiness and buy-in is to assess their attitudes toward the program, or a core concept related to the program, such as TIC. The theory of planned behavior (Ajzen, 1991)

proposes a framework for addressing the relationship between attitudes and behavior. This theory suggests that in order to predict a specific behavior, a person's attitudes, anticipated external approval, perceived behavioral control, and behavioral intention relative to that behavior need to be considered. Attitudes are a critical mediating factor in this model, and are highly related to behavior.

Research on program implementation suggests that new programming in schools have the potential to influence teachers' behavior change through their knowledge and attitude change, as long as the overarching system is supportive of the integration of a new service delivery model (Ajzen, 1991; Fixsen et al., 2009). Just as teacher attitudes have the potential to initiate and sustain behavior change, attitudes can also act as a roadblock to the adoption of new programs (Baker, Kupermidt, Voegler-Lee, Arnold & Willoughby, 2011). Although attitudes of stakeholders play a critical role in systemic adoption of TIC, there are only two existing measures that evaluate these attitudes. Colton and Xiong (2010) developed a 41-item measure to evaluate staff perceptions of organizational change consistent with TIC, including nine dichotomous items on attitudes, however these items are limited by the dichotomous item structure and are not conceptually distinct from broader scale, which suffers from relatively low internal consistency. The other measure is the 19-item scale developed by Brown et al., 2012, which was originally developed in a community context to evaluate a staff trauma training model (Brown et al., 2012; Saakvitne, Gamble, Pearlman, & Tabor Lev, 2001). This instrument is useful for assessing attitude change associated with direct and formal trauma training, though it was limited by a single general factor. Both of these measures are limited in that they do not fully include nor evaluate the range of constructs that are relevant to TIC attitudes.



## **GAPS IN THE LITERATURE AND RATIONALE**

Thus far, the discourse on the implementation and impact of trauma-informed schools has happened largely outside of the scientific literature, grounded in studies with few explicit connections to implementation science. Little is known about whether the educational workforce finds trauma-informed approaches acceptable and feasible (Overstreet & Chafouleous, 2016). To date, there is no objective way to measure the extent to which an individual or system is “trauma informed”. In order to improve upon the process of implementing and measuring outcomes for school-based TIC initiatives, it is crucial to first understand the factors that facilitate or impede the implementation and sustainability of school-based mental health interventions. Teacher characteristics, such as perceived self-efficacy, and attitudes and concerns toward programmatic changes, such as TIC, can impact the success of implementation of new programs and attempts toward shift in school culture. Yet little is known about how these characteristics interact with the implementation of trauma informed practices, specifically.

Several models have been developed to support the investigation of complex variables that influence whether new mental health programming will be sustained in community settings (Mendel, Meredith, Schoenbaum, Sherbourne, & Wells, 2008; Aarons, Hurlburt, & Horwitz, 2011; Greenhalgh, Macfarlane, Bate, & Kyriakidou, 2004; Fixsen, Naoom, Blasé, Friedman, & Wallace, 2005). A common assumption across these models is that buy-in from key stakeholders, such as the teachers in a school setting, is a critical aspect of both implementation and sustainability of mental-health programming. Indeed, teachers’ support of mental health programming has been documented as a key aspect of the success of mental health interventions in schools (Forman, Olin, Hoagwood, Crowe, & Saka, 2009; Lynn, McKay, & Atkins, 2003;

Langley, Nadeem, Katoaka, Stein & Jaycox, 2010). A qualitative study conducted with school-based mental health intervention developers found that 58% of respondents identify teacher support as a significant factor that contributed to the successful implementation of their intervention (Forman et al., 2009). Interventions must reflect the primary goal of the schools they are situated within, which is the education of students (Domitrovich, Bradshaw, Poduska, Hoagwood, Buckley, & Olin, 2008), and the benefits of the intervention must be made clear (Forman et al., 2009; Weist et al. 2012; Flaspohler, Meehan, Maras, & Keller, 2012).

Yet another study conducted in a middle school with school-based clinicians and administrators found that a lack of teacher support and teachers not allowing students to leave class to receive mental health services to be a commonly reported barrier to the implementation of an evidence-based trauma intervention (Langley et al. 2010). Collectively, these studies of stakeholder perspectives point to the importance of teacher buy-in to the success of mental health interventions in schools. In the case of TIC interventions, it is additionally crucial for teachers to understand the relationship between trauma-related symptoms and their students' potential for success at school.

Rigorous evaluation of TIC in the context of school-based mental health is needed, with the goal of wide-spread and sustainable adoption (Ko et al., 2008; SMHSA, 2014), yet there are significant barriers that impede the progress of TIC in schools. Namely, the operationalization of TIC in schools has yet to be defined in the literature. As a result, very few empirically strong measures exist with which to evaluate TIC, and specifically teacher attitudes toward TIC. In order to better understand the process by which trauma-informed school programs are implemented and sustained, research is needed to examine teachers' experiences of trauma-

informed programming, including their attitudes, beliefs, and concerns during the shift toward trauma-informed school programming and culture. This study intends to investigate the teacher characteristics associated with readiness to adopt trauma-informed practices, as well as to evaluate the extent to which a school-based, trauma-informed intervention impacts teachers' awareness of and attitudes toward trauma-informed practices. Furthermore, this study aims to further the understanding of how teacher characteristics influence the implementation process of a school-based, TIC intervention.

## **RESEARCH QUESTIONS AND HYPOTHESES**

**Research question 1.** To what extent do age, gender, years of experience teaching, and perceived professional self-efficacy predict attitudes related to TIC?

*Hypothesis.* I expect to see variability in the sample along these characteristics, and the strength of the relationships will vary. Given that this is one of the first studies investigating these constructs, this question is exploratory.

**Research question 2:** Do teacher attitudes toward TIC differ across three high schools at different phases of implementation of a school-based TIC mental health care intervention?

*Hypothesis.* Teachers at schools in more advanced phases of TIC program implementation will have more favorable attitudes toward TIC as compared to teachers at schools in earlier implementation phases of the intervention. Given that this study is the first to investigate the relationship between teacher attitudes across phases of implementation of a TIC intervention, this research question is exploratory.

**Research question 3:** Do teacher attitudes toward TIC differ across participation in different program tiers within the TIC intervention?

*Hypothesis.* Given that this is the first study to investigate the relationship between teacher attitudes across tiers of participation within a TIC intervention, this research question is exploratory.

**Research question 4:** Does the effect of tier of participation on teacher attitudes toward TIC depend on the phase of implementation?

*Hypothesis.* Given that this is the first study to investigate the effect of the interaction between phase of implementation and tier of participation in a school-based TIC intervention on teacher attitudes, this research question is exploratory.

**Research question 5:** What specific factors (e.g., system/organization-level, individual-level, intervention factors) influence positively and negatively valenced teacher attitudes toward TIC? This question will be answered using qualitative methodology.

## **Chapter 3: Methodology**

### **CONTEXT OF STUDY**

Taking into account the multiple systems influencing students and their teachers, it is important to describe the educational context within which youth in this study are situated. The following chapter provides an overall description of the district (Joliet ISD, pseudonym) that houses the campuses included in this project. An overview of the programming provided at each campus-based clinic is also provided.

### **Joliet Independent School District Demographics**

Joliet Independent School District (JISD, pseudonym) is located in central Texas, with a total population of 713,916 within district boundaries. JISD educates approximately 84,000 students across 130 school campuses, with 84 elementary schools, 18 middle schools, 16 high schools, and 12 other campuses. During the 2015-2016 school year, it was estimated that approximately 59% of JISDs students identify as Hispanic, 8% African American, 27% White, and 7% identify as other or mixed ethnicity. (JISD Department of Campus and District Accountability, 2015). Additionally, 28% of the students in JISD are English language learners, 57% are economically disadvantaged, and 10% qualify for special education services. As previously mentioned, youth who are economically disadvantaged and of racial minority status are at an increased risk of trauma exposure, and are less likely to have access to appropriate mental health services. With the significant proportions of these demographic groups represented in JISD, schools within this district are positioned to provide comprehensive mental health services through a TIC model to a diverse student body.

## **Vida Clinic and the Trauma-Informed Schools Initiative**

Vida clinic has been working with Joliet Independent School District since the beginning of the 2015 school year to develop and maintain a series of campus-based counseling centers, known as a School-Based Mental Health Centers (SBMHC). Within the parameters of the general ARC model, Vida Clinic customizes intervention activities to the expressed needs and culture of the schools, with the intent of fostering a sense of partnership and collaboration within the program.

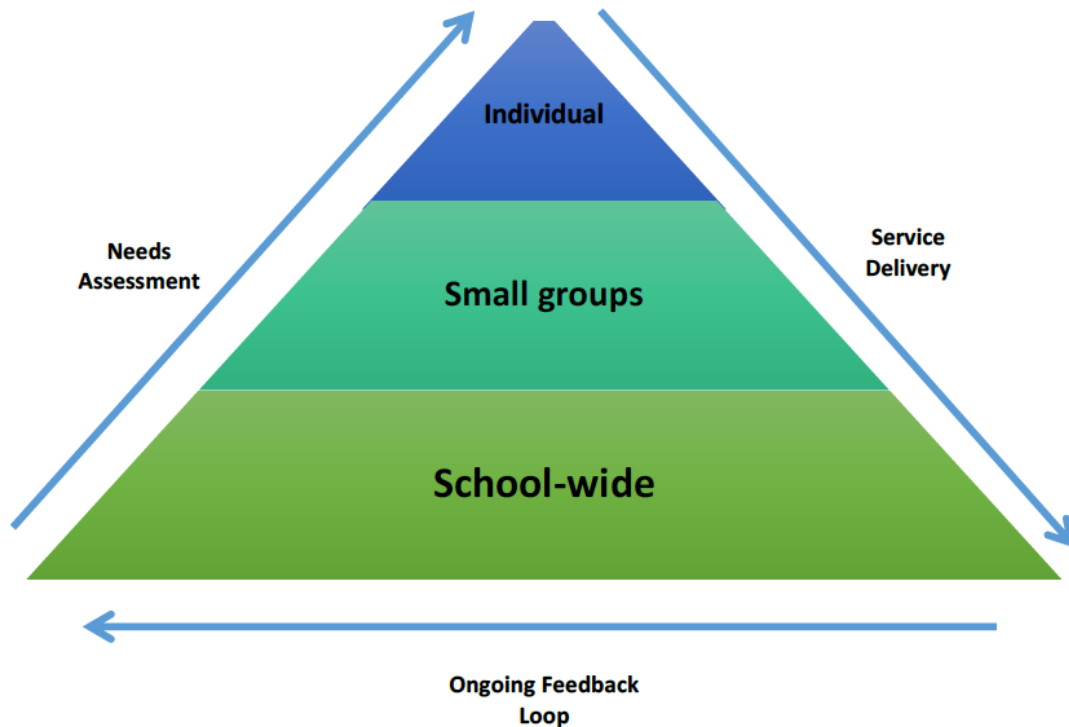
Based on the needs assessment of the main campus (S1) during the first phase of implementation, the clinic's scope of school-based services focuses on intervention across three tiers of service delivery, which is described in detail in the following section. Vida Clinic and JISD have established a strong history of partnering to implement mental health initiatives within several campus communities, starting with individualized student services in their embedded clinics. By design, the services associated with the initiative have been highly compatible with other mental wellness services on S1's campus. In particular, this project worked in tandem with the Campus Based Counseling Center (providing diagnostic and psychotherapy services by a licensed provider to any member of the campus community), Communities in Schools (providing mentoring and support to help students succeed in school), and with JISD Social Support Services (case management by campus social worker for students and families) to develop an integrated model of mental health service delivery. By forming close partnerships with other mental health resources on campus, a coordinated system of services has resulted, creating an ecological model of care that addresses wellness needs of all stakeholders within the school community. The integration of many supports promotes an ecosystemic approach to promoting a

climate of resilience and caring for both students and teachers. True to the ARC protocol for implementation of TIC interventions, the project was not implemented as a fixed protocol, but rather was developed using evidence-based components derived from complex trauma research and with built-in flexibility to address the unique needs of the district.

The project team at the S1 campus offers real-time consultation support to educators and coordination of professional development opportunities to staff in the area of trauma-informed, person-centered practices. The mission of the project was to promote awareness and sensitivity to children who are traumatized or otherwise distressed, to other youth in their presence, and to teacher needs for stress reduction and overall well-being. The consultation-skill building model used in this intervention is one approach for catalyzing shifts in school culture toward trauma-responsive practice. The ultimate goal for this domain of the project is to promote teachers' sense of competence, self-determination, and connections with others, while minimizing the inappropriate use of punishment for "bad" behavior in the classroom.

### **Program Structure Across Tiers**

Overall, the project allowed the clinic to reach students, teachers and staff using multiple levels of support (school-wide, small groups, individual), much like Response to Intervention programs for students (Figure 3). This section provides program activities implemented at S1, beginning in August 2015 and at S2, for which implementation of teacher-level interventions began in October 2017. Current TIC services at the S3 campus is limited to services for students, which includes direct, targeted psychotherapy services at the individual and group level. at S3, and at the individual and small group level at S2.



*Figure 3: Multi-Tiered Framework of Trauma-Informed Schools Initiative*

### **Tier 1: School Wide Interventions**

The activities listed in this section were available to teachers at S1 and S2.

**Presentation on Trauma and Stress:** As a part of the first tier of support, the project team collaborated to provide a school-wide training, entitled “Trauma and the Adolescent Brain”. This presentation, provided to all school staff at the beginning of the 2015-2016 school year, focused on how trauma and stress impact the brain and how emotional regulation and relationship building among students and staff can help mitigate the harmful effects of trauma and stress.

**Staff Tribute Project:** Based on needs assessment meetings with staff groups, the project team identified a need for students to provide strengths-based feedback to their teachers,



allowing for opportunities for positive engagement between teachers and students. To this end, we collaborated with the school staff to create a teacher and staff tribute project in which students were invited to pay written or podcast tributes to staff members who inspired or motivated them.

**Trauma Informed Schools Online Training Modules:** All school staff were encouraged to take part in an online training that is offered through JISD continuing education database. This online course includes nine video learning segments created by the Wisconsin Department of Public Education and provides an overview of what trauma is, what it may look like in the classroom, and best practices for removing barriers to learning for students dealing with trauma.

## **Tier 2: Focused Intervention**

The following activities were available to teachers at S1 and S2, and student level interventions are available at S1, S2 & S3.

**Student Process Groups:** Students have the option to participate in peer process groups led by licensed mental health clinicians. Examples of group foci include: Teen girls group and Social Skills

**Focus Groups:** As a part of the second tier, the Vida team met with small groups of teachers and staff in specific subgroups (such as new teachers, secretaries, or administrators) to assess needs and strengths. Each focus group lasted about 45 minutes. Staff input at these focus groups enabled the consultants to customize their consultation model to the strengths and needs of this particular campus.

**Teacher Small Group:** Teachers had the opportunity to participate in a stress prevention and mindfulness group, which was a 7-8 week intervention offered once in both the fall and spring semesters. The Stress Prevention and Mindfulness (SPAM) intervention was developed through a collaboration with the University of Texas at Austin's graduate department of Counseling Psychology. The SPAM group curriculum combined psychoeducation about the physical and psychological components of stress, cognition, and emotion with experiential practice with mindfulness exercises. SPAM group objectives (as presented to participants) and session titles are listed below.

#### SPAM Group Objectives

- Explore unique stressors and how stress impacts teachers and their work.
- Improve the ability to prevent and manage stress when it arises.
- Learn how to use mindfulness strategies at work and at home as a tool for preventing and coping with stress.
- Receive professional support through weekly practice and processing of skills with colleagues

#### SPAM Session Titles

- Session 1: Introduction to Teacher Stress and Mindfulness
- Session 2: The Stress Response: Breaking the Cycle
- Session 3: Stress and Cognition
- Session 4: Stress and Emotion
- Session 5: Mindful Communication
- Session 6: Mindfulness for Stress Reduction

- Session 7: SPAM Synthesis, Wrap Up, & Resources

Participation in the SPAM group was voluntary and open to all teachers at Schools 1 and 2. Teachers were offered six hours of continuing education credit through JISD for attending at least 6 total SPAM group sessions. Sessions were 45 minutes in length and were held during the lunch hour, with lunch provided during groups. Intervention and session lengths were adjusted for the spring SPAM group to better accommodate the Spring Break holiday and the lunch hour, respectively. A total of 14 teachers began the Spring SPAM group and a total of 11 completed the group (attended 5,6, or all 7 sessions).

### **Tier 3: Specialized Intervention**

**Individual Therapy for Students.** Students have the opportunity to receive weekly psychotherapeutic services from licensed mental health clinicians.

**Therapeutic Consultation.** As part of the third tier of intervention, staff and teachers had the option to self-refer for support with job-related stressors, or personal stressors affecting their work. These “therapeutic consultation” sessions are trauma-informed and solution-oriented in nature and are typically held as brief, 15 to 30-minute meetings. The consultant works with teachers who feel overwhelmed with struggles to manage their classroom and learn new curricula, as well as veteran teachers and staff coping with major life transitions or traumas. This third tier intervention can also support staff dealing with general stress who simply want to learn how to better care for themselves.

**Family-School Meetings:** Family-school meetings are conducted in which parents, teachers and students come together to engage in thoughtful, mutually respectful conversations about how family members can feel most satisfied with their school experiences. These

conversations, led by a licensed clinician, are intended to provide parents and students with the experience of collaborating with school personnel in a way that builds healthy connections between families and schools. The goal of these meetings is to create a deeper, more empathic understanding of the needs of the students and others involved with the student.

The project allowed the clinic to implement an array of activities, in campus wide, small group, and individual formats, geared toward creating a trauma sensitive campus culture in line with the ARC framework. Two of the trainings provided are eligible for Continuing Education Credits as they are integrated into the district's Professional Development System, and they are aligned with the districts goals. All project activities were geared toward supporting staff functioning, both professionally and personally, such that staff are more equipped and motivated to create a trauma-informed culture. Through the project activities, the clinic has had contact with the following staff groups: New teachers, veteran teachers, administrative staff, administrators, counselors, and social service staff.

## **QUANTITATIVE MEASURES AND PARTICIPANT RECRUITMENT**

The following section describes procedures for participant recruitment and measures utilized for the first phase of the study, which includes all quantitative data collection. The process for selecting participants for the qualitative phase of this study will be described in a later section, following a description of the quantitative results.

### **MEASURES**

#### **Teacher Self-Efficacy Subscale**

This scale is administered by JISD annually as a component of a broader teacher satisfaction and performance survey. In 2010, the TELL survey was developed in partnership

with the New Teacher Center, based on their work with over 22,000 schools in 18 states. The survey has been conducted annually since 2011. The TELL survey includes items from the national TELL survey along with general climate items.

### **Attitudes Related to Trauma Informed Care (ARTIC) Scale**

Teacher attitudes toward the trauma-informed care will be assessed using The Attitudes Related to Trauma-Informed Care (ARTIC) scale (Baker, Brown, & Wilcox, 2015). This scale was developed by a team of experts on trauma and stress, school-based mental health, community mental health, and study design and methodology. The original measure includes eight subscales consisting of 75 potential items. The eight subscales were intended to represent the most central components of attitudes which are supportive or unsupportive toward trauma informed program implementation. The subscales included items intended to measure attitudes regarding (1) underlying causes of problem behavior and symptoms, (2) the impact of trauma, (3) responses to problem behavior and symptoms, (4) on-the-job behavior, (5) self-efficacy at work (6) reactions to the work, (7) personal support of TIC, and (8) system-wide support for TIC. The abbreviated versions of the ARTIC were revised to exclude subscales that cannot be answered by individuals who are unfamiliar with TIC (subscales 7 and 8).

The abbreviated version of the scale is a 35-item shorter form (Appendix C) that includes content from the core subscales. The ARTIC-35 version will be used in this study. Reliability coefficients were calculated using Cronbach's alpha. Internal consistency reliability was very good for the ARTIC-35, providing evidence that this version of the ARTIC scale is a reliable measure of individual differences in attitudes relevant to TIC (Baker, Brown, & Wilcox, 2015). Subscale alphas range from respectable to good (DeVellis, 2012) with the lowest reliability

( $\alpha=.71$ ) associated with the “reactions to the work” subscale. And the highest with “system-wide support for TIC” ( $\alpha=.81$ ). Regarding validity of the ARTIC-35, Pearson’s product moment correlations were used to provide preliminary support for construct and criterion validity. Initial evidence provides support related to the validity of the ARTIC. Patterns of correlations across the domains also varied in theoretically meaningful ways. Composite scores differed slightly by demographic characteristic, as females, racial/ethnic majority, better educated, and more experienced participants and those participants with less direct contact with students had ARTIC scores more favorable to TIC (Baker, Brown, & Wilcox, 2015).

#### **DATA COLLECTION PROCEDURE**

The ARTIC measure was administered at each campus at mandatory professional development sessions in February 2017. After obtaining district approval to collect data at the three campuses within JISD, data collection requests were sent via email to the principal of each campus (Appendix A). The request letter included details related to the purpose of the project, as well as the specific data collection procedures and a copy of the ARTIC measure. Teachers were informed at the beginning of the survey that their participation is voluntary, that they can discontinue the survey at any time, and that their responses will be kept confidential and will only be reported in aggregate form to the district should the district request access to the results. The surveys were administered by the principal investigator and two research assistants, one person at each campus. Survey administrators introduced the measure by reading a standardized script. Teachers were asked to write their unique employee identification number on survey packets in order to perform statistical analyses with relevant demographic information, and for interview follow-up during the second (qualitative) phase of investigation.

As outlined in the data collection and analysis agreement with JISD, teacher demographic information and results from the Teacher Self-Efficacy survey were provided by the JISD analytics team.

## **DATA STORAGE**

Data from the paper survey was entered into a password protected excel file. Paper copies were destroyed promptly after data entry. The survey data was kept confidential in two ways. First, there was no public identifying information in their survey data, other than their district employee identification number. The employee identification number was used to identify and contact participants for interviews following completion of the ARTIC survey. Second, after the participants who qualify for the interview portion have been identified, participants were assigned a unique participant number to be entered on the main data file.

For interview data, the participants' unique ID numbers were used for coding purposes. An "interview master key" list of names was stored on a password protected excel document. Any individuals that participants mentioned by name in their interviews will also be given pseudonyms or referred to by their title (i.e. "principal" or "co-worker") during transcription, to avoid the possibility of our participants' identities being known to others by association. After the initial interview, an electronic audio file will be uploaded to a password-protected hard drive. The electronic file will be labeled with the participant's unique ID. Any other electronic copies of the audio file will be erased/destroyed. The transmission of files among the research team will only take place via a password-protected service, such as UT Box, or directly from a password-protected file on a USB drive. Researchers will then transcribe the contents of each audio file into a Word document. Again, the Word document will be labeled by unique ID and saved on a

password-protected hard drive. After transcription, the audio files will be securely saved on the investigator's hard drive and retained for future analysis.

## **QUANTITATIVE RESEARCH QUESTIONS AND ANALYSES**

Regression models were used to evaluate questions one through four, and qualitative methods were used to answer question five. Qualitative methodology will be discussed in detail in the following section.

Teacher age (treated as a continuous variable) and gender (treated as a binary variable) were controlled to isolate the relationship between attitudes and predictor variables. All continuous control and predictor variables will be centered to allow simple and main effects to be interpreted in terms of an “average” attitude toward TIC within the study sample.

*Research question 1.* To what extent do age, gender, years of experience teaching, and perceived professional self-efficacy predict attitudes related to TIC? Given that this is the first study to investigate the relationships between these constructs, this question is exploratory. It is hypothesized that there will be variability along these characteristics, and the that the strength of the relationships will vary. To answer research question 1, teacher scores on the ARTIC will be regressed on perceived professional self-efficacy scores and years of experience teaching, while controlling for gender and age. An alpha of .05 will be used to determine statistical significance. The  $R^2$  will be examined to determine how much variance is accounted for in the ARTIC scores. Depending on the sign of the coefficients, statistically significant relationships will indicate that teacher self-efficacy and years of experience teaching have a positive or negative relationship with teacher attitudes.



*Research question 2.* Do teacher attitudes toward TIC differ across three high schools (S1, S2, S3) at different phases of implementation (P1, P2, P4) of a TIC mental health care intervention? Given that this is the first study to investigate the relationship between teacher attitudes across phases of implementation of a TIC intervention, this research question is exploratory. The second model will be identical to the first, with the addition of the phase of implementation variable as a predictor.

*Research question 3.* Do teacher attitudes toward TIC differ across different program tiers (T1, T2, T3) within the multi-tiered TIC intervention? Given that this is the first study to investigate the relationship between teacher attitudes across tiers of participation within a TIC intervention, this research question is exploratory. The model for research question three will be identical to the second, with the addition of the tier of intervention variable as a predictor.

*Research question 4.* Does the effect of tier of participation on teacher attitudes toward TIC depend on the phase of implementation? Given that this is the first study to investigate the effect of the interaction between phase of implementation and tier of intervention on teacher attitudes across tiers of participation within a TIC intervention, this research question is exploratory. This model will be identical to the model for research question three, with the addition of the interaction between phase and tier. The coefficients associated with the tier of intervention main effect and the six interaction terms will estimate the differential association of tier of intervention and attitudes toward TIC for each of the six phases of implementation.

## **QUALITATIVE METHODS**

For the second phase of this study, qualitative methods were used to further investigate factors related to teacher attitudes toward TIC. Qualitative inquiry is appropriate for studying the

nature and structure of attitudes for several important reasons (Patton, 2001). Firstly, depicting the nature and process of attitude development requires rich descriptions of how people engage with one another, especially within the context of an organization such as a school. Further, the lived experience of the process of adoption of a new intervention varies for different people, so their experiences captured into their own words provide a rich and nuanced source of data. Finally, the implementation process is fluid and dynamic, and thus cannot be adequately summarized with a single rating scale, used across one or two points in time.

### **Participant selection**

Participants for phase two were selected based on their overall scores on the ARTIC measure, obtained in phase one of this study. Participants with the relative lowest and highest scores were identified from the broader sample. Participants with higher scores are assumed to have more favorable attitudes related to TIC, whereas participants with lower scores have less favorable attitudes. Participants were contacted via email with an invitation to participate in an interview.

**Sample.** A total of 11 participants were included in the qualitative portion of this study. There were six participants with more favorable attitudes relative to the total sample, two for each of the three high school campuses represented in this study. In the teacher group with less favorable attitudes, there were five total participants, with two participants from S2 and S3, and one participant from S1. Participant demographics are listed in Table 1.

Table 1

*Participant Demographic Information for Qualitative Phase*

<b>Unique ID</b>	<b>Age</b>	<b>Gender</b>	<b>Race/ Ethnicity</b>	<b>Total years teaching</b>	<b>TIC Attitude Group</b>	<b>Grade/ Subject</b>	<b>Campus</b>	<b>Tier of Intervention*</b>
P1M	38	F	White	1	More Favorable	Special education	013	1
P2M	46	F	White	7	More Favorable	Spanish	013	1
P3M	30	F	White	2	More Favorable	Social Sciences	009	1, 3, 4
P4M	56	M	White	11	More Favorable	SPED, Resource, English	009	1, 4
P5M	54	M	White	3	More Favorable	SPED, Resource	008	1, 2, 3, 4
P6M	35	F	White	2	More Favorable	English	008	1, 2, 3, 4
P7L	27	F	White	2	Less Favorable	Math	013	1
P8L	50	F	White	13	Less Favorable	Social Sciences	013	1
P9L	37	F	White	7	Less Favorable	Biology	009	1, 4
P10L	32	F	White	0	Less Favorable	Vocational Business Computers	009	1, 4
PL11	30	M	White	4	Less Favorable	English	008	1, 4

*Note:* \*Tier of intervention: 1=Student interventions; 2=One-on-One; 3=Teacher Group Work; 4= Full school TIC presentation.

## **Interview procedures**

**Semi-structured interviews.** All participants were sent an email invitation to interview (Appendix A), in which they were given the option to complete the interview via online platform (i.e., Skype or FaceTime) or in-person. All participants opted for an in-person interview. The interview protocol included 14 questions and is provided in Appendix D. Interview questions were piloted with a colleague who is a former high school teacher, and questions were revised slightly following the pilot interview. The interview included open-ended questions all of which were designed to elicit responses related to the research question. The interview protocol included general probes for each question, as well as guidelines for when and how often to utilize a probe.

**Data preparation and organization.** Transcription began immediately following completion of each interview. Across all transcripts, all identifying information was redacted. A comprehensive excel spreadsheet was used as a frame during open coding, as well as during the coding process. The data was organized in two main ways: (1): participants with less favorable and more favorable attitudes, and (2) by organizational theme. The following research question guided the qualitative analysis: *What specific factors at the school-, individual-, and intervention-levels influence positively and negatively valenced teacher attitudes toward TIC?*

## **Qualitative Data Analysis**

Applied thematic analysis was used to explore the teachers' attitudes, beliefs, and perceptions of TIC as a concept and practice, as well as their perceptions of the TIC intervention at their respective campuses. The qualitative approach used in this study is a systematic method of inductive analysis that is particularly useful in applied research contexts (Guest, 2012).

Applied thematic analysis shares several core features with the grounded theory and phenomenology approaches, yet is unique in its flexibility with regard to theoretical frameworks and ultimately, its conduciveness to the inclusion of other analytic approaches and tools. The specific analytic approach will be exploratory, with a combination of deductive and inductive methods that will utilize findings from the quantitative portion of this study as a scaffold to explore factors which impact teacher attitudes toward trauma-informed care.

A six-phase methodology outlined by Braun and Clarke (2006) was used to give transparency to the thematic analysis and maintaining the analytic flexibility of qualitative research. Inductive thematic coding was used to identify themes in teacher responses and examine those themes for contrasts in connection to scores on the ARTIC. Five of the six phases of thematic analysis are outlined below. The sixth and final phase is presented in the Qualitative Results section.

**Phase 1: Familiarity with data.** In this step, the principal investigator transcribed the interviews, read and re-read the transcripts and noted initial impressions of the data. Initial ideas or concepts were noted that were used as codes and memos.

**Phase 2: Generating initial codes.** The transcripts were coded into thematic categories using an inductive approach in which the data were coded based on a combination of the literal or semantic content of the data. An example of coding on literal content would be a participant's use of the word "safety" as the code when it was used in an explicit statement, such as "*Cultivating safety for all students in a top priority in my classroom*". For semantic content coding, the "safety" code would be applied when the participant discussed elements of safety without explicit use of the word, as would be the case in the following statement: "*It is important*

*for students to believe there are adults at school who care for them and will protect them from harassment*”. The data were then collated relevant to each code, which resulted in ## initial codes for this step. Braun and Clarke (2006) made note of the difficulty of fitting social phenomena into codes, and address this challenge by suggesting data be coded into more than one applicable theme, if warranted. For example, there were several cases where more than one code was applied to a single quotation within the data

**Phase 3: Identification of themes.** In this step, data analysis is orientated toward the development of broader conceptual themes. Three initial organizational themes were used to organize the data. These organizational themes were broadly based on factors that are theorized to influence attitudes related to trauma informed care (Baker, et al.). Individual codes under each organizational theme were sorted into content themes based on conceptual similarities. Several codes that were especially salient or high-frequency became content content themes themselves. 34 initial content themes emerged from this phase.

**Phase 4: Reviewing themes.** In this phase, data within the themes are evaluated for (a) thematic cohesiveness and (b) for clear distinctions between themes. If data within the themes did not meet these criteria, then the theme was either revised or data was reconsidered for goodness of fit within a different theme. There is not a strict demarcation between positive and negative valenced codes or themes due to some overlap between these areas. For example, some teachers indicated that “Flexibility” as an approach to behavior management was an effective approach, whereas other teachers indicated flexibility to be an ineffective approach to behavior management.

**Phase 5: Refining and naming themes.** In this phase, the content themes were labeled and defined based on their constituent data. These data were organized in order to identify which data are relevant to the research question. The 34 content themes from Phase 3 were reduced into 16 final subthemes.

## Chapter 4: Results

Results across the two broad phases in this study will be discussed in the following chapter. Quantitative methodology was used to answer research questions 1-4, and will be discussed in the first half of this chapter. During phase two, research question 5 was answered through qualitative means, and will be presented following the overview of phase one results.

### DESCRIPTIVE STATISTICS

The purpose of the following analysis was to investigate the extent to which teacher attitudes related to TIC could be predicted by several teacher-level variables (gender, age, years teaching experience, and perceived professional self-efficacy), phase of implementation of a school-wide TIC intervention, and tier of participation of the TIC intervention by teachers at three schools in the Austin metro area. The first four research questions were investigated using IBM SPSS Statistics program Version 24.

*Descriptive Statistics.* Descriptive data for the 233 teacher participants are presented in Tables 2 and 3. The age of the teachers ranged from 23 years to 70 years, with a mean age of 39 years ( $SD=11.3$ ). The participants had a mean of 9.5 years of teaching experience ( $SD = 8.9$ ), with a minimum of less than one year and a maximum of 43 years. Of the 233 participants in the study, 142 (61%) were female. The majority of the participants (84%) were Caucasian ( $n=195$ ). 39% of participants' home campus was S2 High School, while 26% taught at S1 High School, with the remaining 35% at S3 High School.



Table 2

*Participant Characteristics*

<b>Characteristic</b>	<b><i>N</i></b>	<b>Sample %</b>	<b>Campus S1 <i>n</i></b>	<b>Campus S2 <i>n</i></b>	<b>Campus S3 <i>n</i></b>
<b>Gender</b>					
Female	142	60.9	36	51	55
Male	91	39.1	24	40	27
<b>Tier of Participation*</b>					
Tier 0	82	35.2	0	0	82
Tier 1	4	1.8	4	0	0
Tier 2	21	9.0	7	14	0
Tier 3	119	51.1	43	76	0
Tier 4	7	3.0	6	1	0
<b>Race/Ethnicity</b>					
White (not Hispanic)	195	83.7	49	77	69
Hispanic or Latino Origin	19	8.2	4	8	7
Black	8	3.4	3	2	3
Asian	3	1.3	1	2	0
Native American/Alaska Native	4	1.7	1	2	1
<b>Age</b>					
23-32	78	33.5	19	41	18
33-42	73	31.3	17	25	31
43-52	41	17.6	10	17	14
53-62	31	13.3	10	6	15
63-72	10	4.3	4	2	4
<b>Years of Teaching Experience</b>					
0-5	96	41.2	28	41	27
6-10	61	26.2	12	25	24
11-20	48	20.6	12	19	17
21-30	20	8.6	5	5	10
31-43	8	3.4	3	1	4

*Note.* Data collected from the Teaching, Empowering, Leading and Learning survey (TELL), Joliet Independent School District, 2017. \*See Table 5 for a description of program activities by Tier.

Descriptive statistics for all measured continuous variables are summarized in Table 2. The mean score on the teacher self-efficacy scale was 2.82 out of a maximum possible score of 4 (1= Strongly Disagree, 4= Strongly Agree), indicating that on average, participants indicated that they “Somewhat Agreed” with statements affirming a high degree of perceived teaching

efficacy. The mean score on the ARTIC was 5.05 (scale of 1-7), indicating that teacher attitudes related to TIC tended to be somewhat favorable, on average, for this sample. Internal consistency reliability of ARTIC scale was acceptable at ( $\alpha=.88$ ).

Table 3

*Descriptive Statistics of Observed Study Variables*

Variable	N	Min	Max	Mean	Std.Dev
<b>Age</b>	<b>233</b>	<b>23</b>	<b>70</b>	<b>39.7</b>	<b>11.4</b>
Campus S1	60	23	70	41.2	12.3
Campus S2	91	23	64	36.8	9.8
Campus S3	82	23	66	41.8	11.7
<b>Years Teaching Experience<sup>1</sup></b>	<b>233</b>	<b>0</b>	<b>43</b>	<b>9.5</b>	<b>8.9</b>
Campus S1	60	0	38	9.5	9.7
Campus S2	91	0	31	7.9	7.0
Campus S3	82	0	43	11.3	10.0
<b>Professional Self-Efficacy<sup>1</sup></b>	<b>212</b>	<b>2</b>	<b>4</b>	<b>2.8</b>	<b>.29</b>
Campus S1	52	2.3	4	2.9	.31
Campus S2	83	2.3	4	2.8	.28
Campus S3	77	2.0	3.7	2.8	.29
<b>Attitudes Related to TIC<sup>2</sup></b>	<b>233</b>	<b>3.1</b>	<b>6.8</b>	<b>5.1</b>	<b>.55</b>
Campus S1	60	3.8	6.5	5.1	.58
Campus S2	91	3.1	6.8	5.0	.60
Campus S3	82	3.9	6.5	5.0	.48

*Note.* <sup>1</sup>Data collected from the Teaching, Empowering, Leading and Learning survey (TELL), Joliet Independent School District, 2017.; <sup>2</sup>Attitudes Related to Trauma-Informed Care (ARTIC-35).

Pearson correlation analyses were conducted to examine the relationships among covariates and the dependent variable (Table 4). None of the covariates were significantly

correlated with the scores on the ARTIC, though there was a strong positive relationship between teacher age and scores on the perceived professional self-efficacy scale.

Table 4

*Correlations of Variables of Observed Data*

	1	2	3	4	5
1. Age	--				
2. Gender	.08	--			
3. Years of Teaching Experience <sup>1</sup>	.68**	.07	--		
4. Professional Self –Efficacy <sup>1</sup>	.08**	.14*	.13	--	
5. Teacher Attitudes Toward TIC <sup>2</sup>	.06	-.04	.04	-.09	--

*Note.* \* $p < 0.05$ ; \*\* $p < .001$ . <sup>1</sup>Data collected from the Teaching, Empowering, Leading and Learning survey (TELL), Joliet Independent School District, 2017; <sup>2</sup>Attitudes Related to Trauma-Informed Care (ARTIC-45)

## PRELIMINARY ANALYSES

Prior to testing the research hypotheses, preliminary analyses were conducted to ensure that no assumptions have been violated. Descriptive statistics, means, standard deviations, ranges, and minimum and maximum values of each of the variables were computed and examined. Histogram and q-q plots, as well as the skew values for each variable, were inspected to ensure normality. Box plots were used to identify outliers and sensitivity analyses considered the effect of outliers. When outliers were removed results were comparable to the analysis with the full data; therefore, outliers were included in the analyses. Linearity was supported by looking at the scatterplots of the dependent variables versus the independent variables. Repeated measures were not included in the same analyses; therefore, all observations can be assumed independent.

**Additional Regression Assumptions.** Standardized residuals from the regression analyses were examined to ensure that the data met the assumptions of homoscedasticity of the residuals and the normality of the residuals. The homoscedasticity assumption was not violated, which was determined by observing the equal spread of errors across all levels of the predicted values in the scatterplot of residuals versus predicted values. Normality of residuals was evaluated through the q-q plots and histograms of the residuals. In sum, all statistical assumptions were satisfied. Close attention was paid to the potential problem with multicollinearity, which occurs when independent variables are highly correlated with one another (Keith, 2015). Variance Inflation Factor (VIF) scores were calculated for each independent variable in the regression analysis in order to assess multicollinearity. According to Cohen, Cohen, West, and Aiken (2013) a large VIF value of 10 or greater will lead to an inspection and questioning of the results. VIF values indicated no evidence of multicollinearity.

#### **TEST OF RESEARCH QUESTIONS: HIERARCHICAL MULTIPLE REGRESSION**

Four hierarchical multiple regression (HMR) models were created, one for each of the following research questions. Hierarchical models were appropriate for the questions in this study, since the variables are derived from different “levels” in the educational domain. According to Field (2009), independent variables from different levels of education should not be analyzed in a single multiple linear regression. Further, because school-level variables (i.e., phase) were treated as fixed effects, hierarchical linear modeling was not appropriate for this analysis. Therefore, each level was analyzed separately and four different statistical models were created. Level 1 variables are those that are directly related to the teacher (i.e., demographic variables). Level 2 variables represents the phase of implementation of the overall TIC

intervention, and Level 3 variables represent the unique properties of the different tiers of intervention available at a given school, as well as individual teacher participation in a given tier of intervention. Level 4 variables included interaction terms between tier and phase. Because the majority of teachers participated in different combinations of multiple activities across several tiers, dummy variables were created to capture the unique combinations of intervention activities. Therefore, it is important to note that the dummy variable “Tier 1” is distinct from activities specific to Tier 1 as specified in the previous chapter. Across all participants who participated in teacher-level clinic activities, there were five total dummy variable “tiers”. Activities associated with dummy variable tiers are listed in Table 5.

Table 5

*TIC Program Activities by Tier*

Dummy variable	Campus Availability	Program activities
0	S3	Student level interventions
1	S1, S2	Student level interventions; Therapeutic consultation (1:1); Whole school presentation
2	S1, S2	Student level interventions; Small teacher groups; Whole school presentation
3	S1, S2	Student level interventions; Whole school presentation
4	S1, S2	Student level interventions, Therapeutic consultation (1:1); Small teacher groups; Whole school presentation

Given this is the first study to investigate the relationships between these variables in a school context, the following four research questions are exploratory. It is hypothesized that there will be variability along these characteristics, and that the strength of the relationships will vary. An alpha of .05 will be used to determine statistical significance. The  $R^2$  will be examined to determine how much variance is accounted for in the ARTIC scores. Depending on the sign of the coefficients, statistically significant relationships will indicate which variables have a positive or negative relationship with teacher attitudes.

As outlined in the original analysis plan, all of the covariates were accounted for in the final version of the HMR model within four different blocks, as shown in Table 6. The final HMR model was not significant ( $p > .05$ ). Therefore, the full model was reduced to a parsimonious model with only significant variables to test the individual models (or blocks) for significance. This was done by removing covariates from the model, one at a time, based on the highest p-value. Only significant predictors were left in the model. The p-values were monitored after each covariate was removed from the model. Pairwise comparisons were conducted for variables within significant blocks. The following results report on the findings from the individual regression models.

Table 6

*Hierarchical Data Blocks*

Model	Hierarchical Regression Blocks	Variables
1	Block 1	Age, Gender, Professional Self Efficacy, Years Teaching Experience
2	Block 2	Phase (P1, P2, P4)
3	Block 3	Tier (0, 1, 2, 3, 4)
4	Block 4	Phase x Tier interaction terms

**Research question 1.** To what extent do age, gender, years of experience teaching, and perceived professional self-efficacy predict attitudes related to TIC?

**Results.** Hierarchical regression modeling was conducted to examine the influence of Model 1 covariates (gender, age, professional self-efficacy, and years teaching experience) on attitudes related to TIC (see Table 7). None of the control variables nor the covariates were significant predictors of teacher attitudes related to TIC in Model 1 ( $p > .05$ ).

Table 7

*Regression Estimates for Model 1 Variables Predicting Teacher Attitudes Related to TIC*

Variable	Teacher Attitudes <sup>3</sup>					$R^2$	Overall model $p$
	$B$	$SE\ B$	$\beta$	$t$	$p$		
Age	.00	.01	.08	.88	.38		
Gender	-.03	.08	-.03	-.37	.71		
Years Teaching Experience	-.01	.01	-.02	-.24	.81	.01	.58
Perceived Professional Self-Efficacy <sup>1</sup>	-.18	.13	-.09	-1.31	.19		

*Note.* All results non-significant. <sup>1</sup>Data collected from the Teaching, Empowering, Leading and Learning survey (TELL), Joliet Independent School District, 2017.

**Research question 2.** Do teacher attitudes toward TIC differ across three high schools (S1, S2, S3) at different phases of implementation (P1, P2, P4) of a TIC mental health care intervention?

**Results.** Model 2 was analyzed before and after the exclusion of nonsignificant covariates (age, gender, self-efficacy, and years of experience) from Model 1. In both scenarios, Phase was found to be a nonsignificant predictor of teacher scores on the ARTIC ( $p > .05$ ). Results from the reduced model are presented in Table 8 ( $p > .05$ ).



Table 8

*Regression Estimates for Model 2 Phase Variables Predicting Teacher Attitudes Related to Trauma-Informed Care*

Variable	Teacher Attitudes <sup>3</sup>						Overall model <i>p</i>
	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>	
S3 (Phase 1)	-.05	.09	-.05	-.55	.58	.00	.83
S2 (Phase 2)	-.05	.09	-.05	-.55	.58		

*Note.* All results non-significant. S3 (Phase 4) used as the reference variable. Because this model was not significant, pairwise comparisons were not examined.

**Research question 3.** Do teacher attitudes toward TIC differ across different program tiers (T0, T1, T2, T3, T4) within the multi-tiered TIC intervention?

**Results.** As was the case for HMR Model 2, the third model was analyzed before and after the exclusion of nonsignificant predictors. Prior to the removal of nonsignificant covariates, the model was not significant ( $p > .05$ ). However after all nonsignificant predictors were removed in succession, the model was significant at ( $F(4,228)=2.6, p = .04, R^2=.04$ ). It was concluded that inclusion of the nonsignificant predictors reduced the model's power to detect significance in the tier covariates. Table 9 shows pairwise comparisons between each of the tiers. Only Tier was a significant predictor of teacher scores on the ARTIC across participants in this sample. Additionally, Tier 4 differed significantly from all other Tiers with the exception of Tier 1 ( $p > .05$ ). Descriptively, the magnitude of the difference in scores for Tier 1 was similar to the other comparisons, but the large standard error relative to the coefficients of Tier 2 and Tier 3 rendered the difference between Tier 1 and 4 statistically nonsignificant.

Table 9

*Regression Estimates for Model 3 Tier Variables Predicting Teacher Attitudes Related to Trauma-Informed Care*

Variable	Teacher Attitudes <sup>3</sup>					$R^2$	Overall model $p$
	$B$	$SE\ B$	$\beta$	$t$	$p$		
Tier 0 vs Tier 4	-.64*	.22	-.55	-2.96	.00		
Tier 1 vs Tier 4	-.55	.34	-.13	-1.62	.11		
Tier 2 vs Tier 4	-.55*	.24	-.29	-2.30	.02		
Tier 3 vs Tier 4	-.66*	.21	-.60	-3.13	.00		
Tier 0 vs Tier 3	.03	.08	.03	.36	.72		
Tier 1 vs Tier 3	.11	.28	.03	.40	.69	.04	.04
Tier 2 vs Tier 3	.12	.13	.06	.89	.37		
Tier 0 vs Tier 2	-.09	.13	-.08	-.65	.52		
Tier 1 vs Tier 2	-.00	.30	-.00	-.01	.99		
Tier 0 vs Tier 1	.08	.28	.02	.30	.77		

*Note.* \* $p < 0.05$ ; \*\* $p < .001$ . Use a space to separate the different pairwise comparisons. Use footnotes to explain which tier is the reference. Remove Tier 4 (as a reference), then Tier 3, then Tier 2, then Tier 1.

**Research question 4.** Does the effect of tier of participation on teacher attitudes toward TIC depend on the phase of implementation?

**Results.** To assess whether phase of implementation moderated the relationship between

tier of participation and attitudes related to trauma-informed care, the interaction terms between tier and phase were assessed for campuses S1 and S2 with S1 serving as the reference. The dummy coded variables for S3 and Tier 0 were redundant and therefore excluded from this model. Additionally, Tier 1 was excluded from the model due to insufficient sample size represented in Tier 1 programming. Finally, as was the case with research questions 2 and 3, all nonsignificant covariates were removed before analyzing the interaction terms. The results from the regression analyses indicated that phase (equivalent to school) did not moderate the relationship between Tier and teacher scores on the ARTIC.

## QUALITATIVE RESULTS

The purpose of the second phase of this study was to supplement and expand on the findings from phase one by exploring teacher attitudes, beliefs, and behaviors related to the core principles of TIC in school settings through the use of qualitative methods. The findings presented below provides evidence of the themes embedded within a qualitative narrative framework. The overall impression of the following analysis was that there were meaningful differences in the way the teachers think about student success, behavior and approaches to behavior management across the TIC favorable and unfavorable attitudes groups. Although several thematic divergences were noticed, the two groups also shared similar perspectives in several areas. Results from the analysis offered several new insights into the attitudes, beliefs, and behaviors of teachers as they relate to attitudes about TIC in school settings.

As shown in Table 10, several subthemes were developed under five organizational themes: **Factors that impact student success, teacher-student relationships, student behavior, campus culture, and participation and perception of intervention.** Note that

organizational theme 5 is not represented in the table, rather the findings under this theme are discussed in aggregated form in the discussion section. Recall that two distinct groups of participants were included in the analysis: Those with relatively more favorable attitudes (MFA) and less favorable attitudes (LFA) related to TIC, as measured by the ARTIC scale in the initial phase of this study. Cohesive themes across both groups of participants will be presented first, followed by a between group comparative analyses.

Table 10

*Frequency of Subtheme and Code Occurrences*

<b><i>Organizational Theme, Subtheme, Code</i></b>	<b>More Favorable Teacher N</b>	<b>Less Favorable Teacher N</b>	<b>Total N</b>
<b><i>Factors that Impact Student Success</i></b>			
Teacher-student relationship	6	3	9
Student psychological and developmental factors	4	1	5
Classroom environment			
<i>Safety</i>	6	0	6
<i>Sense of community</i>	3	3	6
<i>Classroom management approach</i>	1	2	3
Home environment			
<i>Family/home context</i>	3	3	6
<i>Peer groups</i>	1	1	2
<i>Basic needs</i>	4	3	7
<i>Caregiver engagement</i>	1	3	4
<b><i>The Teacher-Student Relationship</i></b>			
Strategies for cultivating positive relationships			
<i>Communicate interest, investment, or caring</i>	6	3	9
<i>Self-disclosure</i>	3	1	4
<i>Observing indicators of well-being</i>	3	1	4
<i>Strengths-based lens</i>	3	1	4
Positive relationship attributes			
<i>Empathy</i>	4	1	5
<i>Respect</i>	4	2	6
<i>Multiple roles of teacher</i>	4	1	5
<i>Compatibility</i>	0	2	2
<i>Trust</i>	3	1	4

Table 10, Continued

	6	1	7
<i>Nondefensiveness</i>			
Challenges to maintaining positive relationships			
<i>School systemic factors</i>	3	0	3
<i>Student readiness</i>	4	1	5
<i>Teacher disciplinary approach</i>	1	2	3
Teacher and student well-being			
<i>Teacher well-being not impactful to students</i>	0	4	4
<i>Teacher well-being impactful to students</i>	6	0	6
<i>Maintaining personal well-being</i>	4	1	5
<i>Student well-being impact teacher</i>	4	2	6
<hr/> <b><i>Student Behavior</i></b> <hr/>			
Behavior management approaches*			
<i>Use of teacher-student relationship as tool</i>	3	2	5
<i>Support student autonomy</i>	3	3	6
<i>Classroom environment</i>	4	1	5
<i>Positive reinforcement</i>	3	1	4
<i>Authoritarian approach</i>			
Least effective	4	1	5
<i>Flexibility</i>			
Most effective	3	1	4
Least effective	0	1	1
<i>Interaction/communication style</i>	4	1	5
<i>Individual check-in</i>	1	3	4
<i>Expectations</i>	4	1	5
Attribution of behavior			
<i>Developmental, psychological, socioemotional</i>	3	0	3
<i>Outside school factors: Familial or environment</i>	1	2	3
<i>Comprehension difficulty</i>	2	0	2
<i>Teacher approach</i>	2	1	3
<i>Student volition</i>	0	4	4
<hr/> <b><i>Campus Culture</i></b> <hr/>			
Administrative support for professional development			
<i>High</i>	3	1	4
<i>Variable</i>	2	0	2
<i>Low</i>	1	2	3
Administrative support for teacher wellness			
<i>Moderate</i>	2	1	3
<i>Low</i>	3	4	7
Administrative support for professional autonomy			
<i>High</i>	6	3	9

Table 10, Continued

<i>Moderate</i>	0	2	2
Culture of respect			
<i>High</i>	2	2	4
<i>Variable</i>	3	1	4
<i>Low</i>	1	2	3
Relationships with administrators			
<i>Positive</i>	5	2	7
<i>Negative</i>	0	2	2
Relationships with colleagues			
<i>Positive</i>	4	3	7
<i>Variable</i>	1	2	3

*Note:* The number of teachers in each group who endorsed each code are provided, as well as comparisons of frequencies between the two groups. \*All subthemes under behavior management approaches were endorsed as a *most effective strategy*, unless otherwise indicated with codes.

### Organizational theme 1: Factors that impact student success

Under this organizational theme, four subthemes emerged: **Teacher-student relationship, student psychological and developmental factors, classroom environment, and home environment**. The majority of participants (9/11; 81%) endorsed the **teacher-student relationship** as an important factor to student success. A similarly high proportion of participants indicated the fulfillment of *basic needs* (7/11; 64%) was critical to student success at school. 54% (6/11) of participants cited the importance of *building a sense of community* in their classroom. Slightly more than 50% of participants (6/11) indicated that factors related to their student's *home or family context* are impactful to student success. Relatively few participants cited *teacher disciplinary approach* (3/11; 27%) or *peer groups* (2/11; 18%) as influential to student success.

Within this organizational theme, several differences were observed in the responses between the more favorable attitudes group (MFA) and less favorable attitudes group (LFA). The most marked difference between the two groups in this theme was in their perspective of the salience of the **classroom environment** subtheme, for which they differentially reported on the importance of *safety* (MFA: 6/6; LFA: 0/6) and *expectations and rules*, for which 3/6 (50%) of MFA indicated as important, compared to 0/5 LFA participants. The majority of MFA participants (4/6; 67%) noted the importance of student *psychological and developmental factors*, while only 1/5 (20%) of LFA participants endorsed factors under this subtheme. The final considerable difference was in the participants' views on the importance of *caregiver engagement*, which was endorsed by 3/5 (60%) of LFA participants, compared with only 1/5 (20%) of MFA participants.

### **Organizational theme 2: The teacher-student relationship**

There were four subthemes within this organizational theme: **Strategies for cultivating positive teacher-student relationships, positive relationship attributes, challenges to maintaining positive relationships, and influence of teacher and student well-being**. Note that the MFA group represented a greater proportion of the total responses for this theme, relative to the sample for each group. More specifically, the total number of responses from the MFA group under this organizational theme represented 71% of the total responses (60/84) across all participants, which is a disproportionate response rate considering the MFA participants comprise 54% of the total sample (6/11). The majority of participants in the overall sample (9/11; 81%) endorsed the importance of *communicating interest, investment, or caring* for their students as a **strategy to cultivate positive relationships** with them. Among the

several **relationship attributes** discussed by the participants, *respect* was indicated as important at a similar rate across both groups (MFA: 67%; LFA: 40%). In terms of **teacher and student well-being**, participants in both groups discussed how *student well-being impacts teacher well-being* (MFA: 67%; LFA: 40%).

Even considering the disproportionate response rate, there was notable divergence in several subthemes between the two participant groups. In terms of **strategies for cultivating positive relationships**, 50% of the MFA group identified the use of *self-disclosure*, *observing indicators of wellbeing*, and a *strengths-based lens* as important tools for developing relationships with students, compared with only one teacher in the LFA endorsing endorsing each of those strategies. Two of six MFA participants discussed *recognizing student agency* in the context of the teacher-student relationship, but was endorsed by no one in the CFA group. In terms of **positive relationship attributes**, the most notable divergence was in the participants' perspectives on teacher *nondefensiveness* in teacher-student relationships, for which 100% of MFA participants discussed this code, compared with one LFA participant (20%). MFA participants discussed *empathy* and *multiple roles of teacher* (4/6; 67%), and *trust* (3/6; 50%) with similar frequency, as did the LFA, with only one participant endorsing each of those relationship attributes. Two LFA participants cited teacher-student *compatibility* as an important attribute, compared to no MFA participants. The most frequently cited **challenges to maintaining positive relationships** among the MFA participants were *student readiness* (4/6; 67%) and *school systemic factors* (3/6; 50%). LFA participants more often cited *teacher disciplinary approach* (2/5; 40%) compared to only one MFA participant.



The starkest differences in group opinions are seen in the **teacher and student well-being** subtheme. The first difference between the groups is in their perspective of how *teacher well-being impacts relationships* with students. All of the MFA participants indicated that their well-being is impactful in relationships with students, whereas 80% of LFA participants indicated that *teacher well-being does not impact relationships* with students. Finally, four MFA participants discussed the importance of *maintaining personal well-being* for job performance, compared with only one LFA participant who endorsed this code.

### **Organizational theme 3: Student behavior**

Two subthemes emerged under this theme: **Behavior management approaches** and **behavior attribution**. The two participant groups had several thematic similarities in their responses in the behavior management approaches subtheme, including the endorsement of *use of the teacher-student relationship* (MFA: 3/6, 50%; LFA: 2/5, 40%) and *support student autonomy* (MFA: 3/6, 50%; LFA: 3/5, 40%) as among their most effective behavior management approaches. In terms of **attribution of behavior**, one participant in each group indicated that *outside of school factors* were influential to student behavior problems. MFA and LFA teachers discussed the use of *positive reinforcement* as a behavior management strategy at a similar rate (MFA: 3/6, 50%; LFA: 1/5, 20%).

Differences between the groups were present in both subthemes. More teachers in the MFA group than the LFA group discussed their use of the *classroom environment* (MFA: 5/6, 83%; LFA: 1/5, 20%) as among their most effective behavior management strategies. Use of the *individual check-in* was endorsed more by the LFA group (MFA: 1/6, 16%; LFA: 2/5, 40%). The *authoritarian approach* for behavior management was similarly endorsed as a least effective

strategy by the two groups, however the groups differed in their frequency of responses (MFA: 4/6, 67%; LFA: 1/5, 20%). Two more behavior management approaches cited more often by the MFA group were *interaction style* (4/6, 67%) and *expectations* (4/6; 67%). Within *interaction style*, four MFA participants indicated that a *warm interaction style* was an effective approach. Three MFA participants said that *flexibility* was an effective behavior management approach, compared with one LFA participant stating it was among their most effective, and one participant stating flexibility was less effective. In terms of **behavior attribution**, the majority of LFA participants attributed student behavior to *student volition* (4/5; 80%). MFA participants endorsed other factors, including *developmental, psychological, or socioemotional* (3/6; 50%), *comprehension difficulty* (2/6; 33%), and *teacher approach* (2/6; 33%). None of the LFA participants endorsed those attribution factors.

#### **Organizational theme 4: Campus culture**

This theme was organized into six subthemes: **Administrative support for: (a) personal and/or professional needs, (b) professional autonomy, and (c) teacher wellness, culture of respect, relationships with administrators, and relationships with colleagues.** Participants across both groups were mostly in agreement about **administrative support for professional autonomy**, with 100% of MFA participants indicating a high degree of support, while 3/5 LFA participants indicated a high degree of support and two stating their perception of a variable degree of support for autonomy. The participants also had similar perspectives about their respective campuses **administrative support for teacher wellness** activities and programs, with the majority of participants across both groups indicating a low degree of support from administrator. Participants in both groups indicated a perceived **culture of respect** at variable

rates, overall. Two participants in each group indicated a *high* degree of respect, three in the MFA group indicated a variable degree of respect. Participants indicated that relationships with administrators were generally positive in the MFA group (5/6), while 2/5 LFA participants perceived positive relationships with their administrators. perceived their relationships with colleagues to be positive, overall. Participants in both groups expressed a similar level of **quality of relationships** with their colleagues, with the majority of participants in both groups viewing their peer relationships as generally positive.

#### **Organizational theme 5: Perception of school-based clinic and programming**

Due to the wide range of exposure to and engagement with the programming provided by the campus-based clinics, the data captured under this organizational theme were highly varied. Therefore, data were organized under a single cohesive theme, rather than individual subthemes. Several participants offered their expectations for the future of the clinic, as well as their suggestions for maintenance of clinic-based programming. Individual-level participant responses aggregated across participant groups will be presented in the discussion section.

## Chapter 5: Discussion

Two main theoretical models guided the investigation of variables in this study: Bronfenbrenner's Ecological Systems Theory, and the Attachment, Regulation, and Competency Model used in the design and application of trauma-informed systems of care. In the context of trauma-informed systems of care in schools, this study first evaluated the most proximal variables in a TIC system available in this study (i.e., teacher beliefs and attitudes related to TIC) followed by more distal variables (e.g., teacher perceptions of student attributes, school-related variables, and school-based clinic intervention) in predicting teacher attitudes related to TIC. The following discussion will also use this ecological organizational framework by presenting teacher characteristics first (overall attitudes toward TIC), teacher-rated student attributes and relational qualities second (answered through qualitative methods), and teacher reports of external school-related influences third (also answered through qualitative methods). A discussion of implications will be provided, followed by study limitations and conclusion.

### TEACHER CHARACTERISTICS

**Teacher demographics.** It was hypothesized that a relationship would exist between several teacher demographic variables (i.e., age, gender, and years teaching experience) and attitudes related to TIC. The initial validation study for the ARTIC scale showed weak correlations between overall attitudes related to TIC and age, gender, and years teaching experience, which is consistent with the present findings. The ARTIC scale was designed for use at a variety of institutions that could theoretically support a trauma-informed model of care. Therefore, the ARTIC validation study included a wide variety of professionals in a range of institutions with a subsample of teachers that was smaller than that of the present study.

Additionally, the variability across type of educational institution (i.e., private, public, secondary, postsecondary across the sample was high relative to the present study, which focused on public high school educators. That the present results were similar to previous findings regarding the predictive value of several demographic variables on attitudes related to TIC further supports the use of the ARTIC measure with public high school educators.

**Teacher self-efficacy.** It was hypothesized that teacher self-efficacy would be associated with teacher attitudes related to TIC. Teacher score on the self-efficacy scale administered by the district was not found to be a significant predictor of attitudes related to TIC. This finding was surprising, given the presence of a self-efficacy subscale within the ARTIC measure. The complexity of self-efficacy as a construct, as well as methodological differences in self-efficacy research could explain this finding. Teacher self-efficacy as a construct is complex, with different subtypes and a variety of facets. Tschannen-Moran and Woolfolk Hoy (2001) discussed how research on teacher self-efficacy has been compromised by insufficient reliability and validity estimates, specifically regarding the extent to which it is generalizable across different facets of teacher efficacy and teaching contexts. Perhaps it is the case that some aspects of this construct present themselves differently depending on the type of self-efficacy being measured, and the tools used to measure it.

Overall, these findings suggest that some facets of teacher self-efficacy, including those captured by the self-efficacy scale utilized in this study, may not be strongly related to teacher attitudes related to TIC. As a general construct, professional self-efficacy is a core construct that has been linked to the successful implementation of evidence-based practices in various settings (Michie et al., 2005). The self-efficacy subscale on the ARTIC measure is designed to assess not

only teacher efficacy in supporting traumatized students, but also teacher amenability to the implementation of new programming at the school level. The items on the self-efficacy survey administered by the district are conceptually different from those on the self-efficacy subscale on the ARTIC. Namely, the district scale is limited to items that measure teacher efficacy specific to student engagement and behavior management. The ARTIC subscale items tap into student engagement and behavior management, but also includes items which account for system-level variables, such as teacher efficacy in the context of the school environment. It could be that system-level factors associated with self-efficacy are more important in predicting attitudes related to TIC than other facets of self-efficacy.

**Teacher perceptions of factors that influence student success:** All participants discussed factors that they perceived to be important for student success at school. Highly consistent with literature suggesting the importance of a student's home and family environment to school-related outcomes (Perfect et al., 2016), teachers in both the MFA and LFA groups endorsed several factors within this subtheme as crucial to student success. The following examples from LFA participants illustrate their emphasis on various aspects of the home environment: *"I think their home life is the number one thing that influences their success in school. Just their upbringing and various things that happen at home seems to most directly impact their success in school."* Another participant mentioned level of parent support and parent involvement as important to their students' success: *"With home life, are the parents supportive? I notice when the parents are more involved, the kids are more successful."* Although home context is indeed highly influential in a variety of student outcomes, it is interesting that LFA participants endorsed this theme at a much higher rate than any other factor

within this organizational theme. Perhaps teachers with less favorable attitudes related to TIC tend to view student potential for success as relatively fixed, and somewhat less amenable to influences outside of the home environment.

In terms of the classroom environment subtheme, LFA participants tended to endorse classroom environment factors to a lesser extent than the MFA group, though they seemed to agree on the importance of cultivating a sense of community within their classrooms. For the MFA participants, their most popular ideas about classroom environment were related to the importance of fostering a sense of physical, emotional, and intellectual safety within their classrooms: *“And the classroom has to be a safe place for everyone. For me, that’s the one part of my classroom that I really have to have control over, because if that environment is rocked, that affects everyone and we fall apart, we come down like dominos, boom. And it’s about physical safety and emotional safety. Both are critical.”* Another participant discussed the importance of safety in moving between different physical environments at school: *“Part of it is trying to get them to adapt to their different environments, but first, you have to create an environment that’s conducive to them where they feel safe and wanted.”* That the MFA participants so strongly emphasized safety is aligned with the tenets of the ARC model, in which the importance of safety as a basic relational asset is highlighted (Blaustein & Kinniburgh, 2010).

One surprising difference between the two groups was their perspectives on the influence of student psychological and developmental factors, a subtheme which included factors related to mental health, general cognitive functioning, and socioemotional functioning. Only one participant in the LFA group indicated this theme as an influential factor, whereas the majority of

participants in the MFA group discussed the importance of these factors. One MFA teacher responses illustrate this point: *“Especially in special education, there are a lot of factors that impact success. Like whether or not they have a disability, and whether they are getting support in the classroom for that disability.”* One LFA participant cited the importance of mental health and wellness factors: *“I would say stress. I have some kids that would do good on homework and then just bomb the tests because their anxiety levels are out of control.”* Given the MFA participants’ tendency to associate student success to psychological, developmental, or socioemotional factors, it could be that MFA participants are more attuned to the way that prolonged stress, relational difficulties, or trauma exposure can manifest emotionally and behaviorally in the classroom and impact student wellbeing and academic success.

Another important finding under this organizational theme was the differential emphasis placed on the importance of the teacher-student relationship. Although some participants in the LFA group indicated the relationship as an important factor to student success, the teacher-student relationship was the only factor, aside from safety, that was endorsed unanimously by all MFA participants. That participants with more favorable attitudes toward TIC tended to emphasize this relational factor may be reflective of their understanding of the critical nature of healthy attachments for positive student outcomes. A MFA teacher had this to say about relationship building with her students: *“I think it’s really the relationship building that happens on the teacher’s side, as well as that connection that allows them to bridge to the student that will really determine whether the student believes “OK, I can trust this person, and therefore I trust that they’re going to teach me what I need to know.”* Another teacher discussed the role of trust within the relationship as a prerequisite to student engagement, learning, and success: *“I*



*have to get to know them personally and make a personal connection. If I don't, then I can forget opening a textbook or teaching a curriculum of any sort. Any type of learning experience, academics, go to the wayside if I don't know my students first and foremost."*

**Teacher-student relationships.** This broad theme often co-occurred with the teacher-student relationship subtheme in the first organizational theme (student success factors). Although there was some clear conceptual overlap between the two themes, the teacher-student organizational theme was ultimately distinct because of the frequency and specificity with which the participants talked about the teacher-student relationship. Participants across both groups discussed attributes of positive relationships with their students, as well as strategies for cultivating those relationships. One unifying theme across the two groups was their tendency view the importance of communicating interest, investment, or caring for their students as a strategy to cultivate positive relationships with their students. These teachers expressed an understanding that it is important for their students to know that they are cared for at school. Two quotes from MFA participants illustrate this theme: *"That's something you've got to let go of, that you can't do much about their environment when they leave school. But, I always feel like what you can do at school is let them know the whole world doesn't operate that way. There are people at school who care about them."* Another teacher discussed the importance of getting to know their student's interests as a way to show they care: *"I ask them questions about things other than school. Like I have a kid who does sailing, so I ask about that. They like talking about themselves and they are more willing to work with you if they know you care about them."*

Other strategies for building positive relationships that were favored by teachers with more favorable attitudes were the use of appropriate self-disclosure, observing indicators of

student wellness, and use of a strengths-based lens in their relational approach to students.

Teachers who cited the use of self-disclosure with their students often pointed to the importance of finding experiential common ground with their students as a means to strengthen their relationships: *“I do bring in personal trauma and things that have happened in my life, not in like a false or inappropriate way, but in a way where I’m genuinely like, “hey, I do understand to an extent what’s going on here. I’ve had situations that have not been very good and have gone on in this way so I do understand, to an extent, how you’re feeling right now.” So, I don’t know, sometimes I think strangely it’s like a positive thing, knowing that I’ve had times with my personal well-being that have not been so great, I kind of think it’s an asset.”* MFA teachers also discussed using their observations of their student’s behavior to gain insight about the state of their well-being. The following quote is from an MFA teacher who uses his observations of student behavior to make decisions about his interpersonal approach: *“Being especially aware of things that might be going on with them, if they seem unsettled or if there is a problem, and being able to respond to that with something that would let them know that I care, such as inquiring about their situation, especially if they tell me they aren’t doing well.”*

Finally, several MFA teachers discussed their use of a strengths-based lens in their relationships with students. According to these teachers, it was important to actively search for and acknowledge their student’s strengths, often, or especially, when faced with challenging behaviors: *“I try to maintain a positive impression of them, even if there is a behavior that is not desirable. Even if it’s not desirable, I know there is always something I can find about a person, that are desirable and beneficial, and communicating that to them, letting them know that I see that.”* This strengths-based focus within the teacher-student relationship may be especially

important for students who have been exposed to trauma, as teacher focus on student strengths has been found to contribute to more positive teacher-student relationships (Brendtro, 2004).

In terms of positive relationship attributes, MFA participants tended to endorse relational qualities such as respect, empathy, and trust as important qualities of the teacher student relationship. LFA participants indicated respect as an important attribute more often than empathy or trust. Although respect is undoubtedly a critical element in healthy teacher-student relationship, empathy and trust are two relational attributes that hold unique significance for students who have experienced trauma. For these students, a teacher's expression of genuine empathy and attempt to build trust within the relationship may be the keys to providing a corrective emotional experience and an opportunity to form a healthy attachment, especially for students with relationally-based trauma. The following quotes provide examples of teacher emphases on these relational attributes: *"I think they have to have some sort of trust relationship with the person that's trying to teach them something. Some of the kids come from backgrounds where they don't necessarily feel like they should trust authority figures, so you kind of have to foster that relationship before they are willing to open up to believing "OK, this person has something to share with me that I should retain."* Another MFA teacher viewed relational trust as a means for students to safely express themselves: *"We might be the person they trust the most, and so they might be letting things out or trying out things with us that they need to explore, that they might need help with, and they don't know how to handle on their own. This relationship might provide some catharsis. Or that they are venting or using me as a person to help let off some steam."*

The most significant thematic difference between the two groups was in their frequency of endorsement of nondefensiveness as a teacher-student relational attribute. Teachers most often cited this attribute when discussing their reactions to student behavior, or when reflecting on their role with the teacher-student relationship: *“I also think it’s important that we acknowledge our own humanity as teachers. They will call me out sometimes when I make a mistake, and I’m like, you’re right, my bad. I don’t think there is anything wrong with being a human and having emotions yourself too”*; *“If I set expectations for my students, I also set expectations for myself. I admit when I don’t meet those expectations and vice versa so we can understand that we’re not always at our best.”* Teachers who are capable of depersonalizing their reactions to student behavior may be better equipped to address traumatized students with complex emotional and behavioral needs. Coupled with an understanding of the way trauma manifests socially, emotionally, and behaviorally in the classroom, these teachers may be more adept at viewing challenging student behaviors as reactions to stress or trauma. Thus, these teachers may be better equipped to respond to behaviorally challenging students with compassion, rather than taking behaviors personally and reacting with frustration or punitive measures, which have been shown to be triggering for many students, especially those who have experienced trauma (Brendtro, 2004).

The most frequently cited challenge to maintaining positive relationships among the MFA participants was student readiness to form a relationship. Teachers who endorsed this challenge discussed barriers to some students’ ability to form connections with them. These teachers cited examples such as familial influences, previous negative experiences with adults or authority figures, or general attachment issues. They tended to talk about challenges to forming

relationships as a consequence of factors largely outside of the students' control: *"They are not ready yet to receive that kind of connection. And you really have to respect that and acknowledge that that's where they are. You're doing what you can do on your front, but you can't force them to buy-in to the relationship."*; *"Maybe their homelife is such, their feelings about education is such, that I'm still trying and attempting to connect on a meaningful level with them so they leave knowing that someone was trying to do that with them. But they are not ready to connect in that way."*

The participant's views on teacher and student well-being were particularly interesting, given their inverse perspectives across the different subthemes. Teachers in both groups differed completely in their views of how their personal well-being impacts relationships with students. More specifically, all teachers in the MFA group indicated that their well-being is very important in relationships with students: *"But yeah I would say definitely, my moods or my emotional needs can affect the mood I'm going to display when I'm in front of the kids. And I think a lot of times, the kids look to adults for how to react, they are kind of looking at us for that cue sometimes. So if you're worried or you're really down, it can really affect the atmosphere of the classroom."* Conversely, the majority of LFA participants indicated that their personal well-being has no influence, or very minor influence, on their relationships with students: *"I try not to let it impact my relationship with them. Like if I'm grumpy or I was up late, sometimes I'm grumpy, but I don't let it effect how I am in the classroom."* Another teacher mentioned her separation between work and personal well-being: *"I try to put my take on life aside for the 8-9 hours I'm here, and I don't bring personal life into work. I don't think that's right or fair to me or them. I don't do personal stuff during the school day."* Interestingly, LFA participants did talk about how student

well-being influences their personal well-being, as was the case with this participant: *“I think it [student well-being] is critical and key. I think if they are happy, I am happy.”* Given this finding, it is possible that teachers with less favorable attitudes are more inclined to view the nature of teacher and student wellness as unidirectional, in that student well-being is viewed as impactful to them, but their personal wellness is seen as less influential to their students. Therefore, teachers with less favorable attitudes may be less attuned to the ways in which their personal well-being can impact their students.

Given the importance that teachers with more favorable attitudes placed on personal well-being in the context of the teacher-student relationship, it is unsurprising that these teachers also indicated the importance of self-care at a higher rate than participants with less favorable attitudes: *“Huge! It’s [self-care] very important. I always tell my students too that well-being, you’ve got to take care of yourself first, so I have to practice that myself. So for me, spirituality, making sure I’m connected through going to church, exercise, eating right. And I know if I’m off because I realize I have to get back on track when I’m dragging.”* Although several teachers discussed the challenges associated with maintaining personal wellness, they all acknowledged the importance of personal well-being in their relationships with students, as well as to their general teaching efficacy: *“I just know that sometimes when my tank is running low, I just have to recharge. I have to take care of myself physically and emotionally, and keep my spirits high. I think this work does feed me and take care of me. I know I’m stimulated and engaged, and for the most part, I’m pretty healthy. But there are times where it just is a matter of processing something myself through thought or contemplation or reflection, or maybe gaining instruction in a certain area that’ll help me deal with all the stress I have to deal with.”*

**Teacher attributions and management of student behavior.** Participants discussed their most and least effective approaches to managing student behavior, as well as their attributions of student behavior. The two participant groups had more thematic differences than similarities within this organizational theme. Both groups of teachers endorsed the use of the teacher-student relationship as among their most effective behavior management approaches. In the following example from a teacher in the LFA, she discusses her use of the relationship as a strategy: *“I think most effective is probably them knowing that I care. Like, I try to treat them with respect and treat them like they’re young adults.”* Participants in the MFA group also discussed the relationship as an effective behavior management approach: *“Most effective is proximity to my students, like walking through my classroom. Standing next to a student says two things: First, “I see you”, and second “I care, because I’m right here.” Standing next to someone is a sign of caring.”* Another MFA participant offered her explanation for developing positive relationships early in the school year: *“So I think that’s the best behavior management strategy is building that relationship and doing the best you can early on to get to know everything you can about the students so that you know how to read their moods and read their physical, you know, just everything that’s going on with them.”*

The endorsement of the teacher-student relationship as an effective behavior management strategy by teachers with LFA was surprising, given their reduced emphasis on the relationship in other thematic domains, relative to the MFA group. It is possible that teachers with less favorable TIC attitudes view the teacher-student relationship as an important tool in their behavior management repertoire, but are perhaps less aware of the utility of the relationship outside of behavior management, such as impact of a positive relationship on student

socioemotional adjustment or academic performance. Teachers with more favorable attitudes seem to view the teacher-student relationship as a highly versatile resource for behavior management, but also a critical component of student socioemotional adjustment and wellness.

The classroom environment was viewed by the majority of teachers with MFA as an effective tool for behavior management. Teachers discussed various aspects of the classroom environment that they leverage as a management tool: *“There is a foundation of respect, and there is a foundation of understanding that a successful classroom is a collaborative effort, and then hopefully what you get is that they manage themselves. For me not to be constantly on them. But when someone does get out of line, for the rest of the class to say “Hey that was not OK”. It does happen where they say “hey that was not respectful language”, and giving them the safe space to do that on a social level is really important. Like, these are the community expectations.”* Another teacher had this to say about classroom management as a self-regulating strategy: *“I’ve found that, as our relationship grows, if someone is kind of getting a little wonky or being out of line, then the other kids will be like ‘hey, you know the rules. If you’re having a bad day, don’t take it out on Ms. Fakenname.’ So that’s pretty nice.”* The emphasis on classroom safety through consistent expectations and a sense of community is consistent with the MFA teachers’ beliefs about factors that impact student success, as discussed in the first organizational theme. Further, this finding is reflective of the MFA teachers’ awareness of two core features of the ARC model: safety and healthy attachments.

Three more behavior management approaches emerged as themes across the two teacher groups: interaction style, expectations, and flexibility. Regarding teacher interaction style, the majority of MFA teachers discussed the use of a warm interaction style, examples of which



included the use of a gentle tone of voice, positive or inviting facial expressions (e.g., smiling), a calm and relaxed demeanor, or the use of humor. One teacher discussed the importance of body language as a form of communication with her students: *“When your body language is calm and you’re standing next to someone, it’s a way of saying ‘I’m here for you and I got your back.’ So I use that and go around my classroom, not in a creepy way of course, but I walk around and I know my presence can be felt.”* Another teacher discussed her use of humor to motivate her students and express high expectations for their success: *“Another good one that I love to do is humor with students, just to be able to laugh. If a student is taking something really seriously, like an assignment, it’s OK to help them smile about it and just say, ‘Oh, look at what silly thing I did when I worked on that!’ and laugh about it. Or make a joke with it. Most students respond very well to that, even just a smile. When I show them that it’s OK to smile or laugh with it, they find it a little more fun instead of it being treachery. It’s more like, ‘She thinks we can do it, so we can do it.’”*

MFA teachers also indicated the use of flexibility with regard to classroom rules and expectations. One teacher described her use of flexibility in the classroom, especially for students whose well-being is perceived to be at stake: *“I kind of give kids the understanding that you can have passes on days where, if you come in and things are really hitting the fan or things are not well for you, If you communicate that with me, we can have an OK day. I’ll go easy on you and you can work on something else or you can put your head down or go to the nurse or do what you need to do. And I find that they don’t, for the most part take advantage of that. They are pretty respectful of that and I honor it when they say, “hey, today is not my day and you need to let me be.” And I’m like, “OK”.* Interestingly, while one LFA teacher cited flexibility as an

important tool for behavior management, another LFA teacher stated that flexibility is not an effective approach: *“So like, I get a lot of interaction in the class, and I get a lot of participation, which is great, but then they take advantage of the fact that I’m this chill teacher, and maybe they’re on their phone too much because of it.”* The majority of MFA teachers talked about their preference for communicating reasonable, consistent, and clear expectations for student behavior and relationships in the classroom. One teacher discussed the importance of clear expectations in her classroom: *“It’s really the relationship building and an environment where they have consistent expectations and they know what to expect when they come through the door. And if they don’t know what to expect, then that’s when it gets challenging for any kid.”*

An overarching theme in responses among the MFA participants was their tendency to favor behavior management strategies that are proactive, rather than reactive. In addition to discussing their go-to strategies for managing acute behavior problems, teachers with more favorable attitudes talked extensively about the use of strategies that act as a buffer against interpersonal or behavioral problems from occurring in the first place. Although LFA teachers discussed some proactive approaches to behavior management, they did so to a lesser extent. For example, their most frequently endorsed strategy was the individual check-in, which most often occurred as a reaction to a challenging student behavior: *“I will eyeball them [when they misbehave]. Or I pull them out of the classroom. Not as a punishment, but as young adult to adult. Try to find out what’s going on in their life.”* When MFA participants discussed the use of individual check-ins, they were usually referring to a relationship building strategy rather than an approach to managing challenging behaviors.

Regarding the attribution of student behavior, the teachers' perspectives were highly divergent across the groups. The most notable difference was the frequency in which the LFA teachers attributed challenging student behaviors as volitional, a theme that was not endorsed by any MFA participants. Teachers who cited student volition in their behavioral attributions generally talked about misbehavior or refusal to comply as a choice: *"They don't trust authority sometimes, and if they don't like you they ain't gonna do nothing."* Another teacher discussed scenarios in which her students do not comply with her in-class agenda: *"He was kind of moving back and forth and wouldn't look me in the eye. I asked him if he was high and he said 'No I'm just nervous'. And I said 'I don't know what's going on with you right now'. He just did not care. I have a couple other kids who just don't do their work. They just don't do it."* That LFA teachers tended to view challenging behaviors as largely within their students' locus of control suggests that teachers with less favorable attitudes may be less aware of the reduced capacity for emotional and behavioral self-regulation by some students, particularly those with trauma histories. Conversely, MFA participants tended to attribute challenging behaviors to more contextual factors that are largely outside of student control, such as developmental, familial, psychological or socioemotional factors: *"And I don't think any student really wants to be in crisis all the time. I feel from the bottom of my heart that that's not really where they want to be, and sometimes they're going to need some extra help."* Another MFA participant attributed student behavior problems to issues with comprehension of academic materials, as was the case for this teacher: *"When I find that kids aren't participating in class, it's because the material is so far over their head that they don't know how to participate."*

## INFLUENCES OF SCHOOL CULTURE AND INTERVENTION

**Relationship between intervention and attitudes related to TIC.** An interesting finding from the first phase of this study was the significant value of the intervention Tier variable in predicting teacher attitudes related to TIC. Recall the distinction between Tier levels by activity and dummy coded tier variables. With the exception of Tier 1, teacher participation in Tier 4 activities, which included the most intensive and individualized programming, was significantly different from all other tiers represented in this study (Tiers 0, 2 & 3), and predicted more favorable attitudes related to TIC compared to teachers who participated in other tiers. Although their attitudes were not statistically different from teachers who participated in Tier 1 activities, a descriptive analysis of the results showed that Tier 4 teachers tended to have higher scores than those in Tier 1. These findings supported the hypothesis that teacher attitudes would differ across different tiers of intervention participation.

Due to the lack of a controlled design, it cannot be statistically determined whether the teacher's more favorable attitudes were a result of the intervention, their preexisting beliefs, knowledge, attitudes, or a combination of the two. However, the collective findings from both phases of this study suggest that participation in more individualized interventions unique to Tier 4 may have had an impact on several participant factors that are theoretically related to TIC, such as perceived support, teacher knowledge of the effects of trauma, and an understanding of ways to cultivate healthy attachments with students (Blaustein & Kinneburgh, 2010).

**Campus culture.** Two factors that are theorized to impact attitudes related to TIC are perceived personal support and system-wide support of personal and professional needs and goals. Although these factors are measured on two subscales on the full measure (ARTIC-45),

the version of the scale used in this study (ARTIC-35) does not include the full subscales. Therefore, this study relied on qualitative inquiry to capture participant levels of perceived support at their respective campuses.

For most of the subthemes within the campus culture organizational theme, the participants' perceptions of personal and professional support and relationships with administrators were variable across the two participant groups, as well as across campuses. Participants endorsed similar perceptions for two of the administrative support subthemes: Degree of support for professional autonomy, and support for teacher wellness. The majority of teachers across both groups indicated a high degree of support for professional autonomy. That the majority of teachers perceived this level of autonomy is promising in the context of this study, as perceived professional autonomy is associated with greater job satisfaction and teacher retention (cite). Teachers across both groups were also in agreement about the degree of support for teacher wellness activities, for which they indicated a low degree of support. That teacher wellness activities are not perceived as a priority across all three campuses may be indicative of a global culture which perpetuates the unspoken expectation of teacher selflessness, an idea that was expressed by a teacher in the more favorable attitudes group: *"The job of being a teacher is very difficult in a lot of different ways, and I think a lot of times, teachers tend to be very selfless. They're willing to give so much of themselves, so much of their time, and so much of their energy. And those are people who really need a support structure - they really need support people."*

In terms of the teacher's perceptions of their relationships with their colleagues, most participants indicated that they enjoy high quality relationships with their professional peers, in

which they often cited an expectation for support, and generally felt comfortable discussing their personal or professional concerns. Relationships with administrators were generally perceived as positive for most participants, with the exception of two teachers with LFA. One teacher discussed her general lack of trust in her administrators to express her needs or concerns: *“I would never tell them anything that I needed from them personally because... even if I did something terrible and totally recovered, they are always going to remember that, and they are my boss. They are probably going to give me bad classes, you know?”* Research from dissemination and implementation science has identified that staff engagement in new behaviors in the context of their jobs is linked to both personal support of the initiative and organization-level factors (Baker et al., 2010). Successful implementation and maintenance of TIC programs in schools require individual teachers feel supported by colleagues and the leadership team as they contribute to the movement of their school’s culture toward being more trauma-informed.

**Perception and engagement with campus-based clinic interventions.** Teacher perceptions of the campus-based clinics were overwhelmingly positive and seen as a valuable asset to each of the campus communities. All teachers in the sample identified benefits experienced by students as a result of engagement with the clinic. Additionally, all teachers who participated in teacher-level interventions discussed some aspect of personal gain related to mental health, professional efficacy, or relationships with students. One teacher who participated in all levels of teacher intervention available at her campus had this to say about her increased personal insight as a result of having engaged in campus-based services: *“I feel like the more aware I am of myself and what I need, and how my past traumas have led me to where I am today, it helps me relate to the kids who might be going through that now. A huge part of why I*

*became a high school teacher is because my high school experience was really horrible, and I wanted to be someone who is there for the kids.”*

Regarding the importance of teacher wellness services in general, one teacher described the value of prioritizing teacher well-being in schools: *“I think that interventions provided at the teacher level are so much more valuable than a lot of people might realize. Even knowing that you guys are here, for the people who just use it now and then, I think is beneficial in the same way that I think it is for the students to know, ‘Hey, that teacher has my back. I know they do. There was that day when I needed to cry, and she totally let me leave.’”* Another teacher discussed his experience with teacher-level services at the clinic and the support he received for vicarious trauma experienced on the job: *“That’s the main thing for my personal wellness, being able to process the trauma that we’ve seen. We started having a staffing every Thursday, and it’s usually Dr. Psychologist and myself and Ms. Teachersaide. That’s the first thing you have to be able to process through, the trauma. Like when that student cut her wrists, that kind of stuff. It’s been super, super valuable. It’s made all of the difference for me in my job. I was thinking about this recently, I don’t know if I could have gotten through this year if it weren’t for that piece. And it seems really small, but at the very beginning of the year, like I was telling the administrators, we need to have a professional psychologist or someone that we’re staffing with because this is really hard, you don’t do this type of work and not get damaged. Not without the right support, anyway.”*

The majority of teachers also expressed student benefits to receiving mental health support through the campus based clinic. A number of teachers discussed the important aspect of having a safe space on campus for students to go for support: *“I know that it is a place where*

*they feel safe and where they ask to go when they're having a hard time. Anytime when I know that the child comes here, and I've offered that as like, "Hey, would you like to go see Dr. Psychologist right now? Do you want to take a break in Dr. Psychologist's office?" They always jump on it."* Another participant saw the value in an on-site clinic for at-risk or marginalized students: *"Some kiddos, I think, need more support than others. Some have supportive home environments and maybe won't seek you guys out. Other kids, like, we have kids who are transgender and need more support because they don't know how to go through this process. I have some of those kids in my class, and they need a professional to help them."*

Some participants expressed an expectation for expansion of clinic services: *"I think that expanding your services to include more teachers or even teacher check-ins would be hugely valuable. I think we need that. I think we need to believe that someone cares about who we are as people and not just who we are as numbers, so that's hugely valuable."* Another teacher discussed his desire not only for continuation of the programming provided by the clinic, but expansion throughout the district: *"I would say expectations are that there will be some exploration of how this [clinic programming] can continue. The people that have been involved, from what I have experienced, there is a long term commitment here, based on the people that I've talked to. The therapists here are obviously invested in it. My expectation is that these services will be continued if at all possible. My hope is that they will let us know what we can do to help make that happen, if we can help expand it in the district."*

One teacher in the less favorable attitudes group discussed her skepticism about the purpose of the clinic: *"I was so surprised to hear about your clinic because I was like, "what's their angle", is it like to see who should leave? I know you say it's confidential, but you just*



*don't know. You know it's sensitive stuff and who's going to know and are they going to judge me?"* The same participant discussed her hesitation to seek out group-based teacher services through the clinic: *"Yeah with the group therapy thing, normally I'll say whatever, but these are my colleagues, and I'm not going to admit, "yes, sometimes I go home and cry", even if someone else does, because I'm sitting there thinking, "wow, they look weak." It's just human nature."*

Although her perspective was in the minority within this participant sample, it is likely that other teachers may share similar skepticism and perspective about the purpose of the clinic. Therefore, clinic ambassadors should focus on increasing the clarity of the clinic's mission, values, and goals in an effort to increase teacher buy-in to clinic programming. One possible approach to address teacher skepticism about the clinic and teacher reticence to participate in clinic services came from an MFA participant: *"I wouldn't approach individual teachers, but I would go to their PLC meetings or their department meetings. Contact their department chair and find out when they meet. So find out when they meet, and ask if you can speak for ten minutes. Another way you could do it is you could have advocates who are already involved with the clinic, present that information in the meeting. So like myself for instance, I could speak in my department meeting about whatever program you guys are doing. It's like, if your friend or colleague tells you to come check something out, then you're more likely to do it than if some random person tells you to do it."*

Although the types of engagement with clinic services varied widely across participants, the majority of teachers had overwhelmingly positive feedback regarding the services that they or their students received. For teachers who did not participate in any teacher-level interventions personally, they readily expressed the perceived benefits of having a mental health clinic on-site

for students, and were supportive of the clinic's mission to provide mental health care to both students and teachers. Overall, teachers seemed to be in agreement that the mere presence of a mental health clinic on campus, staffed by qualified and dedicated mental health professionals, provided the perception of support for students and teachers alike. For several teachers, this level of perceived support was an invaluable intervention in and of itself.

## **IMPLICATIONS**

The present study explored teacher attitudes, beliefs, and behaviors related to TIC in schools. While the findings from phase one of this study provided a broad picture of TIC-related teacher attitudes across the three campuses in the study, the findings from the qualitative phase shed light on a more nuanced understanding of what types of beliefs, attitudes, and behaviors makes a teacher more or less "trauma-informed". The findings offer support for the importance of teacher knowledge and understanding of trauma in the context of trauma-informed systems, especially with regard to how complex stress and trauma can manifest socially, emotionally or behaviorally in the classroom.

It is telling that the overwhelming majority of teachers in the qualitative phase of this study endorsed the impact and significance of positive teacher-student relationships. Teachers with more favorable and less favorable attitudes alike seemed to understand that relationships with their students play an important role in their students' lives. However, the results demonstrated important differences in the way teachers in the two groups conceptualize relationships with students, in that MFA participants tended to view the relationship as a dynamic, versatile, and foundational component of student success, behavior management, and student socioemotional adjustment, while LFA teachers tended to discuss the utility of the

relationship in managing student behavior. This finding suggests that not only do trauma-informed teachers have an acute awareness of the importance of the teacher-child relationship in several facets of student functioning, it also suggests that particular attributes of the relationship (i.e., trust, empathy, and teacher nondefensiveness) may be more valuable in the context of trauma-informed care in schools.

The two teacher groups also differed in terms of their understanding of student socioemotional and behavioral functioning, particularly with regard to challenging behaviors. Teachers with less favorable attitudes tended to attribute disruptive behavior almost entirely to student volition. Compared to teachers with more favorable attitudes, who discussed more contextual attributions (i.e., mental health, home environment, or trauma), LFA teachers rarely cited attributions outside of the students locus of control or volitional action. Previous literature has shown that it is often the case that teacher perceptions of disruptive or challenging behavior are based on an understanding of normative child development (Dawidowicz, 2012), which may be the case for teachers who are less trauma-informed. Further, researchers have postulated that when a teacher believes their student has control over his or her behavior, the teacher is more likely to become angry and use harsh punitive measures when their behavior is disruptive or inappropriate, which can be especially triggering for students who have experienced relationally based trauma. However, if teachers are able to recognize the factors that shape a child's behavior and compromise self-control, such as those related to trauma, teachers are more likely to attempt to respond empathically (Weiner, 1993).

One way to alleviate misattribution of student behavior by teachers is through continued professional development efforts. Teachers who are not equipped with an understanding of the

impact of complex stress and trauma on their students may be less likely to have the skills to successfully engage with emotionally or behaviorally challenging youth, and may be at a higher risk for teacher-student relationships marked by conflict. Research has shown the far-reaching impact of conflictual teacher-student relationships (Pianta, 1999). School-based training programs which specifically target the emotional and behavioral effects of trauma on students would be beneficial for bolstering healthier teacher-student relationships in general, not just for students who have experienced trauma.

Teachers with more favorable attitudes seemed to have a keener understanding of contextual factors that impact student success and overall wellness, which was reflected in their relational approach with students, as well as their conceptualizations of student behavior and strategies for behavior management. Teachers with more favorable attitudes, even those with little to no amount of explicit exposure to TIC concepts, demonstrated a fundamental understanding of the tenets of TIC. Namely, the importance of healthy attachments with adults, recognition of the effects of trauma or ongoing stress on students, and qualities of healthy interpersonal relationships. For example, teachers with more favorable attitudes often cited the use of a strengths-based lens in their relationships with students. Brendtro (2004) cited the utility of strengths-based approaches to classroom management, in that they promote emotional and social support, while also decreasing disruptive or inappropriate behavior. Although challenging to maintain when faced with extremely disruptive behavior, keeping a strengths-based focus may be especially important to foster positive and restorative relationships with trauma-impacted students. Given their inclination to use positive behavior management strategies, including the

use of a strengths-based focus, teachers with more favorable attitudes related to TIC may be well suited as leaders in both implementation and maintenance phases of TIC programming.

Finally, the teacher perceptions of clinic programming offered unique insight into the way teachers perceive school-based, trauma-informed mental health care. Although their experiences and perspectives were specific to the programming at their individual campuses, and thus have a low level of generalizability to other settings, there were some common themes in the perceived benefits of the clinic programming that may inform future program design and implementation efforts. Several teachers noted the importance of accessibility of the physical location of the clinic, both for themselves and their students. It was overwhelmingly perceived as a benefit that the clinic is located within their respective campuses, providing the perception of available support, even when services are not directly utilized.

## **LIMITATIONS**

This study focused on the relationship between several teacher characteristics and TIC programming in three urban high schools in central Texas and attitudes related to TIC among teachers. Several important limitations of this study should be addressed. Developed using evidence-based components from decades of trauma research, the intervention in this study was flexible by design, a warranted approach given the complexity of the issues being addressed, and the unique needs of the individual campuses. Because the interventions were not implemented as a fixed protocol, the relative recency of implementation, and lack of available pre-intervention data, it was not feasible to use an experimental design that would allow for a study of efficacy at this time. Additionally, this dissertation used self-report measures, an approach which can introduce threats to the validity of the findings. Namely, the threat of social desirability bias, as

well as potential inconsistencies in the administration of the measure across campuses. Future research using the ARTIC scale would do well to utilize a brief social desirability scale in conjunction with the ARTIC to assess the extent to which social desirability bias may impact findings.

Due to the cross-sectional nature of the study design, it was not possible to make causal inferences related to the study findings, particularly with regard to findings from phase one. Longitudinal data would be required to draw such conclusions about the impact of TIC interventions at the campuses included in this study. Further, because TIC interventions, including the programming implemented at the schools in this study, are generally intended to intervene with all staff (e.g., office administrative professionals, teachers, custodians, cafeteria workers), this study was limited in that it only assessed attitudes of teachers. Future research on system-level impacts of TIC interventions would do well to include other school-based occupational groups in their participant samples.

## **CONCLUSION AND FUTURE DIRECTIONS**

Students who have experienced highly stressful or traumatic circumstances often have difficulty accessing the benefits of their educational environment, including academic enrichment, socioemotional skill development, and stable, healthy attachments. For children who have been exposed to complex trauma, their lived experience at school can be frightening or overwhelming as they are challenged to learn new skills, manage relationships, and regulate their emotions and behavior. Prior research has repeatedly documented the pervasive impact of trauma on student outcomes (Perfect et al., 2016). Yet, teachers are often underprepared to recognize the signs of trauma-exposure in their students, nor are they adequately equipped to address student

trauma when they see it. As a practice, TIC programs in school settings rest on a foundation of healthy attachments with adults, especially teachers. It may be that teachers with more favorable attitudes related to TIC have greater expertise in building and maintaining deeper and less conflictual relationships, which is a crucial prerequisite in successfully engaging with trauma-impacted students.

A better understanding of the differences between teachers with more and less favorable attitudes can guide us in addressing the professional development objectives of teachers with varying degrees of favorability in attitudes related to TIC. Use of the ARTIC measure could support school leaders in tailoring and scaffolding TIC training activities for staff and teachers according to the favorability of their attitudes related to TIC. For example, teachers in this study with less favorable attitudes were less aware of the ways in which their personal well-being impacts their relationships with students. Therefore, education about the impact of teacher stress on teacher-student relationships could be a potential focus for a trauma-informed training curriculum that is better suited for teachers with less favorable attitudes. TIC training days may incorporate the use of targeted training modules, designed specifically to address the unique training goals of different teachers and staff members. Teacher retention and reduced teacher stress may be an added benefit of TIC training, as the empowerment of teachers with the knowledge and skills to address student trauma may reduce frustration and burnout (Blodgett, 2016). For teachers with more favorable attitudes related to TIC, an intensive lesson on the general impact of teacher stress on student well-being may be superfluous. Instead, TIC training modules for teachers with relatively more favorable attitudes might focus on specific strategies

to bolster healthy attachments for students with trauma, or focus on the development of teacher leadership roles in the TIC implementation process.

Although undoubtedly valuable within a trauma-informed system, knowledge of trauma is unfortunately insufficient to build a full system of support. Trauma-informed systems of care, by definition, consider the impact of multiple systems on a student's functioning (i.e., family, school, community), and likewise, must recruit a network of support in the approach to treatment of trauma-impacted youth. Despite their role as front-line support for students, educators are given little or no support in addressing a traumatized student's emotional or behavioral needs within the classroom (Atkinson-Tovar, 2002). Consistent with the findings in this study, teachers also perceived a lack of support for activities that contribute to teacher well-being outside of the support provided by the campus-based clinic. In order for schools to become more trauma-informed for the benefit of students, school leaders must consider the importance of developing a school-wide culture that is amenable to teacher well-being as well.

Future research on TIC should strive to build a more nuanced understanding of how, why, and to what extent TIC interventions in schools are effective. In order to demonstrate efficacy, future research on TIC must utilize more sophisticated methodological approaches, including study designs that allow longitudinal comparisons of outcomes related to TIC that extend beyond measures of attitudes. When used in a controlled research design, future research that assesses outcomes related to TIC interventions may use the ARTIC to determine whether TIC programming led to changes in campus-wide attitudes. Because TIC interventions are generally designed to target staff at all levels of an educational setting, future studies could provide a more precise depiction of a school's level of trauma informedness by measuring



attitudinal changes in all staff, not just teachers. An additional content area for further investigation might include a more in-depth analysis of the extent to which TIC interventions favorably impact teacher well-being, mental health, and professional efficacy. Finally, linking the TIC programming to both agency-level outcomes and student-level outcomes (i.e., anxiety, depression, aggression, PTSD symptoms, self-esteem) is a critical next step in demonstrating the efficacy of the TIC trauma training and program implementation in school settings.

## Appendices

## **APPENDIX A: RECRUITMENT EMAIL LETTER**

Dear [SCHOOL ADMINISTRATOR],

I hope this email finds you well. I am conducting my dissertation research, and I am hoping you might be able to support me in determining a feasible date to distribute my survey. Dr. Minne indicated that you prefer the survey distribution to take place during a mandatory teacher/staff professional development meeting taking place on one of several late-start school days.

All current teachers at your campus will be invited to participate in a study of teacher approaches to managing challenging student behaviors. The research is being conducted as part of a dissertation project at UT-Austin. The initial part of the study is a quick 15-minute paper survey. A few participants will then be selected for a 45-90 minute interview about their experiences. Participants who complete an interview will receive a \$25 Visa gift card. Please read below for more information:

### **Cover Letter for Participation in Research**

High School teachers at [INSERT NAME OF SCHOOL] are invited to participate in a study entitled “Assessing Teacher Approaches to Managing Student Behaviors.” If you are interested in participating, fill proceed with the short survey following this page.

A few eligible participants will be invited to participate in a brief interview after the survey—those who are invited to and complete the interview portion will be compensated with a \$25 Visa gift card. Please indicate below whether you are willing to participate in an interview following the completion of the following survey.

\_\_\_\_\_ YES, I would be willing to participate in an in-person or skype interview for compensation

\_\_\_\_\_ NO, I do not wish to be contacted about an interview

The following paper survey will take approximately 15 minutes of your time. The purpose of the study is to better understand how high school teachers manage challenging student behaviors in school settings.

#### **Eligibility:**

You are eligible to be a participant in this particular study if you currently teach at [SCHOOL NAME]. Additional criteria are: 1) being over 18 years of age, 2) being in good health and not experiencing a mental health emergency, and (3) not currently experiencing any conditions that would prevent them from providing their own consent to participate.

Risks to participants are considered minimal. Your responses will be kept private and your personal information will be kept confidential. Only the researchers will have access to the data during data collection. There will be no costs for participating or compensation for participating in the paper survey portion of the study. However, if you indicate that you are willing to be interviewed following the survey and complete the interview process at time and location that is convenient for you, you will receive a \$25 Visa Gift Card upon study completion.

If you have any questions about the study, feel free to email the researcher, Erica Wendel at [Erica.wendel@utexas.edu](mailto:Erica.wendel@utexas.edu)

This study has been reviewed and approved by The University of Texas at Austin Institutional Review Board. If you have questions about your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact - anonymously, if you wish - the Institutional Review Board by phone at (512) 471-8871 or email at [orisc@uts.cc.utexas.edu](mailto:orisc@uts.cc.utexas.edu).

IRB Approval Number: **xxxxxxx**

Thank you.

Erica Wendel, M.A.  
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## **APPENDIX B: EMAIL INVITATION FOR INTERVIEW CANDIDATES**

Dear [TEACHER],

Recently, you completed a survey for a study entitled “Assessing Teacher Approaches to Managing Student Behaviors.” On the survey, you indicated that you might be interested in completing an in-depth interview process on the same topic. I would now like to invite you to participate in the interview process. If you complete the interviews, you will receive a \$25 Visa gift card for your time.

The process consists of one, 45-90 minute interview. You will be asked general questions about your teaching approach and how you manage behaviors of challenging students in your school setting. The interviews will be audio-recorded and can be done in-person at [INSERT CAMPUS NAME] or via Skype or FaceTime, depending on your preference. Your information will be kept confidential.

You are already eligible for the study because you have completed the paper survey portion. I have attached the consent form, which has more information about the interview.

If you are interested in completing the interview, please email me back, and we can schedule a time that is convenient for you. Please feel free to let me know if you have any questions about the study before you know whether you would like to participate.

IRB Approval Number: xxxxxx

Thank you.

Erica Wendel, M.A.  
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The University of Texas, Austin, TX 78712  
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## APPENDIX C: ATTITUDES RELATED TO TRAUMA-INFORMED CARE SCALE

Teacher ID# \_\_\_\_\_

### ✓ INSTRUCTIONS

For each item, select the circle along the dimension between the two options that best represents your personal belief during the past two months at your job.

#### Sample

	1	2	3	4	5	6	7	
Ice cream is delicious	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ice cream is disgusting.

👁 **Note:** In this SAMPLE ITEM, the respondent is reporting that he/she believes that ice cream is much more delicious than disgusting.

#### I believe that...

	1	2	3	4	5	6	7	
1 Students' learning and behavior problems are rooted in their behavioral or mental health condition.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Students' learning and behavior problems are rooted in their history of difficult life events.
2 Focusing on developing healthy, healing relationships is the best approach when working with people with trauma histories.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Rules and consequences are the best approach when working with people with trauma histories.
3 Being very upset is normal for many of the students I serve.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	It reflects badly on me if my students are very upset.
4 I don't have what it takes to help my students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I have what it takes to help my students.
5 It's best not to tell others if I have strong feelings about the work because they will think I am not cut out for this job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	It's best if I talk with others about my strong feelings about the work so I don't have to hold it alone.
6 The students were raised this way, so there's not much I can do about it now.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	The students were raised this way, so they don't yet know how to do what I'm asking them to do.
7 Students need to experience real life consequences in order to function in the real world.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Students need to experience healing relationships in order to function in the real world.
8 If students say or do disrespectful things to me, it makes me look like a fool in front of others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	If students say or do disrespectful things to me, it doesn't reflect badly on me.
9 I have the skills to help my students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I do not have the skills to help my students.
10 The best way to deal with feeling burnt out at work is to seek support.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	The best way to deal with feeling burnt out at work is not to dwell on it and it will pass.
11 Many students just don't want to change or learn.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	All students want to change or learn.

**CONTINUED →**

***I believe that...***

	1	2	3	4	5	6	7	
12 Students often are not yet able or ready to take responsibility for their actions. They need to be treated flexibly and as individuals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Students need to be held accountable for their actions.
13 I realize that students may not be able to apologize to me after they act out.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	If students don't apologize to me after they act out, I look like a fool in front of others.
14 Each day is uniquely stressful in this job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Each day is new and interesting in this job.
15 The fact that I'm impacted by my work means that I care.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Sometimes I think I'm too sensitive to do this kind of work.
16 Students have had to learn how to trick or mislead others to get their needs met.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Students are manipulative so you need to always question what they say.
17 Helping a student feel safe and cared about is the best way to eliminate undesirable behaviors.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Administering punitive consequences is the best way to eliminate undesirable behaviors.
18 When I make mistakes with students, it is best to move on and pretend it didn't happen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	When I make mistakes with students, it is best to own up to my mistakes.
19 The ups and downs are part of the work so I don't take it personally.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	The unpredictability and intensity of work makes me think I'm not fit for this job.
20 The most effective helpers find ways to toughen up – to screen out the pain – and not care so much about the work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	The most effective helpers allow themselves to be affected by the work – to feel and manage the pain – and to keep caring about the work.
21 Students could act better if they really wanted to.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Students are doing the best they can with the skills they have.
22 It's best to treat students with respect and kindness from the start so they know I care.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	It's best to be very strict at first so students learn they can't take advantage of me.
23 Healthy relationships with students are the way to good student outcomes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	People will think I have poor boundaries if I build relationships with my students.
24 I feel able to do my best each day to help my students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I'm just not up to helping my students anymore.
25 It is because I am good at my job that the work is affecting me so much.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	If I were better at my job, the work wouldn't affect me so much.
26 Students do the right thing one day but not the next. This shows that they are doing the best they can at any particular time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Students do the right thing one day but not the next. This shows that they could control their behavior if they really wanted to.
27 When managing a crisis, enforcement of rules is the most important thing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	When managing a crisis, flexibility is the most important thing.
28 If I don't control students' behavior, bad things will happen to property.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	As long as everyone is safe, it is ok for students to become really upset, even if they cause some property damage.

**CONTINUED →**

***I believe that...***

	1	2	3	4	5	6	7	
29 I dread going to my job because it's just too hard and intense.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Even when my job is hard and intense, I know it's part of the work and it's ok.
30 How I am doing personally is unrelated to whether I can help my students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I have to take care of myself personally in order to take care of my students.
31 If things aren't going well, it is because the students are not doing what they need to do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	If things aren't going well, it is because I need to shift what I'm doing.
32 I am most effective as a helper when I focus on a student's strengths.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I am most effective as a helper when I focus on a student's problem behaviors.
33 Being upset doesn't mean that students will hurt others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	If I don't control students' behavior, other students will get hurt.
34 If I told my colleagues how hard my job is, they would support me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	If I told my colleagues how hard my job is, they would think I wasn't cut out for the job.
35 When I feel myself "taking my work home," it's best to bring it up with my colleagues and/or supervisor(s).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	When I feel myself "taking my work home," it's best to keep it to myself.

*Thank you for your participation.*



## APPENDIX D: QUALITATIVE INTERVIEW QUESTIONS

### *Recognition of link between trauma school-based outcomes*

- 1) What do you believe are the most important factors that impact your students' success in school?

### *Potential prompts*

- a. Academic success?
- b. Social-emotional / behavioral success?
- 2) What do you consider to be your most effective classroom behavior management strategies? Least effective?
- 3) What types of approaches or strategies help you promote positive relationships with your students?
  - a. What makes it challenging to maintain positive relationships with your students?
  - b. How does your students well-being affect your relationship with your students?
  - c. How does your personal well-being affect your relationship with your students?

### *School Culture*

- 1) To what extent do administrators at your campus support your personal and professional development?
- 2) To what extent do administrators at your campus promote activities that support teacher wellness?
- 3) To what extent does your campus foster a culture of mutual respect among teachers, staff, and administrators?
- 4) In general, do you feel you have the freedom to exercise your own professional judgment and autonomy in the classroom?
- 5) In general, do you feel comfortable talking with your colleagues about personal or professional concerns?

### *Perception of Intervention*

Are you familiar with the school-based mental health clinic that has been in operation across the past (phase of implementation specific to school). In general, what is your understanding of the purpose of the programming provided by the clinic?

- 1) What types of wellness services did you participate in this year, school-based or otherwise, if applicable? (*Prompt with intervention examples, if needed*).
- 2) If campus-based wellness services were utilized, how did you become involved?
- 3) What was your experience with the services? Did you experience any benefits or drawbacks as a result from participating in the service(s)?
  - a. Personal well-being
  - b. Relationships with students
  - c. Professional efficacy
- 4) Did any of your students utilize campus-based wellness services this year? If so, talk about what you know of their experience with these services.
- 5) What needs do you think the intervention(s) will address at your campus?
- 6) What are your expectations for the future with regard to the wellness services provided by the clinic??

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